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Abstract

In the clause the concept "the meeting decision" in civil law of the Russian Federation and foreign countries is analyzed. The author considers the legal nature of the decision of meeting on an example of decisions of general meeting of proprietors of premises, copartners of proprietors of habitation, analyzes bases of its invalidity, a consequence of acknowledgement of the decision of meeting of proprietors of premises, copartners of proprietors of habitation void, studies the moment from which the meeting decision is considered void, and also the persons having the right to the appeal of decisions of specified meetings. It is necessary to notice that for today in Russia the substantive provisions, meetings concerning decisions are legislatively established only, and foreign scientists-jurists state considerable number of assumptions of their legal nature. The specified circumstances induce to research, first of all, assumptions and conclusions of foreign authors and to the further rather-legal analysis.

Keywords: *The meeting decision, partnership of proprietors of habitation, general meeting of proprietors of premises, general meeting of copartners of proprietors of habitation, invalidity of the decision of meeting.*

1. Introduction

In a science of civil law of Germany [1; 2] there is a concept of "decision" to which carry decisions of general meetings, the supervisory boards, other controls of economic societies, and also other consolidations and organisations: connections physical and juridical persons, capable and not capable consolidations or people [3]. The specified decisions concern, including decisions of participants of condominiums [4]. However general provisions about decisions of meetings in the legislation of Austria, Germany, Switzerland are absent.

Foreign researchers determine the decision as "technics collective will" [5; 6], but it is thus specified that the will of separate persons is generalised in the decision.

From the point of view of foreign researchers, specificity of the decision of meeting is that it is not declaration of will, but is based on separate declarations of will: on voting of shareholders or other partners. R. Bork, leaning against court practice and the doctrine, notices that the decision of meetings consists of set in parallel flowing, under the maintenance unanimous, namely expressed in the form of the voting, those declarations of will who participates in decision-making [7]. Thus the meeting decision is considered accepted if for its accepting everything have voted not, and the majority of the persons participating in voting. Besides to the meeting decision should submit including the persons who have not taken part in voting and even not consent. V. Boeken asserts that the meeting decision represents the legal transaction with several unidirectional declarations of will. Such orientation, in its opinion, distinguishes the decision from the agreement which also represents the multilateral legal transaction, however is characterised by mutual declarations of will [8]. In turn, V. Flum, leaning against court practice, specifies that the decision represents not the sum of separate declarations of will, and their interaction at participation in decision-making [9].

2. Theory

In the acting Russian legislation decisions of various meetings are provided. Bases of their invalidity, a consequence of their acknowledgement are legislatively fixed by those, and also the moment from which the meeting decision is considered void is specified. So, decisions of participants of the legal entity admit Russia (including the decision of general meeting of shareholders, participants of restricted liability society, housing memory co-operative society, copartners of proprietors of habitation and others); and also decisions of general meeting of proprietors of premises in an apartment house.

The Civil code of the Russian Federation determines the meeting decision as follows: "the meeting Decision with which the law connects civil-law consequences, generates legal consequences on which the decision it is directed, for all

persons, having the right to participate in the given meeting (participants of the legal entity, joint owners, creditors at bankruptcy and others - participants of civil-law community), and also for other persons when it is established by the law or follows from a being of relations" [10]. The given formulation of the decision of meeting as bases of origin of civil laws and obligations, in our opinion, allows to draw a conclusion that it cannot be carried to transactions.

In the Russian right the analysis of the legal nature of decisions of meetings is performed in a context of interpretation of the legislation on juridical persons. So, N.V. Kozlova considers that all acts of an internal of juridical persons including their decisions, represent itself as multilateral transactions [11]. G.S. Shapkin underlines that "decisions, as a rule, mention the rights and legitimate interests of shareholders, but not as the persons acting as the party in the transaction, and as participants of a society within the limits of the corporate relations regulated by special precepts of law" [12].

Other scientists, analyzing the legal nature of acts of controls of the legal entity, determine such acts as local normative acts [13]. The third group of scientists believes that decisions of controls of the legal entity are not standard legal acts [14; 15].

V.I. Dobrovolsky's position which considers that is impossible, obviously to regard the decision of meeting as not standard legal act as relations in a society are not public or administrative and are based exclusively on the civil legislation as the transaction directed on an establishment, change or the termination of the rights and obligations [16], proves to be true court practice materials. It is necessary to notice that it, regarding the decision of general meeting of shareholders exclusively as the act of the supreme body of management of a society, notices that the meeting decision is a basis for the conclusion of the large transaction or the transaction in which fulfilment there is an interest, and the decision of meeting on election of board of directors and (or) the general director generates powers of controls joint stock company and, as consequence, powers on fulfilment of transactions. Thus any conclusions concerning the legal nature of the decision of meeting are not made.

3. Findings and Discussion

Features by which decisions of meetings are allocated, allow to carry them to special type of dispositive facts. The given circumstance proves to be true V.S. Em's position [17] and A.E. Sherstobitov [18] which believe that the meeting decision as the corporate act, undoubtedly, can be carried to special dispositive facts of civil law.

It is necessary to agree with O.M. Rodionova's opinion which believes that any of these approaches to understanding of the nature of decisions of controls the juridical person cannot be accepted on unique, but to very significant basis: bodies of the legal entity are not persons of law, hence, cannot make any legally significant actions, including transactions, not standard legal acts, etc. [19]

3.1 Invalidity of decisions of meetings and its kinds

In a German science it is supposed that decisions of meetings can be recognised by void by general rules about invalidity of the transactions, provided by civil codes. For acknowledgement void decisions of general meetings of joint stock companies, restricted liability societies [20], decisions of condominiums of [21] and other communities laws establish special rules.

Division of nullity decisions on insignificant and debatable is represented reasonable as bases for invalidity of decisions of meetings a little, and the illegality of several of them is obvious and, as a rule, does not demand judicial consideration. Besides, such division is claimed by court practice.

In item 181.3 the Civil code of the Russian Federation decisions of meetings are divided on insignificant and debatable. Just as in the German joint-stock right it is fixed that the meeting decision can be nullified on the bases established by the law, owing to acknowledgement by its that court (debatable the decision) or irrespective of such acknowledgement (insignificant the decision). By analogy to the German legislation position about an order of confirmation of decisions of meetings is entered. So, in item 2 of item 181.4 the Civil code of the Russian Federation it is told: "the meeting Decision, debatable in connection with infringement of an order of its accepting, cannot be challenged, if it is confirmed appropriate repeated by the decision before acknowledgement by its court void".

Division of decisions of meetings into the insignificant and debatable has found continuation in a designation of corresponding methods of protection: possibility of acknowledgement of the decision is fixed by the void. Voidability of the decision disappears, if general meeting has confirmed disputable the decision new and it has not been appealed during term of contest or contest has been refused.

3.2 Bases of invalidity of decisions of meetings

In the acting Russian legislation the positions similar to the German joint-stock legislation are provided: so, ч. 5 items 46 of the Housing code of the Russian Federation the right to appeal in court gives to proprietors of premises in an apartment house the decision, accepted by general meeting of proprietors of premises in the given house with infringement of requirements of the law, in a case if it did not accept participation in this meeting or voted against accepting such decisions and if such the decision breaks its rights and legitimate interests) [22].

The Russian legislator also uses criterion of importance. So, in item 6 of item 46 of the Housing code of the Russian Federation it is established that the court taking into account all circumstances of business has the right to uphold обжалуемое the decision if voting of the specified proprietor could not affect results of the voting, the admitted infringements are not essential and the agreed conclusion has not caused causing of losses to the specified proprietor.

In item 4 of item 181.4 the Civil code of the Russian Federation it is told: "the meeting decision cannot be nullified, if voting of the person which rights are mentioned challenged by the decision, could not affect its accepting and the decision does not attract essential adverse consequences for this person". It means that acknowledgements of the decision of meeting void both circumstances should be present simultaneously. However, it is necessary to notice that determination of "essential adverse consequences" in the legislation is absent.

It is thought, importance of infringement should not be a basis of invalidity of the decision of meeting if it is not legislatively specified how it is made in other cases of the use in the term current legislation "essential". For example, in item 1 of item 178 the Civil code of the Russian Federation is established importance of error and its explanatory is given. Also in item 432 the Civil code of the Russian Federation that concerns essential treaty provisions is specified.

Let's agree with O.M. Rodionova's determination which by analogy to determination in item 2 of item 450 the Civil code of the Russian Federation of fundamental breach of the agreement in which interpretation there is a considerable experience, would solve a problem of division of infringements on attracting and not attracting causing suggests to understand as essential adverse consequences to the participant of community of such harm invalidity of decisions of meetings "that it substantially loses that, on what have the right was to count, having the right to vote" [16].

3.3 Consequences of acknowledgement of decisions of meetings the void

Any consequences of acknowledgement of decisions of meetings void in the Civil code of the Russian Federation it is not fixed. This question till today has not found the decision in the acting Russian legislation. In a science and practice the problem is shined with reference to decisions of separate kinds of meetings.

So, researchers mark an ambiguity of consequences of acknowledgement void decisions of general meetings. As to acknowledgement consequences void decisions of meetings of general meetings of proprietors of premises or copartners of proprietors, about it the legislator at all speaks nothing.

Consequences of invalidity of the decision, considering it регулятивный character, transactions, and the state structure or local government act (item 13 the Civil code of the Russian Federation) are similar to invalidity consequences not. In this connection it would be logical by analogy to paragraph 2 of item 13 the Civil code of the Russian Federation to fix in the Civil code of the Russian Federation a rule that in case of acknowledgement by court of the decision of meeting void the broken right is subject to restoration or protection by the different ways provided by the law.

Taking into account told it is represented what followed give to considered position more general character and to fix in the Civil code of the Russian Federation the prescription that acknowledgement of decisions of meeting about fulfilment of transactions void in case of the appeal of such decisions separately from contest of corresponding transactions does not involve acknowledgement of corresponding transactions by the void.

3.4 The persons having the right to the appeal of decisions of meetings

In the current legislation, and in the Civil code of the Russian Federation a circle of persons, having the right to appeal against the meeting decision, it is limited by those who is anyhow connected with its accepting. In item 3 of item 181.4 the Civil code of the Russian Federation it is specified that the participant of the corresponding civil-law community not accepting participations in meeting or voting against accepting challenged decision has the right to challenge the meeting decision in court. Thus under participants of community in item 181.1. The persons are understood, first of all, having the right to participate in the given meeting: participants of the legal entity, joint owners, creditors at bankruptcy, etc. However the specified possibility is not excluded and for other persons when it is established by the law or follows from a being of relations.

In the current legislation a circle of persons, having the right to appeal against decisions of meeting of participants of juridical persons and joint owners, it is limited only by the authorised persons. So, in item 6 of item 46 of the Housing code of the Russian Federation it is fixed that the proprietor has the right to appeal against the decision in court, accepted by general meeting of proprietors of premises in the given house with infringement of requirements the Housing code of the Russian Federation in case it did not take part in this meeting or voted against accepting such decisions and if such the decision breaks its rights and legitimate interests.

The right to the appeal cannot be transferred the authorised person to other person as has personal character. The given circumstance has great value when the question on possibility of the appeal of the decision of general meeting of proprietors of premises or general meeting of copartners of proprietors of habitation by the persons who have become by proprietors of corresponding object of real estate or copartners of proprietors of habitation after its accepting is solved.

With reference to general meeting of copartners of proprietors of habitation the meeting decision - the internal act of the specified meeting which is created by its participants during their activity during the concrete moment of time. For decision-making by meeting two factors matter: voting of copartners and the decision statement. The first cannot be performed at any time. It is limited by the frameworks specified by the law: the copartner of proprietors of habitation has the right to vote during the moment which has been taken away for this purpose at meeting, or in other established order, but not when will solve itself. Therefore, as it is truly marked by courts, the person who was present at meeting, but did not vote, has not exercised the right, did not participate in decision-making, cannot demand acknowledgement of the decision by the void. All other persons do not concern the meeting decision, as it is not published, not expressed for them. Even if the subject becomes subsequently the participant of meeting, it can challenge only new the decision, but not already accepted. Accordingly, the new member of meeting if its rights and interests are broken by the decision, as well as any interested persons, can challenge only actions (for example, the transactions made after decision-making by meeting) which element it will be.

Thus the satisfaction of the requirement about invalidity of the decision of meeting is supposed possible if voting of the person which rights are mentioned challenged by the decision, could affect its accepting and the decision attracts essential adverse consequences for this person (item 4 of item 181.4 the Civil code of the Russian Federation).

Results of comparison of general meeting of proprietors of premises and general meeting of copartners of proprietors of habitation by various criteria are displayed in table №1 which can assist at the organisation and carrying out of the specified meetings.

Table 1. The comparative table of meeting in partnership of proprietors of habitation

General meeting of proprietors of premises		**General meeting of copartners of proprietors of habitation**	
In the form of a joint presence	**In the form of correspondence voting**	**In the form of a joint presence**	**In the form of correspondence voting**
General meeting place in system of controls an apartment house			
Controls an apartment house		The supreme body of management of partnership of proprietors of habitation	
Regulation of an order of convocation			
The housing code of the Russian Federation		The housing code of the Russian Federation and the partnership charter	
Features of carrying out			
-	Can be conducted only in case of absence of quorum at internal meeting	-	Can be conducted only in case of absence of quorum at internal meeting
Data which should be specified in the message / the notification			
The list is contained in item 5 of item 45 of the Housing code of the Russian Federation		The list is contained in item 2 of item 146 of the Housing code of the Russian Federation	
Quorum			
50 % of voices from total of voices of proprietors		50 % of voices from total of voices of copartners of proprietors of habitation	
The **initiator of carrying out of meeting**			
The proprietor (proprietors)		Any member (members) of partnership	
Leads meeting			
The selected chairman of meeting	-	The chairman of the board or the trustee	-
The competence			
It is specified in item 2 of item 44 of the Housing code of the Russian Federation		It is specified in item 2 of item 145 of the Housing code of the Russian Federation	

4. Concluding Remarks

So, summing up concerning short research of the legal nature of decisions of meetings and their invalidity, it is necessary to notice, first of all, that entered into the Civil code of the Russian Federation new positions have first of all functional character and are caused by practical requirements of civil turnover. The generalisation expressed in these positions, have more likely intuitive character, than are a consequence of carefully developed theory as the approach to the decision as to the transaction which dominates in the German doctrine, is almost unanimously rejected both the Russian scientists, and experts. Thus any of own theoretical positions has not received wide recognition. At the same time the majority of the positions, decisions of meetings concerning to the legal nature, has been adopted from foreign, in particular, the German joint-stock right.

In our opinion, the meeting decision - legally significant actions of citizens, juridical persons, and also the municipal unions, directed on origin, change and the termination of civil, corporate, organizational and other legal relationship.

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Estimation of the Quality of Tax Administration in the Russian Federation

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Abstract

This article is devoted to approaches to the estimation of the quality of tax administration, the basic criteria for estimation of the quality of tax administration, use in scientific literature and in practice of tax authorities is considered; emphasis made on the influence of factors of entrepreneurship activity in regional aspects of tax administration; possibilities of using of some indicators of the quality of tax administration are summarized; the conclusion is made on the necessity of estimation of the quality of tax administration by direct and indirect indicators.

Keywords: *tax administration, quality of tax administration, criteria for estimating the quality of tax administration, collecting of taxes.*

1. Introduction

In the scientific literature, a subject of a heated discussion for many years remains a question of the effectiveness of implementation of a tax policy. An important aspect of tax policy implementation is tax administration. For a long time the scientific community has developed questions regarding the estimation of the efficiency of tax control, and various approaches, methods and estimation policies were offered. However, tax administration is a higher level concept and tax control is only a part of it. Certainly, the practical implementation of tax administration shows in a higher degree through tax control, but it is only a component of tax administration. In our opinion, the questions of the estimation of the quality of tax administration are not given proper attention.

In the light of recent trends of the economic development of our country and transformations in tax imposition, underestimating the role of the quality of tax administration is impropriate. A generally acknowledged fact is that the forms and methods of implementation of a tax policy are no less important than arrangements and reforms. Foreign experience has demonstrated to us that effective tax administration secures the health of the taxation system [1], [2].

The efficiency of the activity of state structures can be defined by the ratio of results and costs [3]. The question lies in how much this efficiency depends on efforts of government authorities and how it is determined by the characteristics of managing a system itself. In our case the quality of tax administration and the level of development of the taxation system are interdependent and interacting factors. The difficulties of estimation of the quality of tax administration lie in the impossibility of authentically estimating a share of this or that parameter of the taxation system which is directly associated with tax administration. The selection and the estimation of these parameters are conditional enough, however, the necessity of its monitoring is undisputed.

2. Method

Tax administration is commonly understood as the managing of tax relations by government authorities, which are allotted with credentials and duties in the field of taxing and tax imposition in order to assure realization of a tax policy and following the tax legislation.

Russian tax policy at the present stage includes a number of arrangements, the realization of which is closely connected with tax administration. These include an accretion of tax collection, control of offshore accounts, improvement of control in transfer price formation, a development of interconciliatory procedures in tax relations, counteraction of tax evasion.

It is difficult to estimate the quality of these characteristics and to discuss their dynamics. However, it is necessary to separate the number of indicative factors, the analysis of the dynamics of which will enable us to discuss the tendencies in tax administration [4].

Certainly, for a long time the indicator of tax collection was the basic indicator for characterizing the tax

administration. It was widely used by both the theorists and experts of taxation. The collecting of taxes in a general sense was understood as a ratio between the size of actually collected taxes and tax rates, which should be collected according to size of the taxable base and the tax rates provided by the tax legislation of the country [5].

C = TR/TC*100 %, where

C - collection,

TR - real tax revenues,

TC – tax charges

Recently, it was realized that collection factor not only defines the quality of tax administration, but also the efficiency of the taxation system as a whole. The factor was essentially different among different taxes; moreover, tax collection from individuals [assessed tax] was higher than from legal entities.

The primary stumbling block in the estimation of the quality of tax administration is the fiscal efficiency of particular taxes. From 2015 the imposition of a sales tax with the maximum rate of 3% had been planned. Heated discussion was held regarding the suitability of such arrangements. Increasing the rate by 2% was considered as an alternative variant. The main argument of rate increase supporters was the low collection of sales tax in 1990-91 and in 1998-99, which was about 30%.

According to the Minister of Finance of the Russian Federation, in modern conditions the collecting of the sales tax would be significantly higher, by the reason of widely developed regional trade networks and the improvement of the quality of tax administration. At the same time, the Ministry of Finance acknowledged all the complexity of tax administration of the sales tax and the increased load on taxing authorities.

The government deliberately planned imposing the tax with the potentially low collection rate and using the collection index for estimating the quality of administration of the sales tax is inadmissible. In this case the tax with low economic effectiveness (as evidenced by two unsuccessful attempts in 1991 and 1998) will bring to nothing all the attempts of taxing and financial authorities for the creation of effective tax administration. However, this doesn't signify the impossibility of the estimation of the quality of the sales tax administration.

In this case at least it is incorrect to characterize tax administration of the sales tax by the indicator of collection. The example of the sales tax makes visible how difficult it is to estimate the quality of tax administration as a whole and taxes in particular.

Here we approach an utterly important factor of tax administration: the fiscal efficiency of taxes. The literature allocates taxes with low, high, and neutral fiscal efficiency [6]. The value-added tax is considered to be an example of a tax with high fiscal effectiveness. With the proper organization of tax administration this tax provides a 100% collection rate. Moreover, the period and procedure of its payment may be formed for specific economic conditions, as was done in 2009.

Among the taxes with low fiscal effectiveness are taxes that can be easily evaded and whose level of evasion is sufficiently high. As an example, the sales tax entered into the tax system of the Russian Federation twice and twice showed its low fiscal effectiveness. This was primarily due to the volumes of shadow turnover in retail trade [7], [8].

3. Result

Addressing the statistical data of the Federal Tax Agency of the Russian Federation, it is possible to draw the following conclusions.

The level of tax revenues tended towards growth [9],[10].

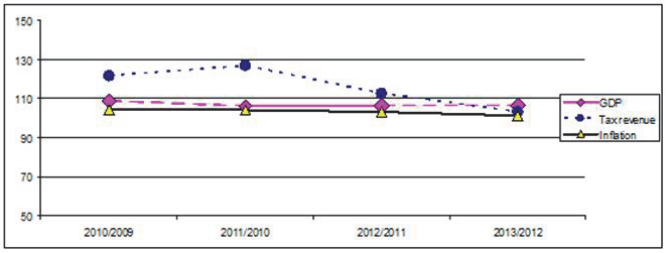

Fig. 1. Growth rates of tax revenues, Gross domestic product and inflation, in %

According to the pictured information it is conspicuous that the growth rates of tax revenues are decreasing, however, according to all available information the situation in 2014 is much more successful in comparison with the similar period of 2013. To the number of main causes of significant growth of a rate decrease it is necessary to include the common economic situation and a temporary lag effect, typical for tax payments. Generally, a slowdown in economic growth doesn't coincide with a slowdown in tax revenues. This is due to the mechanism of calculation and tax payments, and to the procedures of tax administration.

Against a decrease in gross domestic product growth and an increased rate of inflation, the rate of increase of tax revenues is more than considerable. According to the tax service of the Russian Federation, in the nine months of 2014, tax revenue growth outstripped the inflation level, and the quality of tax administration played the significant role in it.

The collecting of taxes throughout the last five years (2009-2013) as a whole across Russia is observed at level above 100%. Let's consider this indicator in more detail in a cut of the federal, regional, and local taxes and the taxes levied within the limits of special tax regimes.

Table 1: Collecting of taxes in the Russian Federation for 2009-2013gg., %

Indicator	2009	2010	2011	2012	2013
Collecting, as a whole on the taxation system	130,32	126,15	127,07	122,95	127,45
On the federal taxes	134,52	130,72	128,84	126,19	131,71
On regional taxes	95,94	96,05	99,75	95,65	98,28
On the local taxes	99,74	96,78	275,34	94,32	100,17
On taxes within the limits of special tax regimes	153,46	104,57	110,11	113,07	107,12

According to the table, federal taxes have the highest tax collection rate. An exception to this rule was the collection of local taxes in 2011 which was due to the change of payment dates and the change of an order of administration of the assessed taxes from individuals. The number of federal taxes also includes the value-added tax, excises, the profits tax, the income tax from individuals, the mineral extraction tax, the state tax, and a number of others. A special value among the federal taxes is derived from the taxation of oil extracting [11]. Among the regional and local taxes, indirect taxes are absent. The situation of the economy for the last five years did not allow us to suggest the lack of influence of the tax level load on the indicators of collection.

Typical for the Russian taxation system is the concentration of taxes with high fiscal effectiveness on the federal level. Imposing a sales tax, according to legislators, should have corrected this misbalance, because the sales tax was planned as regional. Discussion about the expediency of parallel usage of the added value tax and the sales tax became the subject of separate scientific research. In the study of the quality of tax administration, an important step is revealing a dependence on the effectiveness of a particular tax [12].

I would like to touch on the taxes levied under special tax regimes. The indicator of their collection is erratic from year to year. However, the administrative costs on a tax control of the subjects, which applies to special tax regimes, are significantly high. . This is evidenced by a specific weight of tax income and pre-charges via the results of tax inspection of one tax payer [13].

Another indicator of estimation of the quality of tax administration used by federal tax revenue of RF is the ratio of back taxes to tax revenues [14].

Table 2: Ratio of back taxes, possible to collect, to tax revenues in the Russian Federation for 2009-2013gg., %

Indicator	2009	2010	2011	2012	2013
Ratio of back taxes to tax revenues	10,97	9,04	6,73	6,59	6,76
On the federal taxes	10,54	8,44	6,30	5,95	6,01
On the regional taxes	13,46	13,85	13,84	13,21	13,24
On the local taxes	27,31	24,70	20,39	20,20	21,68
On taxes under special tax regimes	8,05	7,68	6,95	6,83	7,27

According to the table the positive tendency is stable enough. And if an indicator of the taxes under special regimes is the lowest, an indicator of the local taxes is the highest.

Several researches of tax administration work effectiveness revealed interesting regularities. Regions with a similar economic situation have shown sharp distinctions in the results of examination of taxing authorities. Therefore, we can

suggest opportunities of organization of a high-quality tax administration at the level of federal subjects of the Russian Federation. In other words, despite rigid centralization and a strict regulation of activity of tax authorities, results of an examination of regions could vary considerably. This can be used as the methodology for estimation of the quality of tax administration. The approach could be based on ranking the regions in terms of economic development and tax burden, and an estimation of the effectiveness of tax control within the groups with the same level of social and economic indexes and regional tax burden.

Certainly, we cannot ignore the level of entrepreneurial activity of regions, since the interaction of a tax system and an entrepreneurial environment is represented by the interdependent changes of their characteristics. The quality of tax administration depended on the structure of taxpayers in the region and on the proper organization of work with them. Tax inspections of the largest taxpayers proved most effective; however, not in all regions as in some it meant a concentration of efforts of taxing authorities only on this category of taxpayers. Again, a sharp dissent occurs in the coverage of small businesses in regions by high-quality tax administration.

4. Conclusion

Despite all the complexity of estimation of the quality of tax administration, it is necessary to allocate a number of indicators which directly or indirectly define different aspects of tax administration. A number of direct indicators include growth rates of tax revenues, collection of tax payment, pre-charges as a result of tax inspections, structure dynamics of tax payers, indicators of tax revenues of one tax payer, etc.

A number of indirect indicators include indicators based on estimates of experts, for example the integrated indicator, “doing business”, of The World Bank. Within this indicator the tax burden condition is assessed. The “doing business” study analyzes taxes and required tax deductions that medium businesses should pay in a given year, as well as the administrative burden due to tax payment and production of deductions. Among the number of considered taxes and allocations are income tax or corporate tax, social security allocations and labor taxes paid by employers, the property tax, the property surrender tax, the dividend tax, tax on capital gains, tax on financial transactions, tax on waste collection, tax on vehicles and road tax, as a well as any other small taxes and fees. Remarkably, the current indicator takes into account not only taxes, but also other fiscal payments (social contributions, environmental fees, etc.) [15].

The values of this indicator in the Russian Federation in 2013 had constitute – 63 and in 2014 - 56. Remoteness from the forward boundary had to constitute in 2013 – 73.39, and in 2014 – 75.33 percentage points.

Thus, an estimate of the quality of considered tax administration indications solves particular problems, however, they don’t define the whole picture. For the purposes of microanalysis it is possible to use the aggregate of direct (tax revenue collection growth rate, collection, the ratio of dept to tax revenue) and indirect (the “doing business” integrated indicator) criteria, however the sharp dissention in regional tax administration quality demands further studies.

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Development of the Oil Companies Taxation System

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Abstract

This publication is dedicated to the taxation of oil sector; describes the Russian oil industry taxation system; identifies the problems and specifies the development trends for taxation of oil companies. Among other things, the oil extraction tax calculation and payment mechanism will be studied for application to the Russian exploration and production sector. As the extraction tax heads the list of the taxes subject to be paid by operators, the authors conclude that the exploration and production sector needs an effective tax regulation.

Keywords: *taxation, oil companies, oil extraction, exploration and production sector, extraction tax*

1. Introduction

The economic activity bases on exploration and production sector, which facilitates the large share of Russian budget revenues. For a long period of time, the Russian oil taxation laws focused on keeping the budget revenue at an appropriate level by all manner of means. Meanwhile, the economic efficiency of the taxation system fell into the shade. The result was the negative tax environment that prevented the oil sector from rapid growth and increase in efficiency. The current global practice of taxing the users of subsurface resources bases on the withdrawal of rent income from the development of the field being the best in terms geological, natural and economic-and-geographic conditions in favour of the subsurface resource owner. The optimum tax systems must serve stimulating and regulating functions. The stimulating function includes stimulation of marginal oil fields or keeping on the production when the oil prices are low. The regulating function means the withdrawal of excess profits from development of high-performance features. Therefore, the Russian exploration and production sector needs the tax regulation to be enhanced.

2. Theory

The tax regulation policy of the exploration and production sector holds a special place in the government regulation of the economy due to the specificity of the methods used, which are associated with rent categories and location of production facilities. Moreover, the exploration and production sector forms the system of the present-day Russian economy. It accounts for about 30% of the industrial output and 32% of the Russian Federation consolidated budget revenues. In addition, the oil sector fully accommodates the internal needs for fuel oil. Therefore, the requirements to the quality and efficiency of tax regulation are extremely high for this sector.

Russian operators contribute to the budget by paying such taxes as income tax, value-added tax, extraction tax, individual income tax, other corporate taxes (including property tax) and by making such compulsory payments as extraction royalty tax, social costs and customs duties.

The Russian Federation consolidated budget returns for exploration and production sector are listed in Table 1.

Table 1: The Russian Federation consolidated budget returns for oil exploration and production sector [1] In thousand Rubles

Tax revenues	2011	2012	2013
Total tax revenues on crude oil and associated gad production, including:	1871639227	2164586716	2252806719
- Corporate income tax	212949710	204391369	151436495
- Individual income tax	15381247	17456722	18503855
- Value-added tax	51361257	68465083	95515165
- Excise taxes	834256	14651150	38127180
- Extraction tax	1537431099	1803815074	1888573483
- Other federal taxes and duties	842449	178421	94044
- Regional taxes	36630836	40133554	45100886
- Local taxes	194136	242883	300533
- Taxes subject to special tax treatment	16014237	15385550	15155078

The extraction tax is the basis of the Russian oil taxation system. Oil refining and selling companies are not subjected to extraction tax and extraction royalty tax, but shall pay mineral oil excise tax.

It should be also noted that the share of export customs duties is high among the non-tax payments, which are payable by Russian oil companies. The export customs duties for oil and oil products are subject to the tax regime "60-66". The main objective of the regime "60-66" is to ensure the fastest yield increase in the exploration and production sector by means of redistribution of income from oil refinery, which level is extremely high at the moment. At the same time, increasing the rate of export customs duty for fuel oil enhances the profitability of secondary refinery processes and will stimulate oil companies to invest the projects of retrofitting oil refineries.

Since 2002, Russia has been taking measures to change the procedure of taxing oil production. Particularly, introduction of the extraction tax provided for budget revenues. Today, the extraction tax is about 83% of the Russian Federation consolidated budget revenues (Table 2).

Table 2: Extraction tax of the Russian Federation consolidated budget revenues for oil exploration and production sector In percents

Tax revenues	2011	2012	2013
Total tax revenues for oil exploration and production, including:	100	100	100
- Corporate income tax	11.4	9.4	6.7
- Value-added tax	2.7	3.1	4.2
- Extraction tax	82.1	83.3	83.8
- Other tax revenues	3.8	4.2	5.3

Table 2 shows that the extraction tax takes the major part among the Russian Federation consolidated budget revenues. For the first time in the existence of the tax system, the subsoil use taxation system was distinctly regulated upon acceptance of Chapter 26 of the Russian Tax Code and the tax and non-tax payments for natural resources were clearly distinguished. The extraction tax calculation and payment conditions base on the payment procedure for subsoil use, which was in use before the extraction tax introduction, with inclusion of half-rate for recovery of mineral resources base and excise rate for crude oil.

The extraction tax being one of the components of the natural resource rent forms its base. According to many modern scholars, the existing mechanism of natural rent withdrawal through the extraction tax and export duty is originally vicious. These are the rough tools of payment collection, which are not the best derivative of the rent. At the interface it is not feasible to distinguish, from which oil field, a mature or a rich, the oil was produced. Hence, the system needs to switch to the system of rental payments well known worldwide: bonus, rent and royalty – three standard payments plus the excess profit tax in the event of unexpected price jumps. This problem remains open for discussions until now.

The oil companies taxation issues are discussed in the papers of such authors as Osmundsen, P. , Løvås, K. [2], Poltavtseva, E. A. [3], Willigers, B.J.A., Hausken, K. [4], Kashani, H.A. [5], Bell, S., Hindmoor, A. [6], Leblond, D. [7]. Problems and features of taxing oil companies in Russia are discussed in the papers of such authors as Lunden, L.P., Group, S. [8, Cherepovitcyn, A., Smirnova, N. [9], Garden, E. [10] Factors that have an effect on oil extraction were covered by Khisamov, R.S., Lavushchenko, V.P., Motina, L.I. [11], Russell, A., Dawe, R.A. [12].

The incomes from extraction taxation are still the primary source of revenue feeding the Russian Federation budget system; therefore, special attention is traditionally given to the taxation of mineral resource sector with significant rent incomes when developing the fiscal tools. In recent years, the main mean of natural rent withdrawal is the extraction tax, which is payable at the production stage and the export customs duties for oil. The key factor of unstable budget revenues is that they are highly dependent on free market prices.

Tax concessions are expected for oil production from the integrated fields in the long term. This will significantly enhance the efficiency of field development, including mature fields.

The extraction expenditures will increase in the mature fields from year to year, which means that the user of subsurface resources would be likely to incur losses, but not the standard profit much less the super profit. A state that wants to extract mineral resources in full shall use a flexible taxation system with tax benefits. In many cases the market participants "skim the cream off" from the areas they have leaving a part of underused resources behind, for which the state could gain but due to the rigid taxation system it loses its potential profit. There are areas instead, which efficiency will be either much low or negative at all.

While the efficiency of any field varies highly depending on development schedule, geological features, size, distance from roads and other natural parameters, the extraction tax is common and does not consider all the conditions. Therefore, the extraction tax, which does not take field details into consideration, strikes primarily those fields with poor production climate so that many of them turned to loss-making fields and run abandonment. Of course, the extraction tax pushes the mineral developers towards the best fields and does not stimulate the production build-up by recoverable reserves.

As is seen, the existing taxation system does not really motivate the field development. In addition, the averaged rates do not provide for the natural rent body to be withdrawn from the high-yielding oil companies to the state revenue. Therefore, the present-day Russia suffers from the following disadvantages of the oil sector taxation system:

- Non-optimum distribution of taxation load in the process chain;
- The taxation system does not consider Russian specificity, which consists mostly of reserves difficult to recover;
- Imperfections in the existing tax concession system for development of difficult-to-access, inefficient and mature fields;
- Need for the extraction tax to be replaced with the excess profit tax at the stage of oil production.
- The solution of these problems is only possible if the existing oil sector taxation system is updated to a rent-oriented taxation system.

3. Results

Considering the entire importance of the matter and the specified problems, Russia needs government regulation, primarily, the fiscal regulation for further development, increase of efficiency and competitive ability of its oil sector on the world market. The oil company taxation procedure should be revised in the nearest future. Figure 1 illustrates the development trends for taxing Russian oil companies.

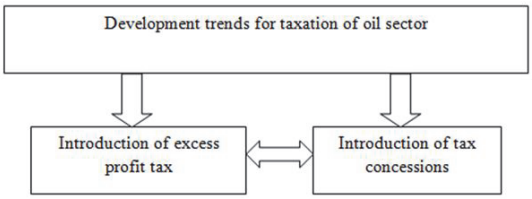

Fig. 1. Development of the oil sector taxation system

The existing Russian taxation system is not flexible as it focuses on taxing the high-flow-rate fields and does not include the objective growth of production costs with the decrease in well flow rates and growth of water cut.

Another significant problem is the existing tax concession system for development of difficult-to-access, marginal and mature fields. If the oil sector taxation remains unchanged, the oil extraction will be reduced to 395 million tons of oil by 2020. According to the experts, if the taxation system remains as it is, 90% of new field reserves and 30% of the explored fields are economically unprofitable for development. Therefore, the government faces a serious problem now –

tax concessions may reduce the budget revenues and the absence of tax concessions will drop the oil production.

Having faced the necessity to stimulate oil production in the marginal fields, the USA and Norway launched the procedure of providing tax concessions for production of hard-to-recover reserves and stimulation of oil companies, which implement technologies of their extraction by all means. The Republic of Tatarstan being one of the Russian Federation regions is an example of such approach to support difficult wells. The tax concessions taken in Tatarstan enabled not only to cease the catastrophic drop in oil production but to increase it.

Today, the extraction tax is linked to the world oil prices while the geological and geographical conditions do not consider the level of extraction tax. That is why the introduction of excess profit tax is so essential. It is important that the key budget revenues would form from excess profit tax applicable to all the existing but not only the new fields. This should be the result of financial activity of the companies but not from the returns prior to taxation. Introduction of the excess profit tax for oil production through final results of oil companies' financial activity will naturally regulate them the same way as in other countries by using the suggested oil production taxation mechanism. All of this will furnish efficient performance of existing wells, rational development of all fields (including small-sized), and remaining and in-place reserves with a high level of operating expenses that base on a differential approach to the quality of reserves.

4. Conclusions

Following the results of our study of oil companies taxation system, the following conclusions are as follows:

1. For Russia, it is a good practice to provide tax concessions to the oil companies that implement new technologies of oil extraction from difficult-to-access, marginal and mature fields and bring old wells back to life.
2. The gradual transition to the excess profit tax is required. However this procedure is a complex one and will take a while. The balance between the interests of the state and the oil sector should be ensured for introduction of the extraction tax.

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The Problem of Social-Psychological Maladjustment of People in Today's Economic Conditions

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Abstract

The article comprises a set of theoretical and methodological bases of adaptation inclusion in a range of important psychological problems is defined as the real demands of life and logic of the development of scientific psychology. Special attention is paid to adaptation - maladjustment, because in this case the person is experiencing problems and the violation of their social activity. In relation to the rights applicable category of mental, psychological and social maladjustment. Social adaptation acquires exceptional importance in the critical periods of human activity, and in periods of radical economic and social reforms.

Keywords: *social adaptation, maladjustment, a self-adaptive, self adjusting, images mature, social conditions of life, active adaptation, economic adaptation, socialization, economic and social reforms.*

1. Introduction

Adaptation represents some of the very real ways to preserve vitality, not only in today's rapidly changing world, but also in the future. The inclusion of adaptation in a range of important psychological problems is defined as the real demands of life and logic of the development of scientific psychology. Modern psychological science, and actively involved in large-scale solution relevant to society's problems, faced with the need to understand the changes in human psychology. The searches for explanations of behavioral modifications, the definition of the integral factors organize psychological transformations associated with the study of adaptation.

Special attention is paid to adaptation - maladjustment, because in this case the person is experiencing problems and the violation of their social activity. The analysis of theoretical and methodological approaches in various scientific fields, including philosophy, biology, medicine, valeology, sociology, pedagogy, allowed us to identify several generalized semantic aspects of adaptation and disadaptation: a review of life in the changing conditions of existence (R.M. Baevsky, I.G. Bezpalko, N.N. Wasilewski, N.R. Derapa, N.I. Kosenkov, V.N. Krutko, F.H. Meyerson, V.P. Petlenko, S.I. Soroko); adaptation as adaptation to the changed environment (V.A. Ananiev, E.V. Vitenberg, A.I. Volozhin, I.B. Germanova, R.G Iluchanok, V.P. Kaznacheev, L.A. Korostyleva, A.G. Maklakov, I.A. Miloslavov, N.N. Obozov, A.N. Severtsev, Y.K. Subbotin); achieving sustainability in a modified environment (F.B. Berezin, L.F. Burlachuck, E.Y. Korzhova, V.I. Medvedev, V.A. Petrovsky). Changes in the social, cultural, objective and natural environment, put experts need to study exclusion from the position of man as the subject of life, as a holistic personality, consciously choose the direction and how to build your own path of life in an unstable world.

2. Theory

The biggest problem in solving these issues arises with those social layers that are due to objective and subjective factors. To one of these groups include young people. Their social and psychological vulnerability, the vulnerability does not allow the individual to solve problems in modern society problems. The elderly, acquiring the status of a pensioner will lose not only the production of communication, but also a significant part of other public functions. It is obvious that older people in contemporary Russian society became one of the most vulnerable socio-demographic groups [1].

Exclusion represents any violation of adaptation, the adaptation of the organism to ever-changing external or

internal environment. The degree of maladjustment characterized by the level of disorganization of the functional systems of the body.

In relation to the rights applicable category of mental, psychological and social maladjustment. Objective manifestations of maladjustment are expressed in a certain type of behavior, and subjective - a wide range of emotional shifts. Personal maladjustment may lead to the formation of suicidal behavior in case of inability to implement the basic values. Exclusion from the social environment is not a simple lack of fitness to others, and the complex socio-psychological condition. Rejection by a group of individual, social and psychological isolation and the associated psychological state of frustrirovannosti and depression, inadequate communication skills and behavioral disorganization, internal stiffness and underlined shyness - this is not an exhaustive list of symptoms [2].

3. Results

Getadaptercount - state due to certain reasons. It can act as some object of desire on the part of the individual: the individual may actively seek to evade a group of institutions that do not accept the views of others and to resist them, to complicate relations with others and to exacerbate conflicts. In one case, getadaptercount individual may come from the social group, "rejecting" him, and from the inability of the individual to fit into their environment, and the other from the desire of the person for violation of state socio-psychological balance in relationships and overcome the requirements of opportunism. You can select specific variations of social and intrapersonal interaction in the framework of the «adaptation-exclusion»:

1. Maladjustment to society - a self-adaptive. This particular pattern of social and intrapersonal interaction may, for example, be expressed in those cases when the person increases self-esteem and internal consistency as how it deviance behaves in relation to group institutions, isolated from others, and, in General, does not fit into the whole "body" of the troupe.
2. Adaptation to society – images mature. This pattern is inversive previous option. As an example you can refer to the psychological state of the internal disagreement and dissatisfaction with himself, arose and increasing in if conformal own behavior and compromise to the environment is "forced landing".
3. Maladjustment to society – self adjusting. This time understands the pattern of interaction, which indicates the transition of interpersonal intrapersonal conflicts in the plan. Misalignment with the outside world is interconnected with interpersonally mismatch. Psycho work in such cases is very complex and includes two complementary strategies: regulation of relations of the individual with others through the stimulation of her "work" self-regulation and, on the contrary, the achievement of the required level of internal consistency through the settlement of its social relations.
4. Adaptation to society - maladjustment to society. Aspiration adaptation to society can lead to the opposite result where the means of achieving this goal are maladaptive in nature.
5. Self adjusting - images mature. The selection of this pattern may seem speculative. However, if reflected upon its contents, then you can at least point to one fact: the reason semi adaptive activity of a person can be a sense of inner coherence. Images mature as the cause (or condition) in this case precedes and determines the complex intrapersonal processes aimed at acceptance of itself and the achievement of the required level of intra-psychic coherence [3].

Social adaptation is not only a state but a process, during which the social organism acquires balance and resistance to impact and influence of the social environment.

Social adaptation acquires exceptional importance in the critical periods of human activity, and in periods of radical economic and social reforms.

Currently, greater attention to the development of this problem is determined by the needs of practical problems associated with accelerating the process of human adaptation to the new conditions in different spheres of life: professional, social, political, legal, etc. Influence the inclusion of a person in a new social environment to optimize this controversial process, is possible only in the case, if known, its nature, structure and mechanisms, as well as the specificity of its occurrence in various areas of social life [4].

In modern scientific literature problems of adaptation are considered in several areas: biological, medical, pedagogical, psychological, sociological, cyber.

Under the social adaptation refers to the process of active adaptation of man to the new social conditions of life. In the process of adaptation of the person is the subject of the impact of the social environment and the active subject, aware of the impact of this environment. The process of adaptation is a broad polyphony learning of social values through the mechanisms of socialization. Man as an active subject develops and uses in its life the products of human civilization,

which include managerial, economic, psychological, educational technology and methods development of social space. In fact, all elements of human culture are involved in the formation of personality through the adaptation mechanism, which is an integral a necessary part of the dominant social development. Sociality is an essential aspect of a human being, its qualitative characteristics. All kinds of adaptation are interrelated, but the dominant is social. Full social adaptation of the person includes physiological, managerial, economic, pedagogical, psychological and professional adaptation.

Managerial (organizational) adaptation. Mesopotamia (at work, at home), to create preconditions for the development of its social role, to influence, to provide activities that meet the interests of society and the individual [5].

Social adaptation is a process that is manageable. Management can be carried out not only in line with the impact of social institutions on the person in the course of its production, non-production, before-production, post-production activity, but also in the mainstream of government. The latter implies demanding, self-critical attitude of man to himself, to his thoughts and actions.

Economic adaptation. This is a very complex process of learning new socio-economic norms and principles of economic relations between individuals, entities. For the technology of social work is important here is the so-called "social unit", including adapting to the actual social reality of the size of unemployment benefits, wages, pensions and benefits. They must meet not only the physical, but also social and cultural needs of the person. It is impossible to speak about a full-fledged social adaptation of the person, if he is poor or doesn't population drags out a miserable existence, or is unemployed.

Pedagogical adaptation. This adaptation to the education system, training and education, which form a system of value orientations of the individual. It should also be pointed out that the adaptation of the person depends on a comprehensive exposure to the natural, genetic, geographical factors, though the latter do not play a decisive role in his socialization.

Adaptive changes are more or less conscious of the changes through which the identity transformation, changes the situation. Changes always accompany human life, therefore, for each individual it is important to be prepared for critical periods, turning moments, conscious revision of their position in life in the new circumstances. This creates real conditions of readiness to lead full and active adaptation.

Psychological adaptation. In psychology, adaptation is considered as a process of adaptation of the senses to the peculiarities of acting on them incentives for their understanding and protection of receptors from excessive load. The psychological process of adaptation occurs continuously, because the constantly changing socio-economic conditions, political and ethical orientation, environmental conditions, etc.

Professional adaptation is the adaptation of the individual to a new kind of professional activity; the new social environment, working conditions and peculiarities of a particular specialty. The professional success of adaptation depends on the propensity of adaptate to a specific professional activity, the coincidence of public and personal motivation and other reasons.

Adaptation encompasses a broad range of concepts from elementary experience of adaptation of organism to environment, to complex socio-psychological adaptation of personality in the process of socialization. Man as a subject of activity should be considered as a complex, multidimensional socio-psychological-biophysiological system. As part of the system approach, the adaptation is presented and the process and the result of the operation of the integral self-regulating system, adaptability which is provided by the interaction of its individual elements.

Therefore, a complete study of human adaptation is only possible with the implementation of a comprehensive approach to the study of all organization levels: from the psychosocial to the biological with regard to their relationship and interaction [6].

Social adaptation as a mechanism of socialization.

Social adaptation is an integrative indicator of the human condition, reflecting its ability to perform certain biosocial functions, namely:

- an adequate perception of the environment and its own body;
- an adequate system of relationships and communication with others; ability to work, study, leisure and recreation;
- a variability (adaptability) behavior in accordance with the role expectations of others.

In the study of adaptation one of the most urgent issues is the question of the relationship between adaptation and socialization. The processes of socialization and social adaptation are closely interrelated, as they reflect a single process of interaction between the individual and society. Often socialization is associated only with the General development and adaptation - adaptive processes already established personality in the new conditions of communication and activity. The phenomenon of socialization is defined as the process and the result of active play of the individual's social experience, ongoing communication and activities. The concept of socialization largely has to do with social experience, development

and formation of personality under the influence of society, institutions and agents of socialization. In the process of socialization formed the psychological mechanisms of interaction of the individual with the environment, carried out in the process of adaptation.

Socialization is the process of identity formation in certain social conditions, the absorption of human social experience in which man transforms social experience in their own values and orientation, selectively enters into your system behavior to the norms and patterns of behavior that are accepted in society or group. Standards of conduct, morality, human beliefs are defined by the norms that are accepted in this society. In the process of socialization of the person internalizes social norms, masters the ways of fulfilling social roles, skills, social behavior. Socialization is based on the knowledge of the identity of social reality.

The result of the socialization of the individual is evident in his personality, perceived them and society as socially valuable qualities - qualities of mind, character, manners and behavior, manners and education, social adaptability of the individual.

The main forms of social adaptation of the individual education and training. However, socialization is not limited to the education and upbringing. In the process of socialization is formed attitude personality - principles of behavior based on stable views of personality in its place and role in the life of society. This position is formed by a complex of social factors.

Thus, socialization is a process, and the result of the assignment (internalization) of the individual systems of social values and socio adapted behavior, carried out both in terms of purposeful influence of social institutions and the natural influence on the personality of the different life circumstances.

Thus, in the course of socialization of the person acts as the object, perceiving, receiving, and acquiring traditions, norms, roles created by society; socialization ensures the normal functioning of the individual in society [7]. In the course of socialization are the development, formation and development of personality, at the same time, the socialization is a prerequisite for the adaptation of the individual in society. Social adaptation is one of the main mechanisms of socialization, one of the ways more complete socialization.

Social adaptation is:

a) an ongoing process of active adaptation of the individual to the new social environment;
b) the result of this process.

Socio-psychological context of social adaptation is the convergence of the goals and values of the group and its individual assimilation of norms, traditions, group culture, and participation in role-playing group structure.

In the course of social adaptation is not only the adaptation of the individual to the new social conditions, but also the realization of his needs, interests and aspirations; the identity is included in a new social environment, it becomes a full member, asserting itself and develop their individuality. As a result of social adaptation are formed social quality of communication, behavior and action in society, due to which the person realizes their aspirations, needs, interests, and can define themselves.

O. I. Zotova and I. K. Kryazheva emphasize the activity of the individual in the process of social adaptation. They consider the socio-psychological adaptation as the interaction of the individual and the social environment, which leads to the right outcome goals and values of individuals and groups. Adaptation occurs when the social environment contributes to the realization of the needs and aspirations of the individual, is discovering and developing her personality.

In the description of the adaptation process are concepts such as "overcoming", "focus", "personality development", "assertion".

Depending on the structure of needs and motives of personality are formed following types of adaptation process:

- the type, characterized by the predominance of active influence on the social environment;
- the type that is determined by a passive, conformal adoption of goals and value orientations of the group.

As noted by A.A. Rean, there is also a third type of adaptation process, which is the most common and the most effective from the point of view of adaptation. This probability is a combined type, based on the use of both the above types. When choosing a person evaluates the likelihood of successful adaptation for different types of adaptive strategies [8]. At the same time evaluated: a) the requirements of the social environment - their strength, the degree of restriction of the goals of the individual, the degree destabilizing effect and so on; b) the potential of the individual in terms of changes, adaptations of the environment to itself.

The majority of domestic psychologists distinguish two levels of adaptation personality: full adaptation and disadaptation.

A.N. Zhmirikov proposes to consider the following criteria of adaptability:

- the degree of integration of the personality with the macro - and microenvironment;
- the degree of realization of personal potential;

- the emotional health.

A.A. Rean associates building a model of social adaptation to the criteria of internal and external plan. The internal criterion involves emotional stability, personal conformity, satisfaction, absence of distress, feelings of threat and state of emotional tension. External criterion reflects the actual behavior of the individual units of society, the requirements of the environment, the rules accepted in society, and the criteria of normative behavior. Thus, maladjustment external criterion can occur simultaneously with adaptation on internal criteria. The system of social adaptation is the adaptation of both external and internal criteria [9].

4. Conclusions

Thus, social adaptation implies ways of adaptation, regulation, harmonization of the interaction of the individual with the environment. In the process of social adaptation of the person acts as an active subject, which adapts to the environment in accordance with their needs, interests, and aspirations and actively identifies?

The main component and mechanism of the process of socialization is adapted, under the influence of which a man acquires features of sociality becomes a full member of society. However, to become a social being, not having domestic premises under the influence of some external conditions [10]. Yes, and the degree of sociality adult is far from complete merger with the society, otherwise there would be no problems of maladjustment, adjustment problems of anti-social behavior, people would not live in the world, does not suffer from the fact that it does not understand others. If the notion of socio-psychological adaptation reflects the phenomenon of inclusion of interaction and integration with the community and self-determination and social-psychological adjustment of the individual is an optimal implementation of the internal capabilities of the person and his personal potential in social activities, ability, keeping herself as a person, to interact with the surrounding society in a particular living conditions, the social-psychological maladjustment is considered by most authors as a process violations homeostatic balance of personality and environment, as a violation of adaptation of the individual in virtue of those or other reasons; as a violation of due to the "mismatch innate personal needs limiting demand social environment"; as the inability of the individual to adapt to their own needs and aspirations.

We believe that overcoming social exclusion and the formation of an independent lifestyle of modern people largely depends on the participation of different specialists (doctors, psychologists, teachers, speech therapists, social workers, specialists in culture, specialists in the rehabilitation of persons with disabilities and others) [11]. This process requires the interaction of scientists and practitioners, governmental and non-governmental institutions, the General public, the media. The objectives of technologies used included the neutralization and elimination of the causes of exclusion in the socio-cultural sphere; initiation and development of professional social and cultural activities, providing them with concrete assistance in accordance with their capabilities and interests; support for human rights in the area of leisure with regard to ethnicity, age, religious and other factors.

As a diagnostic tool we used 16 pF - questionnaire of Kettell. Currently, various forms of 16 PF - questionnaire are the most popular means of rapid diagnosis of a personality. They are used in all situations that require knowledge of individual psychological characteristics of the person. The questionnaire diagnoses of personality traits that R. B. of Cattell calls constitutional factors. These factors are: factor And "isolation - sociability"; factor In "intelligence"; the factor "emotional instability - emotional stability"; the factor E "subordination - dominance"; the factor F "restraint - expression; factor G "exposure feelings - a high standard of conduct; factor H "shyness - boldness"; factor I "stiffness - sensitivity; the factor L "trust - suspicion"; factor M practicality - developed imagination"; the factor N "straightness - diplomacy"; the factor Of "confidence in itself - anxiety"; the factor Q1 "conservatism - radicalism"; factor Q2 "conformity - nonconformity"; factor Q3 "low self-control - high self-control"; the factor Q4 "relaxation - tension"; factor MD "adequacy of self-esteem".

The Test of Rosenzweig - experimental-psychological research methodology a frustrated reaction was first described in 1944. Rosenzweig and called the "Method of drawing frustrations". Stimulating situation of this method is a schematic contour drawing, which depicts two persons or more engaged haven't finished talking. Characters depicted may vary by sex, age and other characteristics. Total for all figures is the presence of a character in a frustrated situation. The technique consists of 24 images, which depict people in a frustrated situation. The situation depicted in the figures, can be divided into two main groups.

1. Situation "obstacles". In these cases an obstacle, the character or subject is daunting, confusing word or some other way.
2. Situation "accusations". The subject is the object of accusations.

Among these types there is a connection, because the situation "accusations" implies that it was preceded by the situation "obstacles", where frustrator was in turn frostreaver. Sometimes a person can interpret the situation "accusations" as a situation of "obstacles", or vice versa.

In the field of diagnostics protective mechanisms primary role was originally given projective research methods. The most serious study of the measurements were carried out using the technique of Rorschach. However, given that using projective techniques cannot systematized to assess the full range of protective mechanisms, a number of researchers attempted to create questionnaires that measure protective mechanisms are based on either self-report test, or taking into account the opinion of the interviewer (expert evaluation). From more than a dozen existing methods, all but a few, limited to measuring only the individual methods are sewn. Most often this "denial", "rationalization", "projection". Some questionnaires, just rebuilt from claims MMPI. The problem of diagnostics of psychological defense mechanisms is complicated by the fact that the authors of the methods have different theoretical orientation that generates a large number of terminological inaccuracies and the problem of incomparability of data obtained by different authors.

Against this background, the LSI technique, described in 1979 on the basis of psychoevolutionary theory R. Pluchek and structural theories of personality, of Kellerman, admittedly the most successful diagnostic tool to diagnose the whole system of MPZ. To identify as leading, basic mechanisms, and to assess the degree of tension of each mechanism PZ.

The undeniable advantages of this technique are its theoretical validity and discriminant validity, targeted, multi-dimensionality and structural simplicity. As a strategic factor examines the relationship of individual species PZ with different effective States and diagnostic concepts.

The study of the level of social adaptation in a group of freshmen, which showed that the average level of social adaptation is equal to ≈ 50%.

Investigated individually-psychological features of students ' first year of University, which showed that:

first, extra peritoneal personality is not an indicator of a more successful social adaptation to the social environment;

secondly, pronounced communicative personality traits are not an indicator of a more successful social adaptation;

third, what personality, which is characterized by high anxiety, dissatisfaction, lack of confidence, low stress less adapted to their social environment, i.e. anxiety occurs as a result of the interaction of personality and its environment;

fourth, a more successful adaptation to the social environment will contribute to significant emotional characteristics such as emotional stability, confidence in themselves and their abilities, calm adequate perception of reality;

fifthly, that the mechanism of suppression provides care from anxiety and accompanied by the emotion of fear.

In the study we can conclude that successful social adjustment of the individual depends on the severity of psychological characteristics, namely the emotional characteristics of the individual.

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Energy Roadmap: Techno-Economic Content and Implementation Issues

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Abstract

The paper analyses the integration of the economic interests of the countries of Eastern Europe. The main direction of the research is a strategy of creation of a unified energy systems of the countries of Eastern Europe and Russia. The roadmap will enable participants to meet the growing energy consumption and energy security of the participants. Forecasting is the main approach in the development of scenarios for implementing the roadmap. Technical and economic content of the roadmap is based on the joint development of the Russian Agency for the Cooperation of Energy Regulators and ENTSO-E.

Keywords: *the energy market, roadmap, the financial instruments.*

1. Introduction

Currently, the economic interests of Europe aimed at strengthening and improving the system against faults in the supply of energy to the energy problems in a global context through co-operation with partner countries and with international organizations. Energy markets are large-scale mechanism, which is impossible without the existence of supporting institutions. Dani Rodrik (Rodrik, 2014) in his work draws attention to the institution of property rights; judicial Institute, charged with the enforcement of contracts; macroeconomic regulators, smoothing economic cycles; the institute of credit and financial system, providing oversight of financial stability and preventing financial panic; institute of uniform standards in the areas of technical standards, safety and environment; Institute of insurance system, giving some protection from market risks.

According to experts of the energy research Institute of RAS, recent trends indicate the manifestation of a number of factors that lead to instability of energy markets. Table 1 presents the factors affecting the stability of world energy markets.

Table 1: Factors influencing of world energy market

Factors	The impact on electricity markets
Changing relationships between actors in the energy markets (consumers and producers)	Not enough effective regulatory instruments of the world energy market has led to changes in the relationship between actors in the energy markets
The change in energy consumption	World energy consumption over the last 60 years has increased 5-fold and per capita – in 2 times.
Change of regional proportions of energy consumption	Regional disparities in energy consumption in the world, with high rates in the developing countries of Asia and India.
Energy supply	The reduction of the volume of hydrocarbon production in developed countries has led to a reduction in energy supply
The need for investment	There is the required amount of capital for the implementation of investment projects (modernization of the generating facilities and distribution lines), but it is difficult to determine the level of profitability of investments to offset the risks.
Rising energy prices	Since 2000, a steady growth of oil prices – the conflicts in the middle East, extreme weather conditions, etc.
International energy trade and infrastructure development	Supply and consumption of energy in the world through the growth of international energy trade brought the problem on a global level.
Supply risk	The growth in transit conflicts due to the increase in the number of transit countries. The maximum throughput of individual types of transport. Political conflicts. Natural and man-made disasters.

Table 1 lists not all the factors that threatens the stability of world energy markets. In the current trend of globalization we should not ignore technical progress, which promotes a mutually beneficial relationship. Taking into account a technical factor we should include its unpredictability.

Independence of energy companies in Russia is limited to the statutory provisions. In European countries, individual consumers cannot buy on the wholesale electricity market of Russia required amount of power. In order to ensure effective cooperation between the Russian energy companies and European consumers is necessary to develop a comprehensible language is the roadmap.

2. Theory

The roadmap was used in the 70-ies of the 20th century. (Phaal, 2004). Motorola developed a Road map for expanding market for its products. Many researchers note that the roadmap is a clear sequence of purposeful action in the legal, technical, financial-economic, scientific and humanitarian spheres, ensuring the reduction of energy resources consumption, the replacement of expensive and scarce energy resources for more accessible and improving the efficiency of their use. The features of the preparation and the implementation of the roadmap should be noted:

- the long-term planning based on the development of subprograms;
- the identification of key stages of development are interrelated by the time of their achievement;
- the support of transparency objective information about progress (scientific, technical, economic, financial) for project participants;
- the preparation of implementation options with regard to the possibility of their achievement at different external parameters (e.g., state support) and internal factors (e.g., different capacities of investments). Table 1 presents the mechanism of state regulation of the electricity market.

One of the standards of poorly soluble contradictions is the contradiction between promising high profitability and current insolvency. It is quite often that tomorrow's profitable innovative project does not provide a standard and mandatory payments today, for example, taxes or interest on borrowed resources. Only in the case of a comprehensive consideration of all aspects of the innovation strategy of the company and its financial policy can provide them with high overall efficiency.

Forecasting energy consumption is the basis for developing a roadmap for the future. Over the last decades, world energy consumption has increased by 5 times, and the roadmap will allow the country to meet the growing electricity needs. Electricity suppliers can implement excess reserves and ensure the capacity of generating companies and distribution lines.

Practice of interactions between producers and consumers of energy supply, formed in the last quarter of the twentieth century, is becoming a thing of the past. Table 2 presents the mechanism of state regulation in the European Union and Russia.

Table 2: The Mechanism of state regulation of the energy market

European Union	Russia
The General management for energy The subsequent stages of regulation relate to the level of individual EU member States, each of which can operate different systems of management of the industry. One regulator power from each EU country members of the Association of regulators ERGEG (European Regulators' Group for Electricity and Gas).	The Ministry of energy of the Russian Federation. in formulating and implementing state policy and normative-legal regulation in the sphere of fuel and energy complex, including issues of power, the Federal Antimonopoly service and its territorial bodies. The aim is to ensure the timely prevention, detection, control and suppression of actions restricting competition and infringement of interests of subjects of electric power industry and electricity consumers.

The information presented in table 2 indicates that the mechanism of state regulation does not weaken, but on the contrary it covers broader areas. Thus, public companies with large reserves, strive to develop processing and to participate in the equity of transport and distribution networks. In turn, large corporations, under the control of which there are processing facilities, transportation and logistics and distribution fuel resources, carry out a strategy of increasing its resource base.

Integration of economic interests of the partner countries is based on the development and strengthening of mutually beneficial relations and further development. Anyway, all kinds of roadmaps in the enterprise form the information base for management through strategic planning.

One of the main advantages of forming technology roadmaps is involvement in the development of the widest range of specialists of different profiles: developers of new technology or product, marketing specialist, producers, financiers and suppliers. That is the very participation in the development of the roadmap is considered as the influence of management that allows everyone to understand their role in implementing the development strategy of the enterprise, to hear (and see in figures and graphs) points of view and motivations of professionals of other services.

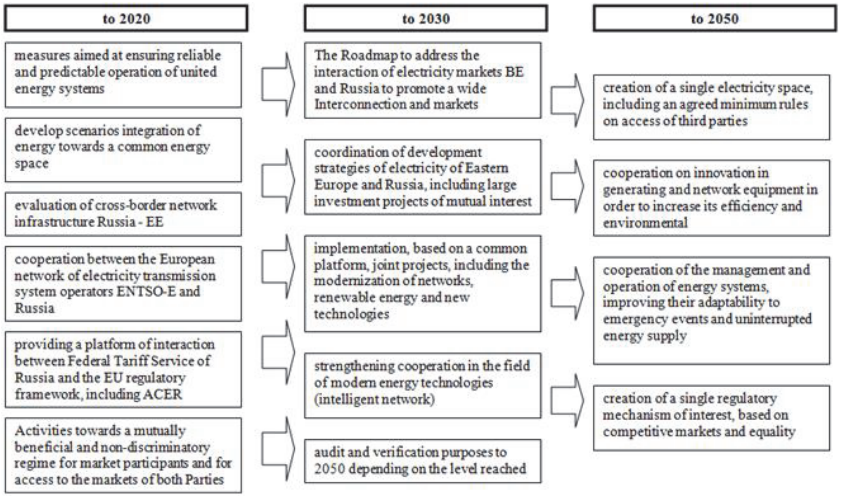

Figure 1. Recommendations and key stages of the Energy Strategy

3. Results

A unified approach to understanding the energy issue will allow to develop an effective set of measures for the implementation of the roadmap. So, at the UN Conference on climate change in December 2011, in Durban, 195 participants of the Convention on climate change agreed on a roadmap in re the development of the legislative framework until 2015 for action by all countries. Starting from the period of Bretton-Wood agreement, trade relations between the two countries has changed from simple trade to deep integration. Not a minor role is played by the World trade organization in the development and regulation of trade relations and on the electricity markets.

With this aim, the EU plans to stimulate further the development of well-functioning infrastructure and wholesale markets; to promote consumer participation, including the deployment of smart grids and metering systems (smart grids and meters) and the development of services for flexible demand management; the introduction of drives and maneuvering generation, stimulating decarburization. In this case, you must pay attention to the experience of the existing EU infrastructure markets Nord Pool, The Nordic Power Exchange, OMEL, European Energy Exchange, The International Petroleum Exchange, the Amsterdam Power Exchange.

The roadmap will allow consumer memebers to meet the growing electricity demand, and suppliers to implement excess reserves and to ensure the capacity of generating companies and distribution lines.

European consumers are interested in modernization of the Russian energy system. This situation is explained by the fact that the EU is supplied 88% of the total amount of oil exports from Russia, 70% of the total volume of gas and 50% of the total export of coal. The volume of electricity consumption in 2010 amounted to 16.8 billion kWh [3] currently, companies Bulgaria, Germany, Greece, Italy and the Czech Republic have expressed their interest in cooperation in the field of electric power transmission and energy.

The main goals and objectives of the roadmap up to 2020 are presented in figure 2.

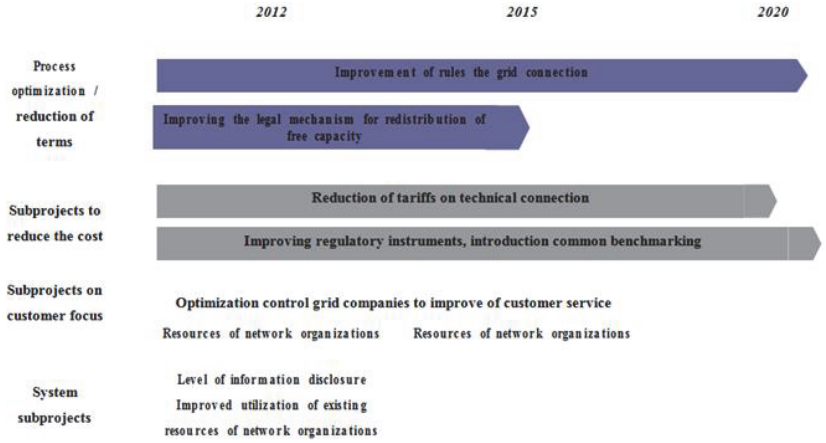

Figure 2. Results of Roadmap 2012-2020

The importance of energy security also requires modification of the relations of the partner countries of the EU and Russia in the field of energy transition from purely commercial relations «supplier-consumer» relationship, based largely on technology.

4. Conclusions

Antimonopoly services concern regulation and identify evidence of abuse of market power by companies to their economic status. The manipulation of prices for electric energy can occur by performing economically and (or) technologically unjustified actions, including the exclusive use of participants (including temporary) position on the wholesale market price zones of the wholesale market), which lead to a significant change of prices (price) for electric power.

As a rule, the manipulation is expressed in filing the members overstated (understated) prices within the price bids or withdraw ling of capacity from the market and creating artificial scarcity.

It is important to pay attention to the following factors that contribute to the implementation of the Road map:

- the development of a unified technical regulations – definition of rules of technological connection to switchgear stations, determining relationship of adjacent network organizations, regulation of a procedure of disconnecting from the network;
- the study of the mechanism imputed bets on technical connection;
- the improvement and implementation of standards for information disclosure network companies;
- the introduction of uniform standards of customer service network organizations;
- the improvement and implementation of the mechanism regulating lost income.

Technical and economic content of the roadmap is based on the joint development of the Russian Agency for the Cooperation of Energy Regulators and ENTSO-E.

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Setting the Minimum Wage in the Russian Federation Regions

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Abstract

Authors investigate the historical aspect of the minimum wage setting in Russia. It is noted that in the USSR period the minimum wage was not aimed at the labour market regulation, but on the structuring of the salary system in the Soviet economy. At the present time the minimum wage in Russia and its regions not solve its main objective - to provide a simple reproduction of the labour force of low-skilled workers. Different ways of the minimum wage setting in the regions of Russia have led to significant territorial differentiation. The authors suggest some measures to improve the minimum wage setting in Russia.

Keywords: *minimum wage, labour market, region, unemployment, wages.*

1. Introduction

An important measure of labour market regulation in the Russian Federation is the practice of minimum wage establishing by the state. According to article 133 of the Labour Code of the Russian Federation, the minimum wage may not be lower than the cost of living of an able-bodied person, however, this provision has not yet been implemented. The discussion on the necessity and feasibility of the minimum wage increasing continua in academic and political circles.

The purpose of this paper is to study the practice of setting the minimum wage in the Russian Federation and to develop recommendations to improve the mechanism of the labour market regulation by a minimum wage setting.

The Russian Federation has developed a unique practice of establishing a minimum wage at different levels of government. So at the federal level, the minimum wage is set by law at the initiative of the Russian Federation Government, and in the Russian Federation regions - on the basis of tripartite agreements of the social partners (regional executive authorities, employers and workers). The federal minimum wage, like in most countries of the world, applies to all categories of employees in all sectors of the economy.

2. Theory

Established in Russian practice of setting the minimum wage has Soviet "roots". Minimum wages in USSR times was not considered as the lower limit of the labour price in the labour market, because de facto the labour market in the Soviet period did not exist. Its main significance was in structuring a system of salaries of the employed population in the Soviet economy. The minimum wage corresponded to the minimum rate Unified tariff intended for wage worker first category operating in normal conditions and performs labour standards or spent time rate.

First tariff wage system was introduced for railway workers in 1917 by People's Commissars Council decree "On the norms of remuneration railwaymen categories of employees and eight-hour day in all branches of railway work", according to which fourteen categories of employees were introduced, where the rate of the first category corresponded salary of 155 rubles and fourteens categories - 510 rubles. April 1, 1918 was adopted People's Commissars Council decree "On the introduction of rates on the People's Commissars Council according to the tariffs approved by the People's Commissariat of Labour," in which all employees are divided into three categories: non-qualified employees, qualified employees and persons intelligent labour (doctors, workers in the education, heads of educational institutions,

heads of departments, engineers, etc.) for the latest category of persons establish the salary of 700 rubles a month, and for the first category persons - 275 rubles per month, which corresponds to the minimum rate of pay.

A new approach to the wages regulation of all employees was established by Decree People's Commissars Council from October 18, 1918 "On the payment of employees and workers of Soviet institutions", according to which the tariff wages system was introduced: all the employees were divided into 4 groups depending on their qualification level and specialized knowledge; in each group were allocated to 3 categories of workers, depending on experience and seniority. The most highly paid employees of the first group of the first category received 1,000 rubles per month, and the lowest-paid workers in group 4 category 3 - 475 rubles per month.

Do not think that the Soviet government made significant progress in raising the minimum wage. However, it must be borne in mind that while only about 7% of wages to employees paid in cash and the other part of wages workers received in products. In particular, according to the Decree of People's Commissars Council from October 18, 1918 "On the payment of employees and workers of Soviet institutions" all kinds of renditions of Employees include in wages: food items and using of apartment, utilities, public transport and even hairdressing and baths - in the amount of their actual value at that time.

During the first years of USSR tariff system of remuneration was a subject to constant change, and with it was changing the minimum wage. This was due to the fact that in the period of war communism in the USSR increased dramatically currency issue, which resulted in a rise in food prices, and that, ultimately, led to the introduction of the rationing system. To restore the monetary system of the country in 1922 - 1924 years held the first monetary reform. Thus, a ruble of 1923 was equivalent to a million old rubles and 100 rubles of 1922. Introduction of a new monetary system and gold pieces entailed changing wage systems. There were excluded non-cash forms of payment of wages to workers. Wages are set by collective agreements for each group of occupations, concluded between the administrations of enterprises and workers unions. Since 1926 there has been a steady growth in the USSR minimum wage. In 1926, the average for the economy, minimum wage was 0,82 rubles per day in 1927 – 0,91 rubles, in 1928 – 1,26 rubles per day.

On November 1, 1937 the minimum wage on the USSR territory is set at 115 rubles per month for employees working on the terms of hourly wages, and 110 rubles for workers working on the terms of piecework pay system.

During the Great Patriotic War natural employee benefits and rationing were mainly used. In the postwar period, all sectors of the economy had their tariff schedules. Reform outdated tariff system, which existed for over 20 years, was conducted in 1956 - 1964. During this time, the amount was reduced tariff scales applied in industries with a few thousand to twelve. The system of remuneration has become clear and understandable for each employee. It links its qualifications, conditions and results with the value of labour wages.

In 1961 the next monetary reform in the Soviet Union was held, at which the specimen banknotes in 1947 were exchanged for new ones in a ratio of 10: 1. In the same proportion were changed and wages, social security benefits, pensions, and the prices of all commodities. In 1964, the minimum wage in all sectors of the national economy was 40 - 45 rubles. From January 1, 1968 the minimum monthly wage of workers and employees of all sectors of the economy has been increased to 60 rubles. In 1972, the minimum wage according to the decree of the Central Committee of the Communist Party and the USSR Council of Ministers Council of Trade Unions was already 70 rubles. It existed until October 1, 1991.

USSR Law of 19 April 1991 "On improving social guarantees for workers' minimum wage in Russia was raised to 180 rubles a month. The uncontrolled growth of prices in 1991 - 1997 years contributed to constant revision of the minimum wage by the Russian Federation Government. During the period of market reforms from 1991 till 1997, the minimum wage has changed seventeen times, and it has grown to 464 times. From January 1, 1997, it was set at 83490 denominated rubles per month. Lack of necessary funds in the federal budget for raising the minimum wage after the 1998 default made it impossible to revise its value until June 2000. Federal law from June 19, 2000 about the minimum wage in Russia was raised to 132 rubles, and from that moment began its gradual growth and increased purchasing power in relation to the cost of living (see table 1).

Table 1: The ratio of the minimum wage and the cost of living established at the level of the Russian Federation

Date of the minimum wage revision	Minimum wage, rub. monthly	The cost of living of an able-bodied person, rub. monthly	The ratio of the minimum wage and cost of living, %
1 January 2014	5554	8283	67,05
1 January 2013	5205	7633	68,19
1 June 2011	4661	7023	66,37
1 January 2009	4330	5497	78,77

Date of the minimum wage revision	Minimum wage, rub. monthly	The cost of living of an able-bodied person, rub. monthly	The ratio of the minimum wage and cost of living, %
1 September 2007	2300	4330	53,12
1 May 2006	1100	3717	29,59
1 September 2005	800	3288	24,33
1 January 2005	720	3138	22,58
1 October 2003	600	2341	25,63
1 May 2002	450	1865	24,12
1 July 2001	300	1635	18,35
1 January 2001	200	1513	13,22
1 July 2000	132	1290	10,23

Since 2007, Russia has changed the economic content of the concept of "minimum wage". In the USSR period there was a practice of establishing the minimum wage as a part of the earnings of the employee, to which various payments and allowances were added, depending on the qualifications of the employee, complexity, quantity, quality and working conditions. This practice was eliminated relatively recently after the introduction of the 2007 amendments to Article 129 of the Labour Code, according to which of this Article was removed the very definition of the minimum wage, with the position that a minimum wage is not included compensation, incentives and social benefits. Therefore, at the present time the minimum wage includes all kinds of those benefits. Changing this provision has caused many disputes and even litigation, especially among the population employed in areas with difficult climatic conditions, as well as in the production of heavy, hazardous or dangerous conditions. However, the new version of Article 129 of the Labour Code was left unchanged.

Thus, at the federal level the law is not enforced norm of Article 133 of the Labour Code that the minimum wage cannot be below the minimum subsistence level. However, in some regions of the Federation, this provision is a practical embodiment, and their experience of establishing a minimum wage can be used by other Russian Federation regions.

3. Results

The understanding that the minimum wage can not be the same in the Russian Federation regions because of the huge territorial extent of the country and different climatic conditions, has led to the fact that since 2005 the individual Russian Federation regions was granted right to establish the regional minimum wage, based on their economic opportunities.

Federal Law of June 19, 2000 "On the minimum wage" from 1 January 2005 at the federal level was established a minimum wage of 720 rubles, and from 1 September 2005 - 800 rubles per month. However, self-sufficient entities of the Russian Federation (which did not receive subsidies from the federal budget) were allowed to make their own laws and establish a higher minimum wage than the federal. These laws were to take into account the views of the tripartite commission for regulation of social and labour relations in the region. First specified rule of law in 2005 benefited Moscow and St. Petersburg.

On September 1, 2007 in accordance with Article 133.1 of the Labour Code of the Russian Federation all subjects of the Federation have the right to establish a regional minimum wage, which must not be less than the federal. To do this they need to provide a regional tripartite agreement between the Government of the Federation, the employers' association and union workers.

The minimum wage in the regions can be established for all workers employed in the territory of the subject of the Federation, except for employees, organizations which are financed from the federal budget. Setting the minimum wage Russian Federation regions should proceed from the socio-economic conditions and the subsistence level of the working population prevailing in the region.

Despite a legislative basis in Article 133 of the Russian Labour Code provisions that the minimum wage can not be below the minimum subsistence level of the working population, the majority of the Russian Federation regions are in no hurry to raise the minimum wage, and use the level set for the Russian Federation. Regional authorities do not want to burden their budgets additional cost to payments of the minimum wage. There is only a region where the minimum wage is established at the cost of living of an able-bodied person in all sectors of the economy, it is the Kamchatka Region.

The lack of common and clearly defined mechanism, to set minimum wages at the regional level has led to three approaches (methods) to establish a minimum wage in the Russian regions:

1. The minimum wage is set at the level of federal significance. This is the most common variant of the minimum wage setting in the Russian Federation regions. It is in no way affiliated with the regional estimates the cost of

living and, therefore, is not a guarantee of social protection against poverty for the working population. But as the legislation of the Russian Federation does not contain the conditions under which the subject of Federation would be obliged to set minimum wages above the federal level, this method is used and the subsidized regions of the North Caucasus Federal District, and it is secured in the Central and Volga Federal District, and the regions with difficult climatic conditions of the Siberian and Far Eastern Federal District.

2. The minimum wage is set as a percentage of the cost of living of an able-bodied population in the region. Typically, this ratio is 100%. There is only a region to set a minimum wage at the level of 120% of the cost of living level, it is the Volgograd Region. As already noted, this social standard in most regions only applies to workers in the private sector.
3. The minimum wage is set as a fixed amount. This practice is more convenient, especially for employers who do not need to constantly monitor the dynamics of the cost of living, established by regional authorities on the expiration of the next quarter, and then compensate for low-paid workers underpaid amount spent for the period. Moreover, in those regions of the Federation, where applicable fixed minimum wage, it is mandatory for employers of all sectors of the economy, but unfortunately it is often lower than the cost of living, because of the limited financial capacity of the regional budgets.

The Russian Federation regions have the right to set a minimum wage below the federal level or even eliminate the use of the minimum wage in their territory (see table 2).

Table 2: The distribution of the subjects of the Russian Federation according to the methods of establishing the minimum wage in 2013

A method for establishing minimum wage	Regions
Minimum wage is the federal level (5205 rubles).	Belgorod Region, Bryansk Region, Voronezh Region, Tula Region, Yaroslavl Region, Rostov Region, Mordovia Republic, Chuvashia Republic, Chelyabinsk Region, Khakassia Republic, Transbaikalia territory, Kemerovo Region, Vladimir Region, Smolensk Region, Tambov Region, Vologda Region, Mari El Republic, Tatarstan Republic, Nizhny Novgorod Region, Orenburg Region, Sverdlovsk Region, Tyumen Region, Buryatia Republic, Krasnoyarsk Region, Irkutsk Region, Ivanovo Region, Kostroma Region, Lipetsk Region, Orel Region, Komi Republic, Novgorod Region, Pskov Region, Dagestan Republic, Ingushetia Republic, Kabardino-Balkar Republic, Karachay-Cherkess Republic, North Ossetia – Alania Republic, Chechen Republic, Stavropol Region, Adygea Republic, Kalmykia Republic, Astrakhan Region, Bashkortostan Republic, Udmurtia Republic, Perm Region, Kirov Region, Penza Region, Samara Region, Saratov Region, Kurgan Region, Tyva Republic, Omsk Region, Jewish Region, Chukotka Region
Minimum wage as a fixed amount	Moscow, St. Petersburg, Moscow Region, The Ryazan Region, Karelia Republic, Arkhangelsk Region, Nenets Region, Kaliningrad Region, Leningrad Region, Murmansk Region, Khanty-Mansiysk and Yamal-Nenets, Altay Region, Tomsk Region, Novosibirsk Region, Khabarovsk Krai, Sakhalin Region, Sakha (Yakutia) Republic, Magadan Region, Resp. Altai, Amur Region.
As a percentage of the minimum wage to a living cost	Kaluga Region, Volgograd Region, Kursk Region, Tver Region, Krasnodar Region, Ulyanovsk Region, Kamchatka, Primorsky Region

Russia is unlikely to achieve a substantial improvement of living standards until such an important social standard as the minimum wage, which serves as a kind of "point of reference" for the wage-setting all the categories of the employed population and the size of temporary disability benefits, is so low that it does not allow meet the vital needs of the employee and provide even simple reproduction of his labour.

Unlike many other countries in Russia there is no applicable subminimum wage for youth, and there are no workers for whom the minimum wage does not apply (for example, persons with disabilities). It is in practice reduces the possibility of employment specified categories of workers.

Labour Code does not provide guidance as to when and under what conditions should be revised minimum wage. Article 134 of the Russian Labour Code contains a provision according to which wages (not just the minimum) should be indexed by employers with the growth of consumer prices for goods and services, however, in practice, this provision is not implemented any budget organizations or private firms. As a result, the minimum wage is reviewed periodically at the discretion of the Government. Such practices have often been criticized by Russian researchers.

Given that Russia is an important player in the global labour market and is involved in the processes of

international migration exchange existing in the Russian system of setting the minimum wage needs to be reformed based on the experience of developed countries and the modern needs of the Russian economy in attracting foreign labour on the Russian labour market.

4. Conclusions

The Government of the Russian Federation has the task of making the minimum wage the social standard that would provide employment to population welfare, sufficient for the reproduction of their labour. The analysis of minimum wages in the subjects of the Russian Federation indicated that the region has not produced any single approach to the determination of its amount. In many regions of the Federation minimum wage remains below the subsistence level. This fact has a negative impact on the ability of reproduction of the labour force of low-skilled workers. Under these circumstances it is necessary to implement these measures.

Firstly, given that the Russian Federation has developed various ways of setting the minimum wage, which create unequal opportunities for low-wage workers in the maintenance of an acceptable level of life, there is a need to develop a common approach to the establishment of the minimum wage across the country. The minimum wage as a social standard should depend only on the conditions of employment and the necessary costs of reproduction of labour power of the employed population, and should not depend on the selected region's ability to establish a minimum wage. In this regard, at the federal level, it is advisable to develop a common methodology for setting the minimum wage in the Russian Federation, which must have prescribed criteria for establishing and raising the minimum wage, such as, for example, the rising cost of living, the expected rate of inflation, the dynamics of labour productivity .

Secondly, it is necessary to review the provisions of Article 129 and 133 of the Russian Labour Code. In our opinion, the minimum wage should not include compensation and incentive payments and allowances. If, for example, enabling premium is included in the minimum wage, then it ceases to be a premium in the conventional sense of the term, and loses its stimulatory. In the current environment the workers no incentive to work in the factories, where the working conditions are different from normal.

Third, in Russia there is a need for the introduction of a special minimum wage for young workers first hired. Since the performance of the young workers are traditionally lower than that of workers with experience, therefore, their wages must also be different. This will increase the incentives for Russian employers to hire young staff.

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Formation of Financial Planning for the Automotive Industry

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Abstract

The article presents the principles and criteria for staging and the use of process-oriented financial planning in the automotive industry, allowing separate business processes, promote the growth of the company's value. The developed model estimates of currency risks on the basis of cash flow modeling of the budget of foreign economic activity the automotive industry aimed at increasing the company's value.

Keywords: *financial planning, cost control, the automotive industry, responsibility center, ABC-costing, foreign trade activities.*

1. Introduction

The process of cost management is a component part of the overall management of the economy of the enterprise. To one of the elements of the financial mechanism of cost management automotive companies include financial planning.

Changes occurring in the internal and external environment, have a corresponding impact on the functioning of the organization as a whole and its budgeting system in particular.

In recent years, the most widely used in practice to obtain three methods of financial planning: the method of percentage of the sale; computational and analytical method; budget planning.

Budgeting is an integral part of the overall planning process, and not just the financial part. The mechanism of budgetary planning income and expenditure to ensure it is advisable to implement cost savings, greater efficiency in the management of these funds, reduce wastage and losses, as well as to improve the reliability targets (for tax planning purposes).

Financial planning - the process of developing specific budgets in accordance with the objectives of operational planning.

2. Theory

For automotive companies there is a need to streamline management processes, the creation of a coherent system of planning and control, ie, it comes resolved budgeting system, the foundation of which is the financial structure.

Following procedure is recommended to determine the financial structure in the formulation of budgeting:

1. Analyze the business enterprise.
2. Make a list of the types of economic activities (type of business).
3. Distribute businesses on structural divisions.
4. Determine the financial structure of the enterprise.
5. Select in the financial structure of the enterprise centers accounting (financial reporting center, the center of financial accounting, cost center).
6. Distribute the revenues and costs for the structural subdivisions.
7. Select the kinds of budgets for these units.
8. Determine the types of consolidated budgets.
9. To review the financial structure of the company, to develop a position on the finance department, accounting,

budgeting provision.

Center of financial responsibility - to the financial structure of the company, which is responsible for all financial results: revenues and profit (loss), costs. The ultimate goal of any center of financial statements - profit maximization. For each center, the financial statements shall be drawn up of all three main budgets: the budget of income and expenses, cash flow budget and forecast balance.

As a rule, a center of financial statements are the individual enterprise; subsidiaries of holding companies; subdivisions, agencies and branches of large companies; regionally or technologically isolated activities (business) diversified companies.

Center for Financial accounting - to the financial structure of the company, responsible for only some of the financial indicators, such as income and for part of the cost. Center for Financial Accounting component of the budget of revenues and expenditures, or some private and support budgets (budget labor costs, sales budget).

As centers of financial accounting may make major manufacturing plants involved in a single process chain enterprises with sequential or continuous production cycle; manufacturing (assembly) shop; sales and service units.

A cost - to the financial structure of the company, which is responsible only for expenses. And not for all the charges, and the so-called regulated costs and expenditure savings which management cost centers can control. This sub-units operating core business processes. For the cost center accounts for only some auxiliary budgets. As a cost center can act Support Services Company (maintenance department, security service, administration).

Registration Center - is any object of the financial structure, which may be the center of the financial statements, and the center of the financial accounting and cost center.

Given the ongoing changes in the automotive industry is the purpose of financial planning, cash flow management of the company as a whole, reducing the risk of loss of company liquidity and inefficient use of funds, accounting centralization, standardization of processes within the company.

Given the ongoing changes in the automotive industry, the purpose of financial planning is to manage the cash flow of the company as a whole, reducing the risk of loss of company liquidity and inefficient use of de-monetary funds, accounting centralization, standardization of processes within the company.

Given the changes in the structure of the industry and company risk-based system of financial planning in the automotive industry offers based on the following principles,

Table 1: Principles of risk-based system of financial planning in the automotive industry

Principles	Characteristics
Support for the organizational structure of the financial structure of the company	Financial structure should be maintained organizational structure, ie, elements of the financial structure must comply with the elements of the organizational structure.
Integrity and consistency	Unity and consistency of the accounting policies used in risk assessment methodologies.
Unification and methodological integrity	All classifiers, budget forms, calculation algorithms and methods used are standardized and binding on all participants in the budget process.
Personal responsibility	Each participant of the budget process is personally responsible in the area of its competence, assesses the extent and cost of risk.
Continuity and coherence of the budget process	The process of planning, accounting, control, analyze and adjust the budgets of operating continuously, when a probability of default of the budget developed appropriate measures.
Feedback	To improve the efficiency of financial planning at the enterprise need for constant monitoring parameters and monitor the implementation of control actions and state changes.
Visibility and transparency	An openness and accessibility of information on the implementation of the company at all levels of the budget system.
Balance	Involves ensuring the planned budgetary measures necessary operational and financial resources.
Rational centralization	Centralized planning and management of financial resources
Budget evaluation	Valuation of potential losses from the planned revenue shortfall and excess expenditure in the performance of the budget.
Democratic governance	Provision of equal conditions and opportunities for all participants in the system.

Management of financial flows of the company is necessary, but any company, managing for results, must learn, first and foremost, to manage their economic results, namely to increase the value of the company as a whole for the shareholders (owners) by increasing revenues and reducing costs. None of the existing models of financial flows can not reveal how effectively the company's financial functions. Therefore, and need a comprehensive approach to budget management system.

Financial planning should be an ongoing process, creating a favorable environment for the development of alternative approaches, as well as allow you to make changes quickly and easily. As a general rule, if the budgeting system does not work, from her, or is abandoned, or put it in order, which is what most companies, each decide for themselves on their own which way to go, and any of the options is correct.

The financial planning of any business is a set of interrelated operational, investment and financial budgets. The operating budget consists of the budgets of sales, production, procurement, etc.., Investment - from capital budgets, implementation of non-current assets, investment income. In the financial budget usually include cash flow budget, the budget of the profit and loss (income and expenditure budget) and the budgeted balance sheet. Consolidated budget, which includes financial, operational and investment budgets, often called the master budget.

In the development of the budgeting system should take into account not only the species component of the budget, but also the relationship between them, as well as the sequence of their formation. The collection of all budgets and order of compilation is called a budget model. And if the low-end models in the textbooks tend to be similar, in practice to find at least two companies who have low-end models are the same, it is difficult.

The budget structure of the enterprise is determined by three main factors:

- Requirements on the part of the company's management,
- Specifics of business,
- The management structure of the company (the future financial structure).

Under the requirements from the management understanding the requirements for composition, detail and timing budgeting procedure. The budget structure should reflect those areas of economic activity, follow-up is mandatory for regular management, that is to be minimally sufficient for successful business management.

In doing so, the budget structure are presented as requirements of detail and accuracy of the information contained therein. The higher these requirements, the more complete structure must be low cost, i.e. cover all areas of economic activity. Completely reliable information has only comprehensive model of the budget structure, and the most detailed and reliable - individual complex model of the budget structure.

Specificity of business enterprise requires an individual approach to the development of functional budgets. There is no single (base) for all types of businesses and areas of economic activity budget structure.

Based on the practice of systems development and implementation of budget management, the following cost model:

1. Individual model for comprehensive budgeting
2. Universal budget model
3. Financial planning of individual work areas
4. Financial Planning financial flows
5. Financial planning inventory flows

In conclusion, we note that, although not formally All models comply with the generally accepted concept of budget management, they all have features that distinguish financial planning in a separate management technologies:

- Availability of financial responsibility centers (although in some cases there is no comprehensive financial structure);
- Availability of interrelated budgets that allow to plan activities and to take into account the fact in the same sections;
- The ability to refine and optimize the system.

It is the choice of optimal budget model at the design stage of financial and budgetary structures enable the company to not only reduce the time and costs, but also to get maximum results, expressed in increasing business transparency and improved financial performance in the shortest possible time, and to provide an opportunity for further growth and development of the system.

It is possible to identify the main factors that make the budgeting system of each company unique:

- Limitations that affect activities of the company (sales volume, production capacity, and so on. Etc..)
- Type of activity;
- The strategic objectives;
- The information needs of management of the company;

- The size of the enterprise and control system.

In the opinion of the author and a modern classic budgetary accounting needs further refinement for management purposes. Although he has many important factors for decision-making:

- Have a complete management cycle: planning, implementation, monitoring, analysis.
- Accounting for financial responsibility centers and centers of financial accounting.
- The existence of different forms of budgets;
- Office of the targets set in the budget;
- Cyclic accounting (accounting periods), and others.

This data is often not enough to make management decisions and to reflect the full picture of the current state of the enterprise. Of course, everything depends on the structure and specificity of business - processes, and for many businesses it will be enough.

Large enterprise is a branched structure with a variety of units and complex bonds. The company can be represented as a set of specific processes or functions:

- The function or process (hereinafter may be considered these concepts as synonyms) for the management of business;
- The function of power supply enterprise;
- The function of maintaining personnel records, production and safety, etc.

As a rule, all functions are grouped by department or office, but the same department may be involved in several processes, such as transport section busy main transportation and support units, as well as leadership, or the same department can perform several different functions for example, the Department of Informatics and Communications, has the role of providing telephone services, computer equipment repair, maintenance or development programs.

The way out of this situation would be to use Activity-Based Budgeting (ABB) - Budgeting built on a process-oriented approach (Process cost functional or financial planning). Process cost financial planning - a relatively new approach to budgeting, but it is small enough common, not least because of the reluctance of companies to share technology, which they consider to be their competitive advantage.

Application of this technique allows you to:

- Get the cost of each process in the enterprise with the necessary level of detail;
- Get the cost structure of processes;
- Track where costs specific aim Center of financial responsibility or the Center for Financial accounting;
- Use additional flexibility in the budget structure through an extra dimension;
- To accurately calculate the cost of goods sold through the distribution process costs;
- Rate of an enterprise from different perspectives;
- Plan on the basis of zero-based budget;
- Evaluate the effectiveness of each process;
- Rate of why there are costs to evaluate the bottlenecks and what processes are the least effective.

We recommend using this technique after the development of strategic maps of the enterprise.

For the introduction of the concept of ABC costing and thus posing ABC budgeting, you need to spend Pre ABC-Costing. ABC-Costing is relevant when the share of indirect costs are substantial, and their distribution approximate empirical methods (in terms of revenue, direct costs, salary, etc.) results in significant error. Sometimes enterprises are marginally unprofitable products. Often accountant analyst feels, what products and other objects accounting unprofitable, if properly take into account all costs. But without ABC-Costing prove by figures that cannot. In the method, all these factors are analyzed quantitatively. Sometimes the use of simple calculations based on data from existing records, but most expert. We call this ratio analysis.

3. Results

For the introduction of the concept of ABC-Costing and thus posing Aus- Budgeting, it is necessary to carry out Pre ABC-Costing, which includes a ratio analysis, which allows to determine the need for and feasibility of ABC-costing the company. The first three coefficients calculated, the fourth factor - expert (see Table 2).

Table 2: Data coefficient analysis

	Odds	
1	The share of indirect costs in the total aggregate cost	>50%
2	Revenue contribution marginally unprofitable products under the existing accounting system	>20%
3	Share of profit marginally unprofitable products in profit under the current accounting system	>30%
4	The error probability distribution of indirect costs	>50%

The total or cumulative assessment of the feasibility of ABC on the enterprise as a whole or groups of units and / or products is a measure - the amount of points (b_i) to indicators (ratios) with the weights of indicators (a_i) = ABC=$\sum b_i*a_i$, (1).

If ABC> 40, the statement of ABC-costing the company will be rational and will lead to lower costs and allocation errors if ABC <40, the statement of ABC-costing the enterprise feasible.

The paper presents a block diagram of the model formulation and use of process-oriented financial planning by the automotive industry, which allows select business processes that contribute to the growth of the company's value:

Methodology Pre ABC-Costing is based on the following principles:

- Simplicity and practicality.
- The probabilistic nature of the conclusions.
- Ability to use a truncated procedure with an incomplete set of coefficients of the difficulties in assessing the appropriateness of some of the factors ABC-Costing.
- Methodology is easily adjusted to the company (usually by giving up some of the coefficients that have little value in the enterprise or that are difficult to estimate).
- The use of expert judgments only where there cannot be direct evidence.
- Estimates used in the method is indirect. Using legal language, we can say that they are not direct but indirect evidence. This means that a negative score on any of the criteria does not put an end to the ABC-Costing for this company. It shows that, probably, the introduction of ABC-Costing is not very important. And even this cautious conclusion is not quite correct. Now, if all of the estimates are negative, then the development of ABC-Costing almost certainly worth the wait.

4. Conclusions

Thus, the purpose of financial planning in the automotive industry, operating in the market of Russia, is as follows:

- More efficient use of the available resources, assets (tangible and intangible) and responsibilities of managers at various levels of government for providing them with the resources and assets.
- Create opportunities for the evaluation of investment attractiveness of certain areas of economic activity which is or who is going to do in the future business.
- Increasing the validity of the provision of financial resources in certain areas of economic activity.
- Strengthening of financial discipline, especially increasing the responsibility of managers at various levels of management and to stimulate a more effective combination of structural units in the interests of the entire organization.
- Control over changes in the financial situation of the company.

In the context of Russian instability problem of risk is of great importance in the justification of administrative decisions, so be aware that the effects of environmental influences can be both positive and negative.

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Hedging as an Important Component of the Financial Mechanism of Enterprise Management in the Automotive Cycles

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Abstract

The Russian automotive industry is facing increasing competition from world leading manufacturers. In these circumstances, it becomes important to achieve optimum prices without affecting the properties of produced consumer vehicles. A possible way to optimize - hedging through the purchase of exchange and OTC derivatives. Practice shows that the leading automotive corporations make extensive use of derivative financial instruments to hedge the cost of optimizing the currency and commodity contracts, interest payments. This practice can be applied to the Russian automobile enterprises in this paper, we consider the practical aspects of risk hedging.

Keywords: *automotive industry, the industry for the production of vehicles, hedging, derivatives, financial derivatives, cyclic, budgeting, hedging system.*

1. Introduction

Russian automobile enterprises are experiencing a negative impact primarily growth in steel prices, which range from 70 to 80% by weight of the car.

At the same time lately has been a sharp rise in steel prices - from 2000-2012's prices rose more than 3 times.

Given the high proportion of steel in the weight of the car, the increase in steel prices leads to an adequate increase in the cost of production automobile. At the same time the increasing competition among the car manufacturers and the growth of production in the first place in China makes it impossible to appropriate compensation cost growth increase in the price for the products.

It should be noted that the financial results of enterprises automotive affect not only the increase in steel prices, but also fluctuations in the value of foreign exchange resources. The effect increases with the proportion of imported components in the value of the car. So the novelty of the domestic automotive industry - Lada Grant - 15-20% consists of imported components, and in value terms, the share of 30-35% of the value of the car. It is obvious that as the integration of the Russian car manufacturers in the industry worldwide impact of foreign currency translation in the direction of the weakening of the national currency will increase.

2. Theory

It should be noted that the weakening of the national currency and an increase in foreign exchange rates occurs in times of crisis for the Russian economy periods, which are usually accompanied by a fall in car sales, a decrease in the volume of consumer credit and other negative consequences. Compensation for losses automaker at this time due to the price increase is not possible, as the market at this time, "lying on its side" and any, even a slight increase in product prices will cause an even greater drop in sales.

However, manufacturers face and reverse the effects of currency fluctuations related to the strengthening of the national currency. This occurs when exporting cars. For example, at the end of 2010 OAO "AvtoVAZ" sold 43,839 units. Car domestic production for export, accounting for 8% of total sales of products of JSC "AvtoVAZ". Geography of

deliveries of vehicles of "AvtoVAZ" export covers almost all regions of the world - from the CIS to Europe and Latin America. Increase in the value of the national currency leads to lower yields concluded export contracts and loss of "AvtoVAZ".

In addition to rising steel prices and changes in exchange rates, the negative impact on the financial and economic activity of the enterprises of motor has a positive change in interest rates (see Fig. 1)

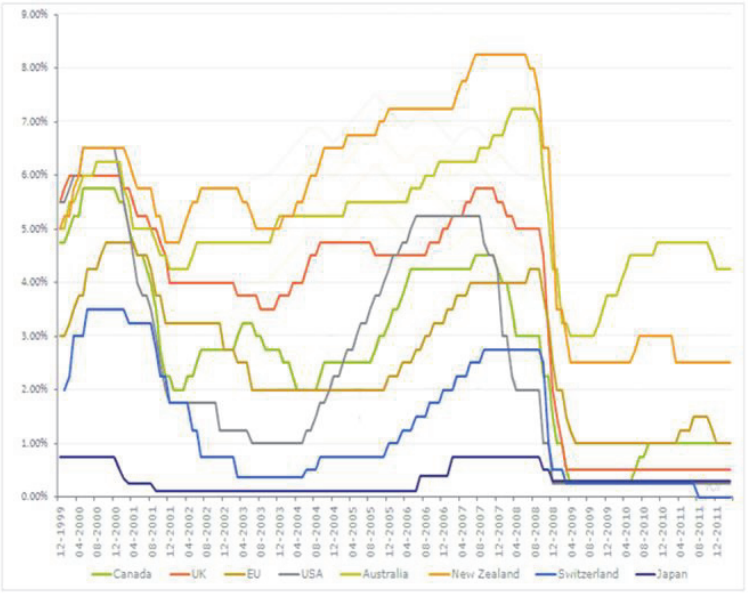

Figure 4 - Change in interest rates c 1999-2012

As is the case with the growth rate of the foreign currency interest rate growth begins in the most "wrong" time - during the progressive crisis phenomena in the economy.

Normally at this point in the warehouses of dealers residues accumulate unsold products, suppliers of raw materials and components are beginning to feel the lack of working capital, reduce the supply of products under the terms of payment by installments, requiring prepayment.

At these moments, the debt burden on the company automobile, which are a unique center for the application of credit load the entire business process, critical increases and growth in interest for the loan servicing existing debt makes software critical for the life of the enterprise. This can lead to destabilization of the financial condition of the company, a decline in its liquidity and bankruptcy of the enterprise. A striking example - the crisis of 2008-2009, the consequences of which are: the bankruptcy of the largest automobile manufacturer - General Motors (General Motors), technical bankruptcy of a member of the American trio - Chrysler (Chrysler), the financial problems of the German Opel (Opel) and Russian AvtoVAZ, bankruptcy of the Swedish SAAB (SAAB) and so on. should be noted that the automotive industry has faced in 2008-2009 with the biggest crisis in the history of the industry, which is one of the reasons - high debt load and failure of service due to a sharp increase in the cost of financing. Debt crisis automakers was overcome by government support. For example, to rescue AvtoVAZ Russian government spent 70 billion rubles, and the majority of these funds - 54 billion rubles were spent on repayment of current debt in the form of a loan, issued bonds and notes.

3. Results

In general, the Russian automobile enterprises in their business activities there are many risks - the risk of compliance with contractual relations in the supply of components and raw materials to the risks associated with changes in the legal system and force majeure. Consequences of most of these risks are minimized by means of selecting contractors, contracts with insurance companies, the use of legal support and so forth.

Out of the risk should be allocated the risks associated with the rising cost of raw materials, changes in exchange rates and interest rates, for the following reasons.

Firstly, these risks are an effective system to reduce losses by hedging these risks in financial and commodity markets through transactions with derivative financial instruments.

Second, the risks are of a periodic, cyclical nature, which explains the periodic opposite changes in asset prices in financial and commodity markets.

Third, hedging these risks without the use of OTC and listed derivative financial instruments is virtually impossible.

In this case, under the hedging understand insurance, reducing the risk of loss due to adverse for buyers or sellers changes in market prices of goods in comparison with those taken into account in the contract.

Table 1: Comparative characteristics of derivative financial instruments that can be used to hedge risks

Tool	Advantages	Disadvantages
Forward contract	Availability	Lack of liquidity, as it is an OTC financial instrument. Potentially unlimited loss on the transaction. Risk of default of the contract, there is no system security risks.
Futures contract	Availability, liquidity, a high probability of the transaction, validate the warranty exchange	Potentially unlimited loss on the transaction.
Option	Availability, liquidity, a high probability of the transaction, validate the warranty exchange (if this exchange instrument), the possibility of waiver of the transaction by the buyer of the option	Expenditure on payment of premium to the option seller.
Swap	Availability	Lack of liquidity, as it is an OTC financial instrument. Potentially unlimited loss on the transaction. Risk of default of the contract, there is no system security risks.

To minimize the additional cost of paying the loan in foreign currency automaker may use derivatives exchange market. In this case, the automaker could buy a derivative, or a combination of several financial instruments with terms of delivery dollars at the time of interest payments on the loan and the date of payment of principal. Thus, the automaker risks associated with a possible increase in the USD exchange rate would be reduced to a minimum. Selection of a particular hedge currency risk will depend on the state of the system hedging specific manufacturer. In the presence of an effective system of hedging may use futures contracts, in the absence of such a system is the most effective and safe in terms of the risks associated with the acquisition of a derivative security is to buy an option or entering OTC swap transaction.

For the automotive industry, exporting products to other countries, is characterized by the loss associated with the reverse situation - the growth rate of the ruble against the dollar. Thus, automakers typically faced with two varieties of currency risk - the risk of depreciation and appreciation of the national currency. In this case, one currency position may prevail over the other, and in some cases foreign exchange position of the company can offset each other.

Hedging increase in the cost of raw materials and components may also be effected by means of derivatives. However, in contrast to hedge currency risk, hedging increased cost of raw materials on the Russian stock markets for car manufacturers is rather difficult due to lack of necessary trade financial instruments such as contracts for aluminum and steel, as well as the low liquidity of the markets.

By using derivative financial instruments that are traded on international markets, the automaker can hedge the risks increase in the cost of raw materials by buying derivatives that are similar to the above example with the hedging of currency risks.

Given a certain complexity in the organization of the process of hedging the rising cost of raw materials through the purchase and sale of derivative financial instruments on the international financial markets, initially Russian automakers can recommend the execution of OTC contracts with Russian banks that offer effective ways of hedging commodity risks.

For this purpose between the Bank and the automaker must be enclosed model contract ISDA, defining the rights and obligations of the parties in the course of hedging risk positions of the client. A significant advantage of this option is the lack of actual hedging transactions in the market on the part of the client, ie Bank shall purchase or sale of exchange tool in its own name on behalf of a client.

Typically, banks are given three options hedging changes in the cost of raw materials:

- Price fixing (swap);
- To guarantee the maximum level of prices (optional);
- Limiting the potential price fluctuations (collar).

Table 2: Comparative options hedging changes in the cost of raw materials as a result of the agreement to enter into an OTC ISDA

Tool	Advantages	Disadvantages
Fixing *(swap)*	Protection rates, purchased asset does not imply bonuses and commissions.	Losses as a result of falling asset prices.
Purchase warranty *(optional)*	Protection rates, purchased asset.	The high cost of the strategy by the payment of premiums and commissions.
limiting fluctuations *(Collar)*	Relatively small values of financial instruments.	The upper limit is often higher than the budget price possible losses as a result of falling asset prices lower limit of the corridor.

Consider the example of hedging the rising cost of raw materials by the example of Russian manufacturers of aluminum - metal that is gaining share in the cars produced in the world is gradually replacing the traditional steel.

Russian automakers pay for the supplied aluminum suppliers in accordance with the average quotation of aluminum on the Exchange LME. To avoid this, the company can hedge risks through the purchase of OTC contract ISDA. Consider the economic impact of the various options hedging.

The first option is to hedge price fixing, i.e. finally, swap (SWAP). The purpose of this transaction to fix the price of purchasing the product at a certain level for a specified period. If the market price of aluminum during a specified period is lower than the fixed price, the buyer of the swap pays the seller the difference between the fixed rate swap and the market price.

Another option hedging - buying a call option (call), ie fixing maximum prices. By purchasing an option, the customer gets the right but not the obligation to make a purchase of an asset at a specified date at a predetermined price (the strike price). If formed price at expiration the market price is more favorable level of the strike, the client waives the strike and making the deal at the market price. Buying an option involves the payment of a customer the option premium. In contrast to the swap agreement, the option buyer not only protects against unfavorable changes in prices, but also allows you to "participate" in a positive development of the market for the client.

The third option proposed by Russian banks hedging is the purchase of a call option (call) and sale of a put option (put). This achieves fixing the market price of the purchased product in a certain guaranteed corridor during a specified period. At the time of the transaction the customer pays the bank a one-time insurance premium. Maybe pick up the boundaries of the corridor so that the insurance premium will be equal to zero. The combination of put and call with a minimum premium achieves almost ideal for the enterprise version of the hedge. So, if the market price is higher than the fixed price (or rather the boundaries of the corridor), the bank will pay the difference between the fixed and the market price. If the market price during a specified period would be within the boundaries of the corridor, the obligations under the option will be reset without payment of additional premiums and commissions. If the price falls below the corridor, the company will incur unlimited losses.

For a final decision on the choice of an option hedging is necessary to assess the price risk, for example by the method of "Monte Carlo" using time series, characterized by fluctuations in prices for a given asset.

4. Conclusions

At present, the domestic automotive industry is at a critical portion of his development, Russia's accession to the WTO, increased competition makes paramount speedy work to optimize all types of costs not only by the trivial reductions on all counts but also by searching for painless methods of production and consumers to reduce them. One option is to hedge the risk of rising raw material costs and financing, as well as changes in exchange rates. Creating a system of hedging by domestic enterprises automobile - it is one of the most effective ways to optimize costs without sacrificing consumer properties of products.

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Investment Mechanisms of Pension Insurance and their Role in Development of National Economy

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Abstract

The article presents a comparative summary of the distributive and funded pension systems, discusses the advantages and disadvantages of each of them. The author of this article describes the various investment instruments in infrastructure, among which the author of this article allocates such class of assets as infrastructure bonds. The article analyzes investment characteristics of the main infrastructure segments and presents the classification of infrastructure projects in depend on the degree of risk. On this basis were given recommendations for the formation of the investment portfolio of infrastructure investments using a variety of tools and objects of investment.

Keywords: *pension insurance, pension funds, pension reserves and savings, investment of pension funds, infrastructure, infrastructure investment, infrastructure bonds, concession agreements.*

1. Introduction

Modern pension systems of the world are characterized by great diversity due to the historical development of country-specific economic conditions and legislative features. Nevertheless, there are two main types of pension systems: Pay-As-You-Go (PAYG) and fully-funded.

In the PAYG system, payments of the pensions to the retired population are financed by the contributions of the working population. The main advantage of the PAYG system is to provide a guaranteed minimum income to those who due to illness or opportunity could not have enough help for retirement during their working lives. The level of pensioners' welfare depends primarily on the economic activity of the current generation. Pension in this system has social nature and usually guaranteed by the government. A major disadvantage of PAYG system is its dependency on demographic factors and the state of the labor market: employment and unemployment levels, wages, the ratio of contributors and pensioners [10].

In a balanced PAYG system, expenditure in each period equals revenue such that [14]:

$$p * R = s * w * L; \quad (1)$$

where p - the average pension;
R - the number of pensioners;
s - the rate of contribution;
L - workers participate in the scheme;
w - average covered wage.

Equation (1) can be re-written as follows:

$$s = \frac{p/w}{L/R} = \frac{R_r}{R_s}; \quad (2)$$

where R_r - replacement ratio;
R_s - support ratio.

Equation (2) shows us that the rate of contribution must equal the replacement ratio, divided by the support ratio. The system is balanced until the support ratio is constant. Unfortunately, in terms of ageing population support ratio changes and the balance of PAYG system breaks down: expenditure is no longer equal to revenue [4]. Without funding from external sources it is necessary to raise the rate of contribution or reduce the replacement ratio. Both solutions are negative for people living in the country and for economic development.

In a fully-funded scheme pensions are paid from a fund built over a period of years from members' contributions. The fundamental difference of the fully-funded pension scheme is the formation of individual real cash savings. All of

contributions are not expended on the pensions to other recipients in the current period; they are placed on individual retirement account to a licensed finance company, which is engaged in storage and investment of these funds (by themselves or by third parties) in the financial market. Government within the funded pension system assumes such functions as: control, monitoring, legislative and regulatory.

The main advantage of fully-funded pension scheme is the possibility of using long-term financial resources for the needs of the economy, leading to the national economic growth and development. Thus, investment mechanisms of pension insurance are present only in fully-funded pension schemes.

2. Method

The Russian pension system is a pension system of mixed type [6], as it contains both: PAYG and fully-funded component of pension scheme. However, the current state of the public pension system in the Russian Federation is characterized by the lack of financial resources in the budget of the Pension Fund of Russia (PFR) and the high dependence of mandatory pension insurance from revenues of the Federal budget. At the same time funded component of the pension system in our country has not received proper development and implementation of the new pension reform at the end of 2013, the number of citizens affected by its influence has declined significantly [11, 12]. Despite the fact that pension savings could be significant internal source for long-term investments in the economy of our country.

At the present stage of development Russia needs to invest substantial funds in all sectors of infrastructure, ranging from modernization of transport and energy systems, to communication systems and telecommunications. The government assessed the needs in modernization of the Russian infrastructure at the level of one trillion US dollars that should be spent in the next ten years, most of which are supposed to come from the private sector. However, the growth of political risks has led to the fact that private investment in infrastructure in large quantities has not been received.

In our country we already have the first experience of pension funds participation in infrastructure projects, but comparing with other countries this trend has serious potential of its development [9]. The role of infrastructure investments in the development of investment mechanisms of pension insurance is as follows:

- protection against strong fluctuations in changes of value and yield;
- protection against inflation;
- compliance of the investment horizons of pension funds long-term pension obligations;
- diversification of pension savings when they invest.

In addition, the fact that infrastructure projects are able to demonstrate citizens how their pension funds can bring real benefits of contemporary reality, developing the country's infrastructure and improving the quality of life, can increase the interest to pension system and to stimulate active management of pension savings.

At the same time, the choice of infrastructure is necessary to consider that the investment characteristics of the various infrastructure facilities differ and the formation of infrastructure investment portfolio it is important to follow the principle of diversification of investments of pension funds (Table 1).

Table 1: Investment characteristics of the main segments of the infrastructure [3]

Segments of the infrastructure	Risk	The average annual yield in the first 5 years	The average internal rate of return (IRR)
Toll roads (operation)	low	4-8%	8-12%
Toll roads (construction)	moderately high	3-5%	12-20%
Railways	high	8-12%	14-18%
Airports and seaports	moderate	5-10%	15-18%
Project financing	moderately low	6-12%	9-11%
Energy, cable networks, long-term tariff regulation systems	moderately low	6-10%	10-15%

It should be noted, that infrastructure projects also have risks, among which are: delays in construction time, the increase of construction budgets, mistakes in predictions of payback, difficulties in obtaining permits and other bureaucratic problems. In addition, financial instruments, which can be used for financing infrastructure projects, have their own inherent risks. On this basis, we propose the following classification of infrastructure projects depending on the degree of risk (Figure 1).

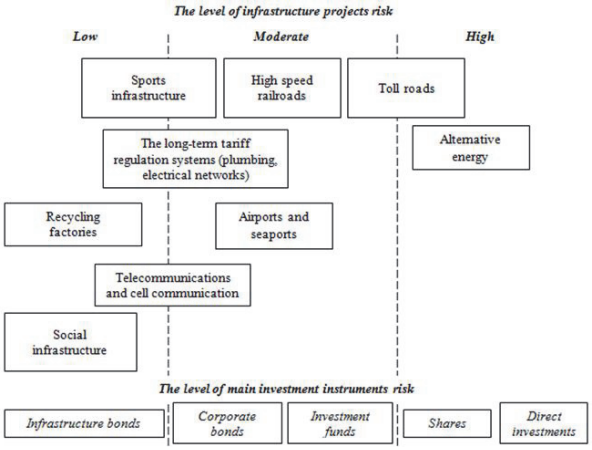

Fig. 1. The classification of infrastructure projects depending on the degree of risk

Thus, the figure shows us that among the main investment instruments infrastructure bonds have the lowest risk and direct investments the highest. Total pension resources are estimated at 3.92 trillion rubles (on 30.06.2014), 78% of which are pension resources in obligatory pension system (3.05 trillion rubles), and 22% are pension resources in voluntary pension system (861.47 billion rubles). In our opinion in infrastructure it could be invested at least 25% of all pension resources (or about 1 trillion rubles) by using different financial instruments.

3. Result

In the process of investing pension financial resources in infrastructure projects, it seems appropriate to diversify investments among the various infrastructure projects and use various financial instruments [8]. We offer the option of pension resources allocation, in which as the primary structural element of the portfolio will be infrastructure bonds, as the most suitable tool for the investment of pension funds, providing the criteria of safety and long-term investment period (Figure 3).

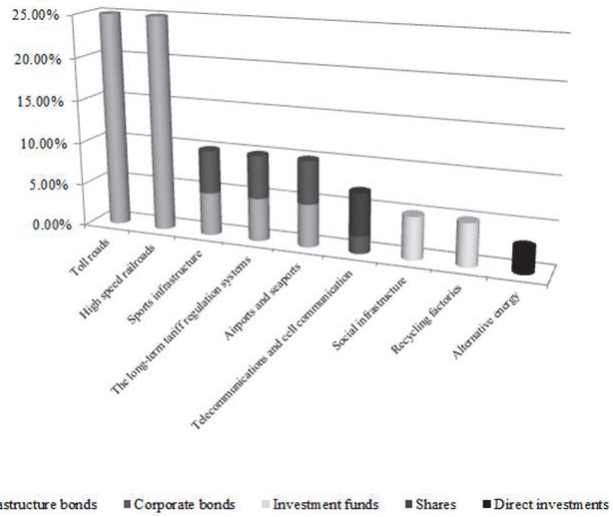

Fig. 3. The structure of pension infrastructure investment portfolio

As can be seen from the figure, the share of infrastructure investments with the use of infrastructure bonds in the structure of the portfolio is 65%. The remaining funds can be invested through other instruments, such as corporate bonds, shares, investment funds, direct investments, because it is also necessary to maintain the liquidity and profitability of the portfolio.

In the case of investing pension financial resources infrastructure bonds are best suited to this. Infrastructure bonds, as well as any other financial instrument, have their investment qualities and features that characterize them as an investment object. These qualities are the following:

- long period of infrastructure bonds circulation (usually 15-30 years), which corresponds to an average term of the project (including construction or modernization of an object and the operation period);
- availability of government or bank guarantees;
- targeted use of funds;
- built-in mechanisms of insurance against inflation losses (coupon, indexed in line with inflation);
- low dependence on the stock market;
- issue of infrastructure bonds are generally carried at the basis of the concession agreement or the public private partnership (PPP) agreement between the government (at the federal or regional level) or municipal authorities, on the one hand, and the project company engaged in the issue of the bonds, on the other.

An important advantage of infrastructure bonds is low correlation of their quotations with other financial instruments, which allows long-term investors to effectively diversify their investments, and to ensure a guaranteed return on investment.

In addition, two important features of infrastructure bonds are: public negotiability and fragmentation of investment. In fact, this means the liquidity of the investment, the availability of public monitoring of the project implementation and access to a wider range of investors.

4. Conclusion

Thus, it is necessary to improve the process of using financial resources in the pension system by investing them in long-term infrastructure projects through financial market instruments. Infrastructure investments have not only an important social functions and contribute to the economic growth of the country, but also act as a corresponding tool to the basic criteria of efficiency of investments of the pension resources:

- the preservation of pension resources;
- the compliance of the investment horizons obligations;
- the reliability of investment objects.

Thus, considering the possibility of diversification between different infrastructure objects and investment methods, this tool has a special meaning for the development of investment mechanisms of pension insurance in our country.

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Tactics of Forming a System of Financial Indicators of the Enterprises in the Operational Aspects

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Abstract

The article contains a number of theoretical and methodological developments and practical recommendations for the tactics of forming financial indicators and to ensure their sustainable basis the financial condition, proposed modeling scheme of financial indicators and indicators with the recommended performance standards for the level of the financial condition of the operational aspect.

Keywords: *enterprise, financial condition, financial performance, planning; analysis, control, accounts receivable, debtors, accounts payable, cash, revenue, cost, inflows and outflows of cash, profit.*

1. Introduction

In the context of mass insolvency of enterprises and the practical application of many of these bankruptcy proceedings objective and accurate assessment of their financial condition is paramount.

The research of selected topics determined by the need for more research in the field of modeling parameters reflecting the level of the financial condition of the enterprise in the market economy from the perspective of how the theory and practice of regulation.

The target of the research is to formulate theories, methodology and practical recommendations that will comprehensively evaluate the impact of external and internal factors of sustainable financial condition of the enterprise with the help of modeling financial indicators for the operational management of the finances of enterprise.

The research is based on the modern approaches of financial management and the provisions of microeconomics.

2. Theory

The main purpose of any kind of financial analysis is the assessment and identification of the internal problems of the enterprise for training, study and adoption of various management decisions, including the development, out of the crisis, the transition to bankruptcy procedures, purchase and sale of businesses, attracting investment (leverage).

Operational aspects of financial analysis are shown in the monitoring of the status of receivables and payables, justifying the most rational forms of payments to contractors, maintaining a balance between the inflow and outflow of funds from the financial results necessary for the daily settlement, monitoring indicators, the analysis of financial budgets and evaluation of their performance that expressed in the monitoring of the level of financial indicators characterizing the company's solvency.

The financial condition of the business entity characterized placement and use of resources (assets) and sources of their formation (equity and liabilities, mean liabilities). The main factors determining the financial condition, are, firstly, the implementation of the financial plan and updating as the need arises own working capital at the expense of profits and, secondly, the rate of turnover of working capital (assets). Signal indicator, which manifests the financial condition, solvency advocates.

Financial condition is characterized by a set of indicators that reflect the process of formation and use of its funds. In a market economy, the financial condition of the organization reflects the final results of its operations.

Analyzing the above definitions of financial condition, can conclude that the financial condition characterized by a set of financial indicators and is the result of the circulation of capital, or the movement of assets and sources of their formation.

Furthermore, in our opinion, this concept needs to be supplemented in the general definition, namely, financial condition – is the level of financial support from enterprises and their sources.

Thus, the stability and the stability of the financial condition of the commercial organization depend on the results of industrial, commercial and financial activities. If the operational and financial plans are successfully carried out, it has a positive effect on the financial condition of the organization.

3. Results

Methodology consistent identifying and resolving problems in the financial condition of the operational aspects based on the results of the financial factor analysis, was created in the process of studying the financial and economic activities of industrial enterprises.

In Figure 1, there are presented a methodology of modeling the system of financial indicators.

To determine the key financial indicators in step 1a (figure 1) must diagnose financial condition. It was concluded that, in the main, many manufacturing companies have similar problems in the financial and economic activity and the basis of the methodology is necessary to lay the following tasks:

- low paying – from enterprises do not have enough cash to meet its obligations;
- low level of profit;
- low financial stability – a large proportion of the receivable.

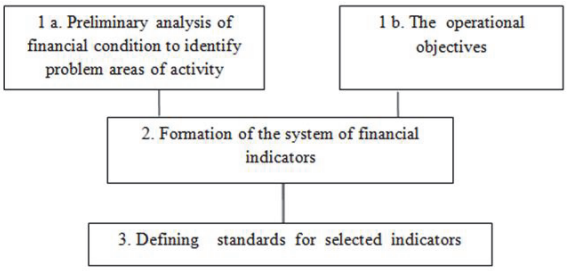

Fig. 1. Schematic of the formation of the system of financial indicators

The specifics of the production orientation requires constantly have sufficient liquid assets where there is the need to monitor the solvency of the organization. A lack of coverage in the most liquid and less liquid assets payables shows that organizations need to regulate the flow of money and the value of liabilities. Based on these results it is advisable to analyze the financial performance related to accounts receivable and payable, balance cash flow, sales profit from the financial information for the last 3 years.

Further, the next step 1b (fig. 1), where the use of such goals as «balanced ratio of receivables and payables, cash flow and obtain the planned sales profit» for the enterprise will identify indicators that will provide operational management of the financial and economic activities of the entity.

The optimal number of indicators will reduce the amount of redundant information and will largely determine the quality of the analysis and management decisions. Endless modeling parameters, their excessive detail, endowing indicators are not their usual characteristics, expansion of management information leads to an increase in the cost of collecting and processing information, its redundancy and inefficient use.

Thus, developed system of financial performance, which will assess, analyze, plan and monitor the financial condition of the enterprise in the operational aspects.

The first indicator represents R0, the ratio of total cash balance at the beginning of the period and the cash inflow to outflow of funds (1).

$$R0 = \frac{SDC+DSD}{DSDo} \quad (1)$$

where DSDo – cash outflow funds;

SDS – in cash at the beginning of the period;
DSD – cash inflow funds.
The ratio of this indicator, many Russian economists recommend the use of 1 or more, which shows the solvency of a commercial organization.
The next indicator is calculated as the ratio R1 received cash for accrued revenue (2):

$$R1 = \frac{SDC+DSD}{B} \quad (2)$$

where SDS – in cash at the beginning of the period;
DSD – cash inflow funds;
B – revenue.
We believe that the rate of this index should be greater than 1. This is due to the logic of the comparison is actually coming earnings (cash flow) with accrued. The company should receive a timely refund on investment in production working capital.
The second indicator is calculated as the ratio of R2 to cost of revenue (3):

$$R2 = \frac{B}{C} \quad (3)$$

where C – cost;
B – revenue.
The increase of this index indicates increasing the efficiency of the company. It is believed that the specification should be set greater than 1.25, which is associated with the need to ensure a higher return (in particular due to inflation). Mortgaging the following condition: revenue – 100%, cost (fixed and variable costs) – 80% profit on sales – 20%. Return on sales is planned to 0.2, profit from sales in the revenue should be 20%. Product profitability as the ratio of profit to the cost, the norm is set 0.25 = 0.2 / 0.8. Norm operational indicators K2 is calculate: 1 / 0.8 = 1.25. Check the correctness of these regulations (4):

$$Pc = \frac{B}{C} \times \frac{P}{B} = \frac{P}{C} \quad (4)$$

where Pc – profitability;
P – profit;
C – cost;
B – revenue.
Mean, 1.25 * 0.2 = 0.25 (4).
For enterprise, in our opinion, it is appropriate to set the following rates of return of economic activity (table 1).

Table 1: Standards of profitability for enterprise

Indicator	The norm
Profitability of sales	0,2
Profitability	0,25
Operational indicator	1,25

Monitoring indicators outlined above will give the opportunity to achieve the planned level of profit and a certain level of cost for expanding the activities and achievements of the operational objective – development and effectiveness the company.
Based on the above parameters R1 and R2, R3 develop indicators (balance index funds), reflecting the influx of cash allocated to cover the cost, mean, balance spent money and working capital for production (5).

$$R3 = \frac{SDC+DSD}{C} \quad (5)$$

where SDS – in cash at the beginning of the period;
DSD – cash inflow funds;
C – cost.
The author believes that the norm the index R3 should equal more than 1.25.
To control the amount of accumulated earnings and cash outflows calculated indicator R4 (rate of collection of revenue), which indicates the need for additional financing of working capital. Calculate the indicator R4 (6).

$$R4 = \frac{DSDo}{B} \quad (6)$$

where DSDo – cash outflow funds;
B – revenue.

By calculation derive the norm indicator R4: 1 – 1, 25.

Cost of products should be commensurate with the money spent on its release in the same period. For this indicator is calculated as the ratio of the cost of R5 in a cash outflow (7).

$$R5 = \frac{C}{DSDo} \quad (7)$$

where DSDo – cash outflow funds;

C – cost.

The ratio is established by dividing the index ratios R0 to R3, mean is less than 1.

For the analysis necessary to establish the relationship of these indicators. Figure 2 shows the first block factor model developed indicators.

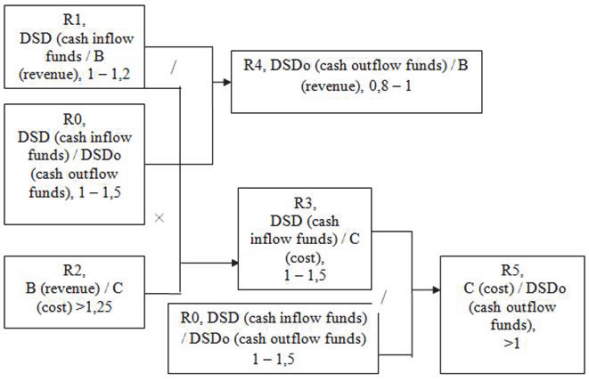

Fig. 2. Factor model of financial indicators

Thus, it can be argued that the following inequalities must be met:

$B \leq DSD \geq C$ (8)

$B \geq DSDo \leq C$ (9)

where DSDo – cash outflow funds;

DSD – cash inflow funds;

B – revenue.

C – cost.

Cash flow should be more than the revenue accrued through the timely collection of receivables and accrued cost more. Regarding cash outflows: cost should be less than the outflow, and more revenue, which in turn balances the inflow and outflow.

The next block of indicators aimed at regulating the payables and receivables relative to revenue and cost, mean, business activities of enterprises.

Consider the indicator of raising funds, showing the share payable in cash outflow, indicating the amount of money the organization of the output of a turn (10).

$$\text{Indicator raise money} = \frac{\text{KZ}}{\text{DSDo}} \quad (10)$$

where KZ – balance payable;

DSDo – cash outflow funds.

The ratio of this index derive by calculation, namely the ratio of accounts payable to multiply the ratio of revenue and cash outflows, we obtain the rate equal to 0.2 – 0.25.

We propose to calculate the indicator diversion of funds characterizing coating receivables cash inflow (formula 11).

$$\text{Indicator diversion of funds} = \frac{\text{DSD}}{\text{DZ}} \quad (11)$$

where DSD – cash inflow funds;

DZ – debtors.

It is the norm is 0.2 – 0.25 (receivables to the cost / inflow to the cost of = 0.25 / 1.25 = 0.2).

To find out how much money from the profit goes to the repayment of debt, consider the indicator cover arrived

(formula 12).

$$\text{Indicator coverage of profit} = \frac{\text{KZ}}{\text{P}} \quad (12)$$

Where KZ – balance payable;

P – profit.

The ratio of the above figure derive by calculation: cost to payables divided into operational indicator (formula 3), we obtain ≤1.

This figure should be viewed in relation to the measure of the proportion of receivables in profit (formula 13).

$$\text{Indicator diversion of profit} = \frac{\text{DZ}}{\text{P}} \quad (13)$$

where DZ – debtors;

P – profit.

The ratio index derived by calculation and amounts to 1.

These figures show an increase and a decrease in financial risk, mean, excess rate of receivables and payables in profit constitutes a violation of their relative balance of revenue and product costs. Factor model of these indicators is presented in Figure 3.

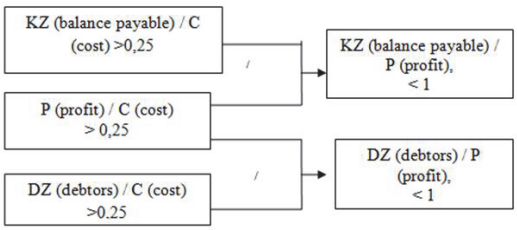

Fig. 3. Factor model indicators of coverage of profit and diversion of profit

4. Conclusions

Key suggestions for further development of procedures for the final modeling of financial indicators for the analysis of financial condition are:

1) the calculation of own standards or optimal levels of financial ratios for the analyzed enterprise using instructional techniques (for example, the optimal level of current ratio is determined from the ratio of the amounts of receivables and payables, current assets, return on sales, the timing and rhythm of the receipt of funds buyers the timing and rhythm of repayment of debts to suppliers and other creditors, the turnover of receivables and payables);
2) isolation of a narrow "indicator" sample financial ratios, the composition of which may vary for different enterprises;
3) qualitative evaluation of test performance, based on a comparison with the calculated optimum level, trends change, mutual comparison and logical rules adopted;
4) development of a model format of the conclusion of the financial performance, which is not just stating the problems analyzed the enterprise, but also indicate factors and future change, and to make recommendations for overcoming them, mitigation or enhancement.

Thus, the analysis and assessment of the financial condition of the company on the basis of financial indicators developed will allow business entities comprehensively characterize the condition and cash requirements and predict financial strategy in terms of economic instability.

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New Start of Nokia

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Abstract

Microsoft will take over Nokia's Devices and Services business, which includes both Smart Devices and Mobile Devices. In other words: The Lumia, Asha and X series are now all under Microsoft's umbrella. Design teams, supply chain, accessories, employees, developer relations and most of Nokia's manufacturing plants and testing facilities are also on Microsoft's side, as are most of the company's services like MixRadio, Store and more. Here, Nokia's mapping entity, is considered a separate business and isn't included as part of the deal, but Microsoft has agreed to a 10-year licensing agreement. On the one hand, Nokia's decision to sell its mobile phone business to Microsoft is a Finnish tragedy. At Nokia's best times, this giant contributed a quarter of Finland's economic growth for past 10 years: it paid 23% of Finland's corporate taxes. On the other hand, getting out of the mobile phone business sector is a probable blessing for Nokia. Life is tough nowadays for second-tier smartphone companies. Nokia's global market share in the mobile phone market has dropped to 14 percent (from 19.9 percent a year ago, according to Gartner). The revenue of the company brings in from its devices and services division is down by more than half since 2008.This paper is aimed to show why Nokia had to be saved by someone external, both from the technological and financial point of view.

Keywords: *acquisition, mobile phone business, revenues, smartphone, loss, technology*

1. Introduction

In September 2013, Nokia announced that an agreement is reached with Microsoft in which the latter would purchase substantially all of Nokia's Devices & Services business. This may be the primary landmark for the Finnish Company [1].

Nokia is a Finnish multinational corporation with headquarters in Espoo, Finland and which used to be a leader in mobile communications information technology. Nokia's technological and design innovations have made its brand one of the most recognized in the world and its products have become an integral part of the people lives around the world.

The main products it offers are not only mobile phones and portable IT devices, but also Internet services including applications, games, music, media and messaging and free-of-charge digital map information and navigation services. Their aim is to deliver differentiated and innovative products to people around the world.

Through its software platforms, Series 30 and Series 40, Nokia has also been developing markets around the world, connecting even more people to their first Internet and application experience and providing consumers with powerful and very affordable mobile products, particularly in emerging markets.

2. Theory

Nokia's share in the global Smartphone market has shown a huge decline in the past couple of years. The problem began with the introduction of the iPhone in 2007, which set a new era in the market. The Finish Company did not recognize that the iPhone release and the introduction of the App Store, as well as Google's Android ecosystem would attract more attention than Nokia products and its operating system - Symbian.

In order to return market leadership, in February 2011 Nokia entered into partnership with Microsoft. Stephen Elop, CEO of Nokia, referred to the operating system Symbian as a burning platform in a memo to his staff in the beginning of 2011.

The company tried to create a new identity by entering the cooperation with Microsoft and introducing the series of Smartphone called Nokia Lumia [2].

The partnership was divided into three broad areas:

1. Nokia is responsible for mapping, navigation and certain location-based services integrated in the Windows Phone ecosystem. Nokia will build innovation in areas like hardware design and language support. Microsoft will provide Bing search services as well as productivity, advertising, social media, gaming and a variety of other services.
2. Microsoft has the right to receive a running royalty from Nokia for Windows Phone platform [3].
3. In recognition of the unique corporation between Nokia and Microsoft, Nokia will receive payments measured in billions of dollars.

A very important point is the distribution of the profits. The three broad areas mentioned before create the impression that both companies are, in effect, paying each other something and sharing the profits [4]. The Nokia Lumia definitely represents the knowledge and technology of both companies.

The market reaction to Mr. Elop's announcement had consequences and influenced immediately Nokia´s and Microsoft´s stock prices. Both companies have suffered a relative decline at the end of 2010. In the following month we can see a smaller recover. After the announcement Nokia´s stock prices decreased from 7,56 Euro to 6,77 Euro few days after[5].

Although Nokia found with Microsoft a strong partner, the company is also suffering from the innovative competitors. In the fourth quarter of the year 2012 the company listed his first loss since 1986. The fourth quarter was showing a loss of 492 million $ [6].

3. Results

Now, I will analyse from an investor point of view, the reasons behind the problems Nokia had to tackle. To do so, I will go through 3 stages: a) Income Statement analysis, b) Financial structure analysis, and c) Performance in the Stock Exchange [7].

3.1 Income Statement analysis

The first thing the investor needs to know is the Nokia's expenditures and revenues, and the easiest way to do so is to analyse the income statement of the company. However, it is not only important the performance of this year, but also the previous ones in order to have a greater overview, and in that way, see the reasons of the bankruptcy.

It is shown, that, although gross margin has remained positive, it has been reduced by more than 36%, due to a large decrease in sales, which has been greater than the decrease of costs. This can be explained because Nokia did not answer accurately to the arising of smartphones while its competitors did (Samsung, Apple, HTC, etc.).

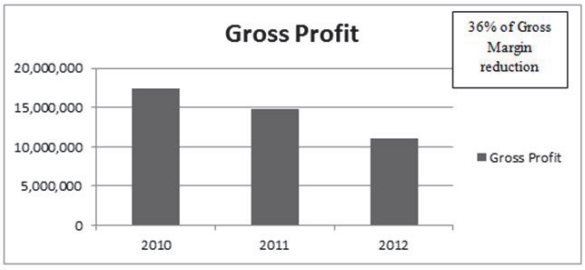

Fig.1 Gross Profit of Nokia [8]

However, we need to include all operating expenses such as selling general and administrative and research and development. Taking into account these additional costs, the net income is greatly loss-making during the last 2 years as can be seen in the following chart. One of the reasons we can find is that financial crisis hit mobile phones companies. Nevertheless, if we compare it with other firms in the field, we realise that this is not a true reason, because while Nokia was suffering from net income losses (5,000,000$), Apple reached its best results ever (41,733,000$).

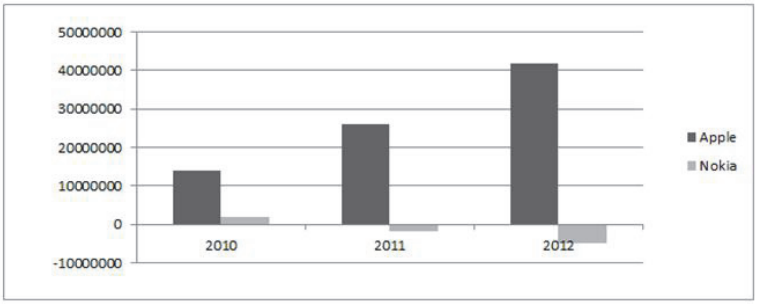

Fig. 2. Net Income (2014): Nokia & Apple [9]

3.2 Economic and financial analysis

The Balance Sheet is another way to see the financial and economic situation of Nokia, and to do so we will go through different analysis.

3.2.1 Working capital

The working capital can help us a lot when analysing the performance of any company. There, we realise that the equilibrium in the company's structure has remained over the history of the firm. Nevertheless, we must mention that the working capital, that is, what ensures that the Nokia will successfully deal with payments, has been reduced for 2 reasons:

- There has been a huge increase of both long-term and short-term debt due to large investment carried out by Nokia. While debt represented 63% in 2010, it signified 73% in 2012.
- The equity has been reduced 9 million$ in only 2 years which might be a sign that investors are not confident about its future, and consequently, they have disinvested in the company.

Table 1: Working Capital Dynamics [10]

Working Capital	2010	2012	%
Non-Current Assets	$ 13 928 000,00	$ 10 307 000,00	-26,0%
Current Assets	$ 36 417 000,00	$ 27 526 000,00	-24,4%
Equity	$ 19 298 000,00	$ 10 628 000,00	-44,9%
Long-Term	$ 8 942 000,00	$ 9 548 000,00	6,8%
Short-Term	$ 23 531 000,00	$ 19 310 000,00	-17,9%

3.2.2 Ratios

In the figure below, it have been calculated some ratios because sometimes an overview to Income Statement and Balance Sheet can make things look what they are not. The conclusions we take out from them are:

- The profitability of Stockholder Equity (e) has been about -65%. This shows that the company's economy is dramatic.
- This % comes from an operative profit of 163% and a financial leverage of -230%. This tells us that the activity performed by Nokia was profitable since the operative profit is positive. However, the company went into huge debts which have put the company into big troubles.
- We have not been able to see this debt problem in the working capital analysis because the current assets were enough to cover the debts. We can conclude that liabilities are behind Nokia's problems.
- From the point of view the ratios, the situation of Nokia is extremely weak.

Table 2: Financial Ratios [11]

Ratios table				
MB	54 408 000		I*(1-t)	40 000 000
MBP	1,368		FALP	9 548 000
VPM	10 309 414,40		i	4,189
V-VPM	29 474 585,60		r-i	-2,551
BAII	40 309 000		FP	10 628 000
BAIdI	38 799 000		FALP/FP	0,898
Margin	0,975		(r-i)*FALP/FP	-2,292
Rotation	1,680		e1	-0,654
r	1,638		e	-0,65

3.3 Performance in Stock Exchange

The final thing we are going to do is an analysis taking information from the Stock Exchange. That is why; we will speak briefly about some key statistics:

- **Market value** may be the most important figure, and in this case, is about 25,800 million of dollars, and although it may sound a lot, if we compare it with Apple (477,830 millions) or Samsung (86,070 millions), Nokia's market value might be seen as low.
- The **pay-back** is other fundamental information that can help the investor. This concept, tells us about the time it requires to recover the amount invested. For Nokia, we need 46.47 years to recover the investment. However, the comparison is bad for Nokia because its competitors Apple (12.14) and Samsung overtake the Finnish company by far.

Finally, it may be interesting an analysis of the performance Nokia had in the Stock Exchange in terms of the share-price. Firstly, we can see a constant price around 15€ per share during 2009 because in most annual results, Nokia market share in all mobile phones, and in smartphones, was very stable [12]. This was in line with the industry growth number. If Nokia was below the industry overall growth, then its market share would decrease, and if Nokia performed better than its competitors, then Nokia's market share would gain to compensate it. This is a usual thing in the Stock Exchange. During that year Nokia's smartphones grew 36% which can be thought as a good result, but it is not so good when the industry grew 75% on average [12]. And of course, if you grow less than the rest, you will lose market share. Apparently, Nokia's share price did not suffer from those disappointing sales.

Nevertheless, the situation worsened in 2010. Company's smartphones market share fell dramatically to 30% in the third quarter, and another 28% the fourth one. Now, markets realise about these problems after carrying out an analysis similar to the one we have done previously. That year shares' price fell from 15€ to 12€ [12]. The reason behind this market share loss is the high competence coming basically from Apple and Samsung. To face it, Nokia tried to launch a new smartphone called "Ovi" with no success what made sales to continue falling not only in 2010, but also, in 2011 and in 2012.

Nokia's shares are depicted on Figure 1.

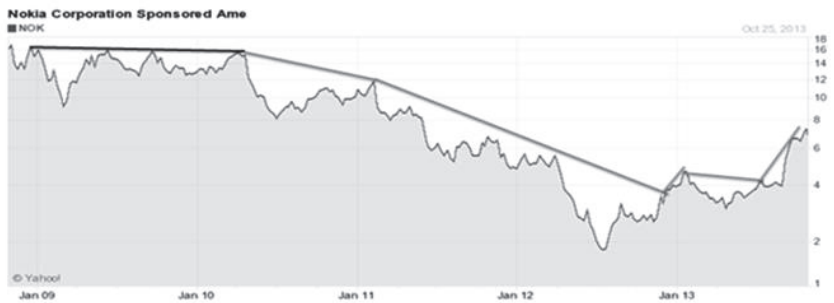

Fig. 3. Nokia's shares (2009-2013) [13]

After three dramatic years, Nokia's results kept worsening as investors lost their confidence in the phone company. However, we see a timid share price increase in the early 2013 because of the first rumours about the purchase of Nokia by a Chinese company. As it did not succeed, Nokia let the market down, and lost what it had gained.

Finally, Microsoft decided to buy Nokia which came as a surprise to the market, which is shown in the chart moving share price from 4€ to 8€.

4. Conclusions

On the one hand, Nokia's decision to sell its mobile phone business to Microsoft is a Finnish tragedy. At Nokia's best times, this giant contributed a quarter of Finland's economic growth for past 10 years: it paid 23% of Finland's corporate taxes [14].

On the other hand, getting out of the mobile phone business sector is a probable blessing for Nokia. Life is tough nowadays for second-tier smartphone companies. Nokia's global market share in the mobile phone market has dropped to 14 percent (from 19.9 percent a year ago, according to Gartner). The revenue the company brings in from its devices and services division is down by more than half since 2008. For sure, Nokia is not on the list of top smartphone sellers anymore. Analysts say, this deal with Microsoft means only one thing - the end of an era in mobile devices. BlackBerry and HTC are also at risk of being swept away by this shift, and the argument could be made that Nokia's strategic retreat should inspire some envy in their boardrooms.

The struggle against Apple and Google is now Microsoft's problem. It makes a certain amount of sense for Microsoft to bring Nokia in-house as it chooses this fight, given that Nokia phones already make up over 80 percent of the Windows phones worldwide. But even if Windows Phone recently surpassed BlackBerry as the world's third most popular mobile operating system, becoming a second OS seems very non-realistic. In the second quarter of this year, 8.7 million Windows phones shipped worldwide, compared to 31.7 million iPhones and 187.4 million Android phones, according to IDC. Microsoft apparently plans to do its best Apple impersonation, abandoning a more Google-like strategy of licensing its smartphone operating system to other companies. This is a tough sell; skepticism about the deal drove Microsoft stock prices down almost 2 percent on the stock market [15].

Nokia, meanwhile, will piece together a more modest, perhaps more sustainable future as a networking, mapping, and patent-licensing company. "They have the chance to continue investing in the businesses where they make money," said Francisco Jeronimo, an analyst at IDC.

These are some directions of common partnership of these two giants [16]:

5. Networking

The biggest part of the company is now NSN, which makes networking and telecommunications equipment. NSN already makes up 45 percent of the company's sales and seemed set to surpass the devices business this year. "Nokia Siemens Networks has a future in the network equipment world, with a streamlined operation and a second position in a now-concentrated and -stable market," Pierre Ferragu, an analyst at Sanford C. Bernstein, told Bloomberg News in July, when Nokia bought out Siemens, its partner in the networking business.

6. Mapping & Patents

Nokia is also hanging onto its mapping business, HERE, which makes up about 4 percent of the company's sales. It's interesting that Microsoft didn't acquire this aspect of Nokia's business, given the hunger for mapping companies shown by Apple, which acquired four mapping companies this year, and Google, which recently spent $1.1 billion for Waze, the Israeli crowd-sourced traffic application. Instead, Microsoft and Nokia reached a cross-licensing agreement on patents that will allow HERE to use Microsoft patents. Microsoft is also paying Nokia for a four-year license to use the mapping platform.

Both the networking and mapping businesses are profitable, according to the company's internal measure of operating income. The devices business is not even close. In shedding the devices business, Nokia will be getting rid of over half of the costs it says it lays out to generate revenue—and about 32,000 employees. So, Nokia's future is smaller, but, probably, brighter [17].

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Shadow Economy in Russia

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Abstract

Importance of the problem is defined by a solid size of shadow component of the economy both nationally and globally, suggesting that an in-depth study of the basic principles, framework and content of informal economic activity in our country, taking into account the current trends to combat it worldwide and to bear in mind its impact when it comes to building a stable state of strategic management model with respect to business entities. In order to understand the grounds of communication between formal and informal sectors occurs the need to conduct a thorough study of the phenomenon of illegal economy in the current transition of the market, its importance in reproductive economic processes and elements of its functioning. This paper is aimed to show the essence of the shadow economy and to know the consequences of activity in the shade.

Keywords: *shadow economy, informal sector, tax evasion, crime, gross domestic product.*

1. Introduction

The relevance of this article is explained by the risen problem - in our time there is a presence of almost two full orders of business in Russian Federation: legal, which operates according to the official laws of the country and illegal (or on the verge of the law), which operates in a situation of non-compliance with laws, not recognizing the accepted system of revenue and depriving the authorities of the country the opportunity to participate in their distribution.

Shadow economic activity takes place in absolutely all countries of the world, and the political system is not so important as well as the standards of living and other socio-economic conditions. According to the World Bank in 2013 (Figure1), the average international level of shadow economic activity was equal to 17.2% of the GDP of the country, but this figure varies vastly. As an example, the minimum index of the shadow economy presence is in Switzerland - 8.4% of GDP, in China - 12.7%, in Russia - 43.8% and the highest level of shadow economy takes place in Bolivia - 66.4% of GDP [13]. National governments of various countries strive by all means affect the size of the illegal component of the economy, while cycling methods ranging from tougher sanctions for financial crimes, ending up to stimulate "a conscientious self-consciousness" of citizens [2]. Here is the chart of shadow part presence of some developed countries.

Table 1: Shadow economy in the world 2013 ([13] and elaborated by author)

Country	USA	Japan	UK	China	France	Germany	Spain	Italy	Brasil	Russia
Shadow Economy ofGDP,%	8.6%	11.0%	12.5%	12.7%	15.0%	16.0%	22.5%	27.0%	34.4%	43.8%

2. Method

In the current situation of our country it is impossible not take into account the fact that the shadow economy has a significant share of the country's GDP, and a fairly long time, it does not lose its position. In the situation of the search of new methods for improving the economic condition of Russia and the establishment of sustainable growth, it is necessary

to conduct a comprehensive analysis of the informal economy, considering it as a full-fledged member of the modern economy.

Despite the presence of the positive directions in Russian economy and in policing bodies, the situation in the national economic and fiscal areas remains difficult and is characterized by an increase in the tax and financial crime rate in absolutely all basic sectors of the national economy, its massive and highest stage of latency, continuous complexity of the techniques used to avoid taxation, including those based on the imperfect functioning of the legislation. All of the above provides the basis that gives the right to assume the current process of transition of economic entities into the shade as the emergence of the threat of the state's economic stability and explains the need for the study of this phenomenon [7].

As a base for the analysis of "dirty" money sources, we have chosen the structure of the shadow economy proposed in the methodology for assessing the shadow economy according to the System of National Accounts, developed and recommended by the United Nations Statistical Commission in 1993[1]. Based on this approach, we can construct a model that describes the productive economic activities depending on their belonging to shadow or legal economy. As a result, we got four conditional sectors of the economy, which can be seen as sphere of education revenues.

First sector - contains permitted lawful activities, and subjects them performing shall report to the state authorities in the specific dates and in procedure provided by law, and which can be further tested if necessary.

The second sector - is an activity permitted by law and implemented by local organizations officially, but the dimensions of which are hidden or resplendence in order to evade the payment of taxes and mandatory social payments or to perform other administrative obligations.

The third sector - is the activity of unincorporated (belonging to one owner - often family) enterprises working for their own needs, i.e. production of goods and services made in the household and consumed by them, as well as the activities of unincorporated enterprises with informal employment (temporary team of builders, etc.).

Fourth sector – is activity directly prohibited by the law, aimed at the production and distribution of goods and services for which there is an effective market demand (production and distribution of drugs, prostitution, smuggling).

In the transitional socio-economic systems, the importance of the non-observed economy is much diversified. From one perspective, tax evasion increases the competitive advantage of companies using work in the shadows, gives you the opportunity to derive additional income to their employees and, among other things, reduces the level of the official unemployment [5]. However, if you look from a different angle, illegal economic activity causes damage to the treasury, by several times lowers the results of all the efforts of macroeconomic policy, rejects interest from all sorts of possible investors, creates an unfavourable situation of law-abiding citizens and taxpayers and causes harm to the public interests of the country (Figure 1).

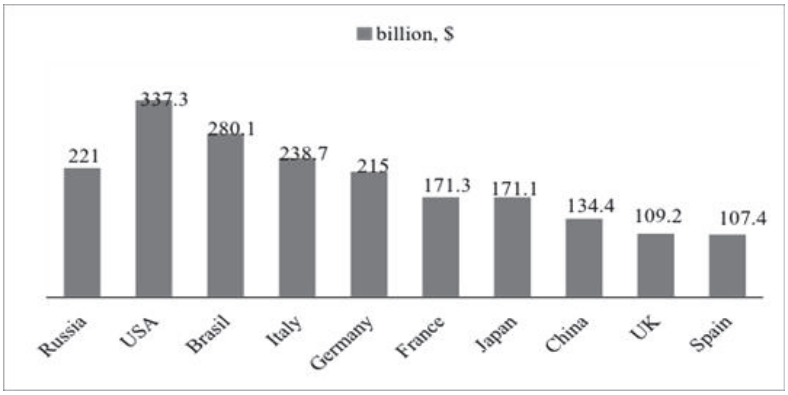

Fig. 1. Amount of non-received taxes ([13] and elaborated by author).

3. Results

In a general sense, the overall level of investigation of this problem makes it impossible to systematically demonstrate the characteristics of the shadow component as part of the economy and the directions and methods of a multilateral

approach to the solution of the main difficulties. However, having avoided these problems, it is still impossible to convincingly move towards establishing a functioning market mechanism in Russia. Plus, the impact of the illegal economy that improves the welfare of the population is still really uncertain [5]. Most of the scientists focus mainly on the negative aspects of the illegal economy; a significant number of scientists confirm its positive impact on economic growth under specific circumstances. The shadow economy is not always carries destructive properties. Sometimes retreat into shadow allows you to adjust the economic processes of the formal economy. Below are some of these properties [4]:

1. "Glue" of the economy - easing crisis periods in the formal economy - prevents standstill of resources, leading them into the shade for a while, and then taking them back to the light at the end of the crisis period.
2. Integrated controller - using it comes the solution of various critical problems of the company, which is problematic to decide officially.
3. "Spring" of employment - an example of forced Fade for human survival, or a similar picture, but on the other underlying reason - implementation abilities and disclosure of entrepreneur talent of people who were unable to express themselves in formal structures [10].
4. Functional aspect - saves the progress of the economy in the transition period of not yet fully established market economy.
5. "Piston" of economic activity - money earned in the shadows, but spent in the formal economy, is deemed to be for the benefit of it, thereby creating the conditions for further development.

However, keeping in mind the fact that everything in this world is dual, the shadow economy has a number of aspects that put the economy and the whole country in danger [6]:

1. Unequal welfare of society because of the corruption of some group of people (government officials, criminals) [14].
2. Distortion of the tax system - a departure from the taxation introduces an additional burden on law-abiding citizens, which leads to more people moving into the shade, in order to circumvent the tax system - a vicious circle.
3. Disorder of the formal process of reproduction - as an example, this aspect of the illegal economy does not bear the idea of a strict control over the personnel, which leads to a decrease in qualification and motivation of the latter - the result is the production, which has a lower value compared to a similar product, issued an official supervision [11].
4. Aspect of improving competitiveness of the economy - transfer of production factors into shade and decline in investment activity together gives a lower gross domestic product.
5. Aspect of high entry barriers to the market - a consequence of corruption in the higher echelons of power, the role of a meager legislative leverage - the competition in the official markets insignificant: either there are monopolies or cartels.
6. Aspect of rising crime in society - as the shadow economy is not regulated by law and other regulations, then in conflict resolution no one will be no recourse to the law, and therefore can start a sad picture of the division of property through racketeering, armed clashes and so on.
7. Aspect of reducing morality of society - someone in the shade makes decent fortune, but still goes unpunished, and someone regularly pays taxes and barely making one's ends meet. It sounds tempting, while increasing these kinds of thoughts in society, economy, in the first place, will receive a very hard hit in the future.
8. Vulnerability of the poor and disabled members of society - the more people does not pay taxes, the smaller the scale of social programs of the state [8].
9. Aspect of disproportionate development of the economy - investments in sectors that are in the shadow, give a greater return on them. The downside is the rapid development of this sector, which may go against the state strategy of the country development in the long term.

Shadow economy can be most easily stylized by a pyramid. Form of a pyramid is picked up deliberately: on the one hand, it preserves the principle of subordination (compliance of vertical subordination of "lower" layers to "higher" ones) interaction among the illegal economy; on the other hand, it clearly describes the approximate number of people in every layer of the pyramid.

The pyramid is composed of three layers, the main layer - the region of the tip of the pyramid. There is no doubt that for any meso-, micro-and macro-level government staff essence of the pyramid is not constant.

In a single embodiment, a figure subject of illegal economy is shown by researcher in the field of illegal Russian economy - Y. Latov (see Fig. 2).

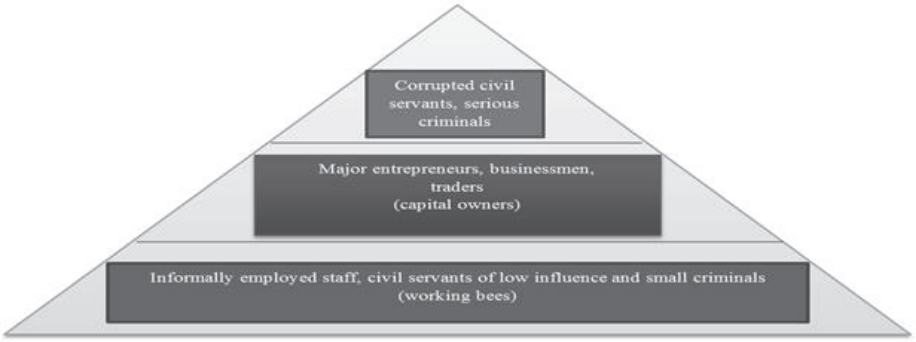

Fig.2. Subjects of shadow economy [9].

The top of the pyramid is formed by: 1) the important persons of the government, and besides them serving as a base environment of persons representing the legislative bodies, the main persons of judicial, investigative, fiscal institutions holding these powers to adopt the necessary decisions or acts; 2) financial and industrial fixed assets - physical and legal entities with funds proportional to the amount of funds to micro and mesolevel; 3) organized criminal association - criminal businessmen, on the one hand, represented by residents of a solid business, and on the other - the criminal environment; 4) power-hierarchical institution of the Orthodox Church - the largest owner of property with a very large accumulation of money available, shut off from the government intervention.

The middle sector is formed by traders, entrepreneurs, financiers and industrialists. This circle of people is associated with one goal - the desire and the chance to denote them as the base of the middle class of the state with a standard market economy. This class can also enroll "medium" (according to the degree of influence) civil servants, criminal units, which use their own place in the hierarchy in their own mercantile purposes.

Possible helpers of medial shadow businesses layer of our pyramid, in my opinion, are the large number of persons of the last layer - the base of the pyramid, displayed with employed workers, petty civil servants and small criminals.

Symbolic expression of the structure of shadow schemes and its hierarchy has the opportunity to be a given sequence: a bureaucrat of higher power apparatus, the capitalist mogul, criminal entity, businessman, hire workers. Such a construction is similar to the configuration of the ordinary and economically productive activities (omitted only criminal components). This is explained by the fact that a significant part of the population of our country is active in the informal sector [15].

The harm caused to the country and the society with the top two layers of the pyramid subjects of the illegal economy, cannot be compared with loss of the economy, which can be obtained from the activities of the subjects of the base of the pyramid. The problem is, by no means, not only in the size of the total loss. Corrupt officials, for example, destroy the basic principles of statehood [3].

Labor market is also affected by the activities of shadow economy. Firstly, it distorts the structure of employment – nearly 25% of economically active people are not offered or don't want to sign the official labor contract, which makes this number up to 10 million people in Russia (see Fig. 3).

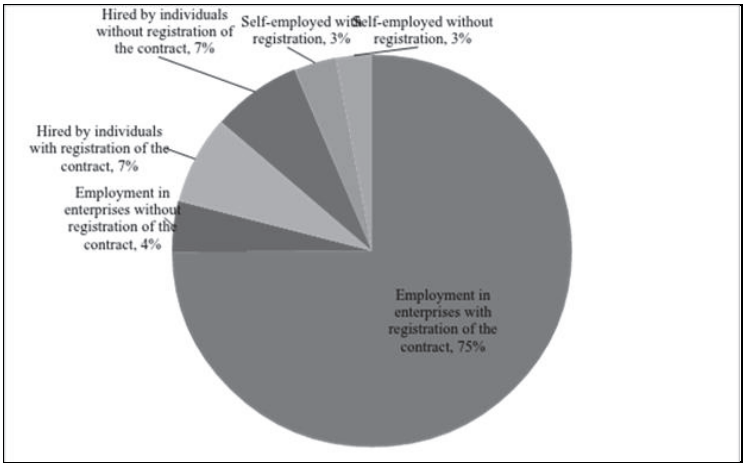

Fig. 3. Structure of Employment in Russia ([12] and elaborated by author).

Deeper analysis of the labor market situation gives us a possibility to divide those who work unofficially into directions of their activity. Results turned up not as a surprise: most of them work in trade, agriculture and construction activities (see Fig.4).

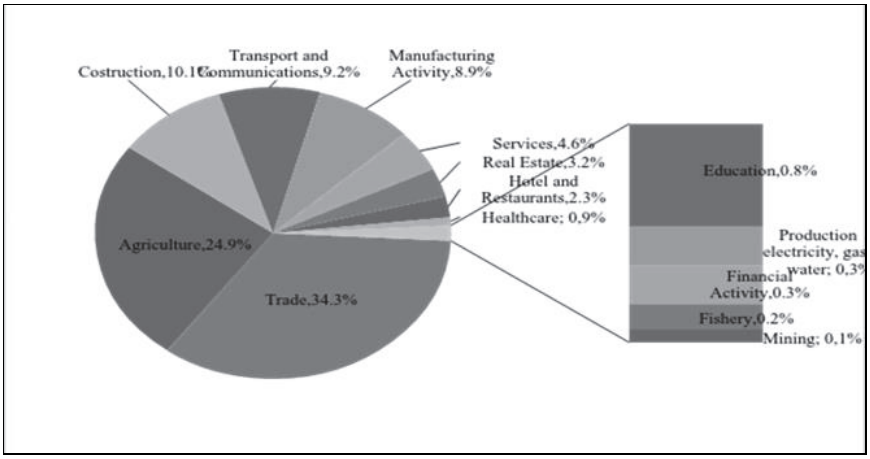

Fig. 4. Areas with informally employed ([12] and elaborated by author).

4. Conclusion

According to this paper we can formulate some conclusions. First of all, it is apparent duality of the shadow economy in the reproduction process: a shadow economy affects regular reproduction process deforming its steps; under certain conditions, the shadow activity begins to reanimate economy (especially in times of crisis) stage of production, distribution, exchange and consumption. But if we look deeper, comes the second and most important thought – shadow economy doesn't just influence the economics, but through it other spheres of our lives, and, not surprisingly, in a bad way.

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Institutional Features of Interaction of the State and of Natural Monopolies

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Abstract

The author examines institutional, as well as economic approaches to natural monopolies investigation. Institutional peculiarities of their development are analyzed; the structure of the institutional environment of natural monopolies is characterized. The problems of regulation of natural monopolies are identified. The process of regulation of natural monopolies is considered through the prism of the effect of dynamic inconsistency. The formal and informal interaction of natural monopolies and government agencies are defined. It is proposed a step-by-step state regulation of natural monopolies with due regard for market instructions maturity. There are formulated additional measures of state regulation of natural monopolies.

Keywords: *natural monopoly, institutional approach, the structure of the institutional environment, state regulation of natural monopolies, investment activities of natural monopolies, competitive relations*

1. Introduction

The overall goal of socio-economic reforms in the Russian Federation is to create an institutional system that generates such norms and standards of conduct and regulation of natural monopolies, which would increase the quality level of all strata of the population. The size of their income is greater, the greater the benefit of their work brings to society [9].

There are elements of a regulated market economy in all industrialized countries currently. This fact implies a certain degree of intervention of different institutional structures in market mechanisms. In this regard, the application of the institutional approach to the analysis of the interaction of natural monopolies and the state in the conditions of an open economy is particularly relevant [8].

Understanding the functioning of the economic system and the economic mechanism of the economy requires the analysis of very complex interactions between society and economy, natural monopolies of and State or together as part of the economic system in terms of the institutional approach. The relationship between society and economy are determined by a set of institutional constraints that define the mode of functioning of the economic system. The Institutions are the key to understanding the relationship between society and economy and the impact of these relationships on economic growth. Ultimately, institutions are the fundamental factors in the functioning of economic systems in the long term [5].

2. Theory

To determine the institutional features of the interaction of natural monopolies and state it is advisable to determine the structure. Under institutional structure refers to the set of institutions, which are in close relationship and develop together with it.

The structure of the institutional environment in relation to natural monopolies can be represented in a diagram (Fig. 1).

The structure of institutional environment includes: legislation, regulations, mandatory for businesses; enforcement mechanism, ensuring adherence to the rules of (court system); unwritten laws, unspoken rules and rules of conduct of business entities, rules, customs, not enshrined in law but applied in economic practice, tradition, historical and national characteristics, religious and cultural factors; organization («players»), in collaboration with each other [12].

The role of the state is a consistency of economic processes, the whole course of social reproduction, conscious centralized influence on economic processes and entities, including natural monopolies. The recognition of the state as a market entity gives grounds to consider it as a phenomenon of basic, economic, integral attribute of market economic mechanism.

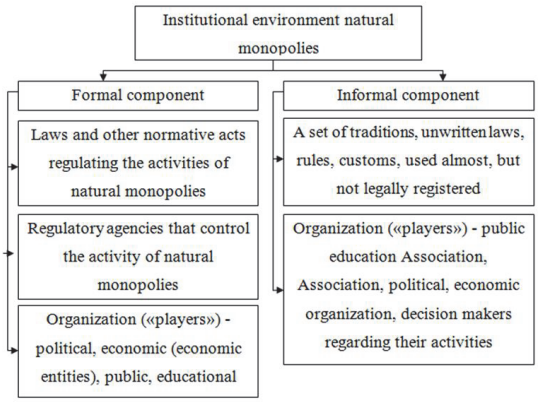

Fig.1. The institutional environment of natural monopolies [1]

Economic efficiency of activity of natural monopolies defines formal rules, informal norms and enforcement system for compliance with the established conditions. The state, as the initiator of formal economic institutions must be in constant interaction with business entities. This condition is necessary for real action legally binding standards and their compliance with informal rules [11].

The complexity of the regulation of joint stock companies in the natural monopoly sectors – for example, OJSC «Rostelecom» and OJSC «Gazprom», OJSC «Svyazinvest», OJSC «Russian Railways», is that the state involved in this process in several guises. It is interested in improving the financial performance of these companies as an owner of companies and the receiver of taxes to the budget [2].

Indicators of activities of natural monopolies in the Russian Federation in January-December 2013

Table 1: Balanced financial result (profit minus loss) of companies spheres of natural monopolies in the Russian Federation for January-December 2013

	Balanced financial result (profit minus loss) for the reporting period, thousand rubles	Balanced financial result (profit minus loss) for the corresponding period last year, thousand rubles	The growth rate in % to the corresponding period last year
transportation of oil and oil products through pipelines	210217642	220711845	95,2
the transportation of gas through pipelines	1032817056	900926772	114,6
transmission services electric (thermal) energy	633965130	535414546	118,4
rail transportation	18533517	66459174	27,9
port services (river and sea transport)	39720192	67674893	58,7
airport services and the services of transport terminals	73708228	87826687	83,9
services public postal	3642397	2330904	156,3
services public telecommunications	356246274	214343469	166,2
services for operational dispatch management in the electric power industry	3327939	2928156	113,7

Source: Main indicators of activity of natural monopolies / Federal state statistics service of the Russian Federation. 2014. (http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/publications/catalog/33857a8044cd99bda132f733421f06f5).

Table 2: The turnover of the organizations in the spheres of natural monopolies in the Russian Federation in January-December 2013, thousand rubles

	In fact, during the		The growth rate in % to the corresponding period last year
	The period from the beginning of the reporting year	The corresponding period of last year	
transportation of oil and oil products through pipelines	1253469476	1192375257	105,1
the transportation of gas through pipelines	6423227540	5911342687	108,7
transmission services electric (thermal) energy	7413078243	7021733098	105,6
rail transportation	1280260560	1266013959	101,1
port services (river and sea transport)	222912901	230370971	96,8
airport services and the services of transport terminals	409705993	381564843	107,4
services public postal	131836394	125062867	105,4
services public telecommunications	1724267844	1708232560	100,9
services for operational dispatch management in the electric power industry	23931467	21739840	110,1

Source: Main indicators of activity of natural monopolies / Federal state statistics service of the Russian Federation. 2014. (http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/publications/catalog/33857a8044cd99bda132f733421f06f5).

At the same time as the conductor of public interest the state is on the side of the consumer and should not allow significant price increases. This requires one of the important macroeconomic control functions - maintaining price stability in the country. At the same time, infrastructural nature of natural monopolies and the significance of the external effects of their activities require maintaining the required level of investments that must be provided appropriate funding sources.

Therefore, the regulation of natural monopolies, the state must combine the goals of efficiency, equity and sustainability in the long term. Ultimately, they correspond to the fundamental interests of three interacting entities (producers, consumers and government), and contribute to balance their interests. At the same time, this ideal scheme adjusts the reality. The difficulty of regulating natural monopolies Federal and local level is that they show a pronounced opportunistic behavior in relation to state and society in the form of inflated costs and hide information from the regulatory body (incomplete or inaccurate information) and direct consumers. You should also consider that the regulation of the entire set of transactions between counterparties in the sphere of natural monopolies may be accompanied by the growth of transaction costs, which reduces the effectiveness of this regulation [4].

In addition, the regulation of natural monopolies, as in any other regulation, may be a manifestation of the effect of dynamic inconsistency: taken once a standard package of norms at the time of its greatest impact may be less effective or even dangerous due to the structural and institutional changes in the economy. And the adjustment of this package will begin to interfere with work «blocking effect» once adopted standard. Besides, there is always the possibility of the manifestation of the so-called «law of unintended consequences» [10].

The informal interaction of natural monopolies with government agencies is a counter character. On the one hand, the state has an "impact" on natural monopolies in the form of administrative-bureaucratic, personnel decisions, the allocation of natural monopolies unusual features, support requirements of certain commercial structures, the imposition run monopolies political problems. On the other hand, the industries of natural monopolies use the state to search for and assign political-economic rent and lobby their economic interests in the authorities actively. As a rule facts lobbying are confirmed by indirect evidence.

In general, rent-seeking behavior leading to reduced production volumes and price disparity, and wasting rent in lobbying further reduces social welfare. In addition, it leads to long-term consequences: deterioration of the institutional environment in general, the maintenance of inefficient management and reduction in the quality of political institutions.

State regulation of natural monopolies shall be accompanied by systemic changes in the economy, the development of market principles of its functioning, the creation of a favorable institutional environment for their development. At the same time, it must fit into the general concept of state regulation of the economy and to match the maturity of market institutions in general.

3. Results

State regulation of natural monopolies, should include three stages:

1) Maintaining a symbiotic (semi-market) institutes corrective nature in the short term:
   - restriction of transactions with property (including related to the sale of shares to foreigners);

- state joint financing of investment and innovation [3];
- temporary preservation practice of cross-subsidization to maintain fair prices for different consumer segments.

State regulation of investment activity of subjects of natural monopolies should be focused on the strengthening of supervision effective and targeted use of investment funds in the form of grants and targeted funding, forecasting needs in investment capital and direct (by order of the target equity grants, loans and indirect taxes, patents) stimulation of research and development work, the creation of favorable innovation climate in the economy [6].

2) To create the basic institutions of a market economy (including the basic rules of the game associated with the elimination of market imperfections):
   - strengthening of civil institutions and civil society,
   - • the adoption of laws to help fight against bureaucracy;
   - overcoming informal practices in the regulation of natural monopolies;
   - improvement of standardization and certification in the activities of natural monopolies;
   - the introduction of mandatory independent audit companies naturally monopolistic industries;
   - creating a framework for the protection of consumers ' rights in collaboration with the natural monopoly entities, aimed, inter alia, to overcome various exotic monopolistic practices (setting high fees for connection services, the imposition of additional services, unjustified disconnection of consumers ' access to welfare and other).
3) The development of complementary market institutions in the long term:
   - ensuring equal access to the market of alternative providers that are willing to offer lower rates than the subjects of natural monopolies;
   - organization bidding for the franchise (franchise), the creation of market-based institutional framework for the purchase and sale of contractual rights of access to transmission and distribution transportation systems;
   - the formation of a civilized market for private companies and foreign companies by organizing futures and spot trading products of natural monopolies on one or more commodity and stock exchanges;
   - the establishment of a voluntary information space providers and consumers of natural monopoly entities;
   - improved procedures for the coordination of economic interests of suppliers and consumers of goods (services) on the regulated segments of the monopoly market;
   - establishment of legal principles for the compensation of losses of natural monopoly structures.

4. Conclusions

An additional measure of state regulation should be indicative planning, orienting natural monopoly on long-term macroeconomic perspective, which will allow for better development of their development strategies [7].

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Usage of Gamification Theory for Increase Motivation of Employees

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Abstract

Games have amazing ability to hold people's attention for a long time, build relationship, win recognition and develop creativity. Games can be considered as a sample of motivation and job involvment, so now we are trying to apply these techniques into the labor process. In the following article gamification term is given and history of gamification theory is analyzed. Besides problems of application of gamification method in sector of national economy are examined. Also analysis of the possibilities of implementation this theory to the Russian reality is presented.

Keywords: *gamification, employment, wage, payment, motivation*

1. Introduction

Networks of different games widely spread in modern world. Professionals more often use game form for teaching children and adults. Organizations use different game forms for increase efficiency and productivity of employees. “Gamification” term was invented by British computer programmer Nick Pelling in 2002, but became widely used only in 2010.

Gamification is usage of game thinking and game mechanics in non-game context to engage users in solving problems. In other words, it is designed system that creates context where person willingly and effectively achieves goal. For decades game is considered as sample of motivation and involvement and nowadays we try to learn this technology from games.

2. Theory

During game people spend time for something that doesn’t improve neither their lives nor others (expect game makers). But if we could use all energy and interest of people that appears during game and transfer it to important and effective solutions of problems, results would be positive for all. In this case employer would have motivated and productive workers, and therefore better results and more profits; and employee, enjoying game process, increases incomes and climbs career ladder. And if usually person simply wastes time playing computer games, here the more time he spends playing “business-game” the more successful he becomes.

Gamification methods in personnel administration are used for recruitment, organizational problems solving, stimulation employees’ initiative and improvement of the corporate culture and preservation of valuable employees (pic.1). Modern generation of workers is more focused on divers use of their knowledge, skills, creativity and is looking for freedom, independence and realization of personal potential in profession, that makes gamification (a new trend in management) as relevant as ever.

Pic. 1. Gamification methods in personnel administration

As a reward respect of management and stuff or financial rewards can be considered. There are several other ways of motivation such as bonuses, career growth or obtaining the right to purchase shares of the company at a discounted price[3]. Non-financial motivation includes acquisition of new skills, admission to more important work, comprehension of importance to the company and, finally, pleasure of work done.

Wage rate cannot directly depend on game results since gamification is based on voluntary participation. Otherwise according to law it can be considered as discrimination against other employees on unverifiable criterion and as hidden additional duties that official duties do not consist of. In the structure of wages gamification cannot influence on guaranteed part, but assumes application of bonuses in addition to the basic system of bonuses.

In the system of gamification there are 3 main groups of game mechanics:

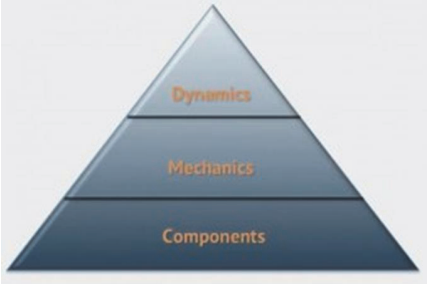
1) Olympiad: competitive mechanics,
2) Win-Win: mechanics without winners and losers,
3) Aesthetics: mechanics focused on visualization

Table 1. Basic game mechanics

Group of mechanics / Tasks:	Olympiad	Win-Win	Aesthetics
To increase overall level of productivity	+		
To identify leaders	+		
To identify vector of development of particular employee and the whole team and promote their development in this direction		+	+
To provide all employees immediate feedback on the results of activities		+	
To increase the visibility of the results of each employee	+	+	+
To improve quality of communication in team		+	
To decrease the amount of conflicts		+	
To unite employees with common idea, to involve in team work	+	+	
To inculcate values of the company to employees, to form an understanding of HR-brand	+	+	+

With the implementation of gamification techniques in the field of personnel management the question of the legal component of the process raises. Relations arising in gamification fall under the requirements of the civil law. Gamification is not directly related to the financial benefits, but there is an indirect link.

Professor Werbach suggested structure of gamification elements (pic.2), where the first basic level presents gamification components, the second – mechanics and the third – game dynamics[11].



Pic. 2. Elements of gamification

Components of gamification are appearance like user avatar, levels of game, process-bars, badges that can be given for achievements, leader-boards, quests, virtual goods. The mechanical elements of the game are tools that can help to figure out how to move the action forward and get the players into the game such as rewards, resource acquisition, feedback, competition and cooperation[7]. Dynamics consists of emotions, relationships between players and progression of player. Important factor is that gamification of business processes including personnel management should encourage people to participate only on voluntary basis.

3. Result

Among the most well-known companies that use theory of gamification is AOL, Microsoft, eBay, Cisco, IBM, L'Oreal, Coca-Cola, Disney, Dell, Nike, NBC, Nissan, HP, Pepsi, Warner Brothers, Viacom, Samsung, Comcast, RecycleBank, Volkswagen, Facebook, Siemens, American Express, EMC. In Russia gamification use such companies as Uralian bank of reconstruction and development, Alfa-bank, Rosatom, M-video, Bank Vostochnyj-express, Altoros, Hlebprom and others.

A lot of minuses of this system can be found: improper of fake motivation, irrelevant awards and inadequate mechanisms. Each of these drawbacks does not allow achieving desired level of motivation and in some cases can lead to the opposite effect[1]. Low quality game systems do not engage audience as it is something more than distribution of badges and tabulation of leaders. Badges and leader table are undoubtedly among basic tactics of gamification, yet without specific business goals one cannot do.

Gamification system is very complicated in development; there is no flexible product that could work in every organization or at least at all departments of one company. It often happens that gamification is incompatible with particular corporate culture. When there is no holistic vision, it is impossible to incorporate new mechanisms in HR and so gamification does not bring significant results.

It is said that gamification can work well only with young employees as the term "game" is closer to young people. However, new popular gamification theory was widely spread and actively practiced on the territory of the Soviet Union and Eastern countries, as socialistic competitions of employees (that were popular those days) meet the requirements of gamification theory[5]. Remembering old methods of increasing motivation older generation is tolerant to implementation of principles in new forms.

Socialist competitions are competitions between employees, teams, departments and enterprises in order to develop labour productivity, cut production costs and strengthening of work discipline[8]. The aim of socialist competition was to show creative initiative, improve product quality and increase the rate of scientific and technological progress and efficiency.

First contract about socialist competition was published in 1929 in newspaper "Truth". The article "Contract about socialist competition of fettlers from pipe department of "Krasniy viborjets" enterprise" laid the foundation of numerous socialist competitions in the USSR.[2] Competitions of employees developed due to shock work and Stakhanovism. The aim of this process was to have high performance rates, that are achieved by individual workers, who were not the best in their field, so that it created conditions for a revision of old standards of development and improvement of material and technical base.

At the same time at the basis of this movement laid moral motives such as sense of duty and moral incentive. Contentiousness and competition (that were a part of the contest) were supposed to increase number of success, to demonstrate abilities and personal fulfillment. The goal of such competition was the product and not the profit, that is was it was considered as the most effective factor in development of society.

4. Conclusion

Let us analyze socialist competitions in terms of modern theory of gamification. Important components for victory in socialist competitions were merit badges such as "Winner of socialist competition". Winners had both material and moral rewards. Material rewards were money, goods or benefits that are typical for the socialist system, such as tickets to resorts, permission to travel abroad, right to receive housing or car out of the main line[6]. Moral rewards were diplomas, badges, portraits of winners posted on the board of honour. Labor collectives were awarded with challenge winner banner.

Thus gamification is a tool that can bring the relationship between employer and employee to a new level, which goes beyond frames of wages and labor contract and is based on feedback, recognition, status and self-fulfillment.

Creation of a game system is individual for every company and there can be no ready-made solutions, as the aim

of game mechanics is strengthening weak sides of company among which could be small operation speed, weak customer orientation, low employee loyalty, absence of effective internal communications, increased level of conflicts.

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Forming an Effective Team in Venture Business

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Abstract

The article explains how to create an effective venture team of venture capital projects. Problems of venture business relations between participants in the Russian economy are related to the human factor. Special relationship arose in venture business universities. Institutional and individual investors prefer to finance the company's activities with professional and proactive team of managers and specialists. To evaluate the venture capital opportunities analysis of dynamics of development of the Russian market of venture capital, defined the problems and prospects of its development.

Keywords: *venture business, effective venture team, university venture business, stage venture capital, venture capital opportunities*

1. Introduction

An important role in the innovative development of economy is venture capital. It allows you to commercialize innovative ideas, technologies and developments, create new companies and jobs, and support existing organizations. Due to this financial instrument are actively developed entire industries, such as information technology, cellular telecommunications, biotechnology, software. Many factors continue to constrain the development of the Russian venture market. Among them are those relating to the human factor: low levels of investment culture and experience of entrepreneurs, the lack of professional management team formation in venture funds, as well as researchers capable of innovative breakthroughs.

Many scientists are drawing attention to the fact that Russian developments with high innovative potential, but lacked the experience of technology commercialization in the marketplace.[6] To output the results of developments to the market need to organize the cooperation of developers and researchers with entrepreneurs and investors, build effective teams of participants in the venture process. The special relationship between the parties arose in venture business universities. It is important to understand the relationship of a business venture in the Russian economy. In the Organization of effective teamwork is useful to take into account the characteristics that affect the willingness of people to work together on investment ideas. Score of venture opportunities and analysis of the dynamics of development of the Russian market of venture capital can identify prospects.

2. Form of Teamwork in Venture Business

The most effective form of venture capital projects in modern conditions is teamwork, which is generally preferred when dealing with complex tasks with great uncertainty and risk. [3] It allows you to use a wide range of competencies and high-impact staff, versatile approach when selecting options to address the problems.

Team work brings together the activities of the researchers, venture managers and agents of venture capital managers. Venture capital managers provide timely transformation of ideas into product and output it to the market. With extensive knowledge in finance, personnel management and sales, they are an experienced team with the exact distribution of the works. In this command, the task of organizing the smooth operation of the parties on the basis of mutual understanding and careful positioning of participants becomes paramount. As with any team, important elements are the coherence and focus on strategic objectives, unity of motivational incentives and value orientations. [9]

Venture business is investing in innovative projects in the early stages of the development of companies and the subsequent sharing of finance investor to share in the business. The venture can be internal and external. An internal venture is a separated Division of the enterprise organizational entities. [1] Typically, in large companies guide provides the freedom of researchers to develop and implement ideas and forming the venture team of staff from various divisions of the company. In a creative atmosphere, getting funding from corporate venture funds or trust funds, venture team is involved in the development and approval of new ideas, the transformation of innovation into a product.

Foreign venture is a legally independent entity that implements an innovative project in the field of high technology and high development of science-intensive products. Media ideas face great difficulties in establishing the venture businesses in finding the necessary human and financial resources.

Sources of innovation in most countries of the world are universities. University business venture is seen as a logical development of the scientific creativity and as a form of entrepreneurship. In the University environment, most venture capital projects start as initiative projects of universities. Subsequently they can connect interested companies. [10] The University may conduct all the research at its base alone, so later set up a company to promote research results.

The most difficult part in the venture business is to establish effective links individual researchers with those employees of the University, which will directly promote the product on the market. But it is the key process of venture business universities. The task of scientists is to report objectively to venture capital managers fact research and innovation, as the transfer of an innovative idea can be transformed or totally lost. At this stage should operate special agent specifically which communicates between the researchers and venture capital managers. [11]

In this regard, agents of venture capital managers in the team are people, tech savvy and understand what consumers are looking for a product. Studies show that any new product or technology on the market within the framework of the venture enterprise includes a substantial component of training in the use of a product or technology.

3. Characteristics of Venture Capital Activity

Important players in the venture capital business are investors. They are institutional investors (venture capital funds, which have attracted funds of pension funds, insurance companies, banks, corporations and through a management company investing in specific projects), corporate investors, investing in small innovative companies and then get shares in it, and business angels. In addition to granting cash, venture capitalists are heavily involved in hiring or firing the CEO of the portfolio company, choosing a board of directors, devising an overall strategy, identifying potential partners, and so on. Indeed, the researchers found that the negative affinity effect was strongest in early-stage deals, which generally require more input from investors than do later stage deals.

Business angels are highly professional in-where investors would: managers, financial advisors, consultants, academics, investing their own money in new businesses and support their community. [7] They have a more creative approach to finding projects for investment and jobs in the early stages of business development, when researchers still don't have the money to hire professional managers. Because it is difficult to document the great ideas in the business plan, business angels have to act as a Manager and to take an active part in the management of the company, to help the team in the formulation of financial and technical side of the project.

Relationship problems and investor arise from the fact that, in addressing the financial issues, the company is in the early stages of development in development planning project and often overstates the funding. Given this fact, the investor must evaluate and monitor actual financial needs and allocate funds in tranches, as their successful development. In addition, developers often overestimate the fair market value of his invention, convinced that the ideas have value in it and very expensive because of the huge cost time, financial and human resources. For venture capital is important to cash generation and their growth.

However, from the investor's point of view, the only independent value industrial design product, customers, partners, business plan and strategy for the development of the patented technology. They are taken into account when assessing the company's withdrawal from the project.

Of course, the investors prefer to finance the company's activities with professional and proactive team of managers and specialists. Among the key entrepreneurial competences for implementation of venture activity, can be described as the ability to think in a new way, discovering new business opportunities, effective communications with different partners.

Thus, the venture development is not possible without creating mutually beneficial relationships between researchers, entrepreneurs, managers and investors. They must be built on trust in any business venture, not only is the problem of the relationship.

Interesting is the study conducted by Harvard researchers.[8] They raised the following questions. What specific

characteristics influence individuals' desire to work together on an investment deal? And given that influence, how does affinity affect investment performance?

The most important characteristics for analysis they chose ethnicity, education and employment history. Across the board, the researchers found that venture capitalists tend to coinvest in deals with other VCs who have similar characteristics. This was true regardless of whether the similarities were ability-based or affinity-based. For example, two VCs, who graduated from the same undergraduate school were 34.4 percent more likely to collaborate on a deal than were two VCs from different alma maters. And the probability of collaboration between VCs increased by 39.2 percent if they were members of the same ethnic minority group.

They found that the probability of success decreased by 17 percent if two co-investor had previously worked at the same company – even if they hadn't worked there at the same time. In cases where investors had attended the same undergraduate school, the success rate dropped to 19 percent. And, overall, the investors who were members of the same ethnic minority were 20 percent less successful than investors with different ethnic backgrounds.

Venture capital investors with similar characteristics make bad decisions because they do not take into account the views other than their own. Working groups work best when the members learn from each other's diverse experiences.

Thus, venture capitalists have a strong tendency to team up with other VCs, whose ethnic and educational backgrounds are similar to their own. Unfortunately, this trend is not always conducive to business development.

4. Venture Opportunities and Perspectives

An important element in the process is to identify venture capital opportunities. Opportunities in the venture business, J. Eckhardt and S. Shane is defined as a situation in which new products, services, materials, technologies or knowledge can be represented in the market by building a new relationship between the objectives and instruments of economic development.[2] Venture capital opportunities are not static monolith, they rapidly change during the venture business process. Can be very vague, but be developed in a more clearly articulated business idea and subsequently become a business with a good income.

To evaluate the venture capital opportunities in the process of business activity, will study the State and dynamics of the venture capital market in terms of its key indicators such as the volume of capital funds, the number of venture capital funds, venture capital funds investment distribution by industry and in stages.

According to the Russian venture capital Association (RVCA) in 2012 compared to 2008 year of committed investment in Russian companies increased from 1.5 billion. to 4.15 billion dollars, i.e. 240%. According to the latest market survey RVCA for 2013 year recorded continued positive momentum on a number of significant indicators. One such indicator is the amount of accumulated in the private equity and venture capital funds. In 2013, according to a conservative estimate that includes only the data for institutional players to the professional market, the level of capital exceeded the 28.9 billion dollars. The positive growth of the accumulated capitalized venture funds saved in recent years (19.6% in 2011 year, 28% in the year 2012, but only 9.6% in 2013 year) (table 1). However, the relative growth rates remain below pre-crisis (in 2007, they accounted for 63.4%, in 2008 is 39.7%)

Table 1: Dynamics of growth of the total amount of capital venture funds in Russia

Years	The aggregate amount of capital, bln. $.	Change to previous year	
		Abs. growth, bln. $.	The growth rate, %
2006	6,28	—	—
2007	10,26	3,98	163,4
2008	14,33	4,07	139,7
2009	15,2	0,87	106,1
2010	16,8	1,6	110,5
2011	20,1	3,3	119,6
2012	26,4	6,3	128
2013	28,93	2,53	109,6

In recent years the tendency of creating funds with a strong specialization and the emergence of the Fund focused on early stage companies. From 2008 to 2013 year number of venture funds in the Russian market increased from 80 to 200. Almost three quarters of the growth of venture capital funds (97 to 155) in 2012 year are funds from the sector of information and communication technologies (ICT). For 2013 year on the Russian market more than 45 new private

equity and venture capital funds with a total capital of at least 2.2 billion dollars.

Business angels investment rate is very difficult due to the preference of the participants remain anonymous and hide the transactions. [5] Even in developed countries the market angels investment investing remains opaque. The amount of informal investment in 2011 in Russia amounted to about $ 550 million dollars, or just over 1% of the volume of investment in the informal capital of the United States.

In the functioning of the venture capital allocated stages which correspond approximately to the stages of the life cycle of the firm or the investment. For the initial phase of the project (seed stage) are characterized by maximum risks that pose the greatest difficulty in attracting resources, but they are important for the implementation and development of breakthrough innovation. This niche market Russian venture is the least developed. Professional attachments to such stages are, as a rule, business angels. However, venture capital may be not all stages. The aggregate amount of the committed investment funds in venture stages in 2012 year accounted for about 10% of the investments in expansion, restructuring and later. Table 2 shows that the last stage of venture capital investment in Russia accounted for the majority of venture capital investments over the years of development. At this stage are often invested in company shares for sale to a strategic investor.

Table 2: The distribution of investments by stage in Russia for 2008-2012 years

Stage	2008		2009		2010		2011		2012	
	mln., $	%	mln., $	%	mln., $	%	mln., $	%	mln., $	%
Seed stage	68	4,6	13	2,6	22	0,9	129	4,2	129	3,1
Start-up	94	6,4	110	21,7	132	5,2	143	4,6	269	6,5
Expansion, restructuring and later	1311	89	384	75,6	2361	93,9	2811	91,2	3754	90,4
Total	1473	100	507	100	2515	100	3083	100	4152	100

On OECD countries have a different picture. At a later stage venture capital accounted for no more than 50% of the investment, in addition to Canada and France (fig. 1).

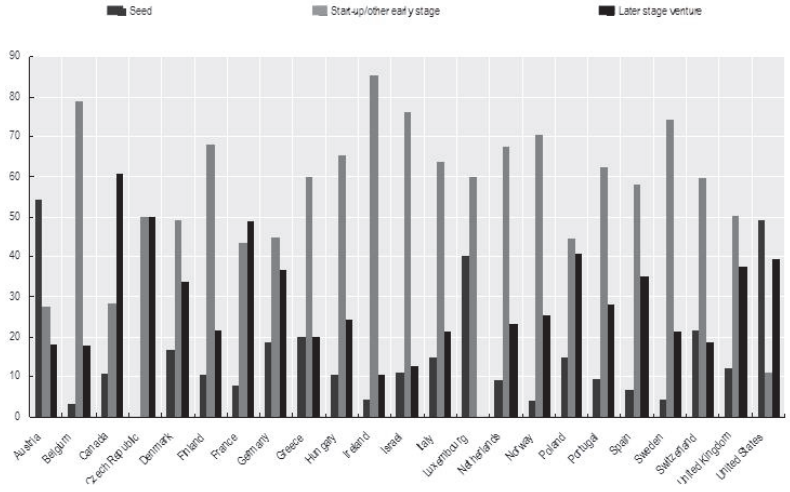

Fig. 1. Venture capital backed companies by stage (2011) [4]

Problems and prospects of development of venture activity in the Russian economy can be summarized as follows (fig.2). Sometimes it seems that knowledge generation system provides a large number of projects for which funding is not enough. In fact, the existing system of generating knowledge does not give due effect to commercial use.

To activate the venture business, big corporations should increasingly serve as a consumer innovation, create small high-tech companies and to enhance the credibility of the business. An important aspect of the venture business is compulsory activities for the protection of intellectual property through patenting. Mechanisms for the registration and

transfer of intellectual property rights in Russia are complicated and take a long time.

The seed stage does not have the required project financing. Development of business angel investment is proceeding at a slow pace due to the lack of venture capital infrastructure to build the State must take a significant place.

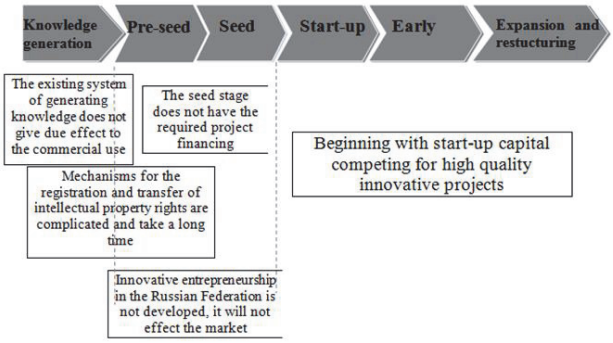

Fig. 2. The specificity of the venture business in Russia by stage

5. Conclusions

For the development of the venture capital market requires technology management team with a good strategy and effective cooperation and understanding of all participants in the venture business. The commercial potential of innovation depends on the field, where were identified and created. University venture business development will allow innovative breakthroughs. Universities on projects of promotion of research results and technologies in the market also contributed to the revitalization of venture business. For this purpose it is necessary to develop mechanisms to link these results with profiles of venture funds. A whole range of different in form and content organizations are practical embodiment of university relations with the business venture.

There is a lack of capital for seed and early stage companies, the majority of investments in the telecommunications industry and the Internet. Beginning with start-up capital is competing for quality innovative projects. Venture investors are looking for an experienced, credible, energetic and agile team, more than anything else. They would rather invest in a team with the idea because the team makes or stops business.

The Russian economy needs to develop entrepreneurial initiative, professionalism and communicability of participants of venture business. Implementation of venture opportunities depends on the decisions of the government on the protection of intellectual property, the creation of venture capital infrastructure.

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Work Optimization of the Production Staff when Implementing Technical Innovations

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Abstract

Technological innovations significantly affect the main characteristics of the labor process of the production staff. Thus, the production efficiency can be related to the increase of the labor intensity, which is associated with negative consequences both social and economic. Therefore, there is a complex optimization problem of labor activity based on labor efficiency, intensity, uniformity. The solution of this problem cause the task of selecting a method of estimating of the labor intensity and economic and mathematical modeling of the organization of labor processes according to the criteria of economic and social efficiency.

Keywords: *personnel, innovations, productivity, labor intensity, optimization, efficiency.*

1. Introduction

Technical innovation is to improve the production efficiency, as a rule for the release of new, more competitive products.

The variety of equipment used in the Russian production leads to the creation of unique technical systems.[1]

Therefore, there is a need to develop innovative organizational solutions, which on the one hand, would take into account the maintenance features and a condition for the effective functioning of the new equipment, and on the other the hand, the most important criteria for activation of the labor potential of the production staff. After all, the main characteristics of the labor potential and the worker's health tend to constant changes. As a result of such changes the labor potential of a person either increases or decreases in terms of the overall result of the evolution of the potential, since the dynamics of labor potential let in the possibility of presence of not the same vector actions of its constituent elements.

For example, an employee can actively develop their professional competence on the background of the deteriorating state of their physical and mental condition. [2]

2. Method

The study of organization problems of the labor process in the conditions of modern production is of the relevant value, including the optimization of the labor intensity of the production staff that is the least studied. [3] In terms of this problem, the optimization of the labor intensity means the elimination or, preferably, prevention of the inconsistencies between the physiological capabilities of the person and working conditions.

Until recently, the research on optimization of work intensity was limited to the area of the labor physiology, and the main attention was paid to the reduction of physical activity. The introduction of automated machines with the reduction of physical activity led to the increase in mental and psychic strain. Labor intensity of the operators of automated equipment has been determined primarily by construction and kinematic features of the equipment. Synchronization of the automated production eliminates the downtime of the machines according to the will of the operator. The value of the labor intensity as a factor of productivity is not only preserved, but even increased, since the production volume and quality depends on the accuracy of the operator actions, the reception of signals about the possible malfunction of the automated equipment and its adjustment. The reliability of service is sharply reduced with an excessive labor intensity of operators that leads to accidents or failures of the technical system with the risk of injury, as well as significant economic

losses that can lead to substantial loss of economic benefits of innovation and that is especially dangerous, to their social rejection in the organization. [4] Therefore, the evaluation of the labor intensity on projects of the introduction of new technology seems to be the first step in the organization optimization process.

As our research shows, the labor intensity of semiautomatic operators depends mainly on the volume of stress in the process of fulfilling support operations (installation of the preform, transerence of the finished piece). In addition, the labor intensity of the operator affects the monotony, which is particularly high when working on semiautomatic machines.

The labor intensity of automatic equipment operators is determined by the size of the mental, psychic and emotional strain associated with the need to monitor the process and actions. When transferring from one machine to another, the content of work changes and the factors that have a dominant effect on its intensity. Relying on this conclusion, the algorithm for measuring the labor intensity, in our opinion, can be represented in the form of dependencies, each of which displays the function of the objective -intensity work while using one of the classes of equipment. Variable functions of the objective are the factors that have a dominant influence on the level of labor intensity. The labor intensity in each of the dependencies is represented as a product of factors that determine its value and has the following form:

$J1 = d\ s\ c\ M,$

where, $J1$ – labor intensity;

d – mechanical work (kg/m);

s – static work (kg/sec);

c – biomechanical work;

M – monotony of work (a number of techniques in repetitive operations, the timing of the repetitive operations, c; the number of operations per hour).

he formula for the labor intensity of operators working on the machines is expressed as follows:

$J2 = tn\ v\ m\ f,$

where, tn – the percentage time activity attention to the shift time;

v – a number of signals to the action when controlling production process (on the shift);

m – intellectual work according to expert rating.

As it is known, assessment factors of the work content, as well as its intensity have received a long-run appraisal and provide rather reliable information about the degree of manifestation of this or that factor in the labor process. In the following table we present a fragment of one of the widely-tested methods of work meaningfulness. [5]

Table 1. Quantitative assessment of comparative content of specific types of work

Characteristics	The number of points		
	10	50	90
Autonomy (A) 1. the ability to pre-regulate the labor	All transactions are made in accordance with the instructions	50% of the operations are performed by the instructions	It is impossible to regulate
2. the sequence of operations	The same (90%)	Can change for 50%	It is determined freely
3. the choice of raw materials	Absent	Can reject raw materials of poor quality with the permission of the master	More independently select raw materials
4. the connection with the functional services	Less than four types of service	More than eight types of service	More than ten types of service
Interdependency (B) 1. interdependence with other employees	The inability to leave the workplace without replacement even for an hour	The ability to leave the workplace for a few hours	The ability to leave the workplace for more than a day
Responsibility (O) 1. the possibility of making important decisions	The absence of the possibility to influence production deliberately	The correct (wrong) decisions are not immediately obvious	The correct (wrong) decisions become apparent after a long time.

3. Results

Conducted in the automotive industry, our research points to the possibility of the development of economic and mathematical optimization model of the labor process when introducing the new equipment. The task consists of the combination of characteristics of the labor process, i.e. such a combination, when they reach higher labor productivity by maintaining work efficiency of the operator. The isolated, local approach to the optimization of any of the characteristics of the labor process, including the labor intensity, without its interaction with other characteristics, will not lead to a constructive solution, i.e., the correct choice of means of improving work efficiency with its normal intensity. [6]

Figure 1 presents an optimization model of labor intensity taking into account the relationship peculiarities of the latter with the most important characteristics of the labor process when working on an automated equipment: productivity and monotony.

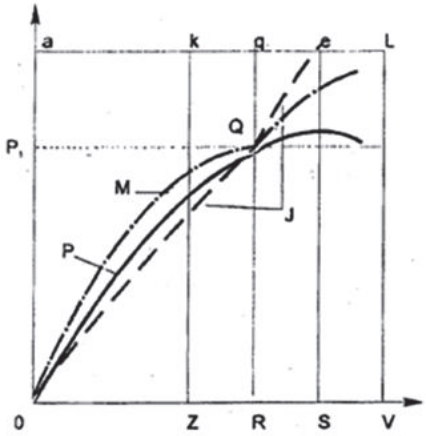


Fig.1. The version of the economic and mathematical model of process of work optimization with the introduction of automated machinery.

The model is built for a typical case, when the main characteristics of labor, namely productivity, intensity and monotony are almost predetermined by work schedule of the automated machinery in normal sanitary conditions. [7]

P – operator's output, an item per shift;

P1 – planned maximum operator's output at normal level of labor intensity, an item per shift;

M – monotony of the work (the number of operations repeated an hour);

J – labor intensity of the operator (in relative units - points).

Point Q characterizes the optimum of labor intensity. It corresponds to the achievement of the highest productivity at normal intensity and acceptable level of work monotony.

OaeS is the area of psychic and physiological abilities of the staff, within which labor costs are compensated by the body under normal conditions of their compensation;

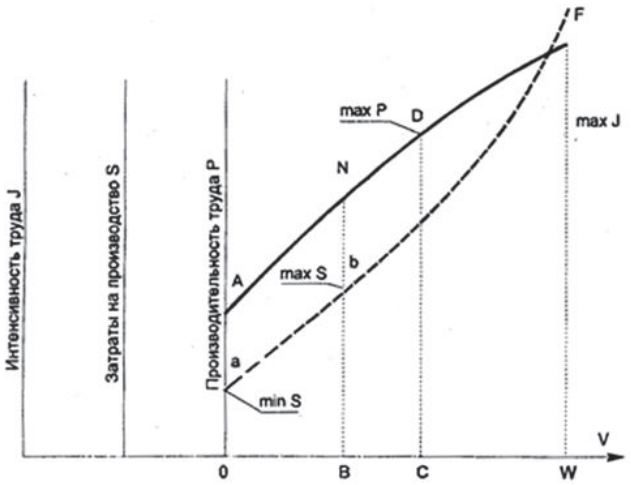
OaκZ determines the zonal region of the labor processes, where the labor intensity, under equal conditions, below the normal level, with the exception of the period of mastering of new equipment.

Here there is a real reserve for productivity increasing due to its intensity. For operators of semi-automated machines it is possible to achieve it, for example, by reducing the automatic processing cycle, and for personnel involved in the local machines service, one can provide acceptable options of combining an engineer's job, the expansion of service area, the increasing the number of controlled machines. [8]

ZkqR and RqeS are regions that characterize the labor process, and that is similar in its characteristics to the optimum one. There one can see stable productivity, enabling staff to achieve high productivity results and to demonstrate their creative abilities. As for processes of work, that require a special accuracy, as well as on the stages of development of new equipment, it is preferable a mode of work corresponding to the area ZkqR. Labor productivity in this area is lower than in RqeS, however, this mode of operation allows the staff is more likely to prevent an extreme situation caused by equipment failures and emergency situations. An extreme labor process is defined in the SeLV area.

Production at this level of labor intensity can be very high for a limited period, but then, due to the overworking, inevitably fall. The modeling of the work process in conjunction with local experimentation allows to choose such innovative organization solutions of the labor process when introducing technological innovations that give the best combination of the main characteristics of the labor process (productivity, intensity, monotony) in specific organizational and technical conditions for the automated production, that should ensure the growth of labor productivity with a high availability of staff, to preserve people's health.

It is important to note that the implementation of innovative activities in the process of technological innovation cannot be free from the restrictions and conditions for the achievement of social and economic efficiency of the system "a human - automation technology" as a whole. Here we mean the high cost of new equipment. So it is necessary to control the costs to maintain efficient operating conditions. We should assess the situation where the additional costs for tools replacing, and the repair of unique equipment may not be compensated by the profits achieved as a result of it. In this case, optimization is about finding a compromise solution about achieving both economic and social efficiency of the introduction of new equipment. Figure 2 shows the variety of relationships between the fundamental economic and social characteristics, caused by the choice of the operation mode of new equipment.



J – labor intensity
S – production costs
P – labor production

Fig. 2. Variants of the relationships between the fundamental economic and social characteristics of the operation of the new equipment depending on its operating mode.

References to the figure:

V - speed of operation of the equipment;

C - mode of operation at normal level of labor intensity and the corresponding high productivity;

A - mode with the maximum allowable cost production;

a - mode with the lowest costs production;

CDFW - area of operation modes, forbidden according to the following criteria:

j > max J

s > max S;

OADC - the area of operation modes where the growth production costs outpaces the increase resultsdue to productivity gains.

Point *D* corresponds to the maximum value of productivity max *P*, excess of which is not valid as the labor intensity in this case will exceed physically normal level.

At the point in the BNDC area the economic effect of productivity growth will not exceed the extra cost of the tool wear and components and details .

The coordinate origin here corresponds to the minimum value of the production cost min *S*. The optimal level of production costs corresponds to the point a, and it should also be planned with the introduction of technological innovations for the cost assessment.

Under identical conditions, the choice of modes of operation in the area of DNBS is preferable in case when the value of the cost for the tools recovery takes a relatively lower value as a result of high qualification of the personnel involved with the implementation and new equipment service, the presence of good repair facilities that meet modern requirements.

Thus, dependences can be used effectively for particular decisions at the option of the rational integration of management and technological innovations in the modern automated production. The implementation of solutions to improve the efficiency of the innovation system "a human - new equipment" will be in each case specific because of the large diversity and automated equipment, and organizational conditions of production.

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Testing the Model of Information System of Innovative Management in Education

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Abstract

The work presents the results of testing the model of information system of innovative management in education on the example of Institute of Economics, Management and Law (Kazan) based on transactional approach, taking into account the classical theory of transaction costs. Classifications of transaction costs, most applicable in corporate hierarchies, are used. Special emphasis is made on the descriptions of economic effects of the information system implementation in an educational establishment.

Keywords: *transaction costs, information system, educational establishment*

Transaction costs run through the whole management system of a modern company. Transaction costs management possesses a huge potential of increasing the company's potential and competitiveness, especially in Russia. This potential is especially important in hi-tech and science intensive sectors, including educational sphere (Ashford & Biswas, 2010), as transaction costs often constitute more than a half of all their expenses.

An important role in transaction costs management is played by corporate information systems of educational establishments (Sullivan, 2009; Violino, 2008). The number of educational establishments which implement them is growing every year. However, using information systems[1] to reduce transaction costs of an educational establishment is not always conceptual and systemic (Jones, 2009).

The work presents the results of testing the model of information system of innovative management in education on the example of Institute of Economics, Management and Law (Kazan) based on transactional approach (Воронцова, Крамин, & Крамин, 2011; Крамин, 2007а), taking into account the classical theory of transaction costs. Classifications of transaction costs, most applicable in corporate hierarchies, are used. Special emphasis is made on the descriptions of economic effects of the information system implementation[2] in an educational establishment, based on the transaction costs approach (Robins, 1987).

One of the most general characteristics of transaction costs was given by Kenneth Arrow, who defined them as costs " to keep the economic system going" (Arrow, 1969). This definition expresses the essence of transaction costs and emphasizes their integral character. Thus, K. Arrow defines transaction costs as costs of economic system implementation.

By D. North, "transaction costs are costs conditioned by the character of productive relations" (North, 1973), which consist of "costs of evaluating the object's useful properties and costs of ensuring rights and forcing for their observance" (North, 1990).

It is well known that under the limited rationality of agents and choice uncertainty the institutions are intended for solving the problems of motivation and coordination. Taking this fact into account, Paul Milgrom and John Roberts (Milgrom, 1992) proposed classification of transaction costs according to the key spheres of problems generated by them

[1] *For the stages of introducing information systems see also "stages of ERP systems development" (Esteves & Pastor, 1999; Sabau, Munten, Bologa, Bologa, & Surcel, 2009).*

[2] *Investments connected with implementation of information systems in educational establishments are considered to be most significant. Costs classification can be found in the work by E. Babey (Babey, 2006).*

(Кузьминов, Бендукидзе, & Юдкевич, 2013). By their classification, transaction costs can be divided into coordination costs and motivation costs.

Coordination costs are costs aimed at providing the temporal and spatial coordination of the transaction participants. Such costs can occur both within the company and in market transactions. Within the company, which is a hierarchical structure, the coordination costs are costs of transmitting information by the different levels of the company, costs of elaborating the plan of activity, presenting the plan to the personnel and its implementation. In the market the coordination costs are connected with defining the price for goods and the characteristics of potential partners, as well as mutual referring to this information. Besides, coordination costs include the time spent.

Motivation costs are costs motivating the parties of transaction to fulfil their duties; these are costs for controlling, information collection, monitoring of the mutual liabilities' observance by the partners, etc. These costs, like coordination costs, can occur both within the company and in the market, which is conditioned by two factors: opportunism of the participants of transaction and imperfection and incompleteness of information. Thus, motivation costs can be expressed by costs for infrastructure formation, which will stimulate the agents to enter the transaction.

Milgrom-Roberts classification is especially convenient for the analysis of transaction costs occurring in intra-company hierarchies. It allows to define how to minimize costs for coordination of the personnel actions, how to effectively organize the information flow, and how to assess the effect of information distortion during its flow along the company's hierarchical levels.

Milgrom-Roberts classification allows to distinguish the potential sources of transaction costs. However, it is quite hard to assess the costs of a particular transaction, by using this classification. For that purpose another classification is often used, namely North-Eggertsson classification. It is based on constructing the external elements of a particular transaction, which leads to occurring the corresponding costs, and allows to distinguish them while its stages are realized. According to North-Eggertsson classification, six types of transaction costs are singled out (Eggertsson, 1990):

- information search costs*;*
- negotiation costs*;*
- contracting costs*;*
- monitoring costs*;*
- costs of forcing to execute contracts*;*
- costs of protection against third parties.

By O. Williamson, transaction costs include "… comparative costs of planning, adapting and monitoring task completion under alternative governance structure" (Williamson, 1985, p. 2). This definition directly points out the necessity of choosing the available alternative managerial structure.

The proposed functional definitions and classifications are used in the present work to test the model of information system of innovative management in education based on transactional approach. To fulfil this task, the characteristic is given of the model of innovative management information system, which is being developed in Institute of Economics, Management and Law (Kazan), from the point of view of the above described classifications of transaction costs.

To reduce coordination costs (information transfer and planning of activity), the corporate information system gives a number of opportunities provided by its features:

1. Access to the system from the Internet. The employees can work from home or from abroad without installing any additional software and without physical connection to a particular working place. For that any computer with the Internet access is sufficient.
2. Prompt input of information into the system at the point of its appearance. For example, the published data of a student are inputted not in the Dean's office, but in the Admission Commission, where they are submitted.
3. Strict regulation of forming and using the information flows. Each employee has a working place in the system, which is determined by the personal name and access rights, and executes the same tasks as during manual documentation circulation. As a result, the high efficiency of introducing and implementing the system is achieved.
4. Information protection and minimization of information loss risks. Data transfer is carried out via protected canals with ciphering. In case of equipment errors, the system functioning and all data can be restored in a few minutes.
5. Accounting, planning and calculation of costs by faculties, departments, specialties, and forms of education by integrating Idis.Education into accounting systems.
6. Prompt access of the Institute administration to corporate information, with the demanded level of detailing from any point with the access to the Internet.
7. The system provides information transfer for all participants of the educational process. Besides, the system is

used for automatization of planning their activity. The main users of the system, from the point of view of information transfer and planning, are (functional specialization of the system for each group of users is given in brackets):

- Matriculants (registration, filling in the form, competition results).
- Admission commission (data receiving, competition implementation, signing contracts, statistics).
- Students (on-line schedule, progress, search of professors, correspondence with the professors, contacts with employers, personal page of a student, etc.).
- Academic-methodological department [3] (planning the educational process, academic-methodological provision, studying programs).
- Department (planning and distributing the teaching load, individual plans professors, etc.).
- Professors (on-line schedule, planned and actual load, progress reports, distributing of teaching materials, personal page of a professor).
- Employers (selecting students and graduates, monitoring of potential employees).
- Administration (prompt vision of the complex pattern of the educational establishment both with detailing of each information element and in consolidation on-line).

8. Automatization of operations at each working place.
9. Accumulation and aggregation of the information.
10. Forming the integral reporting system. Integrating the system with other software used by the educational establishment: electronic documentation circulation, accounting, and other software.
11. Organizing the centralized using of information resources and competitive advantages of each dependent educational establishment (electronic catalogs and libraries, personnel potential, etc.).
12. Planning activity on the basis of key indicators.
13. Elaborating the development strategies.

At the stage of planning and distribution of the teaching load, the institute can actually model the whole educational process and promptly change the decisions if needed.

The presented information system is also aimed at reducing motivation costs (controlling costs, information collection costs, costs of monitoring of liabilities execution during transactions between participants of educational process):

1. Providing quality control of educational process.
2. Regulation of departments' activity.
3. Opportunity to trace changes (structure of admission, contingent, demand for graduates, staff composition, costs, etc.) and promptly react to them.
4. The main users of the system from the point of view of motivation costs management are:
   - Dean's office (private information registration, personal data, forming the students' contingent, progress, etc.).
   - Academic department (organization and control of the educational process, automatization of schedule formation, teaching load forming, etc.).
   - Human resources department (automatization of employees' registration, analysis of employees' composition, staff list).
   - Administration (monitoring and control of the whole educational process)
5. Providing the educational establishment (and its administration) with new methods of management: methods of scenario analysis, methods of project management, methods of economical-mathematical modelling.
6. Prompt reacting to changes of key efficiency indicators.
7. Creating additional motivation factors for employees; forming of their involvement into the general process, realizing their mission, strategic goals of the organization, belonging to the common cause.
8. Excluding the duplicating functions of the departments of the organization.
9. Ensuring the principle of synchronizing the employees' activity.
10. Systemic associativity of all indicators.
11. Obligatory coordination of planned indicators and actual data.
12. Automatization of classroom and professors stock management. The resource base built into the program is interactive schedule, formed automatically.

[3] *See also on the features of curriculum integration (Hepner & Dickson, 2013; Joseph & George, 2002; Watson & Schneider, 1999)*

13. Initiating activities and setting tasks for the chosen strategy implementation.
14. Analyzing managerial information and tracing the decision making.
15. Carrying out the complex of works for managing the educational establishment.
16. Forming the system of labor market demands monitoring and their satisfying by educational establishments included into the community of users.

Similarly, one can classify the functional possibilities of the described information system by the North-Eggertsson grouping of transaction costs.

Below we present the examples of transaction costs reduction in Institute of Economics, Management and Law (Kazan) as a result of introducing the corporate information system according to the North-Eggertsson classification of transaction costs.

As a result of reducing the costs of information search and contracting in the functioning of the Institute's Academic department, the number of employees in that department has not increased during several recent years, while the number of students increased several times, as well as the number of specialties. Besides, transition to the two-level system of education 2011 significantly and sharply increased the load on the Academic department. However, due to information system, the employees successfully managed the new tasks.

Negotiation costs and contract execution costs were also reduced due to information system introduction. This fact can be illustrated by the process of departments' enlarging by uniting the main institute's departments with departments in the branches.

As a result the administrative-managerial apparatus was reduced, as well as the documentation circulation, and the volume of information to be traced and controlled. At the same time the quality and promptness of departments' management increased due to unification, transparency growing, etc.

Monitoring costs have also significantly reduced. Before introducing the information system, it was rather hard to obtain some indicators, such as unit costs by specialties, forms of education, particular streams and groups. Promptness of data obtaining was very low. The information system allowed to significantly broaden the range of the calculated indicators. Besides, the automatization of their calculation made it possible for the Institute's administration to trace the situation on-line. In particular, as a result of prompt monitoring of the structure of unit costs, the Institute's financial-economic department continuously reveals the unprofitable directions of activity and makes appropriate managerial decisions. The mentioned new possibilities of the educational process management became available without additional increase of the personnel of financial-economic department.

One can calculate the economic effect of each case of implementing and testing the model of information system of innovative management in education (Ansari, 1997) basing on scenario analysis and project management. For that two scenarios of the Institute's functioning are viewed – without the information system and after its introducing. The differences in cash flows between the two scenarios can be viewed as the cash flow of the virtual project of introducing the information system in the Institute. Such calculations will be presented in further publications.

Thus, introducing the information system in an educational establishment allows to systematize and automatize the documentation circulation, to ensure transparency, homogeneity and validity of managerial decisions; ensures availability of any reports (by employees, students, graduates, etc.) at any time and place where the Internet is available; organization of control over budget and off-budget expenses; centralization of information resources an labor market monitoring.

All that ensures the stable, dynamic and efficient management of the educational establishment based on the efficient using of the available resources and systemic management of its transaction costs.

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Forming a Model of Cost Management in the Regional Scientific-Educational Cluster

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Abstract

The work presents a model of the organizations' interaction in the framework of the regional scientific-educational cluster, based on the cost approach. When using the hierarchical structure of the cost management system, a new classification of cluster interactions and the clusters themselves was formed, which takes into account not only economic, but also institutional factors. In particular, the model of cluster interactions takes into account the key areas of the organization competence, playing a significant role in enhancing the competitiveness of educational institutions in the post-industrial economy.

Keywords: *institutional environment, scientific-educational cluster, cost approach, cost management, educational institution*

The cluster approach is becoming more and more widespread, both in theory and practice of modern management. However, the modeling of cluster schemes is not paid sufficient attention to: the researchers in the field of clustering focus mainly on sectoral and regional aspects. At the same time, the post-industrial economic development requires a new view on the nature of clusters. In the present work, a cluster is considered on the basis of the concept of business value management and institutional approach.

The work models organizations' interaction in the framework of the regional scientific-educational cluster[1], based on the cost approach.

Starting with the famous works by M. Porter (M.E. Porter, 1986), many publications were devoted to the modeling of clusters. Many of them are based on the "competitiveness diamond" by M. Porter. Thus, the work by I.R. Ferova (Ферова, 2005) describes the educational model of local industrial clusters based on "competitiveness diamond" by M. Porter, including the following diamond-forming components:

1. The firm's strategy and forms of competition (intense competition between rival firms located in the same area).
2. Features of production resources (local resources: labour, capital, natural resources; natural, administrative, informational and technological infrastructure, specialized factors of production).
3. Local features (the features of the habitat that stimulate appropriate forms of investment and constant renovation).
4. Features of demand (local consumers with a high level of product requirements, specialized factors of demand, customer needs, the occurrence of which can be expected everywhere).
5. Development of auxiliary and servicing enterprises (the presence of potential suppliers and competing production in the same area).

In other works modelling is used as a means of forming the classification and grounding the clusters typology (Ферова, 2005). Thus, the modelling results by I. Gordon, P. McCann can be presented in the following tabular form (Gordon & McCann, 2000) (see Table 1).

It is an undeniable fact that any model is an ideal construction, intended to explain the behavior of real objects. In this sense, in reality there is no "pure" cluster, which could only be described using one of the above models.

[1] *Features of educational factors development (Amaral, Ferreira, & Teodoro, 2011; Chapman, Smith, Wood, Barnes, & Romeo, 2011; Korchagin, Safin, Vildanov, & Abitov, 2014; Mayer, 2007; Peters, 2006; Вахрушева, 2009)*

When modeling clusters, one should take into account the modern trends in the development of the post-industrial economy. Currently, the social sphere (Gavrilov & Yaw, 2013) has a large impact on economic processes, including on appearing and forming of clusters.

Table 1. Classification models by I. Gordon and P. McCann

Pure model of economy by agglomeration	Industrial complex model	Social network model
Special attention is paid to the external effects of geographical concentration	Clusters are space participants of intersectoral balance models in the regional economy, geographical agglomeration which appeared through inter-company trade links and minimizing transactional costs	Clusters are solid local networks, interaction in which is carried out on the basis of interpersonal, trustful relations, within the formed institutional environment

M. Porter marks: " cluster theory also provides a way to connect theories of networks, social capital, and civic engagements more tightly to business competition and economic prosperity—and to extend them. Moreover, ... Clusters offer a new way of exploring the mechanisms by which networks, social capital, and civic engagement affect competition and market outcomes... Cluster theory … Cluster theory may also reveal how network relationships form and how social capital is acquired" (Michael E Porter, 2008, p. 243). Thus, M. Porter takes into account the importance of the social sphere (in particular, social networks) in the formation and functioning of clusters. At the same time, the mechanism of the influence of social and institutional aspects in cluster models is not discussed in detail. The empirical research on the social and information networks within the cluster also does not consider the intra-cluster institutional environment.

The trend of the recent years is to spread clusters in the world economy (Den Hertog & Remoe, 2001). Moreover, clusters are now increasingly considered not only as a theoretical model, but also as a tool of economic policy. This is due to the fact that the cluster concept is naturally combined with the development of the information economy, knowledge economy. According to D. North, the reason of the US global leadership in the new economy is the existence of several large, dynamically developing clusters of innovative entrepreneurship activity in this country (Норт, 1997).

Completing a brief overview of works in the field of cluster schemes modeling, we should make the following conclusion. In the methodological sense, the modeling of clusters in these works is mostly of a summarizing nature (for example, based on the "diamond of competitiveness" by M. Porter). The importance of social aspects in the cluster approach is marked; however, a complex institutional theory is not applied in cluster analysis. In addition, the cluster is not considered as a tool of company value management. The studies of this work are intended to eliminate these gaps.

The key feature of the cluster is to increase the competitiveness of the companies included in it[2]. Classically it is believed that one of the sources of this increase is the increase in production factors efficiency. In the post-industrial economy, however, the emphasis is shifted from production and distribution factors to the intangible, institutional ones. Moreover, particular importance in the cluster is attributed to the exchange and sharing of key areas of competencies of its participants.

Currently, the most important branch of management is the management of business value (Copeland, Koller, & Murrin, 1994). The development of capital markets both abroad and in Russia led to the need for companies to maximize their value (Т.В. Крамин & Ю.С. Церцеил, 2008). The company value management has become a critical mandatory function of its top management and all employees under their jurisdiction. In this paper, it is proved that the cluster approach is an effective tool of the company cost management.

Anticipating the rationale for the efficiency cost approach in the management of scientific-educational cluster, we will consider a model of company value management system, developed by T.V. Kramin (Т. Крамин, 2006).

The system considers the subjects and objects as well as the principles of their interaction (Table 2). When using the institutional approach, the group of subjects of the cost management system significantly expands, exceeding the limits of the company management and its owners. In addition, the most important object cost management system is its institutional environment, including the complex system of intra-company institutions.

[2] *Aspects of regional competitiveness increase (Lefebvre, Pallez, & Fixari, 2009; Safiullin, Fatkhiev, & Grigorian, 2014; Safiullina, Ivanov, & Beloborodova, 2014; Safiullina, Ivanov, & Ramazanov, 2014; Safiullina, Odintsova, Zhilina, & Shamsutdinova, 2014; Safiullina, Volkova, Petukhova, & Guseva, 2014).*

Table 2. Elements of cost management system

Subjects	Management principles	Objects
Owners, managers, employees, creditors, consumers, suppliers, the state.	The combination of strategy and tactics, theory and practice, accounting and planning; using an institutional approach, the results of factor and scenario analysis; optimization of management decisions.	Institutional environment, finance, production, organizational structure, corporate culture, the image of the company, employees.

The structure of company cost management system is shown in Fig.1. It reflects the main principle: the business is formed by the investor with the aim of obtaining maximum return on investment. Formulation and implementation of strategic goals of the business operation are presented in the corporate strategy. The investor (shareholder) invests capital both in the development of the objects, and in the development of the subjects (human capital), and in some cases provides the initial conditions for the impact of the subjects on the objects in the cost management system. The result is that the investor (shareholder), in case of successful business, increases the capital in the form of the business value increase.

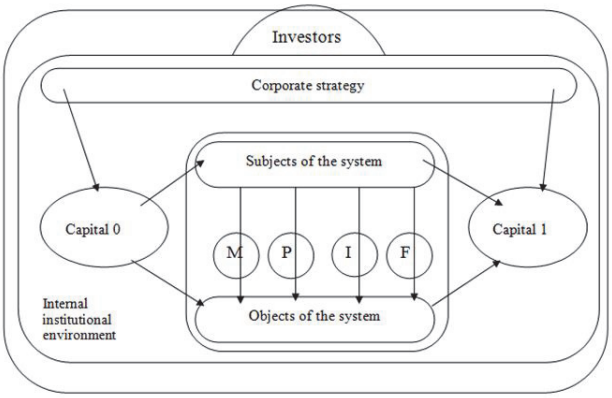

Fig. 1. System of company cost management (SCCM).

In the scheme in Fig.1, Capital 0 is the capital invested into the business. Capital 1 is the volume of capital available for the investor at the moment of the supposed coming out of business. The SCCM subjects are investors and managers of all levels, and the personnel. The SCCM objects is the property of the company and the intangible assets (intellectual capital). The subjects influence the objects in four functional spheres: in marketing (denoted as “M” on the scheme), in production (“P”), in investment policy (“I”), and in finance (“F”).

Despite the strict and consistent character of the proposed scheme of the company cost management system, its maintenance requires additions. The author (Т. Крамин, 2006) noted the fact that its central component is intellectual capital. For the model development in accordance with the modern post-industrial economy, one must specify the list of objects and subjects of cot management. In particular, the list of the system objects must include all the elements of intellectual capital, besides human capital: consumer, innovative, infrastructural, integrational, and institutional assets. When investing in the system subjects development, we should note, first of all, the formation of human capital.

The investor is influenced by external socio-economic environment, including the state. Management -level business functions in its information, or broader, institutional environment. The speed and effectiveness of the internal subjects of business (management) system depends on the speed and completeness of information flows in the system, which form the informational system of business, and the level of development of internal institutional environment.

As practice shows, the investment in human capital (Di Liberto, 2008) not only gives an effect mediated through the increase of financial assets, but also directly in the form of improving the company's image, prestige and reputation.

In our previous studies we have shown that the cost management should be based on the following four hierarchical levels (Т. Крамин, 2006; Т.В. Крамин & Ю.С. Церцеил, 2008).

The first level of managerial decision-making is the level of impact of a manager or a group of managers within a particular issue, problem.

The second level of competence fields is the level of acquired knowledge, developed skills and abilities of the company as a whole.

The third level of cost factors is the level of objectively existing conditions of value creation, grouped into functional groups within a single type or types of activities, or the national economy as a whole.

The fourth level of integrative value is the highest level of the system, where, on the basis of common definitions and measurement value criteria, the system efficiency and effectiveness are evaluated.

As it is, the specified levels of the system are arranged in a logical sequence. The making of managerial decisions is strategically determined by the choice of key competencies throughout the company. The selection of key competencies of the company, in turn, is determined on the basis of their potential impact on the cost factors on the market of the company products or services.

Furthermore, the managerial decisions should be considered as deals (transactions). Depending on the characteristics of the transaction, a particular contract is selected. Thus, the basis of cost management is transaction management and contractual relationships.

Thus, the basis of the model of valuation and cost management should be the system of managerial decisions, allowing to accurately determine the source of a particular change, and the degree of influence of each managerial decision, as well as its contribution to the creation of a new value.

In this case, managerial decision refers not only to the decision of a manager, but decisions of business owners in the framework of corporate management and of agency relationships management. Practice shows that the opportunistic behavior of investors has a high potential impact on the cost; a similar situation occurs at the level of company management.

After identifying the levels of a company value in CCMS, it is necessary to characterize the institutional environment in which they operate. The first three levels are in-house institutional environment. The most important internal institution is an organizational (corporate) culture, characterizing the effectiveness and promptness of the information system, the managerial decisions, the modelling systems, etc.

In addition, all CCMS levels function in the external institutional environment, including social, legal, and political institutions.

The above structure takes into account the specifics of the enterprise, associated with the enterprise intangible assets (intellectual capital). The level of managerial decision-making is a tactical level. However, in the process of intangible assets (IA) cost management, it is necessary to define the strategic orientation of the company in the field of their use. As is shown above, one can allocate a sufficiently large number of such assets. Effective management involves, however, not the management of all intangible assets, but the allocation of key intangible assets for the company, defining its uniqueness and, as a consequence, competitiveness. In this regard, we can highlight the key competence areas (KCA) of the company.

The most general definition of the KCA, which is used in the present study, was given by Harry Hamel (Hamel, 1996): "this is a set of skills, the possession of which is essential for the company to be able to compete successfully with other companies, as well as the foundation of its prosperity in the long term". "The set of skills", according to Hummel, can be attributed to the key competence area, if:

1) helps to increase the value of the company's products for the buyer who receives special benefits from the ownership of the products;
2) ensures the uniqueness of the company;
3) provides the ability of the company to enter new markets.

From the point of view of the set of intangible assets, the key competence area can be structured in the following way (Андриссен & Тиссен, 2004):

1) valuable resources and acquisition (customer base, image and brand, supply chain, intellectual potential, embedded standards);
2) skills and tacit knowledge (know-how, knowledge and skills);
3) primary processes and management processes (management and control, information system);
4) technology and formalized knowledge (patents, manuals);
5) general moral values and norms (corporate culture, reliability, client-orientation).

To solve the above problems in the cluster functioning, Institute of Economics, Management and Law plans to form institutions the following competences in EI PPE and EI SPE:

1. Competences of strategic management: strategy formulation, operational refinement of strategy for a dynamic

and highly competitive market of educational services.

2. Competencies of corporate management (the interaction of institutions).
3. Market competences: competence for the promotion of educational services in the market (marketing competence, the ability to quickly and accurately assess the needs of the population, organizations and society as a whole in the market of educational services).
4. Corporate culture forming competencies of "anchor" institution.
5. Infrastructure competences: the use of modern info-communication technologies, corporate system of business process of the branch network management.
6. Innovation competences: corporate culture development and innovation, the use of intellectual property objects of "anchor" institutions.
7. Competences in the field of financial management: project management technologies, cost savings and others.
8. Risk management competences.

Passing the intellectual capital accumulated by IEML to other educational institutions of the cluster, as well as other forms of partnershipsб will significantly increase the efficiency of EI PPE and EI SPE within the cluster, which is also consistent with the trends of higher education institutions development in the regional context (Birx, Anderson-Fletcher, & Whitney, 2013; Chapman et al., 2011; Goddard & Puukka, 2008).

Thus, the use of the hierarchical structure of the cost management system allowed to create and use a new classification of cluster interactions and the clusters themselves. The above model can be effectively used in the cost management of the scientific-educational cluster, as it comprehensively takes into account not only the economical but also institutional factors. The model pays special attention to the key competence areas of the organization, which play an important role in increasing the competitiveness of educational institutions in post-industrial economy.

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Estimation of the Impact of Large Regional Investment Projects on the Regional Development on the Example of Universiade-2013

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Abstract

The work reveals and classifies the main socio-economic consequences of large international competitions. The impact of a large international sporting event on the socio-economic development of the host region is characterized with the institutional approach on the example of Universiade 2013 in Kazan. The impact of the Universiade on the socio-economic development in Tatarstan is estimated by economic sectors. In particular, the construction industry, hospitality industry, tourism, education in the Republic of Tatarstan are considered.

Keywords: *region, large sporting event, the Universiade, socio-economic development, investment attraction, investment project, institutional approach*

Large regional investment projects are distinguished by a variety of factors influencing them, and the consequences arising from them (Preuss, 2005; Spilling, 1996). One of the bright, diverse and significant projects by its impact on the regional development is the preparation for and hosting of the Summer Universiade 2013 in Kazan. This has become one of the key events of 2013. It has significantly raised the status of Kazan and has had a powerful impact on the socio-economic development of the Republic of Tatarstan, as well as on Russia's economic system as a whole. The article is devoted to estimation of the impact of large regional investment projects on the socio-economic development of the region. The object of the evaluation of the results of the "Universiade-2013" project for Tatarstan Republic.

It is known from history that hosting of large international events, such as the Olympic Games, does not always have a significant and lasting impact on key socio-economic indicators like income, employment and inflation (Essex & Chalkley, 1998). The positive long-term effect of the Universiade[1] is possible in the case of the effective use of its heritage - tangible and intangible assets created within the framework of its preparation and conduct. In addition, it is necessary to take into account the economic situation, infrastructure and the status of the host region.

The impact of the Universiade on the regional economy is traditionally assessed out in two aspects: estimating the direct economic effect associated with income and expenses during the preparation and holding of the Universiade; evaluation of the long-term effect of the Universiade on the development of a city and region favorable image, on the increase of the investment attractiveness of the region[2] and, etc. (Hiller, 1998; Safiullin, Fatkhiev, & Grigorian, 2014).

The positive socio-economic impact of the Universiade can be strengthened if this international project is consistent with the strategic plan of the city infrastructure and economy development (Roche, 1994).

In particular, in preparation for the summer Olympic Games of 2012 the London authorities invested 7.2 billion of $ 9.9 billion pounds into roads and underground railway construction in East London. These transformations were necessary for the development of new business areas in that part of the city and enhanced the prestige of residential construction (Кузина & Хамукова, 2009).

The budget of the Universiade in Kazan was about $ 4 billion. They were used not only for the preparation and

[1] *Effects of hosting the Olympics in different countries (for example, Floros, 2010; Jasmand & Maennig, 2008)*
[2] *See also aspects of raising of investment attractiveness of the region (Safiullina, Ivanov, & Beloborodova, 2014; Safiullina, Ivanov, & Ramazanov, 2014; Safiullina, Odintsova, Zhilina, & Shamsutdinova, 2014)*

hosting of the Games, but also for the city development. The USA (Atlanta) and Australia (Sydney) used relatively smaller budgets for the Summer Olympic Games - $ 1.8 billion and $ 5 billion respectively, due to the developed infrastructure in these cities.

In the emerging economies, where the hospitality industry, transport infrastructure and funds placement were poorly developed, the budgets of large sporting events were significant. For example, in Beijing the Olympic Games budget exceeded $ 36 billion due to the low development of hotel infrastructure in Beijing. Two years before the Olympics 250 new hotels were opened in Beijing.

As was mentioned earlier, a large budget does not guarantee success and positive effect of hosting large sporting events[3]. The examples of Montreal (Essex & Chalkley, 1998; Kidd, 1992), Barcelona, Athens (Maloutas, Sayas, & Souliotis, 2009) and London (Jennings, 2012) illustrate this assertion.

Montreal, which hosted the Olympic Games in 1976, suffered the greatest loss in the history of the Olympic Games. The losses occurred as a result of the excess of capital expenditures compared to initial estimates by 400%. A large part of the loss was covered from the funds of the regional budget, but in Montreal was in debt after the Olympics.

The use of Olympic venues after the Games in Montreal has been difficult due to technical, organizational and logistical reasons. Thus, the Olympic Park, including the stadium, two swimming pools and a velodrome, was unusable after the Games, and the multi-storied Olympic Village, which housed the athletes during the Olympics, today is not used due to its remoteness from the Montreal business center.

The results of the Olympic Games in Barcelona is a striking example of the positive impact of the Games on infrastructure development and improvement of the tourism potential (the number of tourists visiting Barcelona has doubled in 2000 relative to 1991). Although the huge investments in infrastructure made by the Barcelona authorities significantly increased the burden on the city budget, which was then a deficit one, these expenses provided long-term economic growth and city development, by reducing the need of investments. Besides, the tourist sector growth positively influenced the income growth (Timiryasova & Kramin, 2014).

A good example of a competent strategic planning of large sports events is London, which hosted the summer Olympic Games in 2012. Before the Games, London was a financial and tourist center, with a well-developed transport and service infrastructure, therefore, the main strategic objectives of the organizers were to maintain the high international status of the city and to maximize the economic effect from the Olympics. The concept of using the Olympic venues after the Olympic Games was formed. Special attention was paid to obtaining a synergistic effect of the application of the Olympics infrastructure (transport, engineering, service, shopping, tourist and business) in the city and surrounding areas development plans. For example, the "Stratford city", situated next to the Olympic Park, is a multipurpose venue including 150 thousand square meters of retail facilities, 500 square meters of offices, 4850 apartments, 2000 hotel rooms, a medical center and a school.

Some apartments were sold after being used as the Olympic Village. "Stratford city" has become the new business district of London in which it is planned to create about 30 thousand new jobs after the Olympics.

The project of the Olympic Games in London also includes technological innovations in the field of sustainable use of Olympic venues. The London Olympic stadium was constructed of inexpensive light structures. During the Olympic Games the London Olympic stadium could accommodate 80 thousand spectators. However, due to the lack of demand on such large-scale venue after the Olympics, it was partially dismantled, and the stadium capacity was reduced to 20 thousand people. The scenarios of using the stadium after the Olympics were designed beforehand. Due to the use of this technology, savings can exceed hundreds of millions of dollars for only one venue.

Below we view the issues of a sustainable long-term development of Kazan city and the Tatarstan Republic as a result of the preparation and hosting of the Summer Universiade in 2013. They are closely linked with all other activities of the Universiade organizers, as well as partner organizations and all stakeholders. During the development of post-industrial economy, the main accent of the research are made not at solely economic, but also institutional aspects.

We have studied the combination of all effects and changes caused by the Universiade, which have a substantial impact on the lives of future generations. These are the Games venues and infrastructure created for the competitions, socio-economic legacy in the form of new business opportunities, jobs and tourism, as well as a wide set “intangible" components of the legacy, including intellectual property, behavioral changes, and even changes of attitude.

The Universiade Strategic plan implies sustainable development of the city and the Republic after the Games. We interpret sustainable development as the process of change in which the exploitation of natural resources, direction of investments, orientation of scientific and technological development, personality development and institutional changes

[3] *Possible socio-economic consequences of preparation, realization of sport events and subsequent use of facilities are discussed in various studies (see for example, Essex & Chalkley, 2003, pp. 12-14; Ritchie, Shipway, & Cleeve, 2009, pp. 145-147).*

are coordinated with each other and strengthen the current and future potential to meet human needs and aspirations (Зеркалов, 2012). Sustainable development implies satisfaction of the existing needs without limiting the ability of future generations (from the Report of the World Commission on Environment and Development at the session of the UN General Assembly on December 11, 1987). Sustainable development is one of the necessary conditions for maintaining high investment attraction of the region. The concept of sustainable development implies the following components:

- Economic (optimal use of limited resources and use of ecology-friendly technologies, including the extraction and processing of raw materials, creation of environmentally friendly products, minimization, recycling and disposal of waste)
- Social (focused on humans and aimed at preserving the stability of social and cultural systems, including the reduction in the number of destructive conflicts between people)
- Ecological (biological integrity and physical habitat preservation, keeping the abilities for self-restoration and dynamic adaptation of such systems to changes)

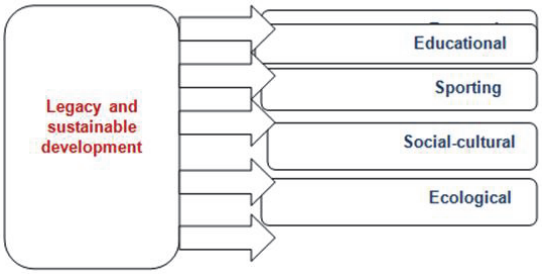

Fig. 1. Structural directions of the Universiade Legacy program and the sustainable development of the region after its implementation

For the institutional consolidation of the sustainable development concept, together with FISU on the example of "Kazan Universiade 2013" we developed and implemented a program of the World University Games Legacy, including impact indicators of the Games, introduced the principles of sustainable development within the organization of work of the Executive Directorate and at Universiade venues. The issues of the games legacy in the sphere of students' sports were viewed by A.G. Pasmurov before the Universiade (Пасмуров, 2011).

Let us consider the basic structural directions of the program of Universiade Legacy and sustainable development of the region as a result of its hosting (see Fig.1).

The key components of sporting tangible heritage of the Universiade 2013 are:

- **modern and eco-efficient** sports facilities intended for training professional athletes and development of mass sports in Russia
- **upgrading of the existing infrastructure** through the development and implementation of innovative sports technology in the interests of establishing a Federal center for summer sports
- **the formation a new training base** for the development of physical culture and sports, based on the latest achievements in the theory of physical education and sports training, pedagogy, psychology, biomechanics and biotechnology, medicine, informatics, nanotechnology and control.

The areas of cooperation between the Executive Committee and the Republican authorities in the preparation and maintenance of Games, that have had a significant impact on the socio-economic development of the Republic, are:

- Construction of the most modern facilities for training and competitions in accordance with the new standards in the field of eco-efficient construction;
- Development of regional transport infrastructure;
- Modernization of infrastructure of engineering networks and communications;
- Project of energy and water resources management;
- Projects in the field of waste management and wastewater treatment, including the modernization of existing waste management systems;
- Implementation of barrier-free environment programs;
- Educational and social projects.

In order to maximize the positive effect of the Universiade 2013, one must consolidate the best ideas and efforts of all of the organizers and stakeholders, including representatives of community and non-governmental organizations, in order to integrate the principles of sustainable development and environmental protection into all the issues of preparation and hosting of the Universiade, which must earn the highest rating by participants, to leave a positive legacy for Kazan, Russia, and the University sports movement worldwide.

The main strategic goal is to achieve sustainable development and Universiade Legacy preservation in the following areas:

Thus, the Universiade 2013 had a powerful multilateral positive impact on the growth of investment potential of Kazan and Republic of Tatarstan. In this regard, a significant effect was and will be rendered by not only tangible, but also intangible factors. Among the latter one should note institutional factors, whose role in the development of economic systems is growing every year. Many investment risks of the Republic of Tatarstan will be reduced. Therefore, in general, the investment attractiveness and competitiveness of the Republic of Tatarstan in the international arena will increase. At the same time, the scale and character of this effect will largely depend on the efficiency of the Universiade legacy. From this point of view, the work has only just begun.

Our next task is to define the priority actions in this area and offer effective tools for their implementation. These will include tourism, hospitality, education, management innovations at the regional level, territorial marketing, corporate management institutions and integration mechanisms.

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Developing the Corporate Management Model on the Basis of State-Private Partnership in Energy Supply to the State and Municipal Budget Organizations[1]

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Abstract

The article presents the research results of one of the topical issues of corporate management – interaction between a corporation and state in the frameworks of state-private partnership for increasing the energy efficiency and energy saving in the budget sphere. The advanced model of corporate management offers ways of developing the state-private partnership mechanism in this sector.

Keywords: *Corporate management; state-private partnership; energy efficiency; energy saving; energy servicing company; energy servicing contract; energy servicing market.*

Under the speeding globalization and post-industrial economic development, the institution of corporate management is rapidly developing both in Russia and abroad. The corporate management efficiency becomes one of the key factors of competitiveness of both a particular company and the national economy as a whole (Blackburn, 1994). The article presents the research results of one of the topical issues of corporate management – interaction between a corporation and state in the frameworks of state-private partnership for increasing the energy efficiency and energy saving in the budget sphere. The advanced model of corporate management offers ways of developing the state-private partnership mechanism in this sector.

In previous works we proved that corporate management must be based on systemic approach. The previous results allow to form a complex system of corporate management, to describe its elements and interaction between them (Engelen, 2002). The system management will use the cost (Othman & Rahman, 2009) and institutional approaches (Aguilera & Jackson, 2003).

The classical corporate management system is based on the division of owner and manager functions (Corbett, 1998; Fama & Jensen, 1983a, 1983b). The main role of the owners (shareholders) is to appoint the Board of Directors. The main role of the Board of Directors, which is the leading body in corporate management of an organization, is to appoint the top managers and further control their performance (Molz, 1985). The recent practice, both in Russia and abroad, shows that this mechanism is inefficient, as it does not allow the corporation authorities to make operative decisions and create an efficient system of risk management in corporations, which is extremely necessary during financial instability.

The new corporate management system should be based on cooperation and integration of management at all levels of the corporation. Besides, the corporate management system, as it was shown before, should include all stakeholders of the corporation (Freeman, Harrison, & Wicks, 2007; Hill & Jones, 1992; Jones, 1995; Post, Preston, & Sauter-Sachs, 2002).

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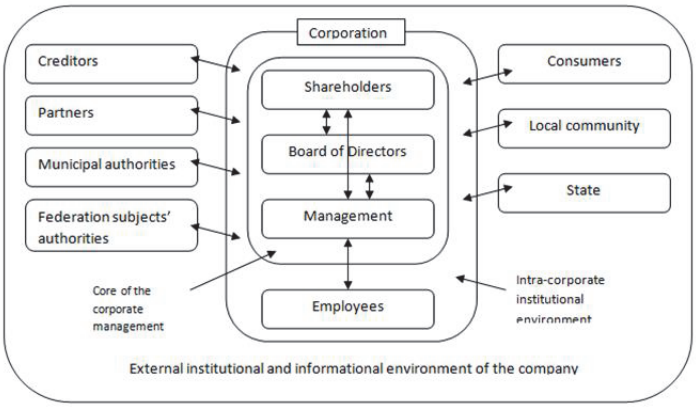

Fig.1 Corporate management system in post-industrial economy

The post-industrial economy is characterized by the growth of significance of the corporations' intangible assets, their intellectual capital (Malhotra, 2001; Skyrme & Amidon, 1998). In many modern corporations the independent directors have no experience in the markets of these corporations' products (their major activities refer to other sector). This has a negative effect on the efficiency of the Board of Directors in general. Moreover, it is necessary to systemically manage the competences of the Board of Directors.

Other elements of corporate management are considering and using the intra-corporate institutional factors, adaption to the external institutional environment of a corporation (Hoskisson, Johnson, Tihanyi, & White, 2005; Judge & Zeithaml, 1992; Pfeffer & Salancik, 2003).

Taking the above factors into account, we can view the corporate management system as follows (see Fig. 1), (Т. Крамин, Крамин, & Петрова, 2011).

Unlike the traditional corporate management system, the proposed one broadens the shareholders' authorities (to simplify the model, we will here and further consider a corporation to be a joint-stock company). Corporate management should be based on the balanced satisfaction of all stakeholders' interests (Clarkson, 1995; Donaldson & Preston, 1995; Freeman & Edward, 1984; Jawahar & McLaughlin, 2001). Here lies the great and so far not fully implemented potential of the corporations' efficiency growth. Shareholders should take an active part in this sphere of corporate management.

Bearing in mind that stakeholders play an important role in corporate management, and interaction with them largely determines the efficiency of corporate management, stakeholders are one of the key elements of corporate management system (Ireland & Hitt, 1999; Jensen, 1991; White, 2009). The corporate management should include the mechanism of revealing and predicting the key stakeholders' interests and using them as the basis for balancing and satisfying the stakeholders' interests (Buck, Filatotchev, & Wright, 1998; Gourevitch & Shinn, 2005; Ho, 2005). To fulfil this task a number of intra-corporate institutions should be formed:

1) Institutions for the stakeholders' interests balancing;
2) System of standards of interactions with stakeholders (shareholders, employees, consumers, partners, etc.);
3) Formal and informal mechanisms of disambiguation.

The main directions of activity in accounting and satisfying the stakeholders' interests are:

1) Determining the company's key stakeholders;
2) Accumulation and systematization of information about the key stakeholders' interests;
3) Evaluating efficiency of a corporation's activity on satisfying the stakeholders' interests, both from the point of view of usefulness for a corporation and from the point of view of stakeholders;
4) Tracing the changes in the interests of corporation stakeholders;
5) Correction of the strategy of interaction with stakeholders and the corporate strategy as a whole.

Thus, the dynamics of the corporate strategy development will be determined not only by the dynamics of the market conjuncture development and the priorities of the corporations' shareholders, but also the stability of the key stakeholders' interests, the degree of their influence on the corporation activity and the process of developing ambiguity in their relations with the corporation.

The stakeholders' interests are determined by the factors of their utility. For the further analysis of the corporate

management system, they should be viewed in more detail.

The shareholders' utility factors are the level of their profitability and the degree of risk of no return of their investments. The employees' utility factors are the volume of their work, the level of awards for their work, and the working conditions.

The consumers' utility factors are the price of goods and services, their quality and convenience of use. For the corporate partners it is important that the corporation fulfils its contract obligations, and flexibly corrects the contract terms if necessary.

The creditors are interested in the transparency of the corporation's activity, the ability to duly and correctly trace the dynamics of its key financial indicators and the financial position as whole, in order to estimate the risks in the corporation's activity.

The local population is interested in preserving the favorable ecological conditions in the territory of the corporation's activity (level of noise, pollution, etc.).

The authorities of various levels are interested in budget income as a result of the corporation's activity, the growth of employment and incomes of the population, the increase of the social protection of the population, the creation of infrastructure, the minimization of negative consequences of the corporation's activity for the environment, etc.

The above examples allow to conclude that the utility factors are not always tangible. However, the majority of the above intangible factors can be evaluated by their cost. It is the cost approach that gives a common criteria for their evaluation, management and making other managerial decisions.

Taking everything above-mentioned into account, we should extinguish the following hierarchical levels of the corporate management system:

1) Factors of utility of the corporation and its stakeholders;
2) Competences of corporate management subjects;
3) System of managerial decisions.

Concluding the characteristics of the corporate management system, we should highlight that its main elements are the intra-corporate institutional environment and the external institutional and informational environment of a corporation.

The functioning of the above model can be illustrated by the example of energy servicing companies with the state.

Let us view the prerequisites and mechanisms of the private companies' interaction with the state in the field of energy supply and energy saving in budget sphere, which are especially acute due to the requirement of the law to reduce energy consumption in budget organizations by 15% on the basis of quantity till 2014 (*Law #261-ФЗ "On energy saving and energy efficiency increase."*, 2009) .

According to the materials of the European Bank for Reconstruction and Development, prepared for the session of Expert council on legislative on state-private partnership of the Russian State Duma Committee on economic policy and entrepreneurship, of April 18, 2011 (EBRR, 2011), the financing of energy supply and other communal resources for state and municipal budget sphere, about 4-5% of the Russian consolidated budget are spent. It is necessary to note that this financing comes only from the budget sources of inefficient resulting consumption of the resources. Moreover, the efficiency of energy supply of budget-financed buildings in the Russian Federation is significantly lower than in Europe: our norms of energy consumption is 40-50% higher than the European ones, while the actual consumption of the budget-financed buildings in Russia is much higher than the normative one.

Inefficiency and high level of budget expenses for communal resources together with the growth of internal prices for energy leads to the need to increase the energy efficiency in the budget sphere. Very important are also the issues of reconstruction of the budget and social venues and providing the comfortable exploitation of these venues. These are, first of all, schools, kindergartens, hospitals and other establishments for the least protected groups of the Russian population. Solving these tasks demands large investments. At the same time, the possibilities of attracting the local and regional budget funds are limited; there are also limitations of non-budget financing.

A prospective direction of the set task is using the mechanism of state-private partnership[2] in the sphere of energy efficiency increasing and budget sphere servicing (Андреев & Моргунов, 2008; Романова, 2012). According to the expert estimations by the European Bank for Reconstruction and Development, the current energy consumption in the budget sphere can be reduced by 30-40% with the help of resources saving mechanisms. Such measures save a lot of energy and can be used for financing the energy saving. Elaborating the appropriate legislation for private energy servicing companies (ESC) (specialized energy servicing companies, equipment suppliers, energy suppliers, engineering companies, etc.) will create the conditions for investing into the techniques for energy efficiency in budget sphere. The

[2] *See for instance (Белицкая, 2011; Варнавский, 2005).*

ESC investments will be returned from the budget economy during the action of energy servicing contract (the contract is signed by ESC and the municipality and the budget organization on the competitive basis).

It should be note that the budget organizations usually lack technical equipment, experience and competences for energy supply optimization. Attracting specialized ESC will allow them to focus on their main activity.

Since 2009 the institutional environment of energy servicing contracts has been rapidly developing (the development of legislation in energy servicing), which provides conditions for implementing the mechanisms of state-private partnership in the sphere of energy efficiency: the notion of "energy servicing" is introduced; the general requirements for the content and order of signing the energy servicing contracts; possibility is ensured to sign long-term (longer than the three-years budget cycle) energy servicing contracts; possibility to use the budget funds, saved by energy saving, for payments on energy servicing contracts; rules are determined to form the maximal price of energy servicing contract and carrying out the municipal auctions for signing the energy servicing contracts in compliance with the legislation on placing orders for state and municipal needs (94-ФЗ).

The adopted legislative base makes a solid foundation for signing long-term energy servicing contracts and provides guarantees of investment return to energy servicing companies and banks, which are financing them, from budget economy. At the same time, there are legal restrictions and other problems to be solved in order to create conditions for competitive market of energy servicing in Russia.

As a result of thorough investigation of these issues, the European Bank for Reconstruction and Development specialists made the following proposals for improving the legislation in the above sphere, which are the most topical:

1. To make amendments in 94-ФЗ to abolish the consumer's liability to require the contract execution if the initial (maximal) price of the contract exceeds 50 mln rubles.
2. To change Article 56 of 94-ФЗ to enable the increase of the maximal price of the contract by the part of exploitation costs for communal infrastructure servicing, which will be reduced as a result of energy servicing measures.
3. To include the energy servicing into Article 149 of the Tax Code, containing the list of operations freed from taxation on added value.
4. To make amendments in part 2 of Article 24 of 261-ФЗ, aimed at preserving the existing amounts "communal services" financing for the budget/autonomous organizations and state enterprises who signed energy servicing contracts.

The materials prepared by the European Bank for Reconstruction and Development also pose additional questions, which should be studied for the further stimulation of energy servicing business in Russia:

1. Risks of inappropriate services rendered by resource companies are imposed on ESCs.
2. It is necessary that a consumer monthly initiates a complex procedure of negotiating the volume of energy consumption reduction with the resources supplier, which can be combined with the significant for consumption reduction of energy and other resources.
3. At present, the rules of signing the energy servicing contracts do not regulate the ESC participation in rendering servicing of equipment installation (which can require consumer's payment additional to the price of the energy-servicing contract). At the same time, to obtain the maximal economy of the energy-efficiency equipment introduction, the correct professional exploitation of this equipment is required.
4. There are high political risks in cases, when the terms of consumer's liability exceeds the term of "political cycle". This fact is destimulating for banks when they open "long" credit lines for energy servicing companies. It is necessary to reduce these risks by developing the mechanisms of state support in the form of state guarantees institutions, creating the refinancing funds of energy servicing contracts, etc.

Thus, the institutional environment of energy servicing contracts in Russia is far from the ideal. It should be thoroughly reformed in order to reduce risks and transactional costs of all participants of such contracts.

The traditional energy service is not the only tool of energy saving in the budget sphere. There are other possibilities of attracting the private capital into the energy efficiency budget sector. Leasing is most popular among them. Besides, energy servicing, popular in developed markets is often discussed, i.e. energy servicing of the type of guaranteed economy. Here we should consider the long-term energy servicing contracts not only with the companies, independently implementing the energy-saving measures and obtaining the return investments during the contract period (called ESCon-1), but also with another type of companies (ESCon-2). ESCon-2 does not finance the project (delivery services, installation and maintaining are financed from the budget). However, unlike ESCon-1, such companies give a guarantee of economy ("performance bond") to the customer (state establishment, for example).

Thus, a customer, having funds for equipment and services, obtain an important advantage in comparison with the ordinary contracts for equipment delivery: the risks of the wrong choice of technical solution and its maintenance are

imposed on the customer in case of classical scheme, while in case of energy servicing of the second type they are imposed on the executor, i.e. on ESCon-2.

The energy servicing contract of type 2 is especially beneficial for the Russian conditions, as it eliminates a number of risks of its participants. It should be viewed as the main type of an energy servicing contract in the period of forming of this kind of state-private partnership.

To introduce the type 2 energy servicing contracts into the Russian practice, it is necessary to confirm them institutionally as amendments in Law 94-ФЗ on state purchases and budget code. Besides, the contract relations of energy servicing of type 2 should be thoroughly elaborated.

The above example of an energy servicing contract brightly illustrates the functioning of the described advanced model of corporate management, which implies participation of the majority of stockholders shown in Fig.1. Besides, the institutional environment, shown in the model, is very significant for contract.

The main conclusions of the research are listed below:

1. There is no strategy and concept of state-private partnership development in Russia, both at federal and regional levels (including in energy servicing).
2. There is no system both in signing particular contracts of state-private partnership (including energy servicing contracts), and in developing the legislative and normative-legal base of state-private partnership in Russia.
3. Most problems in energy servicing development are connected with the lack of stimuli for its implementation in its potential participants, with high risks and transactional costs while its implementation.

The essence of our proposals is to amend the previous schemes of state-private partnership development (in particular, energy servicing contracts (ESCon)) to maximize the stimuli, minimize the risks and transactional costs for all its potential participants. The above mentioned materials (viewed at the session of May 18, 2011) contain no proposals for stimulating the municipalities for ESCon implementation (though, as experts note, the municipalities are satisfied with the present position). Besides, the state risks are not considered, connected with the potential ESC inefficiency. The selection of ESC is made on traditional tendering foundations. It may provide efficient selection at municipal level. However, ESC, at least in the budget sphere, should be based on the advanced achievements and best practices in the sphere of energy saving at federal level.

To stimulate corporate management based on state-private partnership in the energy servicing market it is necessary:

1. to form the state-private partnership conception: to define the society demands in state-private partnership, the interests of the main potential participants, the resource limitations, to systemically characterize the state-private partnership relations (as broadening and amending the *Law #115-ФЗ On concession agreements*).
2. to form the strategy of state-private partnership development and a detailed program for its implementation. In particular, in the sphere of ESC activity it is appropriate to define the stages of energy servicing market development and specific measures within each stage (see below).
3. To ensure the systemic character of activity in the energy-efficiency sphere, which consists in the complex problem-solving. The problem of energy saving should be solved at the state level. In this process the state should act as a coordinator. Due to that, a cluster should be formed for ensuring the efficiency of energy servicing projects. The cluster should accumulate the best technologies, business processes and managerial innovations, offering the high-technology solutions, standards and equipment to energy servicing companies. At the regional level the cluster should include the municipalities, sectoral scientific-research institutes, project organizations, universities, engineering companies, etc.
4. to continue work on creating the Federal law on state-private partnership, which would promote the procedure of making amendments to the federal legislation (to federal laws 261-ФЗ, 94-ФЗ, to the Russian Taxation Code, etc.). The law should contain the definition of the state-private partnership, list the main features, forms and mechanisms of state-private partnership. It should also eliminate the so-called “political risks” of ESCon and promote the procedure of ESC financing.
5. To ensure the staged introduction of the institutions of energy servicing contracts into practice, considering the high risks for all participants.

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Theoretical Approaches to Definition of Regional Economic Stability

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Abstract

The article describes the main theoretical approaches to the definition of the regional economic stability. Based on the analysis of existing theoretical approaches to regional economic stability the authors offer their own definition of economic stability of the region and also pay attention to technique of its estimation and conditions providing its maintenance

Keywords: *region, economic stability, concept of economic stability of the region, conditions of regional economic stability, estimation technique of the region economic stability*

1. Introduction

The modern requirements of the sustainable development for socio-economic systems lead to the need in development of the theory and methodology of economic stability, undertaking corresponding calculations, defining criteria and thresholds of socio- economic indicators determining the boundaries of effective and sustainable development of regions. Nevertheless we still do not have unified approach to interpretation of the term in economics.

2. Theoretical Discussion: What is the Regional Economic Stability?

The definition of sustainability has been borrowed by economic science from systems theory, when economic objects being considered as complex and diverse economic systems. In the usual sense stability means that the object is not exposed to fluctuations, it's stable and changeless. Stability of an object is shown in the fact that even under external influence it's able to return to its former state.

In the system analysis and synthesis stability is seen in complex of integral characteristics of an object reflecting its interaction with the environment, internal structure and behavior, so stability is one of the primary qualities of any system (Ostreikovsky, 2005). It's a relative category so we can estimate it only in comparison with other objects. The more stable is a state of the object which is less susceptible to changes, deviations from the previous state under the equal external influences. At the same time the condition of possessing resistance to external influences are intrinsic properties of the object itself. Consequently stability is the outer form, the external manifestation of the internal structure of the object. Basis of external sustainability lies within the object itself. In order to improve its stability we should improve the object inside.

Sustainability issues in relation to the economic problems were first reflected in the theoretical studies exploring the market equilibrium under condition of perfect competition (L. Walras , P. Samuelson , A.Wald) where were examined issues of market stability from the technical side namely in relation to economic processes and not to economic systems. Based on these models were obtained conclusion that underlie the formation of the modern theory of economic stability, in particular, findings about disparities in income distribution, inconsistencies between predictive expectations and actual results of economic life as the reasons for the loss of stability, strengthening the regulatory role of the state in order to maintain stability.

Issues of economic stability have got further development in the works of A.A.Bogdanov who has elaborated relation between the stability of systems of different levels, proved that stability of the system is determined largely by resistant structural links rather than elements.

This term suggests creative process, which should result in any good satisfying the specific needs of individuals or entities. Creative process is development of business units, and together with them and society as a whole. The development process is a form of movement through the time and space. Economic stability characterizes development of business entities and shows their ability not to deviate from the path of its development, to keep the pace, speed and volume of the creation of any goods under the influence of external factors.

Modern trends in the theory of economic stability are laid by neoinstitutionalism which believes the role of institutions is to reduce uncertainty by establishing a stable structure of interactions between economic agents. According V.A.Mau (Mau, 2008), it's institutional environment that provides the foundation of sustainable economic growth, which implies the conclusion of the institutional roots of economic stability in relation to the economic system at any level. Regional application of the concept were explored by A.G. Greenberg, S. Kuznetsov, etc.

At the end of the last millennium the problem of sustainability of economic systems received regular expansion in the global civilized concept of sustainable development scientific basis of which were elaborated by such scientists as Arnold V., Abalkin L., Aganbegyan A., AN Azrailyan , RS Greenberg and others. Besides investigating the issues of economic stability at the macro level they were developed also at micro level – enterprises, organizations and large corporations- in papers of Balabanov V., Karpovich A. and others. Thus, the problem of sustainability in economic science developed in two directions: at the micro - and meso-level for the national and regional economy as a whole as the concept of sustainable development, in which special attention is paid to environmental issues long-term plan; at the micro level, in relation of certain business entities (enterprises, firms, corporations) - as the concept of economic stability according to which main attention is paid to specific aspects of individual economic entities (financial, strategic, organizational and structural stability, reliability and economic security).

In the process of their development economic entities have to overcome not only the impact of factors that are external to them, such as, for example, inflation, growth of prices for raw materials, introduction of the new tax payments and many others, but also countering internal processes inherent to their own internal structure. Indeed, the development of any economic system is the interaction of opposing parties and trends arising from the intrinsic characteristics of these opposites. Outwardly it appears as self-development. Thus, for example, there is a tendency to reduce the exposure time for each separate unit of goods for workers affecting raw material during manufacturing process. However, in order to provide quality product, in line with certain technological standards and aesthetic forms - you need to spend time. Thus, under constant conditions of work the more time is spent the better item will be produced.

We can cause quite a lot of examples of such contradictions arising and developing within the economic entity. Dialectical unity of the many contradictions, the totality of their occurrence, development and resolution ultimately is the process of economic activity. Eliminating some controversy leads to appearance of another one with different content, at another level, etc. This process is infinite while economic activity is carried out.

The development process of an economic unit is its self-movement, self-development, folding of constant occurrence and overcome internal contradictions due to the structure and content of a business entity. However, this process of development as self-motion occurs in time and economic space. The less time is required to overcome and neutralize arising contradictions, the faster business entity develops.

In this effort of subjects of economic relations to the reduction of time to overcome the existing contradictions and lies an objective trend, special production need - regularity of sustainable development of economic entities. Economic stability of business entity is a vital factor of sustainable development. The higher economic sustainability is, the greater the ability of enterprises forming a regional economic system to resist market fluctuations and hence the lower the probability of their bankruptcy can be seen.

Vital condition of sustainable development is the state of inner balance, when all contradictions, speaking as opposites, neutralize actions and influence from each other and when they are mutually balanced. Economic entity is in a state of equilibrium when its each segment (or structural unit) is in private-equilibrium. Each private equilibrium is achieved at a certain structural level of the entity and at a certain stage of its development. Private equilibrium is possible only provided the aggregate of individual equilibriums of the contradictions inherent in this segment (or structural unit) at a certain stage (time interval). Individual equilibrium implies an equilibrium of separate contradiction based on the balance of opposites determining it. Thus, the total balance of the business entity is a complex multi-level system of the separate, individual and private equilibria. Taking this into account we agree with Safin F. that possibility of defining stable and unstable equilibrium depends on extent of balance equilibrium (Safin, 2007).

Stable equilibrium is the sequence of equilibria of different levels that provides economic entity with possibility to be restored after minor external impacts. Unstable equilibrium means that economic entity can not only be broken by external factors but also can lose opportunity to be recovered. Therefore, it is fair to say that the balance is the outward form of stability which is a complex of equilibrium at different levels - separate, individual and private equilibria. Stability of

economic entity is higher when a set of its stable equilibria exceeds the number of unstable.

However, each time point is full of destruction of equilibrium is reached and the establishment of new ones. Destruction of equilibrium means the process of development that lays the possibility and conditions for the establishment of a new equilibrium at a higher level. Thus we can see reproduction of equilibria.

It is not necessary that a stable equilibrium is reproducted as a sustainable , it likely initially appears as unstable, fragile one. Whether it will become subsequently sustained or broken depends on how the development process of economic entity or its separate segment (structural units) will meet the requirements of the need to preserve and strengthen this even unstable equilibrium . Arisen unstable equilibrium can become stable one when the need for its development coincides with the general trend of development of an economic entity. Otherwise it will remain unstable and like any unstable phenomenon for a long time will not be able to survive and will be rapidly destroyed.

Economic stability of the region as a whole is determined by the economic sustainability of regional main industries. As economic stability of the production we understand its ability to resist and prevent exposure that could lead to a decline in production. Steadily developing may be called production that provides the necessary issue of consumer goods at the lowest cost with efficient use of factors of production and time.

The concept of economic stability of the region, thus, is linked to resistance of the material reproduction of regional economic complex and according to this it's seen as socially - economic concept and is defined as a system of economic relations providing continuous maintenance of stability or economic growth of the regional economy (Khairullov D.S., Eremeev L. M, 2012).

At the same time economic stability can be considered from two points of view:

From the viewpoint of maintaining the stability of any certain level of the final economic indicators. In this case we are talking about stabilization stability;

Economic stability as maintaining the stability of the incremental, marginal rates of economic growth, such as maintaining the annual growth of the gross regional product (GRP) or inflation within the set limits. In this case we mean the dynamic stability.

However, the stability of regional economic development also requires a set of conditions, factors and measures of regulatory impact, ensuring the stability of the final economic indicators. In this regard more attention should be paid to interrelation of stable regional development and economic stability of regional systems in framework of the mechanism of regional economic development, the source of which is the production of the gross regional product. That is, economic stability of regional system is the basis for sustainable development of the region.

3. Research of the Regional Economic Stability Estimation

Having studied contemporary works in estimation of economic stability we can distinguish the main approaches and provisions used in the development of methodologies for assessment:

1. Assessment of integral economic stability which includes all characteristics of the regional socio-economic stability: economic, production, financial, investment and social sustainability.
2. Summary estimates reflecting certain aspects of economic sustainability, including in dynamics.
3. Financial stability is seen a vital component of the economic stability that allows the use of standard ratios as the initial indicators of economic stability.
4. Bringing to the integral form of initial assessments is carried out by ranking, using the index method (Broilo, 2008).

Problems of regional economic stability are closely linked to sustainable development of the country economy. Elaboration of a program for sustainable economic development of the region should be based on the concept of transition of the Russian Federation and its regions to sustainable development. And it requires a strengthening of the role of state regulation of sustainable socio-economic development of the region.

State economic policy is aimed to achieve internal and external stability of the country. The internal economic stability implies such state of regional economy which is characterized by stable reproduction of territorial-economic complex, maintenance a level of employment. External economic stability can include balance of payments stability, maintaining a positive foreign trade balance, sufficient level of stabilization Fund. The main tools of state regulation in this case are such elements as its fiscal, financial, tax, pricing, tariffs, which affect the economic system in the region ensuring its stability.

4. Conclusions

Thus, in our sense economic stability of the region is the state of its economy defined by its economic potential (industrial, financial, employment, innovation, research, and natural) that can resist different negative impact leading to decline in regional economic development and recover quickly in case of violation or achievement a higher point in its development. At the same time economic stability of the region is such state of the regional economy that maintains a constant process of expanded reproduction territorial-economic complex providing stable growth of the final performance and economic indicators. Estimation of economic stability of the region is the starting point of formation of science-based sustainable development of the region, which is particularly relevant in the current conditions of Russia's accession to the WTO.

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Structured Financial Products as the Instrument of Financial Credit Assurance for the Companies Involved into Foreign Economic Activities

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Abstract

Indefiniteness in financial markets motivates many market participants to use with increasing frequency the structured financial products. In the research paper at the level of concept we propose the structured financial products aimed at solution of pressing tasks faced by the companies involved into foreign economic activities.

Keywords: *financial engineering, foreign economic activity, structured financial product, risk engineering*

1. Introduction

The world financial market, as well as the Russian one however, for the recent 10 years has been subjected to considerable repeated changes on the strength of financial crises, major companies' defaults, economic system instability, etc. As of today, each economic entity of the financial market performing its activities uses traditional financial instruments and their various combinations. It, in its turn, implies new risks and the wish of financial market participants to hedge them by use of the financial instruments. However, upon incurrence of new risk situations, the available financial instruments cannot secure the investments in full, i.e. they do not meet the requirements of the set target.

In the paper we study the materials to find out and form the mechanisms to support the companies involved into the foreign economic activities.

2. Theory

Within the frames of the research we come to necessity to create a new financial product; its designing may follow the two variants. First of all, it is taking into account the new encountered circumstances and the available instruments. Secondly, to develop an essentially new financial product by means of financial engineering, at that, having solved the targeted objectives. If to take into account the fact that such a product is going to be aimed at hedging various risks, then there will be used the tools of risk engineering.

Risk engineering stands for the complex of measures including projecting, development and realization of innovative financial products and processes, and also creative research on new products to solve the problems related to management and decrease of the risks faced by financial market entities.

Owing to risk engineering, the innovative financial products appear generated as a result of particular relationship between economic entities in the process of their activities in newly existing conditions of the financial market allowing to meet the requirements related to management and distribution of risks, taxation optimization, investments attraction and gaining the investment income. Besides, such a product is going to provide the final financial results with liquidity, safety and improvement.

Taking the decision on efficient functioning in the conditions of present-day Russian economy by means of using an innovative financial product, the economic entity should thoroughly study the particular situation requiring deep system-factorial analysis, riskiness level, profitability, estimation of financial flow defining the strategy of the organization. Due to significant work content to provide with analysis of the incoming information and necessity to have considerable knowledge, it arises the requirement in getting knowledgeable assistance. It is possible to get such assistance form the investment banks by virtue of the fact that they represent the driving force for the process of creating new financial products.

3. Theory

Consequently, the structured financial products have appeared as a result of search for the solution to the objective to protect from risks the operations with currency, loans, securities and active innovative activities of investment banks in the markets of securities, product, foreign-exchange, credit and other financial markets.

The structured financial product represents a complex financial product which assumes the combination of available financial instruments and complies with the requirements of investors on managing and regulating the risks and as well facilitates the realization of innovative reforms in financial markets.

Realization of the structured financial products is performed via particular mechanism of interrelation between the participants of various financial markets and it becomes a financial service which possesses its user value and is capable of causing demand and supply. In other words, the structured financial product can be sold as a service embodying into particular models of interrelation between the participants of various financial markets by means of exchanging financial instruments, certificates of indebtedness, risks and monetary means, etc. with each other. Let us consider the situations of using the structured financial product as a model in practice.

4. Results

Let us assume that one of Russian companies has taken a decision to extend the scope of market for its product, thereby, to enter an export market and to become a participant of international trade. Having signed a deal with a foreign company, the Russian company can face a risk of non-payment or settlement delay for the delivered product from the part of the foreign acquirer which will cause the seller's debts receivables. It can be contributed with various events happening in the country or in the world community which can be referred to political risks.

One more problem related to the subject, the overdue accounts receivable of commercial and non-commercial enterprises involved into foreign economic activities vividly demonstrates the limitations of the settlement system, the same is true about the present-day Russian economy. The definite approach to solve this situation does not exist.

The models specified below should provide all the participants with guarantees and should be quite attractive to the investors. Having studied the theoretical aspects and practical use of depository receipts, we propose the scheme of interrelation for the financial sector, private capital and international financial institutions; while the realization of the scheme, the capital of foreign investors is going to be located in the sector not directly but via the financial instrument of equities market.

Let's consider the model of issuance and circulation of the depositary receipts for the bills of exchange in export-import transactions (Figure 1).

As seen from Figure 1, the model of issuance and circulation of the depositary receipts for the bills of exchange in export-import transactions contains 8 stages and consists in the following:

1. Let us assume that one of Russian organizations has closed a deal with a foreign company. Then the Russian organization can face risks of non-payment or delay of settlements for the delivered product from the part за foreign acquirer which will cause the seller's accounts receivable forthcoming. In order to secure oneself in such a situation, the Russian company can require the issuance of the bill of exchange to the amount of indebtedness.

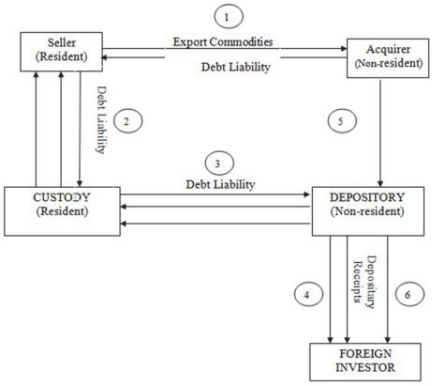

Fig. 1. The model of issuance and circulation of the depositary receipts for bills of exchange in export-import transactions

2. It exists the risk of bills of exchange forgery due to their issuance in paper that is why the seller deposits the bills of exchange into the custody for further undersigning the custody agreement and issuance of depository receipts for the bills of exchange. In the custody agreement, it takes place the fixation of all the terms and conditions for the issuance of depository receipts as well as the liabilities for each party of the agreement.
3. The custody fulfills its obligations by virtue of the agreement with the depository issuing the depository receipts. The bills of exchange to keep at custody are to be stood in the register in the name of the bailee, whereupon, it is sent a message to depository to the effect that the securities have been immobilized; the custody also provides with the instructions on issuance of the depository receipts.
4. Upon getting all the required information from the custody, the depository proceeds to the issuance of depository receipts for the bills of exchange and to search for a potential investor. Having found the investor, the depository bank submits to it the depository receipts for the bills of exchange in return of monetary assets (S'), which are delivered to the seller in chain via depository and custody.
5. Upon some time having passed, the acquirer is to discharge the bills of exchange paying to the depository a particular amount of money (S) which will subsequently be retransferred to the seller and the investor.
6. After the seller's transfer of the monetary assets to the bank, the bank pays to holder of the depository receipts for the bills of exchange the required amount ($S(S')$), as well as the remaining sum (S'') to the seller via the custody.

However, in present-day conditions the market situation is characterized with instability and it can cause the necessity to attract monetary funds to keep providing with the enterprise successful foreign economic activities. Therefore, we propose the model with the use of escrow account oriented to export-import transactions financing. As far as the use of escrow account in the Russian banking area will allow the creditors to control and manage the loan debtor's flows of money while its realizing the various obligations within the frames of the loan agreement.

Let us review the mechanism of escrow account functioning for the loan transactions aimed at export-import operations financing. (Figure 2).

At making a long-term loan agreement, it is agreed upon the amount of provided loan, total period of the loan, loan payout time, loan payout amount, etc. The peculiarity of the agreement is going to be the status of creditor at export-import transactions since the lending agency may be whether the resident or non-resident of the borrower's country.

The escrow account opened at the escrow agent's is a service bank account aimed at accumulating on it the monetary assets arriving from the loan debtor's export-import contracts. Liens on the assets credited to the account are to be transferred to the creditors, and at the expense of these receipts the loan and the accrued interest as well as the agent's commission are reimbursed.

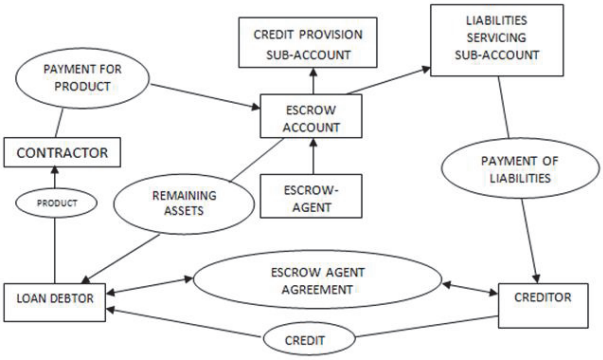

Fig. 2. The model of the escrow account functioning for the credit transactions referred to export-import transactions financing

The escrow account, on which it arrives the payment under the loan debtor's export-import contracts, possesses two more sub-accounts. One of them is dedicated to servicing the liabilities; the second sub-account is for the loan reserve. After the receipts of payment under the contracts, the monetary assets from the assigned account are retransferred on these sub-accounts in the confirmed amount. The remaining assets are transferred on the loan debtor account. All the

transactions to perform with the sub-accounts are to be done in compliance with the schedule specified in the escrow agent agreement.

The assets in liabilities service sub-account are transferred for paying the commission to the escrow agent, the loan discharge and payment of the interest under this credit in compliance with the loan agreement schedule of payments.

The loan reserve sub-account is used in the cases when in liabilities service sub-account the assets are not sufficient for processing the above mentioned settlements.

At the beginning of each settlement period, the escrow agent calculates the values to credit both sub-accounts. The first transfer is effected on liabilities service sub-account, and then they transfer the assets on the loan reserve sub-account. When the value in the latter account runs up to some particular limit, the remaining assets available in escrow account are transferred on the loan debtor account before the following settlement period start.

Consequently, at the end of work day after the redistribution of assets on the sub-accounts, the escrow account is to have zero balance; the same is also applicable to the liabilities service sub-account.

If the loan debtor's contractors effect payment according to the export-import contracts, then there will be no necessity for the loan reserve sub-account. In case when in liabilities service sub-account there is not sufficient assets to get out of the red and if the loan debtor's contractors do not comply with their obligations in good faith, then from the loan reserve sub-account they will transfer the shortfall amount in liabilities service sub-account. For an obvious reason, the loan reserve sub-account cannot have overdraft.

If dated last but the one settlement for the credit in the loan reserve sub-account it is available the amount equal to the last payment, then the escrow agent will effect it at the expense of these assets. When the liabilities to the creditor are performed in full volume, the escrow account balance will be transferred to the loan debtor; as well as both the assigned account and its sub-accounts will by closed.

At closing the escrow account, the escrow agent sends out to all the participants of escrow agent agreement the letters of advice on its closure and acceptance of possible counter-arguments from the parties within the specified time. If the counter-arguments do not come, the account is closed. But if the counter-arguments do come, the escrow agent is obliged to study them and if necessary, to require additional information to take the final decision.

Adjusted export-import agreements are the contracts for the loan debtor manufactured product supply between the loan debtor and its contractors concluded for all the time of the loan on conditions that the settlement for the contract is sufficient for the loan security and settlement.

For an obvious reason, the creditor is entitled to submit its own terms and conditions to the export-import transactions:

- The term of contracts is to be not less than the total term of the loan;
- The contractors undertake to purchase the product totaling not less than the specified amount, whereas the loan-debtor undertakes to produce and deliver the same quantity of the product;
- The prices for the product are to be agreed upon;
- The maturities for the product are not to exceed 30 days;
- Contractors are to transfer the payment for the product on the escrow account.

5. Conclusions

In conclusion, it should be noted that the presented models are the structured financial products which contribute to efficient functioning of the organizations involved into the foreign economic activities as well as allow to solve the previously specified objectives: account receivable level decrease, foreign capital attraction, hedging the political risks and risks of non-payment and provision the participants of foreign economic activities with guarantees.

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Actual Demographic Processes in the Republic of Tatarstan

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Abstract

This article analyzes the current demographic characteristics of the Republic of Tatarstan. The key indicators of the demographic situation, such as the indicators of natural (birth and death rate) and migration of population have an uncertain future. Demographic indicators are influenced by a number of different factors which can be hard to predict. At the same time the demographic characteristics of the population have highly significant implications for economic and social development of any area in a long term perspective. Demographic characteristics and trends analysis is one of the most important points in understanding the demographic future of certain region and the country as a whole. Tatarstan is one of the most socio-economically developed regions in Russia. In recent years birth rate exceeds its deaths rate in the republic and the urban population increases annually.

Keywords: *demography, population, migration, city, population policy*

1. Introduction

Demographic characteristics of the territory can be a decisive factor on its socio-economic development. The regional strategy over the next 15-20 years is required to take into account the current demographic characteristics of the territory and the prospects for their change. It is necessary for provide realistic scenarios for the development of the region and for the goals that is possible to achieve according existing and future demographic indicators. The demographic future is inherently uncertain that should be considered in socio-economic decisions, including marketing, financial and other [1,2].

Such uncertainty exists due to factors such as an incomplete understanding of demographic processes, imperfect demographic data, and unpredictable immigration policy changes. Demographers solving this problem using functional data models for fertility, mortality and overseas migration [1,3,4] For example, factors potential influencing people's choice for place to live and work during the pre-migration stage are not only socio-economic but psychoemotional (psychological well-being). It is difficult to obtain data on migrants in pre-migration stage [5].

Uncertainty in demographic future has a long-term effects and one of the most important steps in overcoming this uncertainty is a comprehensive analysis of the current demographic situation, the forces constraining or enabling certain demographic processes of society.

2. Method

For the study of demographic characteristics a number of methods were used. It is, in the first place, the statistical method, comparison method and spatio-temporal approach. Statistical data analysis and diagramming were obtained from the official web-site of Territorial authority of the Federal State Statistics Service of the Republic of Tatarstan http://tatstat.gks.ru/wps/wcm/connect/rosstat_ts/tatstat/ru/statistics/population/.

3. Main Part

Tatarstan is one of the most economically developed regions in Russia. A population of 3.822 million people (2013) comprises 2 main ethnic groups - Tatars and Russians - their sum is more than 92 percent [6]

Tatarstan is highly urbanized, with 76% of the population living in urban areas. Both in absolute and in relative terms, the number of residents increase in recent years. It should be noted that high level of urbanization and migration is an important symbol of a regional economic development. For example, in the early 70's of the last century in Naberezhnye Chelny city Kamsky Motor Works (OJSC "KamAZ")- a manufacturer of heavy-duty vehicles were built. And as the result influx of migrants from different parts of Russia was increased significantly [7].Economic growth stimulates the migration – it occurs in many regions of the world. The impact of migration on economic (labor market) and social development (assimilation of migrants, inter-ethnic relations, the change in fertility) is significantly and diverse both in developed and developing countries. There are vast array of studies examining the migration impacts on economic and social development [8, 9,10,11].

Demographics and settlement system of the Republic of Tatarstan is influenced by phenomena and processes that are specific to the entire socio-economic situation of Russia. Decline in fertility and high mortality were observed in Russian Federation in the mid- 90's and were typical for republic too. In the late 90's republic's population increase has been due to migration. Increasing fertility is the result of active demographic policy at both the federal and regional level, as well as the stabilization of the economic situation in comparison with the 90's of the 20th century. An increase in fertility rates to 25 % observed during the last 5 years (2008-2012). At the same time mortality stable and has a tendency to decrease. These phenomena were possible to overcome the negative trend of population decline and in 2011, the natural population decline has been replaced by natural growth, as shown in figure 1.

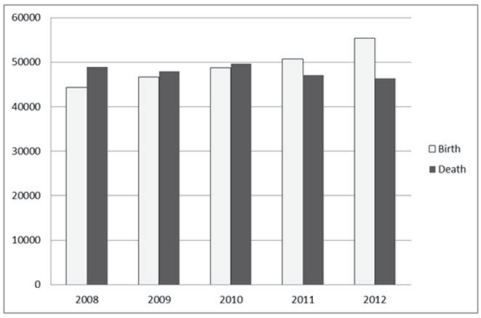

Figure 1. Dynamics of birth and death indicators in the Republic of Tatarstan in 2008-2012 periods (people)

Another important positive trend is the decline in the divorce rate during the growth of marriages, which may be indicative of the fact that family values strengthening in a society. In 2012, the divorce rate has decreased by 10 percent compared to 2008.A noteworthy fact is that the economic crisis of 2008 has had almost no a negative impact on (almost have not affected) marriage indicators.

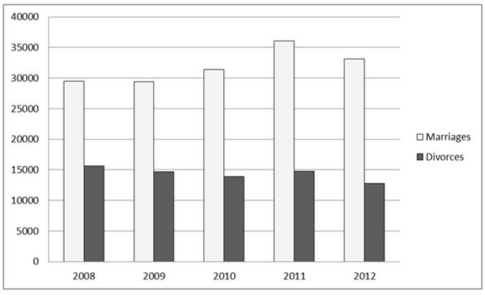

Figure 2. Dynamics of marriage and divorce indicators in the Republic of Tatarstan in 2008-2012.

The rate of population growth during the last 5 years in the Republic of Tatarstan is mainly due to the positive migration balance. Data from the Table 3 clearly demonstrate (indicate) that the number of entrants exceeds the number of those who left the republic both in the general migration exchange and the internal migration in Russian Federation.

Table 3. Dynamics of migration growth in the Republic of Tatarstan, including internal migration between Russia's regions (people).

	2008	2009	2010	2011	2012
Overall migration growth rate	10433	11211	4691	11998	9786
Including internal migration between regions of Russia	2651	2220	3045	3429	2853

It is notable that the total flow of migrants has seriously reduced, and the number of entrants from other regions of Russia significantly increased compared with the previous period. In general, reducing the number of international migrants was due to the effects of the global economic crisis in 2008 and the change in migration policy. Uzbekistan and Tajikistan are unquestionable leaders in international migration exchanges with the Republic of Tatarstan. These two countries represented a third of all migrants (It is from these two countries, labor migration is more than a third of the total migration growth) (Table 2). Not only the employment opportunity is contributing to migration. Many researchers have observed interethnic tolerance, which is a historical advantage of the Republic of Tatarstan. For centuries here live peacefully 2 main ethnic groups- Tatars and Russians [7].

Table 2. Main (leading) countries in migration stream exchange with the Republic of Tatarstan(people).

	Countries	2008	2009	2010	2011	2012
1	Uzbekistan	3498	3823	509	3069	3002
2	Tajikistan	1239	1660	307	1646	1131
3	Azerbaijan	806	834	137	708	582
4	Kyrgyzstan	522	547	459	1297	575
5	Kazakhstan	382	401	184	338	501
6	Armenia	508	523	87	401	374
7	Ukraine	355	493	-12	365	272
8	Turkmenistan	157	139	33	158	105
9	Moldova	104	120	20	114	92
10	Georgia	71	122	27	128	69
	Other countries	140	329	-105	345	230

4. Conclusion

The analysis shows that in recent years there have been positive trends in demographics of Republic of Tatarstan. They are: rise in the birth rate and relative stability in the mortality rate. Besides increasing number of marriages and decreasing divorce rate were observed in 2012 year (number of marriages increased and divorce rate have decreased). These trends are likely associated with a relatively stable economic situation in comparison with the 90-ies of XX century, and may serve as a positive indicator of an active demographic policy at both the federal and regional level which based on the idea of stimulating fertility.

Migration growth is important for the republic. Leading countries in migration stream exchange with the Republic of Tatarstan are Uzbekistan and Tajikistan. Labor migration is the main type of migration for representatives of these countries and migrant workers are employed in low-skilled jobs as a rule.

The most important socio-demographic policy goals for the near future should be considered:

- strengthening positive trends in fertility;
- municipal authorities should take into account the current situation, and create opportunities for families to educate and bring up their children - opening of kindergarten (this task is carry out in the Tatarstan), supporting the existing and opening new educational, training and care centers (including sport, art, music etc.) both for preschool children and teenagers;
- increase in life expectancy;
- strengthening family values in society;
- regulation of migration flows for the vacant positions of employment

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Formation of Ecological Culture in the Aspect of Ethno Pedagogy

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Abstract

Ethno-ecological culture of students is a complete system, the operation of which is based on the harmonious interaction of all spheres of personal consciousness. Ethno-pedagogy helps to solve the problem of using conceptual frameworks in practice and best methods of environmental education and training of young generation, developed by different peoples for centuries. Knowledge of ethno-pedagogical, ethno-psychological and ethno-ecological characteristics of children is the basis of the educational process in the national school, and it follows from the understanding of national character. Selected epistemological and methodological bases of formation of ecological culture of students in the context of sustainable development of society, suggest clarifying of strategic objectives of the environmental education - education of ecological culture of the young generation.

Keywords: *culture, education, ecology, ethno pedagogy, folk pedagogies.*

1. Introduction

Centuries-old experience of cooperation of Tatar, Russian, Bashkir, Chuvash, Udmurt, Mari, Mordovian and other peoples and their living together in the same environmental space contribute to the development of general ecological culture. In addition, socio-political, environmental and economic change in modern society, ethnic conflicts forced to take a new look at the national and universal values as a factor of stability and harmony between peoples. Research of environmental education and upbringing, the study of mechanisms of realization of the integrative functions in the formation of ecological culture of the young generation contribute to the solution of some problems.

Ethno pedagogy is a science about life experience of people, about upbringing and education of children, ethical and environmental standards and rules of behaviour of the younger generation in natural and social environment. People are unique and inexhaustible source of spiritual values. Since the time immemorial a distinctive moral way of spiritual culture has been developed by people [1].

The problem of formation of ecological culture of students that we have chosen, in ethnic pedagogical aspect has ecological, scientific, educational, historical and socio-political significance. However, the development of cultural traditions of the peoples inhabiting the region becomes especially important in connection with the development of their national identity. It implies both the need to create the conceptual basis for the formation of ecological culture of students, and also to identify regular tendencies of integration of environmental and natural sciences with spiritual culture of the peoples of the Republic of Tatarstan.

2. Methods

To disclose the content of scientific work, the following methods were used: theoretical, logical, historical, pedagogical and ecological analysis of various aspects of the problem; theoretical generalization of the research results, taking into account key factors and specific conditions; study of environmental information on the topic; analysis and synthesis of educational, ethnographic and ethno-ecological sources, archival materials and documents on the environmental culture

of the Tatar people and the ethnic groups living in the region;

3. The Type and Methods of Research

Based on the principles of natural development, natural education and problem-based learning, we have formulated the following provisions for formation of ecological culture of students, composing conceptual framework.

3.1 Ethno-pedagogical knowledge.

Basis for the formation of ecological culture of schoolchildren is systematized ethno-pedagogical knowledge which should be used in the educational process. Ethno-pedagogical knowledge is the result of mental and cognitive activity of a student expressed in learning the basic concepts of folk pedagogy reflected in his consciousness. There are people's sayings such as: " Awkwardly planted tree dries quickly", "We do not appreciate water until the well is dry ".

Such ethno-pedagogical knowledge reflects basic patterns and relationships that exist in nature and society, the violation of which creates negative and irreversible processes. Ethno-pedagogical knowledge involves the interaction and interrelation of society with natural environment, and scientific basis of environmental management. The English lawyer and politician G.P. Broome said about it: "Try to know everything about something and something about everything" [2].

Search of ways to enhance the learning process has led to the development and establishment of a new type of introducing ethno-pedagogical knowledge by the teacher – the problem-based presentation. M. I. MAKHMUTOV writes: "The essence of it is that instead of a full explanation of the teaching material, giving the made conclusions, rules, statements, the teacher reports only factual material but the essential features of the properties of the phenomena being studied are formulated in the form of problematic issues or problems. This creates problematic situations in introducing of the new material " [5].

The cognitive activity of a student in the classroom and extracurricular activities, methods and techniques of work on environmental material, which are formed in the process of assimilation of ethno-pedagogical knowledge, contribute to the intellectual development of the individual and do not lose their value when this knowledge is sometimes forgotten. "Knowledge - is not simply the result of a mechanical projection of certain concepts into the head of a person who hears or reads. Knowledge, concepts must become knowledge relevant to him, having a personal subjective meaning" [3]. Consequently, the teacher who is able to equip students with ethno-pedagogical knowledge, forming their ecological awareness, acts as a mentor, with the help of whom students consciously performed refinement of natural and social environment.

4. Environmental Thinking and Ethno-Ecological Consciousness

Thinking is the highest stage of human cognition, indirect and generalized perceptions by a human being of nature and its components, natural phenomena in their essential properties, connections and relations.

Environmental thinking arises in the course of interaction and the relationship of the individual with the environment. Natural and social environment determines the way the individual think through his needs, giving birth to his issues and environmental problems [4]. Ecological thinking is developed through various activities: in environmental games, in acquiring entertaining ecological knowledge and skills, in an active and practical relationship and emotional experiences. Intellectual activity is successfully activated and developed when students are aware of new environmental knowledge on the base of problem-based learning. M.I. MAKHMUTOV writes: "Learning the ways of mental activity is possible only in the process of independent mental activity on mastering the system of knowledge" [5].

In our understanding, ethno-ecological consciousness is the ability of a person belonging to a particular ethnic group, to the perfect reproduction of certain natural and social environment in his thinking. Ecological knowledge is accompanied by high emotionality of students: positive emotions, feelings in relation to the natural and social environment and the negative feelings towards individuals, doing harm to the environment.

Thus, ecological way of thinking of a student is an intellectual form of environmental consciousness, the highest level of awareness of the natural and social environment, cognitive fundamental component of ecological culture of the younger generation.

4.1 Environmental action-practical attitude towards reality.

It includes creative experience and work; ecologically justified research activity of students in terms of ethnic culture.

The labour and labour education are interrelated with teaching, moral and environmental upbringing and development of a student. "Man is born to labour; labour gives him earthly happiness; the work is the best guardian of his human morality, and the work must be an educator of a person. It plays the main role in a spiritual life of a person" [3]. People say: "When the work is fun, the life is good!", "Studying and work go side by side", provided, however, that next to them there is the most important component of ecological culture- beauty. Spiritual purity is the basic condition for the development of environmental outlook of the individual and his/her activities. Labor becomes a tutor when he enters into the spiritual life of students. Source of labour activity of schoolchildren in Tatar national school is «омэ» («өмә»). It is an organized collective work of people, the tradition of mutual help of Tatars. Khusainov Z.A. writes: «The aim of the study is to develop the content and methods of forming of ecological culture of the students of the national school-based knowledge of the Tatar people on the nature»[8].

Thus, labor and research activity of a student in the natural and social environment enters into his spiritual life, becoming a factor in education, forming the basis for environmental philosophy, culture and morality, in a result of which a student with his active and practical attitude towards the nature ennobles the environment.

4.2 Environmental games in the ethno-cultural context.

For a more detailed and scientifically-based discussion of the problem of ecological culture formation of schoolchildren it is necessary to expand categorical apparatus and pay attention to the basic concepts, which play a main role in the formation of the young generation.

In ethno pedagogy of Tatars, transmitted from generation to generation, there were game songs, in a genre of popular music and poetic folklore, which is characterized by a clear rhythm, fullness of rhymes and they must be used in environmental education in national schools. Tatars have them in a form of special round dances with dancing executed on melody of the chorus. They were performed at youth gatherings and as a genre, have a long history. By the content of the games, they are closely interrelated with nature of the region. Thus, the national environmental games have a close relationship with ethno pedagogy and ethno ecology, they help to develop children's responsibility and independence towards the environment and are used in the purpose of formation of ecological culture of a student.

5. Ecological Moral-Aesthetic Attitude of the Ethnos

Ecological moral-aesthetic attitude of the ethnos to reality - emotional-sensory experiences. The ecological aspect of education of schoolchildren includes disclosure of the idea of the role of nature in personal development, her spiritual enrichment, moral and aesthetic education. Aesthetic education reaches its target in certain pedagogical conditions. Any impact on the spiritual world of a student acquires educational force only when stimulating motives are involved. One of the ways to overcome the ecological and spiritual crisis is the communion of the younger generation to the world of beauty. Tatar people say: «To see the beauty is to see a piece of Paradise"), "Beauty doesn't need any ornaments". People usually experience positive emotions during the contact with nature. If a person is able to experience the intellectual, moral, spiritual and emotional state, she is given the desire to preserve and responsibly increase the value of the natural and social environment.

Studying this direction in the course of the study, we came to the conclusion that the person while studying and perceiving ethnic pedagogical and ethno-ecological sayings, being able to worry about the state of the natural and social environment, intellectually, morally and spiritually-sensually, consciously and responsibly protects and increases the value of the environment.

6. Ecological Means of Ethnopedagogy

During its existence the Tatar people has accumulated wide ecological knowledge and experience appropriate for using. Ethnos, summarizing observations of natural phenomena had incorporated environmental skills and applied them in practice. All this is reflected in the experience, traditions and customs of the people and is expressed in the oral work: in proverbs, sayings, riddles, legends, songs, baits, munajats etc. Khusainov Z.A. writes: «Ecological culture of a personality is being formed in the integration of the three areas: environmental consciousness, moral-aesthetic, active, practical relations»[8].

Having examined the environmental education of students by means of folk pedagogy, we came to the conclusion: proverbs, sayings, riddles, legends, tales, songs, etc., that are passed from generation to generation, create visual images. For example: "Don't spit in the old well, a new one has to be dug"; "If you have planted a tree, you become a

respected man"; "If you have a garden around the house - the nightingale will become a frequent guest"). Thus, environmental knowledge, skills of the people are passed from generation to generation through the mechanism of succession of traditions, customs, ceremonies and holidays. People always had exceptional attachment to their native place of habitat, especially sacred springs and all this imposed special rules of behavior in the natural world. For example, there is a saying: "Flowing pure water is the medicine itself". This way of life was essential in preserving the pristine environment because it contributed to the sustainable functioning of the ecological system. Environmental knowledge of the Tatar people and of other ethnic groups of the region is contained in the genres of folklore. It was the first unwritten laws for the protection of the environment, the primordial ethno-ecological culture. Integration of fundamental natural sciences, humanities and ecological knowledge of the people, the social environment can ensure the formation of the foundations of ecological outlook, culture and morality. Thus, the tools of pedagogy, traditions, rites and customs of the people by their environmental content help to set the stable standards and rules of behaviour of children in nature and contribute to the formation of ecological culture.

7. Religious Ecological Culture

Investigation of the problem related to the study of ecological traditions, experiences, customs, rituals and knowledge of the Tatar people as the basis for the formation of ecological culture of a student, in this regard, we adhere to the Islamic religion and believe that religious ecological culture is one of the fundamental components for the formation of ecological culture of schoolchildren.

Islam played an important role in the formation of ecological culture of the Tatar people. On this occasion K.D.Davletshin writes: "It would be wrong to claim that Islam is not a part of the national consciousness, it is closely connected, spliced with national identity" [6]. The essence of Islamic culture is expressed by the principles of the Koran. Ecological principles are reflected on many pages of the Holy book. For example, the older generation taught the junior by the Koran, "Do not distribute misery on the earth; we are here only for doing good deeds". A certain part of the Koran is made by its legal, moral and aesthetic aspects. Islamic theory and practice was the basis for the creation of a system of values that determine the thinking and being of Tatars, as well as of many other peoples of Russia, developed in the bosom of the Islamic culture in which morality and ecology are inseparable.

On this occasion, the German philosopher L. Feuerbach, indicating the influence of religion on various feelings of a person, wrote: "The sense of need is transitory, the feeling of gratitude is long-term; it fastens bonds of love and friendship. The sense of need is rough, while the feeling of gratitude is noble; the first reveres his subject only in misfortune, the second one - in happiness" [12].

Environmental education and training is not just a process of passing environmental knowledge to students, this is a means of transferring the rich moral and psychological heritage, which attaches a child to the national culture and helps him to become a personality. Khusainov Z.A. writes: «Ecological culture, intelligence, spirituality and unbridled passion for profit, absence of control and animate egoism two incompatible directions» [9]. The concept created by us consists in building a positive attitude of the individual to the valuable cultural heritage of his country. In this case our study has the unifying principle which allows historically neighboring ethnic groups and religions to develop a common content of environmental, civic and patriotic education.

The results and discussion of the results of the study were provided by:

- systematic approach to the research problem, the adequacy of the methods of its goals and objectives;
- the combination of the generalization of practice and experimental work, the research on the basis of the gymnasium № 4 of Kirovsky district, Kazan, in the scientific-experimental laboratory "New pedagogical technologies in teaching regional geography and ecology" at the chair of economical geography and methodology of teaching geography of Tatar State Humanitarian-Pedagogical University;
- scientific testing of the most important ideas, hypotheses and conclusions in schools № 23, 73, 75, 81, 92, 139, in gymnasiums No. 18, 102, 155 and in the Tatar-Turkish Lyceum № 4, Kazan; in Drozhzhanovsky District of the Republic of Tatarstan- in Malotsilninskay, Bolshetsilninskay, Staroshaymurzinskay schools; in Tyulyachinsky District – in MaloKibyakozinskay; In Rybno-Slobodskoy District – in Upper-Timerlikovskay schools (with teaching in Tatar language) in Starodrozhzhanovskay (with teaching in Russian language), in the Old-Ubeevskay, New Ubeevskay schools (with teaching in Chuvash language); in Rybno-Slobodskoy District - in Urahchinskay, Betkovskay schools (with teaching in Russian language).

8. Conclusions

Formation of ecological culture of schoolchildren naturally includes the integration of parts of the whole and consists of interrelated, identified in this study, conceptual frameworks:

- ethno-pedagogical knowledge, ecological thinking and ethno-ecological consciousness;
- environmental activity-practical relations and environmental games in the ethno-cultural context;
- environmental moral and aesthetic relations;
- environmental means of ethno-pedagogy;
- religious environmental culture.

The absolutization of one of these fundamentals and underestimation of others may lead to the formation of one-sided limited personality. Ethno-ecological culture of students is a complete system, the operation of which is based on the harmonious interaction of all spheres of personal consciousness. Ethno-pedagogy helps to solve the problem of using conceptual frameworks in practice and best methods of environmental education and training of young generation, developed by different peoples for centuries. Knowledge of ethno-pedagogical, ethno-psychological and ethno-ecological characteristics of children is the basis of the educational process in the national school, and it follows from the understanding of national character. Selected epistemological and methodological bases of formation of ecological culture of students in the context of sustainable development of society, suggest clarifying of strategic objectives of the environmental education - education of ecological culture of the young generation, which is the new content of the public culture of the XXI century.

Analyzing and summarizing the study material, we synthesized the definition of environmentally cultural people. An environmentally cultural man is an intelligent and civilized person with ecological knowledge and skills, including current environmental knowledge and skills of ethnic groups of the region, who is able to think and act ecologically, and take care of the natural and social environment.

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Humanitarization Geographic Education in Universities

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Abstract

This article discusses the structure of science. Highlighted border integration and cross-cutting areas. Considered the most important priorities of the Russian geographical education; humanization, aimed at the development of common cultural components in the content of education in the formation of personality; humanization, expressed by an emphasis on personal factors, the social aspects of the development of society; sociologization, object of study is sociosphere - a set of geographic and socio-economic factors, with increased attention to the social aspects of development; greening, reflecting spatial processes and forms of organization of the productive forces, in order to optimize and improve production efficiency; regionalization, promoting deeper identifying the structure, function, increased understanding of the regions, the study and development of a geographical approach to the management of the region; greening, characteristic of the whole complex of geographical sciences dealing with the interaction of society and nature. Presents the contribution of prominent scientists-geographers: V.M.Maksakovskogo - his recommendations for the Study of the greening of industry and spatial aspects; YD Demetrius, releasing a comprehensive study of the major issues of geo-ecological problems; A.M.Trofimova, MD Sharygina on the role of general geography - basic science, which considers all aspects of the development of an integrated system of "nature-economy-population" in the space-time aspect, as well as trends in long-term development of geographical education. The contribution of scientists CFI and the Institute of Ecology and Mineral Sciences of the Republic of Tatarstan in the environmental mapping.

Keywords: *geographical education, humanitarianism and humanization, sociologization greening, economization, regionalization.*

1. Introduction

Russia's accession to the Bologna process has contributed to the modernization of education - a focused process of education and training. The process of education is aimed at building knowledge, skills, experience, creativity, intellectual and moral qualities, spiritual values, professional competence, development and cultivation of future specialists.

The modern period of the development of education is characterized by updating the content and structure of the studied disciplines.

Inevitable changes have affected and geographical education. As the priorities of content updates geographical entities to humanization and humanization, aimed at identifying the humanistic spirit and the personal meaning of the studied geographical disciplines, and ultimately the formation of a scientific world outlook and geographical culture.

2. Method

When writing articles to apply theoretical and empirical methods: the study and analysis of the methodological, geographical, psychological and educational literature, the study of legal and procedural documentation, teaching experience, observation of the learning process.

3. The Main Part

In the scientific and methodical literature along with the general geographic integration of isolated two types of integration: the border and cross-cutting areas. Border integration is largely due to the emergence of the trend towards humanization

and humanization, including sotsiolizatsiyu, economization and the greening of geographical education.

One of the most important priorities of the Russian Geographical Education is humanization - the introduction of human subject content of education. Humanization of education is a system of measures aimed at the priority development of common cultural components in the content of education, including geographic, and on the formation of personal maturity of the students. It is culture that determines the formation of the person. [1] The most important practical direction of the humanization of geographical education is the revision of curricula and programs for socio-economic disciplines, to provide substantial assistance to students in understanding the history and the present, world and national cultural heritage [2,3]. At the time, NN Baranskii suggested that "physical geography - is unnatural, and economic - is immoral," referring to the fact that nature is seen as a resource base of the economy, rather than habitat, and human evolution. [4]

In the literature in recent years have begun to talk about the humanization of geographical education. According to the humanization of the content of geographical education should ensure the free and full development of personality, the active participation of the individual in society. [3]

Consequently, the idea of humanization, according to many researchers, also apply to the forms and methods of training, on the totality of conditions in which they occur. In the study of the geography of the learning process should be structured in such a way that the student discovering the personal significance of geographical knowledge and on this basis mastered the content of the physical and economic geography, and other geographic disciplines.

VP Maksakovskii talks about the humanization of geographical education as follows: "... as in all of science, humanization is associated with turning to the man, and all areas of his life and cycles. In fact, it's a whole new world, affirms universal, common cultural heritage and considers primarily the lives of people and their social relations "[5]. An interesting interpretation of the humanization of geography education in his "Fundamentals of geography" gives YG Mashbitz, who believes that "modern geography - is the science of" human "," from the man, "and in many ways" through a man. "At the forefront of her come a bunch of "man - nature", "people - agriculture", "man - the territory", "human - environment" [6]. Consequently, at the forefront of the humanization of geographical education goes a man with all his relations to the environment.

The next trend in geographic education - sociologization geographical education. According to VP Maksakovskii, many scientists sociologization is closely related to the humanization of education and is a general trend throughout the science and social practice, "is to raise attention to the social aspects of development" [5]. According to him, the beginning of sociologization national geography and related sciences is at the beginning of 80-ies of XX century and is connected with the development of ethnography and social geography, social ecology, social infrastructure and others. Thus, social geography studies the processes and forms of human life mostly in terms of living conditions, recreation, personal development and reproduction of human life. [7] The object of her research are the various territorial community of people, including all of humanity as a whole, ie sociosphere. In our opinion, sociosphere - a set of geographic and socio-economic factors specific to the stage of development of society in its interaction with nature.

In the development of geographical education hold a special place and economization of questions, especially since the early 90-ies of XX century, in connection with the transition to a market economy. Economization issues received much attention in the study of economic and social geography of the regional economy, as it examines the spatial processes and forms of organization of the productive forces in order to optimize and improve production efficiency. Therefore, in the scientific literature more intensively started to use these integrated concepts as "economic and geographical space", "economic and geographical area", "economic and geographical field," et al. [8].

Due to Russia's transition to a market economy and the transformation of a general methodological framework, in universities in the study of economic geography began to use terms such as "market economy", "business", "economic resources", "quality of life" and others.

In K (L) FU for third year students enrolled in the specialty 050103 "Geography", offers courses: "Foundations of the market economy", "Regional Economy", "Economic-geographical features of the Republic of Tatarstan".

In the study of economic geography in higher education system plays a vital role regionally and economic knowledge and economization of geographical education. It relies on a system of scientific knowledge on environmental management, the distribution of production and resettlement of the population who are the most important areas of interaction between nature and society.

In a market economy, there is a strengthening of interaction between nature and the economy, between nature and man, the aggravation of ethnic phenomena, which requires the establishment of effective geographical division of labor, the rational use of the economically active population, the effective use of the territory and the nature [9].

Since 70-ies of XX century, more intensive in the greening of geographic education, which involves consideration of the human hand in hand with his environment. Greening is also characteristic for the entire interdisciplinary complex of

geographical science, which explores the interaction of society, production and the environment. We can say that in recent times there has been some greening of both natural and social sciences, and these processes have led to increased synthesis of science and human knowledge. Especially developing rapidly greening the physical geography of Russia, economic and social geography, biogeography, geography of soils, geography Tatarstan, etc.

In the study of economic and social geography of Russia, in particular the theme "Natural resource factor in the development of Russia", attention is paid to environmental and economic education, the role of natural resources in economic development, changing environmental conditions under the impact of human activity, methods of valuation of natural resources, sustainable and efficient use of natural resources and the environment, geo-ecological research in Russia. In the study of industries, agriculture and transport also need to use additional information and teaching materials geographical and ecological maintenance.

In the study of Russia's regions highlighted issues such as the "environmental factor", "Environmental Protection", "Regions of ecological disaster", "The ecological status of the territory of Russia", "Environmental Management" and others. When studying the economic regions of Russia is considered their brief ecological and economic characteristics and environmental issues, and sustainable use of natural resources in each economic region.

VP Maksakovskii in his writings recommends considering the greening of geography at the sectoral and spatial aspects. In the first scenario, the greening of industry physical and economic - geographical disciplines - climatology, hydrology, soil geography, population geography and others. In the second case, we can talk about the three main levels of the territorial application of greening: a) the global level - consideration of a global environmental problem and global changes in the environment; b) the regional level; c) the local level [5,10].

In the scientific and methodical literature within the geographical entity, a new direction - geo-ecological approach. In the works [11, 12], scientists have determined the content of Geoecology as follows: a) the control of environmental changes, ie anthropogenic monitoring; b) projections of impacts of economic activity on the environment; c) the prevention, alleviation and elimination of natural disasters; d) optimization environment created by natural and technical systems.

In the monograph of scientists of the Faculty of Geography and Geoecology, St. Petersburg State University discussed in more detail the relationship of geography and ecology, the authors give the following definition of Geoecology "Geoecology-science that studies the irreversible processes and phenomena in the natural environment and the biosphere resulting from intense anthropogenic impact, and also near and distant in time the consequences of these actions "[12].

As can be seen from this definition, this paper questions of geography and ecology are considered integrated. Despite this, the proposed problems geoecology are generally reduced to the problem of the impact of society on nature, and the other side of a single process - the nature of the impact on society - missed. In its work, YD Demetrius highlights the major issues of complex study of geo-environmental problems and their impact: a) on the human body of the surrounding nature; b) on human society of the whole complex of natural conditions; c) to human society, they altered the natural (ie, technical) environment; g) the effect of nature on the socio-cultural and ethnic environment, and others. [11].

Great development in recent years has received environmental mapping, which includes the creation of maps of human impacts on the environment; risk maps of natural hazards and environmental emergencies; complex

environmental cards; maps of ecological management; environmental cards-natural systems.

Scientists K (R) FS, Institute of Ecology and subsoil of the Academy of Sciences of the Republic of Tatarstan on the basis of ecological mapping prepared and published the following cartographic products:

- Atlas of the Republic of Tatarstan (a section "Natural Resources and the Environment" and thematic maps: 1) human influences, 2) anthropogenic impact, and 3) the intensity of the manifestations of emergencies, 4) environmental map and others.
- Ecological map of the Kuibyshev Reservoir;
- Ecological map of the Republic of Tatarstan, and others.

All of these cartographic materials have been successfully used by teachers of high schools in the educational process as information ¬didakticheskie materials.

In the works of AM Mills, MD Sharygina considered the essence of object-subject unified geography, describes the principles and approaches of geographical science methodology, research methods and techniques, a snapshot of the scientific research in geography, the study of the theory of the organization of geographical space, the geographical field, geosystems, geographical zoning, etc. And identify trends in long-term development of geographical education and its ability to solve problems of territorial development and management [2]. We believe that the geographic entity in recent years, in the course of modernization of Russian education is becoming popular in the solution of modern eco-geographic, economic and geographic, social and other territorial issues.

An analysis of the literature identified several priorities update the content and structure of geographic education in higher education institutions. This humanization humanization and stimulating introduction to the content of human geography education; emergence of cultural, social, behavioral, religious geography; humanization of the forms and methods, a set of learning environments; maximum realization of the whole person, open to new experiences of perception, capable of informed and responsible choices in various situations; socialization, which is closely related to the content humanitarization geography education, including as an object of study various territorial community of people, ie sociosphere; economization, actualization which is associated with the transition to a market economy; suggesting the formation of the system of regional-economic knowledge of environmental management, the distribution of production and resettlement of the population, human interaction - nature - society; greening, the person in question in close connection with his environment, which is characteristic for the entire interdisciplinary complex of Geographical Sciences in the interaction of society, production and the environment; implementing geo-ecological approach as a new direction in geography; regionalization related to regional studies, regional studies, the regional economy; physical and economic regionalization, regional politics, demographics, etc..

4. Results

1. Modern processes of integration, characterized by a tendency to humanization, humanization, and cross-cutting areas of geography: sociologization, economization, greening are the basis of updating the content and structure of geography education.
2. Gumanitarizatcija focused on the development of common cultural components of education, the study of the experience of cultural heritage. Humanization is expressed in increasing attention to the human factor, the social aspects of the development of society.
3. The process of training and education through the humanization methods, forms of learning becomes student-significant and, therefore, forms of thinking, their own attitudes, beliefs.
4. Geography becomes a science for humans. This contributes to the sociologization aimed at comprehensively study the social aspects of geography, and greening, reflecting the interaction of nature and society, the territorial structure of the economy. Forms of production organization.
5. Greening considered by scientists in the sectoral and spatial aspects. There is a new stage in the development of Environmental Geoscience, namely the impact of geo-environmental problems in the human, the human society on the ethical environment, etc.
6. The most important contribution to the development of ecological education content makes economic mapping, which allows to estimate, predict environmental change under the influence of anthropogenic factors.
7. All updates priorities geographical education directed to the fact that geography becomes fundamental science, geography becomes fundamental science that can solve verbal spatio-temporal problems of natural and social systems.
8. The process of learning geography, becoming a student-significant, forms the scientific professional thinking, dialectical scientific outlook and geographic culture.

5. Conclusion

In this way, the search for new philosophical orientation in the current difficult situation in modern society enabled the priorities update the content and structure of geographic education: humanitarization, humanization, sociologization, greening, aimed at the formation and development of personality.

Ekogumanisticheskaya and cultural studies focus geographical content, learning sociosphere, economic geography matters in connection with the transition to a market economy, contribute to the formation of emotional and value relationship to reality. Generate values of a personal nature, which would be identical to a human, social - is the task of education. Personal values become when students realize that knowledge and skills, the experience of creative activity - these are the values necessary for further development, they are personally meaningful, therefore, students are attached to the spiritual and material culture of the surrounding society, develop intellectual creativity, formed worldview.

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Elaboration of the Model of Evaluating the Transactional Costs Management Efficiency in the Educational Sphere

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Abstract

The article is devoted to elaboration of tools for transactional costs management in the educational sphere of Russia. The work uses space-temporal classification of transactional costs of an organization, takes into account the impact of institutional environment upon transactional costs, and formulates the model of evaluating the efficiency of the main transactional costs management in the educational sphere in Russia.

Keywords: *managerial tools, transactional costs, educational establishment, institutional environment, benchmarking*

At present, the Russian educational system actively integrates into the European educational system, introduces and adapts international standards within the framework of Bologna process (De Wit, 2006; Pursiainen & Medvedev, 2005). Russia's joining the World Trade organization creates additional possibilities for foreign educational establishments in Russia, providing Russia's further integration into the international labor division system (Gaponenko, 2004; Gounko & Smale, 2007; Колесов, 2006). Competition grows both in the educational services[1] market (Johnson, 2013) and in the labor market of Russia, which becomes more mobile and competitive (Ворошилова, 2002).

These conditions and processes generate new requirements for the competitiveness level of the Russian educational sector. Consequently, it is necessary to reveal and use the sources of efficiency growth of the Russian educational establishments.

The presented work is devoted to forming the model of evaluating of transactional costs management in the educational sphere.

Revealing, accounting and managing the transactional costs is traditionally a very complex task. Transactional costs are intangible, but the objectives of their management are tangible – we are to reduce the material loses caused by transactional costs (Dietrich, 2008; Groenewegen, 1996; Т. Крамин, 2006). Thus, it is necessary to estimate the economic effect of transactional costs management (Крамин, 2007). The work is devoted to elaborating the tools of transactional costs management in an educational establishment.

According to some researchers, transactional costs are based on information (Крамин, 2007; Олейник, 2005; Сафиуллин & Сафиуллина, 2007; Скоблева, 2010). Actually they are determined by some information, its completeness and quality, speed of distributing and level of automatization, the degree of its asymmetry, etc.

Thus, to systematically reveal the transactional costs of an organization, it is necessary to thoroughly research its informational system, the processes of formation, distribution and using the information, both within the organization and when its interaction with the environment (Davis, North, & Smorodin, 1971; Mühlfeld, 2004; Williamson, 1991). If the information reaches the decision-maker in due time and with due quality, then the transactional costs will be minimal. By modelling information streams, revealing the stages of forming and transferring of information, we have built the classification of transactional costs (Воронцова, Крамин, & Крамин, 2011) (see Table 1).

The types of transactional costs in Table 1 are marked with the Roman numerals. Group I of transactional costs, for instance, corresponds to the external transactional costs, occurring at the stage of information forming.

[1] *See for instance (Marginson, 2006).*

Table 1. Overall space-temporal classification of transactional costs.

Sphere \ Stage	Information forming	Information distribution	Use of information
External transactional costs	I	II	III
Internal transactional costs of Human Capital management	IV	V	VI
Internal transactional costs of processes management	VII	VIII	IX

Previous research was devoted to systematization and accounting of internal transactional costs (Воронцова et al., 2011; Т. Крамин, 2006). This work views external transactional costs of educational establishments, which determine the transactional costs of educational sphere in general.

Special attention should be paid to Group I of the presented classification (further - TC1). The transactional costs of this group can also be structured. They include:

1) current costs of obtaining external information for creating teaching programs and materials, for professional development of personnel, for access to libraries, databases of statistical services and informational and analytical agencies, etc.;
2) costs of obtaining information, connected with learning the experience of advanced educational establishments, with forming competences from the Russian and foreign best practices, during benchmarking technologies implementation;
3) costs for elaboration and introducing own innovations in the sphere of educational technologies, taking account of national and regional features.

Such division of TC corresponds to the structure of intellectual capital management of an educational establishment: the first group is aimed at development of the existing intellectual capital, the second – at using the intellectual capital of other organizations, at the transfer of educational technologies and competences; the third one corresponds to the creation of the new elements of intellectual capital.

The transactional costs of Group II (TC2) are connected with providing information streams between the subjects of the educational services market, and development of communication systems. Such costs, for example, include the costs for communication networks, equipment and laboratories construction, exchange and mutual analysis of professional information by the personnel of different educational establishments; teaching English to the personnel of educational establishments so that they could read foreign books and articles in their sphere; teaching the personnel to work with software necessary to transform and systematize the data of foreign sources.

The special place in the described structure belongs to the costs of the third group (TC3). They are the costs of creating institutions for innovations commercialization: creating and functioning of the infrastructure of innovations forming (small innovative enterprises at universities, innovative and scientific-educational clusters, including technology towns and technology parks).

In the model of evaluating the efficiency of transactional costs management in educational sphere, the calculation and analysis are subdivided into two stages:

1) calculation of the absolute and relative indicators of particular managerial decisions' efficiency in the sphere of transactional costs management;
2) comparing the obtained indicators with the corresponding data of subjects showing better (or more typical for the sector) result.

The first stage is implemented on the basis of scenario analysis. Typically two scenarios are considered: the first, when there is no activity for transactional costs management (the scientific and educational processes stay intact); in the second scenario the activity is implemented with appropriate costs and effects.

The example of such activity can be financing by the regional authorities of the access to international library funds for all higher educational establishments of the region. The proposed result is the increase of researchers' publishing activity, the increase of popularity of the regional scientific schools, the stimulation of scientific exchange and joint scientific-applied projects it foreign colleagues.

It should be highlighted that the proposed result will, in turn, be very sensitive to some other factors, like the degree of mastering English by university lecturers. Besides, the structure, culture and style of presenting the scientific results in Russia and abroad differ significantly, which is especially vivid in the humanities. This is a great obstacle for activating of publishing the Russian researchers' works abroad. These problems can be solved within one particular university, but at national or regional level they can be solved with much lower transactional costs. That is why the managerial decision on transactional costs management should always be of complex character and undergo a multi-level preliminary preparation.

The presented managerial decision can be viewed as a "project". Making and implementing the managerial decision corresponds to approving and implementing a project, and vice versa. The difference in investment costs in the two described scenarios is viewed as conditional investment costs of a project, while the difference in cash flows of these scenarios – as a project cash flow.

For such project all traditional indicators of investment projects efficiency are calculated, including the net modified effect of the project, the pay-off period, the internal profitability norm and profitability index.

At the second stage, the calculated indicators are used for benchmarking procedure as the universal tool for evaluating and comparing educational services. For the complex investigation of the model of evaluation the efficiency of transactional costs management in educational sphere, it is necessary to describe the modern benchmarking mechanisms.

Benchmarking originates from the 1950-s when the Japanese started to study the activity of the most successful American companies. However, benchmarking has not gained due popularity in Russia yet.

In 1993 benchmarking centers in the USA and Europe decided to unite their efforts for its development an in 1994 established Global Benchmarking Network, (GBN), which nowadays includes centers in twenty countries. Russia became a member of GBN in autumn 2004 (Kramin, Safiullin, Kramin, & Timiryasova, 2014).

Having undergone several stages of development, nowadays benchmarking is viewed as an international tool for business-information exchange. This is due to the appearance of organizations engaged in searching partners for reference comparison, which a well-known American marketer Philip Kotler called "industrial dating agencies". In many countries the benchmarking programs are developed with the state support. Their experience shows that such exchange is beneficial for both the enterprises and economy as a whole.

Table 2. Classification of benchmarking types by the object of comparing

Benchmarking type	Object of comparing	Appropriateness of use
Strategic benchmarking	Strategic decisions, techniques of their making and implementation	1. Changing strategy in case of changing the external conditions. 2. Orientation towards long-term results. Preparedness of the university for global change. 3. The main objective is mastering the best practice.
Process benchmarking	Industrial and business processes	1. Necessity to change the key educational processes. Availability of the potential for their modelling. 2. Orientation towards short-tern results. Possibility to model processes. 3. The main objective is mastering the best practice.
Benchmarking of indicators	One or more measurable indicators	1. Necessity to achieve the key indicators of competitiveness. 2. Sufficiency of local changes. 3. The main objective is to achieve the key indicators.
Benchmarking of institutions	Internal institutions of educational establishments	1. Necessity to change the internal institutional environment. 2. The main objective is to form the beneficial institutional environment.

To reveal the nature and more complete classification of Group I transactional costs and to elaborate the model of evaluating the transactional costs management efficiency in the educational sphere, we have reviewed and broadened the existing classifications of benchmarking, revealed the causes of its low popularity in Russia, and studied the earlier models of benchmarking implementation.

The broadened classifications of benchmarking based on classifications given in (Alstete, 1995; Hämäläinen, Hämäläinen, Jessen, Kaartinen-Koutaniemi, & Kristoffersen, 2002; Karjalainen, Kuortti, & Niinikoski, 2002; Подопригора, 2011), are shown in Tables 2,3.

In Table 2, in addition to earlier classifications, we extinguish benchmarking of institutions, aimed at revealing the best practice in the sphere of internal institutional environment functioning, which is considered to be one of the essential factors of an organization competitiveness under modern conditions.

Table 3. Classification of benchmarking by the partner status

Benchmarking type	Object of comparing	Conditions and appropriateness of use
Competitive benchmarking	Competitive positions of competing universities	Agreements with competitors and existence of a third party for observe the benchmarking "Code of conduct". Lack of successful experience at the university. The main objective is to achieve the key indicators.
Internal benchmarking	Indicators of efficient work of structural subdivisions inside the educational establishment.	Existence of several structural subdivisions, showing excellent results. Preparedness for evaluating and changing of the corporate policy. The main objective is to improve the current indicators.
Functional-sectoral benchmarking	Indicators of functional efficiency: sales of services, supply, personnel management, etc.	Impossibility to violate the law on confidential information. Preparedness for the complex adaptation process. Possibility to create non-standard approaches. The main objective is to achieve the key indicators.
Inter-sectoral benchmarking	Positions of organizations in other sectors	Lack of successful experience in educational sector. Search for innovations. The main objective is mastering the best practice.
Integrative benchmarking	Integrative characteristics of activity of educational establishments	Necessity to develop state-private partnership, various forms of integration and interaction in the functioning of educational establishments, e.g. in clusters. The main objective is mastering the best practice.
International benchmarking	Positions of foreign educational establishments	Lack of successful experience in this country. A partner in another country. Unlimited resource base. Preparedness for language problems and overcoming cultural differences. The main objective is achieving the leading positions in the world.

In Table 3, to develop the earlier classifications, we highlight the integrative benchmarking, aimed at revealing the best practice in the sphere of integrative interaction and partnership development of educational establishments, and development of the corresponding external institutions.

The low popularity of benchmarking in Russia is due to several objective reasons. M.G. Podoprigora has marked several of them (Подопригора, 2011):

- unpreparedness of managers of educational establishments to participate in disclosing information;
- high costs and relative slow pay-off of benchmarking;
- lack of experienced benchmarking specialists in Russia;
- functional confusion and unclear objective-setting for benchmarking;
- errors and risks when choosing a reference company;
- problems of estimation of intangible indicators, such as tam spirit, level of comfort in the collective, degree of attention towards consumers of educational services, etc.;
- lack of understanding of objectives and one's own role in achieving them by the managers and personnel;
- violations in implementation of benchmarking mechanism ("The Code of benchmarking"), like using illegal ways in searching and using information; asymmetry in information exchange, etc; violation of agreements on confidentiality.

The presented research results allow to thoroughly systematize and specify the transactional costs of educational establishments in the sphere of benchmarking, which belong to group I of transactional costs according to the above classification.

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Design of a Marketing Information System

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Abstract

The article considers the creation of a marketing information system. When designing the information system for the sphere of surveys the key role is played by the development of an effective conceptual model. On the basis of the analysis of existing approaches to the design of information systems the author offers his own model of the design process of a marketing information system, which covers its entire life cycle. The attention is paid to the special role of the stages of the definition of information costs and evaluation of the effectiveness of information systems.

Keywords: *marketing information system (MIS), design of a marketing information system, effectiveness of marketing information system, analysis of information costs*

1. Introduction

Taking into account the dynamic development of the information systems for the management of the activities of organizations the issues of designing information systems in general and marketing information systems in particular are getting urgent. The diversity and specificity of the industry of design and survey activities often do not allow using for such tasks complete solutions offered by firms - manufacturers of software. However, this leads to the development of their own marketing information systems (MIS).

2. Literature Review

The author's research revealed that the foreign and domestic scientists offer different approaches to the design of a marketing information system.

For example, F. Kotler and K.L. Keller noted that the marketing information system of an organization should be established by taking into account the wishes of the marketing managers, their real needs, and economic feasibility. Useful step in solving this problem may be the creation of an internal committee on the marketing information system, which is mandated to carry out the necessary coordination activities with the departments and all stakeholders [8].

G. Churchill expressed similar opinions emphasizing that the basis for the design of marketing information systems is a detailed analysis of responsibility, opportunities, abilities and work style of each decision makers and system users. The analysis performed in the framework of a marketing information system is focused on the definition of the kinds of decisions and information required for their adoption [14].

According to S.V. Mkhitaryan, the construction of modern marketing information systems is based on object-oriented design, statistical methods of information processing, and concepts of decentralized management of the units and integrated marketing [10].

N.G. Antonchenko, N.V. Kalenskaya argues that the introduction of a marketing information system should be preceded by the step of description of the internal business processes of the organization and detailization of the basic quantitative parameters of evaluation. Thus, designing a marketing information system is a complex and multi-step process, during which the methods of algorithmic presentation of the information processes and the techniques of their interpretation for the management decision-making are specified [1].

Moreover, as noted by Y. Gnesdova, the process of developing a marketing information system should be managed to ensure the implementation of the system in a given timeframe, without exceeding cost estimates and with the required characteristics [7].

The researchers also address the issues relating to the requirements imposed on the skilled developers of marketing information systems. Often, the authors note that outside organizations can be engaged in the development of a marketing information system, if they have the necessary scientific and technical potential and sufficient practical

experience, but it also requires the participation of a number of experts from the organization itself. E.U. Mardanova expresses a different view based on the fact that the best method of organizing the work with information, in terms of correlation "the price - the results", is an independent design of marketing information systems, as the fundamental advantage of this approach is the ability to considerate the specificity of an organization [9].

It should be noted that many authors suggest ideas about the necessity of organic integration of a marketing information system in the higher-order system, in particular, corporate information systems, which corresponds to modern trends of globalization of the economic activity.

However, the authors pay much attention to the issues related to the life cycle of marketing information systems.

Nitayaprapha S., Atkinson C.J. identifies the following stages of the development of information system [12]:

1) Identification of potential users of the information system - the persons responsible for making decisions;
2) Determination of their information needs;
3) Definition of the data that should be entered into the system, as well as methods for their protection and storage, access and integration;
4) Realization of direct "construction" of the system, that is the task of programmers who write and document programs;
5) Debugging of all procedures, checking the accuracy of the system;
6) Operation of the system in the interactive mode.

The process of designing a marketing information system, according to E.U. Mardanova, consists of the following stages [9]:

1) Development of types and structure of the reports needed for decision-making by managers of different levels;
2) Reporting electronically;
3) Identification of the main streams of incoming information and their primary processing algorithms;
4) Identifying relevant sources of information;
5) Approval of marketing information obtaining technology, timing, determination of budgets and responsibilities for data;
6) Creation and adoption of the technology of getting generalized knowledge from the accumulated experience.

On the basis of the assumptions of the theory of change management, L.I. Bushueva identifies the following stages of implementation of the system of information support of marketing activities [5]:

1) Preparation;
2) Defrostation (training staff to change);
3) Change;
4) Freezing (consolidation of changes).

According to the author of the article, A.P. Tyapukhin and M.N. Satarova presented the most detailed process of designing a marketing information system. Focusing on the classification features such as horizon of planning a marketing information system activity and the challenges facing the organization, these scientists formulated the following stages of creating and functioning of the marketing information system [13]:

1) Project development;
2) Forming
3) Maintenance of activity;
4) Optimization.

More detailed approach, the authors use to structure the process of designing a marketing information system, allows you to highlight the steps listed below:

1) Definition of the scope of work to be carried out by the system (it is obvious that the structure and content of this stage are unique to each organization);
2) Identification of basic and auxiliary functions performed within the marketing information system;
3) Structuring functions to the operation (designers should make a choice in the orientation of the work of performers either on the implementation technology, or on individual processes; the second direction, as practice shows, now seems more promising);
4) Determination of the required number of resources: material, financial, information and human;
5) Formation of the elements of a marketing information system, namely: personnel by specialties and levels of expertise, equipment and technology, conducting work, resources, control systems, etc.;
6) Construction of the organizational structure of the marketing information system management, development of the personnel motivation system;
7) Securing the organizational, functional and legal aspects of the building a marketing information system in the

documents;

8) Developing a plan of forming a marketing information system (it is advisable to use the methods of network planning and project management).

However, it should be considered, what kind of issues may arise, when designing a marketing information system. So, E.U. Mardanova describes the following barriers that may be faced by the management in implementing of a marketing information system [9]:

- Technological (lack of software due to its high cost, lack of formalization of management processes);
- Institutional (opposition of the organizational culture to the implementation of information system);
- Personal (unwillingness to perform additional work);
- Other (presence of previous negative experiences).

3. Method

Thus, in the process of building and developing a marketing information system it is necessary to identify the problems that may arise, and develop activities aimed at their elimination. After analyzing all of the above approaches to the design of marketing information systems, developed by domestic and foreign scholars, the author proposes an improved algorithm of the marketing information system design process, presented in Fig. 1.

A special feature of this algorithm is a systematic approach covering all stages of the life cycle of the information system and all the possible options for its development on the basis of the results of evaluation of the effectiveness of its activities.

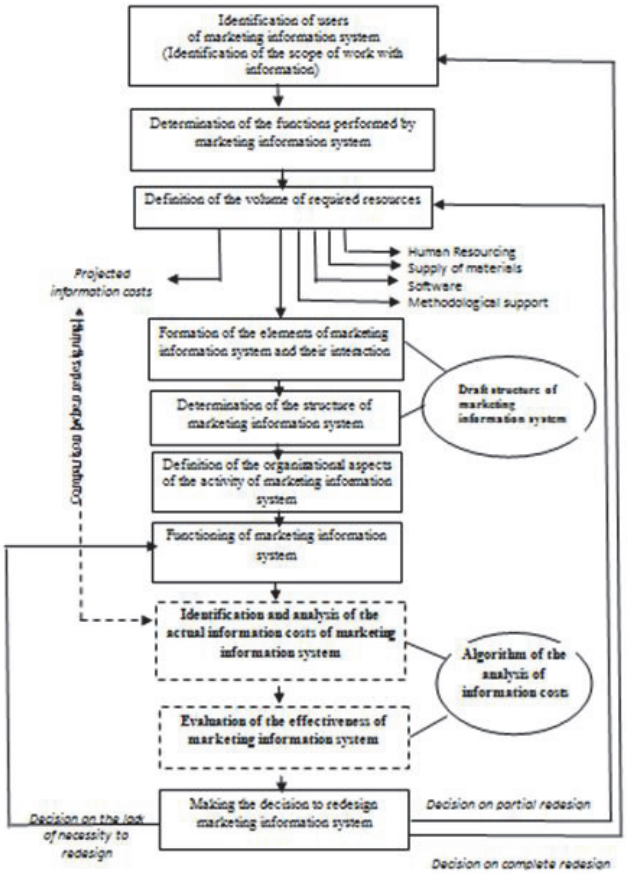

Figure 1. Algorithm of the marketing information system design

The design process is also based on an analysis of information costs of a marketing information system. The methods of analysis of information costs of the marketing system are described by the author in [15]. The result of implementing the stages of the proposed design process of a marketing information system is to build the structure, taking into account the characteristics of the organization and the system of information support for its activities.

4. Results

This conceptual model was used to develop the marketing information system for a big design and survey provider of the Republic of Tatarstan JSC Institute "Kazan Promstroiproekt". The structure of the designed information system includes the following subsystems:

- Subsystem of internal reporting, which collects, analyzes, distributes accounting data; information on contracts, performed design works; information on subcontractors, suppliers, etc .;
- Marketing supervision subsystem, that handles the largest volume of information. It includes an extensive component covering regulations, technical and scientific information, the presence of which is required to ensure a high quality of design and survey works. This subsystem also includes information related to the industry associations, self-regulatory organizations; industry surveys; periodical literature, books, monographs of the specialized and general economic nature; information related to tenders and competitions; information received at the exhibitions, etc.;
- Subsystem of marketing research (research of customers, competitors, suppliers), which is often virtually absent in information systems of design and survey organizations, but has a great potential to improve the effectiveness of marketing activities.

Draft structure of marketing information system by the example of design and survey organizations proved the effectiveness of the proposed approach. The developed system of marketing information is characterized by such indicators of functioning quality as: 1) efficiency; 2) reliability; 3) sustainability.

5. Conclusion

This article describes the conceptual model of designing a marketing information system of a design and survey organization. A feature of this model is a systematic approach and an emphasis on the design stages such as analysis of information costs and evaluation of the functioning effectiveness of the information system of the design and survey provider. Testing procedure of the methods was performed on the example of one of the largest R&D organization of the Republic of Tatarstan - JSC Institute "Kazan Promstroiproekt". The author of the article examined the structure of the designed marketing information system, and made recommendations to improve the functioning of the information system of the analyzed organization.

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Marketing Strategy of Higher Education Institutions

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Abstract

The article reveals the essence of the formation of the university's marketing strategy allows us to adapt to the requirements of the market. Also in the article shows the results of the analysis of motives in choosing profession and the university. Also allow conclusions to strengthen the power of the brand of the university for prospective students

Keywords: *marketing strategy, brand, of the university, image of university*

1. Introduction

Marketing approach to the management of educational services is particularly relevant because it allows adapt of the learning process to the needs of the market. According to estimates for the normal functioning of the market for goods and services in Russia requires almost 0.5 million of professionals in the field of marketing.

In the field of educational services marketing helps to predicts the changes of the market and adapt students to the needs of buyers (employers).

Required aspect of competitiveness becomes universities focusing on the global education standards, improving the quality, relevance and practical relevance of educational products and services. Advanced technologies are being introduced in the process of learning, curricula and standards are directed to the needs of the employed market and to the level of competences. During the development of the strategy of the university are accounted different needs, opportunities and motivation of staff. All this contributes to active implementation of marketing tools in the activity of universities.

In the formation of the brand of university the demand for graduates shows the degree of loyalty to this institution. Motivations of students are of great importance, as they choose one or the other institution or particular profession. It is the student's choice of a benchmark relevance of the university and the future profession.

2. Theory

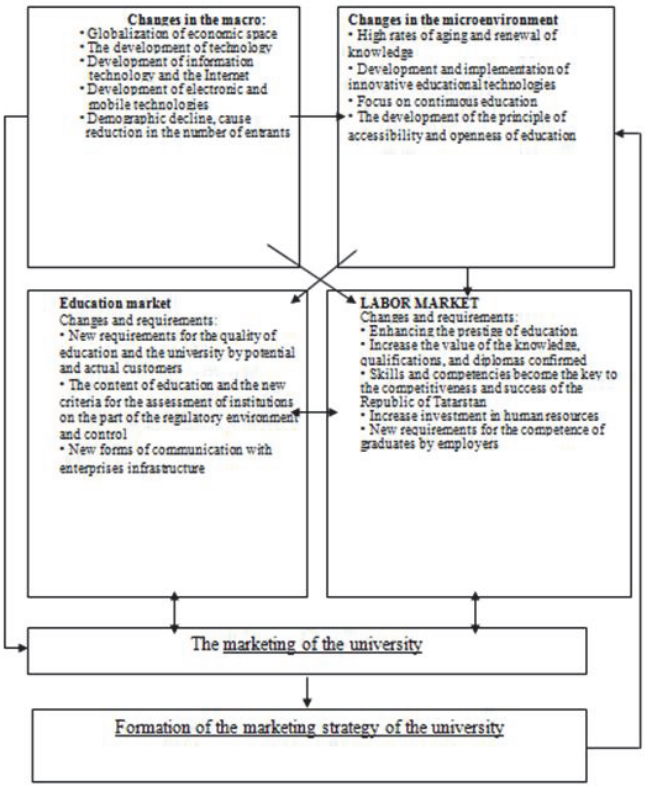
Marketing activities of the university primarily focused on the needs of the market then develops requirements for quality educational services. The quality of education is a necessary condition for the competitiveness of the university in terms of international integration, high domestic competition. The quality of education depends on the teaching competence and experience.

Marketing education could be defined as a system of adaptation to operate the market activities directed to satisfy of social needs with the efficiency of the educational institution.

In this way, marketing education is the ideology of strategy and tactics of the institution at which the implementation of the system solution to the problems of the state on promising research areas and the satisfaction of highly qualified personnel. This increases the reputation (image) of the institution and leads to its prosperity.

Study of the principles of marketing allows to the Institutes to function in conditions of uncertainty of the educational environment. Marketing as a method of assessment and prediction of the environment allows the organization to more fully assess market opportunities, needs and demands of customers, taking into account their capacity to identify the most effective model of market behavior. The mechanism of formation of the marketing strategy of the university is shown in Pic. 1.

For the implementation of the marketing activities of educational institutions use a variety of tools that form the complex of marketing to influence the demand for their services. Marketing mix is one of the basic concepts of modern marketing. Under the “complex marketing” means a series of uncontrollable marketing variables that the firm uses in an effort to induce the desired responses from the target market.



Pic. 1. Formation of the marketing strategy of the university

3. Results

As shown, the beginning of a marketing strategy laid into the motives of the students. In the formation of the brand of the university we must answer questions from students:

1. What is the purpose of the entrant to enter higher education institution?
2. What was the cause of the need for education (which external and internal stimulus)?
3. In what educational services is urgently required in the market, what educational services are most attractive?

Answering to these questions university can build an effective marketing strategy in its positioning in the market of educational services.

After realizing the need for education, begins a phase of active search for information on educational institutions and the range of services they provide. At this stage the search for efficiency and completeness of the information, educational institutions should consider the following points:

- What kind of information interests of potential customers? From what sources consumers receive information about educational institutions and their services?
- What sources are most trusted by consumers?

According to our estimates, the main sources of information for consumers on educational institutions parent's opinion follow 45%, the opinion of friends - 40% of respondents and specialized literature (manuals, brochures, etc.) - for 15% of examined people.

Thus, we can conclude that the greatest influence in the choice of the university have reference groups than the specialized literature and specified-events.

However, the results of the survey among students of 2-4 courses in "Marketing" (108 students), the main motive of getting higher education are presented in Table 1.

Table 1. Motivation for higher education

№ п.п.	**Possible reasons for the choice**	**The importance of the motives on the 5-degree scale**
1	Getting good profession which provides good salary	4,8
2	Opportunity to make a good career	4,5
3	The image of the university and faculty	4,3
4	Thirst for the knowledge and curiosity	4,0
5	It is easier to find a job in their chosen specialty	3,8
6	Schedule of future work	3,7
7	Effect of activities before university	3.6

-When you start collecting the necessary information? For what period of the year is the active search? Research shows that active and conscious search for information on educational institutions begins in 9-11 class. However, about 1/3 of high school graduates at the beginning of the year have not yet decided on a specialty and educational institution.

Thus, the most active search for information comes for the last year before the entrance exams. This time of universities must be used to attract potential students, holding the events like open days, Olympiads, conducting classes for teachers of universities, Schools etc.

Finally, educational institutions must take into account the opinion of others who is the most influential in the choice of educational institution. Point that domestic communication way is the most trusted for potential consumers, so the educational institution need to work not only with prospective students, but also their parents and teachers.

Then implements analysis of the available information, the assessment of the available options for education and selection of the best benefits. Based on the most important criteria for evaluating the attractiveness of an educational institution a potential consumer compares the alternatives of those universities, which information is sufficient and complete. Therefore, the more information about various aspects of the educational institution and its services the higher the percentage of consumers for whom this information is available, the more chance of getting into the educational institution and become one of the alternatives for being selected for entering.

Selected options are measured by the consumer on the criteria that consumers are the most significant. This may be the price of educational services, the form of training, prestige of the university, its location, qualification of the teaching staff, the ability to obtain additional services (to obtain a diploma of an interpreter), the availability of hostels etc.

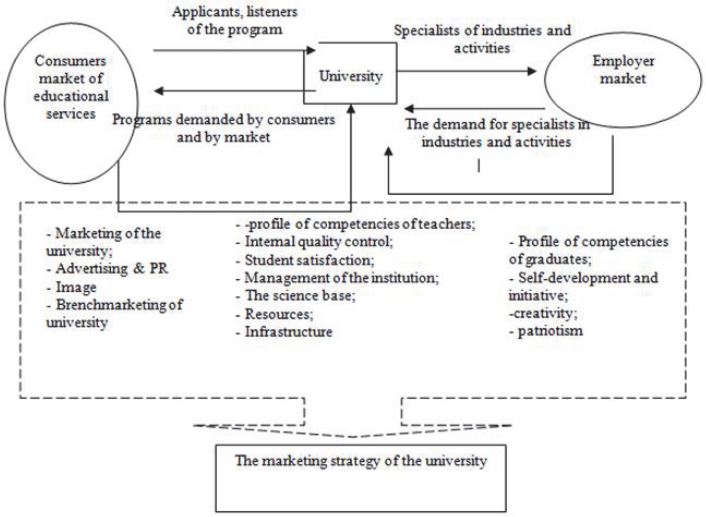
For specialists in marketing field of university it is important to know which of these criteria are selected the best alternative in each market segment.

Thus, analyzing the behavior of consumers at decision about choosing the university, it is important to know the following:

1. What educational institutions, educational and related activities are considered by consumers as alternatives?
2. Does this university in the top 50 universities in Russia or the top 100 of the world or not?
3. Which criteria are used by consumers to compare available options, and which criteria are most important for each consumer segment?

Answers to these questions allows for the institution to develop an effective marketing strategy to promote their services, focusing on the characteristics of the educational institution, which are regarded by buyers as decisive in choosing the best option.

As shown by our analysis - two markets form the marketing strategy of the university. This market is of users of educational services market and employer. The mechanism is shown in Pic. 2



Pic. 2. Marketing support of the university

In our opinion, the goods in the complex educational marketing is an educational program, which organization offers to consumers and markets. At the same time it is necessary to form the basic direction of marketing strategies.

The price of education is the main element in combination with the marketing for educational institutions, where the basis for financing is payment for services by consumers. Correct positioning of the university and the educational program from the financial point of services which provided as "public", "elite" or "with the best combination of quality and price" is an important component of the marketing strategy of the university.

Buyer of educational products would be ready to pay a higher price, or continue to purchase products at the same price in the economic crisis, if the manufacturer can demonstrate "added value": additional services, improved performance of educational programs that distinguish them from the competitors, additional features as quality of service, utmost care staff of the university, etc. The tools of distribution channels and promotion must be used while implementing the marketing strategy of the university. Analysis of the following areas is necessary to carry:

1. The real state of the educational institutions in the market and among competitors;
2. Develop of strategies and tactics of educational services;
3. Quick decision-making at the conclusion of economic agreements, cooperation agreements.

A successful marketing strategy of educational institution depends on a well-coordinated action unit, which form the internal environment of marketing. It includes:

- Resource providing of educational institution (its administrative, scientific and pedagogical, methodological, financial, logistical capacity, the internal culture of the enterprise);
- Organizational support (tools and systems management, planning and control);
- Information provides (marketing information system of educational institutions).

Following the concept of the marketing approach, all these elements of the internal environment must be tightly controlled by the organization to function as a unit, "thinking like a customer" with purpose to provide for the clients the educational services with high value.

The internal environment of educational institutions, in comparence with other areas of the economy has the most extensive and strong feedback from the external environment, as it forming a whole generation of specialists, which in its further work begins to determine the changes of the environment. On the other hand, education is more than any other sphere of activity, which are affected by the external environment.

On the basis of the analysis of internal and external environment of the university can be build a tree of goals of the university and the factors matrix of the internal environment.

4. Conclusions

Study of the formation of a marketing strategy allows the university to make conclusions.

Identified the main steps in the process of quality assurance in the university system of marketing, they are: 1) Formation of parameters of the quality of education in accordance with the requirements of the consumers of educational services, and taking into account the selection criteria of the institution customers; 2) Estimation of conditions of achievements identified parameters and their integration into the system of strategic marketing planning activities of the educational institution; 3) Adaptation of types and forms of educational services in accordance with the changing market trends and customer needs; 4) Planning of necessary resources, which provides suitability of work of universities to have high indicators of quality and to match to customer needs, and prediction of their volume with current market trends of educational services;

5) Formation of human resources of the university providing the required level of quality of education, including taking into account the predicted values of indicators.

The purpose of the university is to study consumers' needs and offer a wide range of educational programs at various levels, the introduction of integrated modular educational programs, which increases the value of marketing in the activities of the university. Introduction of innovative education technologies, electronic and mobile, significantly reduces the costs related to consumers, allowing more widely and quickly enter new markets. It gives possibilities to the implementation of the principles of marketing to a concentrated group of target consumers and global marketing at an exit on transnational markets. The multilevel and exclusivity educational product determines that adequate support in the process of delivery to the consumer that requires highly skilled personnel. Besides, the effectiveness of the educational activities of the university in modern conditions depends on the degree of involvement and coordination of staff in the process of identifying and satisfying needs. This is the basis of the marketing activities of the university.

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Government Regulation of Small and Medium Entrepreneurship under the Influence of Value-Time Benchmarks

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Abstract

The article describes the role of regional infrastructure provision in small and medium entrepreneurship development in the Republic of Tatarstan. It covers and analyses efforts of republic's government in small businesses support. Statistical data reflecting positive dynamics of measures implemented is given.

Keywords: *small and medium entrepreneurship, infrastructure, government support.*

1. Introduction

Government regulation of socio-economic development of Russian Federation aims to switch to innovative progressive dynamics. At the present stage of economic development one of the priority directions of this regulation is to create an infrastructure for entrepreneurial activity growth. In current institutional conditions existing barriers to market entry in most spheres of economic activity are prohibitively high for small and medium businesses. It should be noted that, according to the Strategy for development of the Russian Federation for the period until the year 2020, namely these measures have to become the background for positive forward dynamics provision, what makes the research priority-driven. As practice shows, the main reason for high level of barriers mentioned above is lack of infrastructure development (transport, innovative, logistical, financial and managerial).[6] Its influence is strengthened by economic space polarization and results in gradual business recession at early stages of business development. Thus, we witness gradual decline in share of small entrepreneurs in total number of business units. Therefore, at the current moment the priority aim of business activity government regulation is to build an infrastructure system that would meet small businesses' needs and consider spatial polarization as well as national socio-economic system imbalances.

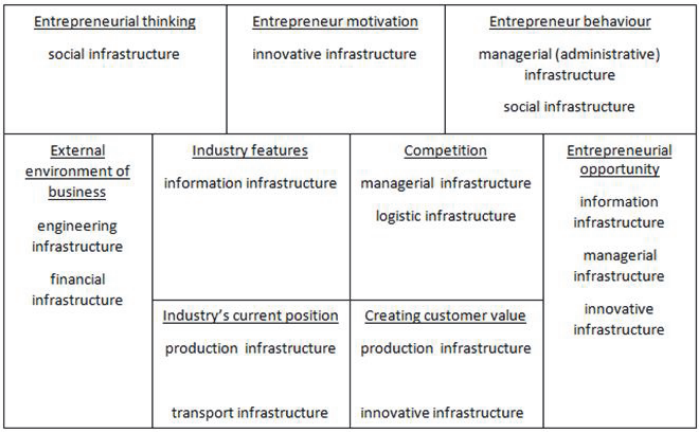
2. Theory

While building and introducing complex infrastructure for entrepreneurs and supporting its operation and development it is necessary to take into account the fact that more than 80% of new jobs are added by small businesses.[3] At the same time entrepreneurs of these type run into many difficulties while getting access to infrastructure objects due to funds raising problems in an initial stage of development. Consequently government regulation of infrastructure provision for entrepreneurs has to be structured with due regard for small enterprises needs that would provide equal conditions for breaking through market entry barriers. Russia's entry to the WTO has increased the need of creating conditions for small and medium-sized enterprises effective development because of market competition growth and as consequence of all that decrease in small businesses competitiveness over extra pressure of market barriers not in the last instance affected by relatively low level of infrastructure development. Government interest in that issue is based on tax revenues accumulated by small businesses in local authority budgets facing considerable imbalance problems, and also driven by the need to smooth spatial economic polarization resulting largely from small and medium-sized enterprises development trends.[9] As best world practices in creating favorable conditions for small enterprises show that the most effective long-term regulation instruments are investments in infrastructure since the level of its development is a key incentive for business activity growth at early stages of company's life cycle.

This fact has caused the need to study the possibilities and priority directions for government regulation of resources supply, necessity to develop effective tools and mechanisms for entrepreneurial infrastructure government regulation system on different levels of managerial hierarchy, which formed the bases for topicality of the research, its

theoretical and practical significance at the present stage of Russian economic development.

The article gives an analysis of theoretical approaches to entrepreneurship development, showing that in order to provide effective government regulation of the sphere the Entrepreneurial Canvas Model designed at the University of Maryland should be used as the appropriate basic business model. The model mentioned above clearly differentiates external and internal environment of small enterprises, what has determined the choice of the model as methodological platform of the dissertation research. According to the approach the model canvas puts different types of infrastructure into the boxes in the canvas, where each box specifies what kind of infrastructure provision corresponds with certain element of small business development (see Picture 1).[4]



Picture 1. Typology of small and medium-sized entrepreneurship infrastructure types in the context of OEC elements

3. Results

Entrepreneurial community of the Republic of Tatarstan came to conclusion that favourable business environment is one of the main conditions for the economy growth. Need to mention, that the government of the Republic of Tatarstan is responsible for building sustainable entrepreneurial ecosystem. Efforts implemented in that direction could be presented as follows: government support of small and medium-sized enterprises, building a dialog with business community, incitement of youth interest in entrepreneurship, creating a platform for attracting investments (including foreign investments), innovative businesses development.[7]

One of the most interesting ways of small and medium enterprises support in the Republic of Tatarstan is "Youth Entrepreneurship in the Republic of Tatarstan for the period 2012-2016" long-term program implementation. The program aims to create conditions for youth involvement in socio-economic development if the Republic of Tatarstan.[5] The main objectives of the educational program are:

- the development of an information supply system for young people in entrepreneurial area;
- the formation of a positive image of the business;
- the development and implementation of educational programs for enterprising young people;
- support aspiring young entrepreneurs and business promotion of youth entrepreneurship projects.

While accomplishing abovementioned objectives the following measures were implemented: together with municipal institutions some steps in youth entrepreneurship development were made; youth inquiry consulting and information and consulting services supply practices were introduced; republic remote business education programs were developed and implemented; business trainers working with businesslike young people were prepared in municipal institutions of the Republic of Tatarstan.[8] Along with these measures annual conference for enterprising young people "Step forward" were held, where different issues including young people business potential development and their contribution to socio-economic development of the Republic of Tatarstan were discussed.

The idea of creating business camps for young entrepreneurs was implemented in municipal institutions of the Republic of Tatarstan, managerial and business trainings, managerial competitions, championship developing entrepreneurial competences among managers, and other events were held. Local and republican school business

companies meetings were organised, the process of creating and introducing an educational course named "Entrepreneurship basics for school children" in school program is in work.

4. Conclusions

Summarizing interim results of "Youth Entrepreneurship in the Republic of Tatarstan for the period 2012-2016" long-term program implementation we can identify the following tendencies related to businesslike young people. The basic tendency is particular interest in entrepreneurial business in services sector. While implementation of measures mentioned within the Program, enterprising young people were offered to write a plan for their "own business", further assessment of these business plans showed that overwhelming majority of projects were related to services sector - hotel business, public catering business (cafes, restaurants), and beauty salons of different types (stationary, mobile), etc.[1] The Government of the Republic of Tatarstan assumed, that such kind of measures would stimulate entrepreneurial activity in the region, and that was proven by statistical data given in Table 1.

Table 1. The main trends in entrepreneurship development in the Republic of Tatarstan

Index	2010 (fact)	2011 (fact)	2012 (fact)	2013 (fact)	2014 (plan)
Number of economically active business units:					
Small businesses, thousands of units	42,3	46,5	47,9	49,3	51,0
Medium enterprises, units	759,0	559,0	521,0	510,0	500,0
Sole proprietorship, thousands of units	128,3	116,8	111,0	106,1	100,0
Small and medium-sized enterprises share in growth regional product, %	24,5	25,3	25,2	27,0	28,0
Number of employees working at small and medium-sized enterprises, thousands of people	379,1	390,3	392,7	394,6	396,0
Share of people occupied in small and medium businesses in total number of working people in the republic, %	27,8	28,6	28,8	29,5	30,5
Turnover of small and medium businesses and sole proprietors, bln rubles	851,7	1031,7	1062,2	1089,3	1150,0
Share of small and medium businesses investments in total volume of investments in the republic, %	7,0	10,0	11,8	12,0	12,5

Main highlights analysis shows a positive dynamics in small and medium-sized entrepreneurship development in the Republic of Tatarstan, what is undoubtedly a result of small and medium enterprises support within the Republican program of small and medium entrepreneurship development in the Republic of Tatarstan for the period 2011-2016.

From 2012 to 2014 within the program implementation 3,5 bln rubles were spent on entrepreneurship development in the Republic of Tatarstan, including 1,4 bln rubles from the budget of the Republic of Tatarstan and more than 2 bln rubles шт form of federal grant.

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Development Typology for Retail Networks in the Russian Federation

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Abstract

Under the prevailing economic conditions, retail networks preset the thrust for the development of the trade sector in the Russian Federation. The retail networks develop according to two development types: extensive and intensive. Due to greater concentration of chain retailing, methods of intensive development, such as innovations, become actual in regions of. A timely evaluation of the intensive development of retail networks enables estimation of strategic prospects of their development.

Keywords: *retail networks, intensive development, extensive development, innovations, estimation of the intensive development.*

1. Introduction

Retail networks discharge important economic and social functions (for the state, consumer and manufacturers) by means of engaging foreign investments in the economy, development of the trade infrastructure, satisfaction of consumers' needs for goods, elaboration of business relations. As rule of thumb states, the development thrust for the trade sector in the Russian Federation is preset by retail networks whose share in the structure of the turnover of the sector in March 2014 amounted to 23.1% of the total sales volume of retail networks. In 33 regions of the Russian Federation, the share of the chain retailers in the total sales volume of the retail trade exceeded the mean level throughout Russia.

At present, retail networks develop, for the most, by means of extension of their shopping space. However, due to increasing concentration of the trade business (about 20% in a number of regions, while the threshold level is 40% to 45%), tougher competition in the chain retailing market, increase and differentiation of purchasers' needs, the necessity to implement the intensive development of the retail networks' services occurs. Moreover, as the Russian Federation has joined the World Trade Organization, it is necessary to shape a comprehensive approach ensuring innovative development of trade structures as a factor of competitiveness for the Russian trade sector.[3]

2. Theory

We define the development of a retail network as a process of quantitative and qualitative changes in the retail network's activities implemented in response to factors of the internal and external environment and intended to increase the efficiency of its activities. The qualitative changes in the activities of the retail network appear as an increasing number of retail facilities (increase of shopping space and staff numbers). The development of the retail network based on an increase in numbers of retail facilities by means of construction, purchase, lease of shopping space, franchising, and deeds of merger or amalgamation is considered as an extensive development pattern. The qualitative changes in the activities of a retail network are manifested as increased indices of efficient application of the retail network's resources (materiel, labor, finance) due to implementation of achievement of the technological advance, improved approaches to the labor arrangement and management. Such development pattern is regarded as intensive one. As a rule, the extensive and intensive development processes are to flow simultaneously but to a different extent depending on the conditions of the internal and external environment. Figure 1 represents the development patterns and methods that define them.

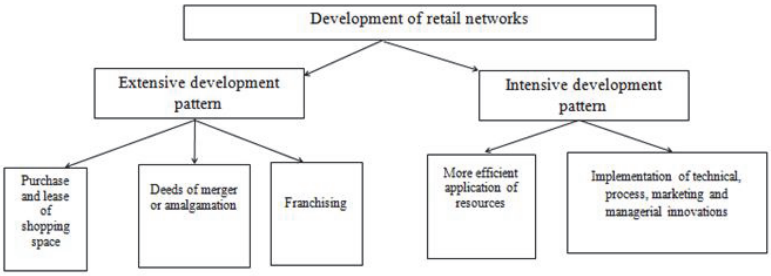

Fig. 1 Development patterns for retail networks

Table 1 represents the factors that influence certain development patterns for retail networks.

Table 1. Development factors for retail networks' services

	Contributing factors	Barring factors
Extensive development	- unbalanced penetration (concentration) of retail networks in regions; - availability of the effective demand from the residents; - availability of government-backed programs intended to provide the residents with up-to-date shopping space; - popularity of the multi-format approach; - expanse of the country.	- greater consumers' demand for quality trade services; - increasing competition in certain regions or cities; - high prices and lease rates for shopping space.
Intensive development	- antimonopoly regulation of retail networks' activities in the Russian Federation; - development of information technologies; - institutional abundance of shopping space in certain regions; - proactive proposal of innovative equipment for trade facilities by manufacturers; - poor workforce efficiency inherent for the trade sector.	- poor qualification of the personnel; - shortage of financial resources; - difficulties with adapting the innovations to the conventional approaches to the arrangement of the retail business; - poor development level of the trade infrastructure in the country.

3. Outcome

At the moment, the extensive development pattern is prevailing among the retail networks. This is due to the fact that such subjects of the trade sector have formed in the Russian Federation relatively recently and the concentration level is not high and uneven in terms of geography. Thus, for example, in the cities of Saint Petersburg and Moscow, the penetration level of the chain retailing amounts to 51%. Nevertheless, in many regions of the Russian Federation, retail networks cover 10% or less of the retail sales volume. According to a mid-term forecast of the Ministry of economic development of the Russian Federation, by 2015 the share of the chain retailing in the structure of the retail sales volumes will amount to 30%, while in most large cities it will reach 50%. Under the conditions of a high concentration of the retail business, the methods of intensive development for the retail networks' services become relevant.[6]

One of the methods of the intensive development is an augmentation of the application of the retail networks resources: strenuous, more intensive flow of the trade and economic processes facilitates more efficient application of the resources. Saving of means and objects of labor is related not only their increased operation per a unit of time but also to their replacement with more efficient ones. A number of researchers suppose that the basis for the intensive development pattern is the scientific and technological advance and/or innovations. While researching the innovations in the retail business implemented in order to improve the efficiency of the activities, their following features should be taken into account:

- in the trade sector, innovations to the largest extent are related to the occurrence of a new technology or service for its representation or their perfection. Thus, consumers obtain a new or greater value of the service. Innovations in the wholesale or retail business occur not as a result of a research and development but as a result of a certain analysis and/or benchmarking;[1]

- novelties related to the occurrence of new elements of the trade process or marketing are implemented at trade facilities;
- in the trade sector, innovations are created or implemented, both developed within the sector itself and in other sectors, first of all, in productive industry;[5]
- a large extent of the innovations in the trade sector is borrowed from the foreign expertise.

The notion of 'innovation' is quite properly construed when allied to objects of the trade sector as a novelty implemented for the purpose of improving the efficiency of their activities. Innovations in the trade business manifest themselves as a new format of the service provision by means of implementation of new process, marketing or managerial solutions capable of reducing the costs and increasing the sales volume.

Implementation of certain types of innovations is justified with peculiarities of activities of the retail networks that include the scale of the activities and complexity of the business processes:

- application of a regional expansion strategy facilitates the occurrence of managerial innovations;
- application of the multi-format approach facilitates the development of marketing innovations;
- development of the retail networks consolidation policy entails the occurrence and development of innovations related to logistics flow management, ect.

The innovations are embodied in the increased workforce efficiency, return on assets, revenue per square meter of the shopping space, increased return on expenses and the current assets movement rate.

Let us dwell on the essence of such indices from the point of view of their innovative contents:

- the workforce efficiency is the most relevant index for the intensive development of the retail network's services. Augmentation of the workforce efficiency can be performed by means innovative implements: personnel development, innovative information technologies for the labor automation, etc.;
- the return on assets is ensured by means commissioning innovative equipment that makes it possible to perfect the operations related to sales of goods and customer service;
- current assets movement rate. Current assets of the retail network are represented with the stock, accounts receivable and money assets. At present, innovative methods emerge for the management of such groups of assets, which enables to increase their movement rate. For example, factoring operations are used to manage the accounts receivable, which enable to increase the cash flow rates, to reduce the costs related to the account management and to ensure settlement of debts;
- return on expenses. A positive dynamics of the return on expenses evidences the application of innovative developments in order to reduce certain types of costs of the commercial or managerial nature. Nowadays, retail networks proactively implement novelties, such as power-saving technologies, which enables to reduce utility charges, while new managerial methods enable to optimize the labor costs, and new process equipment enables to reduce the depreciation expenses;
- revenue per square meter of shopping space. An efficient operation of shopping space may be achieved provided the trade facility is complete with up-to-date shop fittings and equipment with a large enough area of the goods layout, application of merchandising approaches depending on the type and composition of the shop equipment.[2]

Due to the fact that at present intensive development patterns become a necessity for a number of chain retailers, a requisite occurs to develop a method for an evaluation of the achieved level of the intensive development and elaboration of strategic prospects.

It was identified in the course of studies of methodical approaches for the evaluation of the intensive development level for economic entities that it is advisable to perform the calculation on the basis of obtained values for indices with preset basic values. Indices for past period, their industry-mean values, relevant indices of competitors, statistic data by leading Russian or foreign companies can be used as such comparative values.[4]

In the evaluation method for the intensive development level of various retail networks adopted by the authors, a virtual retail network is used as a reference where all the indices inherent for the intensive development backed up with implementation of innovations are the best.

In general terms, the algorithm for a ranking of the intensive development level of the retail networks' services can be presented as a sequence of the following stages:

Stage 1. Selection and justification of indices, their calculation. The system of economic indices featuring the intensive development of the retail networks' services is compiled of conventional indices (workforce efficiency, return on assets, current assets movement rate) and supplemented with a number of indices featuring the peculiarities of the trade sector (return on expenses and revenue per square meter). The basis for the calculation is the augmentation rate backed up with innovations for the above indices.

The indices were calculated according to the following formula:

$\Delta P_i = (1 - K_e) * \Delta P$, (1)

where

ΔP_i is the rate of alteration of the analyzed index due to implementation of innovations;

K_e is the ratio of effect of extensive factors to the augmentation of the analyzed index that is defined be expertise and alters within the following range:

$0 \leq K_e \leq 1$;

ΔP is the alteration of the index during the accounted period compared to the previous period.

Stage 2. Representation of the indices as a matrix (a_{ij}), i.e. a table where the lines contain entries with the numbers of the indices (i = I, 2, 3, ..., n), and columns hold the numbers of the analyzed retail networks (j = 1, 2, 3, ..., m).

Stage 3. The maximum value is found and entered into the column of the virtual reference trade facility (max).

Stage 4. The initial indices of the matrix (a_{ij}) are normalized as related to the respective index of the reference trade facility according to the formula:

$Xij = a_{ij} / \max a_{ij}$, (2)

where Xij are normalized indices of the j-th retail network.

Stage 5. For each analyzed retail network, the value of its ranking estimation is defined according to the following formula:

$$Rj = \sqrt{(1-X1j)^2 + (1-X2j)^2 . + ... + (1-Xnj)^2}\ , (3)$$

where

Rj is the ranking estimation for the j-th retail network;

X1j, X2j, ..., Xnj are normalized indices of the j-th retail network.

The retail networks are ordered (ranged) in the descending order of the value of the ranking estimation. The trade facility with the lowers R value will have the highest rating.

4. Conclusions

The intensive development of retail networks results in the perfection of the trade technology that is represented as an aggregate of works ensuring the performance of the trade process in the most rational ways in accordance with the specific economic conditions. Implementation of innovations enables the services of the retail networks to develop by means of efficient application of resources: capital renewals, improved operation of current assets, optimization of the circulation expenses, continuous personnel development, etc.

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Assessment of Socioeconomic Rating Indicators of the Republic of Tatarstan Municipalities

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Abstract

The Republic of Tatarstan municipalities differ highly in their socioeconomic status while there are industrially developed as well as weak regions. The Tatarstan's Ministry of Economic Affairs monitors the socioeconomic growth of municipalities using the "Rating Calculation Procedure for Municipalities and Urban Districts of the Republic of Tatarstan." The municipality ratings allow tracking the socioeconomic growth dynamics. This paper provides with an assessment of the socioeconomic indicators of municipalities and examines their importance for rating indicators. The correlation analysis of rating values has shown that some of them have no effect on the rating. The authors suggest that this procedure has to be specified using relative indicators with stronger correlation.

Keywords: *rating of municipalities, socioeconomic indicators, correlation analysis, integral index, group of municipalities.*

1. Introduction

The Russian Federation municipalities are an essential element of the state structure with 22777 municipalities as of 1 January 2014. Their economic status and financial stability are subject to monitoring by regional authorities. The Republic of Tatarstan numbers 955 municipalities including 43 municipal districts, 2 urban districts and 910 settlements. The Republic's Ministry of Economic Affairs monitors only the urban and municipal districts being the first level of municipal structure. The problem is that the mentioned municipal units differ greatly in their socioeconomic status. The oil producing regions are more effective due to their developed industry. They lead the pack in terms of economic growth as well as the urban areas with their developed industry while the agricultural regions are less prosperous. Since 2010, the Tatarstan's Ministry of Economic Affairs provides rating of socioeconomic growth of municipalities (municipal and urban districts). Six absolute and eight relative indicators were used for the rating (Table 1).

Table 1. Socioeconomic indicators in the rating of Republic of Tatarstan municipalities

Indicator	Description
Absolute	Company value added, thousand Rubles
	Fixed investments (except for budgetary funds), thousand Rubles
	Total area of commissioned residential buildings, square metres
	Tax and non-tax revenues, Rubles
	Shipped own-produced goods in terms of neat types of economic activity, thousand Rubles
	Gross agricultural output, thousand Rubles (for municipalities)
Relative	Company value added per capita, thousand Rubles
	Fixed investments (except for budgetary funds) per capita, thousand Rubles
	Total area of commissioned residential buildings per capita, square metres
	Tax and non-tax revenues per capita, Rubles
	Shipped own-produced goods in terms of neat types of economic activity per capita, thousand Rubles
	Gross agricultural output per capita, thousand Rubles (for municipalities)
	Wage purchasing power (ratio of mean accrued wage to minimum consumer budget), times
	Recorded unemployment, %

Ratings base on ranking of Tatarstan's municipalities and urban districts in decreasing order by integral indexes, which

are calculated in several steps. In the first step, the numerical values of direct and reciprocal indicators are converted into normalised values, and then a sum of normalised indicators with absolute and relative values shall be determined for each municipality of the Republic of Tatarstan. Further, the normalised indicators without absolute values are added to the normalised indicators with both the absolute and the relative values. At the last stage, a composite index will be determined for ranking: the municipality with the highest index value should head the list while the municipality with the lowest index occupies the last position in the rating. Table 2 lists municipalities rated by the Republic of Tatarstan Ministry of Economic Affairs in 2013.

Table 2. Rating of socioeconomic growth of municipal and urban districts of the Republic of Tatarstan in 2013.

Position	Municipality	Position	Municipality
1	Kazan	24	Bavlinskiy
2	Almetievskiy	25	Kaibitskiy
3	Laishevskiy	26	Yutazinskiy
4	Tukayevskiy	27	Menzelinskiy
5	Nizhnekamskiy	28	Kamsko-Ustienskiy
6	Naberezhnye Chelny	29	Agryzskiy
7	Novosheshminskiy	30	Cheremshanskiy
8	Pestrechinskiy	31	Apastovskiy
9	Mendeleyevskiy	32	Atninskiy
10	Tyulyachinskiy	33	Muslyumovskiy
11	Yelabuzhskiy	34	Alkeyevskiy
12	Vysokogorskiy	35	Mamadyshskiy
13	Aznakayevskiy	36	Kukmorskiy
14	Leninogorskiy	37	Arskiy
15	Aktanyshskiy	38	Baltasinskiy
16	Nurlatskiy	39	Alekseyevskiy
17	Bugulminskiy	40	Drozhzhanovskiy
18	Verkhneuslonskiy	41	Aksubayevskiy
19	Sarmanovskiy	42	Rybno-Slobodskiy
20	Zelenodolskiy	43	Chistopolskiy
21	Zainskiy	44	Spasskiy
22	Buinskiy	45	Tetyushskiy
23	Sabinskiy	x	x

Analysis of these data shows that the rating performed using the above procedure does not support our hypothesis that urban districts and oil-producing areas will be within the top ten. Such agricultural areas as Laishevskiy, Pestrechinskiy and Tyulyachinskiy are within the top ten while the majority of oil-producing regions such as Aznakayevskiy, Leninogorskiy, Nurlatskiy, Bugulminskiy, Sarmanovskiy, Zainskiy and others are far beyond the top tens. Therefore, we judge the procedure itself and determine the magnitude of the indicators used in the rating procedure.

2. Theory

The experience of other countries to monitor the socioeconomic growth of municipalities was examined when writing this paper. Monitoring of the municipalities is described in the papers of such authors as Donaldson, R., van Niekerk, A., du Plessis, D., Spocter, M. They emphasize the key values for determination of the growth capacity of the Western Cape municipalities (Republic of South Africa) and divided municipalities in three categories: with high, middle and low growth capacity [1]. Novak, J., Netrdova, P. described cluster analysis, which identified spatial regularities in socioeconomic differentiation of municipalities in Czech Republic [6]. Grigoryeva, N., Kundukchyan, R. provide values that had significant effect on the innovation activity of the regions, which they have found through the econometrical analysis [4]. Interesting is the comparative assessment procedure for the socioeconomic growth of cities and municipalities provided by Panasyuk, M.V. [7]. The following authors studied the problems of socioeconomic growth of regions: Vladyslavovych, S.V. [11], Mashunin, Yu.K., Mashunin, I.A. [5], Gainova, R.A., Shaidullin, R.N., Safiullin, L.N. [3], while Stepanovich, B.V. [10], Draci, B., Caro, D., Nikolli, P. [2], Salvati, L [9], Pastor, E.M.C., García, J.H., Gavilan, M.D.S. [8] et al. examined the matter at the municipal level. This and other papers may be useful for drafting and updating the municipality assessment

and monitoring procedure.

3. Results

For the determination of how the correlation of the rating with absolute and relative socioeconomic indicators for the Republic's municipalities was assessed, we have performed a correlation analysis of indicators, which then was used by the Republic of Tatarstan Ministry of Economic Affairs. The objective of the analysis was to identify whether the inclusion of some or other indicator into the rating is practical. The results of the correlation analysis are given in Table 3.

Table 3. Correlation between the rating and absolute and relative socioeconomic indicators of Tatarstan's municipalities in 2013

Correlation	Description
High	Wage purchasing power (ratio of mean accrued wage to minimum consumer budget), times
Upper Middle	Tax and non-tax revenues per capita, Rubles
	Fixed investments (except for budgetary funds), thousand Rubles
Middle	Company value added, thousand Rubles and company value added per capita, thousand Rubles
	Shipped own-produced goods in terms of neat types of economic activity, thousand Rubles and shipped own-produced goods in terms of neat types of economic activity per capita, thousand Rubles
	Total area of commissioned residential buildings, square metres and total area of commissioned residential buildings per capita, square metres
	Recorded unemployment, %
	Tax and non-tax revenues, thousand Rubles
	Fixed investments (except for budgetary funds) per capita, thousand Rubles
Low	Gross agricultural output, thousand Rubles and gross agricultural output per capita, thousand Rubles

The correlation analysis has shown that the rating had the highest correlation with the wage purchasing power and it correlated well with the tax and non-tax revenues per capita and fixed investments (except for budgetary funds). The gross agricultural output in absolute values per capita does not correlate with the rating. Therefore, we think that these data should be ignored for calculations, as they have no effect on the rating positions. We feel that such indicators as the gross territorial product in absolute values and per capita as well as the industrial production index should be added to the rating. This will provide with an accurate and actual information on socioeconomic status of the Republic's municipalities.

The coefficients of variations were found for determination of variability or spread in rating indicators. Only two of 14 indicators have acceptable variation (i.e. totally, data are uniform) – these are the wage purchasing power and tax and non-tax revenues per capita. The recorded unemployment may be considered close to the acceptable variation. Other indicators are highly spread in values suggesting strong differentiation of socioeconomic growth of Republic's municipalities.

We grouped the municipalities depending on their socioeconomic level. Integral indexes were calculated for rating indicators using a procedure provided by the Republic of Tatarstan Ministry of Economic Affairs. Then we determined the optimum number of groups, interval lengths and constructed interval distribution series for integral indexes, based on which the municipalities were grouped (Table 4).

Table 4. Municipalities against their socioeconomic growth for 2013

Level of growth	Municipality
Very High	Kazan
High	Almetievskiy, Laishevskiy, Tukayevskiy
Upper Middle	Nizhnekamskiy, Naberezhnye Chelny, Novosheshminskiy
Middle	Pestrechinskiy, Mendeleyevskiy, Tyulyachinskiy, Yelabuzhskiy, Vysokogorskiy
Lower Middle	Aznakayevskiy, Leninogorskiy, Aktanyshskiy, Nurlatskiy, Bugulminskiy, Verkhneuslonskiy, Sarmanovskiy, Zelenodolskiy, Zainskiy, Buinskiy, Sabinskiy, Bavlinskiy, Kaibitskiy, Yutazinskiy, Menzelinskiy, Kamsko-Ustienskiy, Agryzskiy, Cheremshanskiy, Apastovskiy, Atninskiy, Muslyumovskiy, Alkeyevskiy
Low	Mamadyshskiy, Kukmorskiy, Arskiy, Baltasinskiy, Alekseyevskiy, Drozhzhanovskiy, Aksubayevskiy, Rybno-Slobodskiy, Chistopolskiy, Spasskiy, Tetyushskiy

The averaged integral indexes of absolute and relative socioeconomic indicators are calculated for rating the municipalities according to the Republic of Tatarstan Ministry of Economic Affairs procedure. The averaging resulted in more developed and inhabited municipalities having higher integral index values due to higher absolute indicator values. Otherwise, less developed and sparsely populated municipalities become lower integral indexes due to lower absolute indicator values. It results in inequality of assessment conditions, as the sparsely populated municipalities usually cannot compete with the densely populated municipalities in terms of absolute indicator values. If the rating were built according to the economic and industrial development, the absolute values would play a key role. However, social factors, which assessment requires values per capita, are important for rating the socioeconomic growth. Therefore, we think that the rating of municipalities should base on the relative indicators only. Table 5 groups the municipalities against their socioeconomic development based on relative indicators only.

Table 5. Municipalities against their socioeconomic growth for 2013 (relative indicators only)

Level of growth	Municipality
Very High	Laishevskiy, Tukayevskiy, Almetievskiy
High	Novosheshminskiy
Upper Middle	Kazan, Nizhnekamskiy, Pestrechinskiy, Mendeleyevskiy
Middle	Tyulyachinskiy, Verkhneuslonskiy, Азнакаевский, Yelabuzhskiy, Vysokogorskiy, Nurlatskiy, Leninogorskiy, Aktanyshskiy, Naberezhnye Chelny, Sarmanovskiy, Sabinskiy, Bugulminskiy, Bavlinskiy, Zainskiy
Lower Middle	Cheremshanskiy, Yutazinskiy, Buinskiy, Kamsko-Ustienskiy, Zelenodolskiy, Kaibitskiy, Menzelinskiy, Agryzskiy, Apastovskiy, Atninskiy, Alkeyevskiy, Alekseyevskiy, Muslyumovskiy, Mamadyshskiy
Low	Kukmorskiy, Arskiy, Baltasinskiy, Aksubayevskiy, Drozhzhanovskiy, Chistopolskiy, Spasskiy, Rybno-Slobodskiy, Tetyushskiy

Thus, the socioeconomic growth of municipalities grouped in Table 5 by their relative parameters can be more accurately assessed, because their population size is taken into account.

4. Conclusions

The analysis of the Republic of Tatarstan municipality socioeconomic growth rating procedure used by the Ministry of Economic Affairs needs to be updated, which is supported by the correlation analysis of rating indicators and the rating itself. The problem is that the municipalities differ highly in their socioeconomic development; therefore, absolute indicators are poorly linked to the rating. In addition, the correlation analysis has shown that the rating should neglect absolute and relative indicators of gross agricultural output since their relation to the rating is low. We suggest rating the Republic of Tatarstan municipalities using relative indicators only for more valid assessment of their socioeconomic growth. It is a good practice for the municipality socioeconomic growth assessment procedure to include the characteristics of the region, where municipalities are located. Being an oil-producing region, the Republic of Tatarstan has its own particular characteristics in terms of differentiation of areas; therefore, from our point of view, these characteristics should be considered in the municipality socioeconomic growth assessment procedure.

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The Guarantee Mechanism of Small Business Lending

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Abstract

The state and the problems of the small business system in the Russian Federation are primarily associated with its financial conditions. Insufficient rate of small business growth relates to a variety of causes, including lack of availability of the long-term lending resources. Small business lending conditions need state-financing backing. This publication substantiates the need for growing such a form to support small business as the guarantees for getting access to supplementary financial resources.

Keywords: *Small business, governmental control, financial backing forms, lending, rates of interest, loan arrears.*

1. Introduction

The small business system serves to find solution to the key problem of any state – the employment of population. The share of small business segment varies from 50% to 75% of the total employment in the EU countries and over 50% in the USA while the contribution of small business into the total employment in Russia is 17-18%. According to the official figures of Rosstat, the Federal State Statistics Service, 11,695.2 thousand persons were engaged in the small business activity in 2013 and the annual average number of employed was 67,901 thousand persons or 5.8% of the total employment. Additional tools are required for development of this system that will ensure favourable financial conditions of their functioning.

Affordability of lending resources is of most importance to the growth of the small business system. Taking significant risks of small business lending into consideration, a loan guarantee mechanism should be developed and provided to ensure lending the small business.

2. Theory

The matter of governmental financial backing to the small and medium-sized enterprises was covered by such authors as Walczak, D. and G.Voss [1], Cowling, M., W. Liu, A. Ledger [2], studied the positive effect of small business lending guarantees.

There are many tools of governmental financial backing provided to small business, including budget investments, governmental guarantees and subsidies. In particular, since 2008 the subsidies allocated by the federal budget to support small business have been seeking to grow. However, this level of small business growth does not match the level of other countries.

The need for further availability of loans remains actual in connexion with this. The factors that prevent expansion of small business lending are: small business size; minor part of own funds in the capital structure and absence of liquid assets; short credit history or its absence at all; high credit risks and limitations to secure the mentioned loans; mismatch of small business profitability with the interest rates on credit; instable legal system, including taxation. The authors see the solution to the problem of small business lending in perfection of the guarantee mechanism.

3. Results

Lending institutions unwillingness to lend the small enterprises is also explained by loan debt growth. The total loan debt amounts of small and medium-sized enterprises nationwide are listed in Table 1. Furthermore, it should be mentioned that debt arrears of both small and medium-sized enterprises increase in the total arrear volume. So, if the debt arrear was 19% in 2009, it raised to 26% by 2013.

Table 1. Debt arrears of small and medium-sized enterprises over a period of 2010-2014

Billions of Rubles

Period	2010	2011	2012	Within 7 months of 2013	2013	Within 7 months of 2014
Total, including	3 227	3 843.5	4 494.2	4 938.7	5 160.6	5 389.9
Ruble lending	2 992	3 616.7	4 288.9	4 684.1	4 878.0	5 084.0
Foreign currency lending	235	226.8	205.3	254.6	282.6	305.9

Increase in arrears for the period under review suggests that the small business system fails to be liable for debts and the lending conditions are stringent. This, in turn, results in that the borrowings taken by small and medium-sized enterprises are negligible in the total corporate bank loans in Russia as compared with other countries (Table 2).

Table 2. Borrowings of small and medium-sized enterprises in the total corporate bank loans in 2008-2011. (according to MSP Bank studies) [17] (%)

Country	2008	2009	2010	2011
Switzerland	81.3	80.3	80.1	79
Republic of Korea	82.6	83.5	81.5	77.7
Portugal	77.7	77.4	77.3	76.8
Hungary	60.6	60	54.5	54.5
Thailand	26.6	26.9	38.4	36.8
Slovenia	48.2	47	51.8	54.3
USA	27.7	27.6	29	26.5
Russia	19.9	21.3	23.7	22.5
France	20.4	20.2	20.6	20.9
United Kingdom	18	20.8	21	20.6
Italy	17.9	18.3	19	18.3
Canada	15.6	17.9	17.5	17.5
Chile	15.2	17.5	18.2	17.4
Sweden	88.5	92.4	91.1	n/a

Notwithstanding that the borrowings of small and medium-sized enterprises have increased in the total corporate bank loans in Russia by 2.6 percentage points over 4 years, this figure does not achieve the average value of 33.8% for the above countries in 2011. This fact can be primarily explained by high lending interest rates provided to the small enterprises. The analysis of lending rates in other countries (Table 3) shows that the rates for small enterprises are higher than those granted to other market participants. However, the lending rates are much lower in the considered countries than in Russia.

Table 3. Lending rates for small and medium-sized business [17] %

Period	2007	2008	2009	2010	2011
Switzerland					
Mean lending rate (for loans not exceeding 1 million Swiss Francs)	n/a	n/a	2,21	2,11	2,08
Mean lending rate (for loans in excess of 1 million Swiss Francs)	n/a	n/a	0,86	0,88	0,92
United Kingdom					
Mean lending rate for small and medium-sized business	n/a	4,54	3,47	3,49	3,52
Mean lending rate for business	n/a	3,71	2,36	2,19	2,45
Czech Republic					
Mean lending rate for small and medium-sized business	5,63	5,37	4,46	4,08	3,83
Mean lending rate for business	5,1	4,8	3,72	3,47	2,86
France					
Lending rate (for loans less than 1 million Euro)	4,91	5,43	3,93	3,27	3,69
Lending rate for loans in excess of 1 million Euro	4,71	5,01	2,25	2,05	2,75
USA					
Mean lending rate for loans 100 thousand USD – 1 million USD	7,96	5,16	3,82	4,09	3,95
Mean lending rate for loans in excess of 1 million USD	6,75	4,29	2,99	3,23	3,07

Thus, the nominal interest rate for loans in excess of 3 year given to the Russian small and medium-sized enterprises as of July 2014 averages 13.27% while the actual rate including multiple bank charges and payments is 17% and higher. Regarding the corporate loans in general, is should be noted that the interest rate for loans in excess of 3 years averaged 11.9% as of July 2014. The same is true for short-term loans. Moreover, the commerce and services received most of the loans (up to 80%). The small and medium-sized production enterprises are restricted in access to bank financing as before as the security requirements are stringent to them. The situation is worsening now by the reason that the commercial banks begin with reducing their limits for small and medium-sized enterprises and tighten the requirements to these borrowers.

As practice of different countries shows, using guarantee mechanisms is the most effective tool to increase affordability of lending resources for small and medium-sized business (Table 4).

Unlike the direct budget financing of small business, the guarantee mechanisms are lower in cost; they do not prevent competition and contribute to risk assessment of both the creditors and borrowers (small enterprises) and drafting the credit agreement terms as well as strengthening ties between them. At the same time, the guarantees are a form to protect the lending agencies from high risks of small business lending.

Table 4. Amount of loans taken by small and medium-sized business and government guarantee secured, in 2007–2011 for the below countries [17]

Million Euro

Country	2007	2008	2009	2010	2011
Canada	900	975	900	975	975
Chile	445.7	413.1	1252.5	2258.3	3077.9
Czech Republic	114,5	197.1	369.6	389.7	24.4
Denmark	41	29.5	37	162	259.2
France	5850	8861	11267	10883	8826
Hungary	1296.8	1483.8	2041	1604.9	1486.5
Italy	2,3	2,3	4.9	9.1	8.4
Republic of Korea	27790	30030	39410	39270	38850
The Netherlands	09	400	370	945	1040
Portugal	740	1552	4961	6285	6147
Russia	–	–	964.7	1656.6	3043
Serbia	–	10.5	2.6	2.2	–
Slovakia	115	157	143	139	167
Spain	5210	7053	5906	7236	7502
Sweden	18.8	15.7	12.8	–	–
Thailand	–	–	557324.8	–	–
Turkey	32.6	174.3	342.3	563.8	702.3
United Kingdom	242.7	208.7	890.7	690.3	425.2
USA	15.8	12.3	11.8	17.2	14.3

The existing Russian guarantee mechanism, which is implemented through the federal Guarantee Fund and the regional funds, has its own disadvantages. Despite ever-augmenting number of regional funds, one can see some drawbacks of the guarantee mechanisms. The lending agencies that unwish to lose their borrowers misapply to the Guarantee Fund by sending entities unable to pay for loan guarantees. The analysis of the Russian Government Resolution No. 825 dated 14 August 2012 "Concerning the Procedure for Providing the Government Guarantees in 2012 on Credits or Bonded Loans Used by Legal Bodies for the Purposes Determined by the Russian Federation Government as Part of Measures to Enhance Economic Growth Stability if the Financial Markets Decline" brings to the conclusion that this Resolution does not clearly reflect the objectives of attraction of guaranteed loans and determine the criteria of the position of a company claimed to the guarantee.

The Russian Government is regarding different alternatives of financial backing of banks for small business lending. So far, the Government is going to complete the conceptual design of a Loan Guarantee Agency by the end of 2014. We think that this form of support will be the most effective one. This Loan Guarantee Agency being a non-bank credit-deposit organisation will be 100% owned by the Federal Government. The Agency is designed for lodging investment loan guarantees to the small and medium-sized enterprises for 2-7 years in the amount of 50-270 million Rubles if their own pledge is insufficient.

Both the national guarantee agencies system and the Loan Guarantee Agency being a core of federal guarantee fund will increase affordability of lending resources to be lodged to the small and medium-sized enterprises, specifically, to those of uncommercial sector. The goal of the Agency is to provide regional guarantee organisations of all Russian regions with counter-guarantees. The key objectives of the Agency will be:

- Reduction in credit risks of small business investment projects by means of risk sharing with the pecuniary institutions;
- Enhancement of lending conditions for small and medium-sized business;
- Increase in long-term lending capacity;
- Increased capabilities of regional guarantee agencies to provide loan guarantees to the small and medium-sized business and enhancement of their efficiency.

According to the Agency's 5-year business plan, the following financial and economic results (provided that the capitalisation is 30.0 billion Rubles) are expected:

- The total guarantee amount: 217.8 billion Rubles;
- The total guaranteed investment loans: 435.0 billion Rubles;
- The total number of guarantees granted: 6900;
- The number of small and medium-sized enterprises having guaranteed loans will be 79.5 thousand entities;
- The percentage of loans granted to the small and medium-sized enterprises and secured by the national lending agencies system will reach 4.0% of the total loan debts of small and medium-sized business.

Therefore, this mechanism of guarantee support through the Loan Guarantee Agency will be primarily targeting the small and medium-sized enterprises that realise their investment project in the regions.

4. Conclusions

Generally, the small business in Russia does not yet meet the level of other developed countries. This relates chiefly to the financial disadvantages of this economic system notably it associates with severe lending conditions. The result is that the small business system raises concerns from the state due to:

- Unsettled problems of unemployment;
- Reduction of investment programmes for small and medium-sized business due to limitation of long-term lending resources;
- Failure to meet import substitution requirements.

One of the options to solve the problem of loan affordability for small business is the national guarantee backing through the Loan Guarantee Agency. The efficient risk control and appreciable social-and-economic effect of the projects is the main advantage of this support. Furthermore, the regional guarantee funds should develop and employ special lending products for the small business to facilitate the governmental contracts in order to progress the guarantee mechanism.

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Information Technologies as a Factor of Evolution of Tax Administration

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Abstract

This publication describes the comparative analysis of taxing activity in different countries in terms of using information technologies and communication with the taxpayers through electronic means, as well as development of web services. Particularly, the document refers to the comparative country-specific data of cost structure for tax administration, electronic filing of personal/corporate income tax, automated application of budget settlements within Russia provided to taxpayers and others. Since its establishment, the Federal Tax Service of Russia deals with enhancement of tax administration all over the country, however, the tax authorities are not as effective as required for the time being. The point is to ensure the growth of tax revenues and enhance the quality of services rendered.

Keywords: *Tax authorities, tax administration, quality of services, communication through electronic means*

1. Introduction

The perfection of tax administration is a significant trend to reform the national administration of Russia, including but not limited to optimisation of tax activities, providing comfort conditions for joint work of taxpayers and government authorities and development of electronic document management. As the Russian Federation is a member of international taxation organisations such as the Intra-European Organisation of Tax Administration (IOTA), the Coordination Board of CIS tax leaders, it is important to focus on the global tax administration practice. The objective of this cooperation is the exchange of experience between the tax authorities of different countries with regard to enhanced tax administration effectiveness.

2. Theory

As is already discussed, the global practice means by the perfection of tax administration the improvement in quality of services subject to render to the taxpayers, using the current information technologies by tax authorities and updating the document flow. The matters of how the tax authorities engage with the taxpayers are covered in the publications of the following authors: Rusdi Hidayat N., Suhadak, Darminto, Handayani S. R., Otok B. W. [1], Hauptman L., Horvat M., Korez-Vide R. [2], Alm J., Cherry T., Jones M., McKee M., Jackson B. R. [3], [4], [5]. The authors: Gopaul A. [6], Li D., He Y., Xu Y., Fan Y. [7], Dias E. M., De Mello N. O., Fernandez, M. L. A. [8], Tay, A.S.M. [9], Ostasius, E., Petraviciute, Z. [10] have studied the development of information technologies and electronic document management using world-wide case studies as an example. The aspects of international fiscal cooperation are described in the publication of Kudrle, R.T. [11].

The variety of approaches to the tax administration system, which is intrinsically associated with difference between tax systems, however, identifies some general development trends of tax activity growth notably:

- Reforms that are aimed to optimisation of tax administration, enhancement of its efficiency; introduction of the advanced corporate methods of strategic management and planning;
- Introduction of information technologies to enhance tax control and a taxpayer information system that will result in increased performance of tax officers;
- Engagement of private agencies in performing individual functions for tax authorities; and
- International cooperation of the revenues.

The solution to these problems in all countries is only possible if the key society institutions are at a high level, the technological and social infrastructure is set up as well as codes and values are provided that maintain the good performance of all the market participants.

3. Results

The Russian taxation system for both the legal bodies and individuals keeps constantly updating taking the world practice into consideration. The public administration system is being also improved including the tax administration, which is one of the taxation priorities of the country. The Ministry of Finance of the Russian Federation uses the fiscal policy on the global tax trends. For drafting the budgets of the Russian budget system, a document "Key Trends of Fiscal Policy of the Russian Federation for the Subsequent Financial Year…" will be issued that provides a comparative analysis of country-wise taxation loads in terms of tax types and taxpayers. However, a comparative analysis is essential for measures that characterise the level and quality of tax administration, in particular, such information as cost for tax administration, cost structure, personal/corporate income tax return by electronic means, and introduction of automated application of budget settlements within Russia provided to taxpayers and others should be available. This document does not refer to such information although it may be useful for the taxpayers as well and contribute to the transparency of Russian fiscal system. However this information is available in the official publications of the Organization for Economic Cooperation and Development (OECD).

We are going to analyse some comparative measures of concern for tax administration in this document. The tax cost structure analysis provides more details. The human resources are the key feature of tax administration. The worldwide practice suggest that the labor cost varies from 60% to 90% of the total tax expenditures. The average country-specific labor costs are about 70% of the total tax administration expenditures (Table 1).

For the countries of OECD, the labor costs are just over those not being the OECD member, which can be explained by higher wage level in the developed economies that overweighs other tax costs in the relative measurement. However, in some highly-developed countries with the labor cost much lesser than the average value, this fact is determined by higher level of information technologies that reduce the number of employees. This can be specifically seen in such countries as the UK and the USA. The IT costs in the non-OECD countries are low. This measure, however, keeps growing over the last years. Therefore, the statistic data confirm that the current tax administration is going to actively use the information technologies.

Table 1. Cost structure for tax administration [13] percentage of total expenditure

Countries	2005 year		2006 year		2007 year		2008 year		2009 year	
	Labor costs	Information Technology	Labor costs	Information Technology	Labor costs	Information Technology	Labor costs	Information Technology	Labor costs	Information Technology
OECD countries:	75,5	11,3	72,7	11,4	73,1	11,5	71,1	12	72,4	11,6
United Kingdom	63	n.a.	60,1	22,7	61,2	20,2	58,8	20,3	59,1	16,3
Canada	81,5	9	82	8,9	83	8,4	82,8	11,4	83,9	12,6
United States	71,5	16,1	71,3	15,9	71,6	15,1	70,4	15,8	71,5	14,9
France	78,6	6,1	79,3	5,1	79,1	5,3	81,3	4,2	81,1	4,2
Germany	84,3	5,5	84,3	5,1	83,3	5,3	83,7	5,7	82,3	6,4
Japan	80,2	9,7	80,5	9,2	81,1	8,5	80,7	8,1	80,8	8,3
Non-OECD countries:	69,6	6,6	69,7	7,9	72,1	8	63,4	9,7	63,7	11,7
India	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	60	n.a.	65,5	n.a.
Russia	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	66,5	6,7	68,2	5,7
All countries	70,1	10,2	70,2	10,6	71,1	10,7	68,78	11,3	69,7	11,7

Currently, most of the industrial countries use electronic filing and online services of providing information to the taxpayers. Electronic filing of the personal income tax return is most popular in the USA, the UK and Canada (Table 2).

Table 2. Personal income tax returns: use of electronic filling [14] in percent

Country	Year begun	2004 year	2009 year	2011 year
OECD countries:				
United Kingdom	2000	17	73	77
Canada	1993	49	58	62
United States	1986	47	65	76
France	2001	4	27	33
Germany	1999	7	30	32
Japan	2004	0	31	44
Non-OECD countries:				
India	n.a.	n.a.	17	13,1
Russia	2006	0	9	3

As is seen from Table 2, Russia is not within the leaders. In Russia, legal bodies use electronic filing that is also specific to the developed countries (Table 3).

Table 3. Corporate income tax returns: use of electronic filling [15] in percent

Country	Year begun	2004 year	2009 year	2011 year
OECD countries:				
United Kingdom	2004	1	16	42
Canada	2002	2	21	46
United States	2004	1	25	44
France	1991	26	77	81
Germany	n.a.	0	0	n.a.
Japan	2004	0	38	58
Non-OECD countries:				
India	n.a.	0	n.a.	1,25
Russia	n.a.	0	12	57

The average data for the OECD countries show that the electronic corporate tax return is 68% in 2011, which is in excess of the percentage for non-OECD countries. However, an electronic tax returns system for both the corporate income tax and other tax payments has been actively developing in Russia in recent years. It is due to that the one of the current features of tax administration is enhancement of quality and expanded range of services rendered to the taxpayers. The first thing to mention is the increase in electronic tax returns and the number of taxpayers, who have a contact-free access to the tax database to check their budget settlements. Now Russian taxpayers may receive the following formalised documents upon request: A document providing tax, charge, fine and penalty settlements; extracts from budget settlements; a list of tax returns (settlements) and accounting statements for the report year; and a reconciliation report of tax, charge, fine and penalty settlements.

In 2012, the percentage of taxpayers – companies and individual entrepreneurs having access to the personalised information on budget settlements through communication channels and via the Internet – is 61.9% of the total number of actual taxpayers being companies and individual entrepreneurs (Fig. 1).

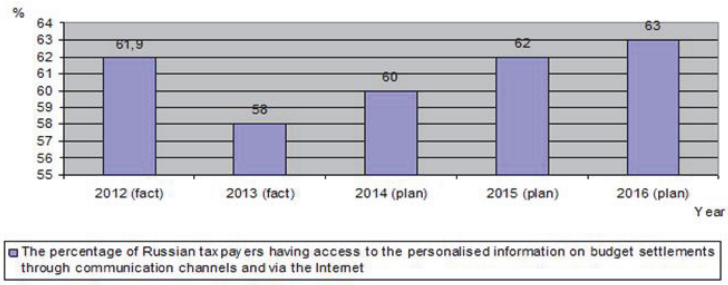

Fig.1. The percentage of Russian taxpayers having access to the personalised information on budget settlements through communication channels and via the Internet.

Despite the development of electronic document management, the percentage of Russian taxpayers having access to the personalised information on budget settlements through communication channels and via the Internet is low. This number is going to slightly increase over 2014-2016. The plan is for Russia to achieve 80% by 2020.

The online services become a frequent practice worldwide. For example, the official website of the Her Majesty's Revenue and Customs (HMRC) provides online services for the taxpayers to fill in the tax return forms in electronic format, obtain information on how to fill in the return forms, rates and miscellaneous terms of taxation, apply for the deductions and others. In addition, many countries have been using the service of taxpayer account since recently. This service is a helpful tool for the taxpayers to fill in their tax return forms, pay the dues, online check/settle arrears, apply to the revenue services, apply for the deductions and sign in for a taxpayer ID. The average number of the employees engaged in this activity is about 30% of the total number of the tax officials. The IT specialists account for about 10-15%.

The website of the Federal Tax of Russia also provides links to the ongoing services. Development of the online services will make it possible to provide information to the taxpayers at a more qualitative level. Thus, multiple expert assessments suggests that website of the Federal Tax of Russia is the most demanded, informative and popular website among the public websites. Near three million visitors use it every month. The website of the Federal Tax of Russia provides links to the services, which number increases from year to year. Now, 30 online services are available, among which are "Corporate Taxpayer Account", "Individual Taxpayer Account", "Pay the tax", "Property taxes: rates and privileges", "Inquire About Complaint" and others.

Therefore, the quality of tax services means online cooperation between the tax authorities with the taxpayers, online providing the entire scope of information to the taxpayers, based on which they undertake in terms of the budget.

The taxation authorities in the modern developed economies delegates some features to the private agencies. The following activities as tax collections through private banks and engagement of independent auditors (who should check the correct profit calculations of banks, insurance companies and joint-stock companies) have already become a practice. In addition, it should be noted that private agencies are involved into the software development for tax bodies and processing mass data. However, private agencies in Russia are not engaged in performing individual functions for tax authorities.

A specific area of tax administration is the international cooperation between tax authorities in different formats – from single or periodic consulting and mutual data exchange regarding amendments of tax laws to conclusion of long-term tax agreements and migration to a full-scale tax harmonisation. The latter is specifically characteristic of the EU and OECD countries. The objective need for cooperation between the Federal Tax Service of Russia and similar structures of other countries bases primarily on the Russia's external economic activity, which is in line with the international economic relations and is of an international nature.

Therefore, the following development trends of the global tax practice may be identified: Introduction of a 'result-based management' model for tax authorities; using current technologies in the tax activity; further introduction and development of online services for taxpayers; and evolution of international tax cooperation.

4. Conclusions

The analysis of theories and practical aspects of world taxation mainstreams yields the following conclusions:

1. The comparative analysis of tax business in different countries in terms of tax administration revealed that Russia focuses efforts on the comfort conditions for communication between taxpayers and tax authorities.
2. It is a good practice in Russia to develop online communication of tax authorities with taxpayers, using newest information technologies in undertaking tax activities. The wide use of current information technologies enables automation of the entire process of tax administration.
3. As part of international tax cooperation, the automated information systems are being developed that ensure tax business, facilitate communication at a quality level and exchange the information between the tax authorities worldwide. Making of such system will allow for more effective and accurate employing the information component of tax authorities. The information exchange between tax authorities in different countries should also develop to reduce double taxation significantly.

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Income Taxation as a Tool of Income Redistribution

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Abstract

Many countries use income taxation as one of the essential tools of income redistribution. This paper covers positive and negative effect of the proportional scale of individual taxation introduced by the Russian Federation. The observation suggests that the flat rate increases the social inequality, which, in turn, reflects adversely on the economic growth of the country. The document describes the contribution of the income tax to the budget revenues of the developed countries and provides the data of foreign practice to apply income tax rates. The authors demonstrate the need for the progressive taxation and establishment of a tax-free allowance.

Keywords: *Personal income tax, individual income tax, progressive taxation, flat tax rate schedule, minimum subsistence level, tax-free allowance, minimum wage.*

1. Introduction

Many countries use the income tax in their taxation system. Nowadays, there are over 200 countries in the world and only 15 of them do not have income tax (UAE, Bahamas, Kuwait, Monaco, Qatar, Somalia, Uruguay and others). Countries with income tax use different scales of income taxation: progressive and proportional. The developed countries employ progressive taxation that enables not only the fiscal function but also smoothing the social inequality. This is implemented in more than 150 countries. The proportional or flat income taxation is acceptable by Russia, Estonia, Latvia, Czech Republic, Bulgaria, Romania and Montenegro. These are not leading countries neither in terms of economic growth nor social protection. Russia has used the progressive income taxation until 2001 and then switched to the proportional one, which is still in use. Switching to the proportional taxation was justified by necessity for taking the illegal salaries out of the shadow, which taxation might contribute to the budget system with additional returns. Such effect took place in the first years after introduction of proportional taxation. Now both the economic publications and political quarters discuss the return back to the progressive income taxation even though there are opponents of such return. Certainly, this tax has both the fiscal and social implication; therefore, the selection of the income taxation scale is rather complicated as the population is socially unequal. Taxes, including income tax, are the tools of redistribution of earnings and wealth in all countries. Therefore, studies are required to identify all pluses and minuses of progressive and proportional income taxation.

2. Theory

Many countries employ progressive taxation with the tax rates ranged from 14% to 75%. Since 2001, the proportional individual income taxation with a rate of 13% is in use in Russia. As envisioned by Russian lawmakers, denial of progressive taxation and implementation of proportional taxation for individuals should take the wages out of the shadow since the employers frequently use the 'envelop' form of payment for labour. Moreover, revenue base of the budgets should increase as well. The opponents of the proportional taxation indicate that one of the key principles of taxation formulated by A. Smith – Concept of Social Justice is violated as the real earnings are not considered in terms of wage size and purchasing ability of population. It should be noted that there have been disputes about the advantages of one or another form of taxation for centuries. Protecting the progressive taxation, the English economist A. Marshall (1842—1924) wrote that "the happiness which an additional shilling brings to a poor man is much greater than that which it brings to a rich one; and that he does good by buying things the production of which raises, in preference to things the production of which lowers the character of those who make them."

At the same time, in many countries the income tax is one of the key sources, which feeds the budgets at different levels. That is to say that the fiscal significance of this tax should not be neglected. The income tax is of great importance in other countries than in Russia, which is supported by statistical data. The income tax returns are the largest budget revenue in many countries. This tax takes the biggest share of tax revenues in Denmark accounting for more than 50% while it varies within 25-35% in other countries. In the Russian Federation, the individual income tax is much lesser accounting for 21% in the revenue and general tax revenue structure of the consolidated budget. Country-wise data are brought in the Table 1.

Table 1. Income tax in the budgets In percentage

Country	Tax revenues of the consolidated budget	GDP share
Australia	47	13
Belgium	34	14
United Kingdom	34	10
Germany	28	9
Denmark	57	26
Ireland	34	10
Iceland	39	12
Italy	27	11
Canada	41	14
Norway	30	12
USA	48	12
Finland	35	15
Switzerland	35	11
Sweden	38	18
Russia	21	4

The matter of income taxation are examined by Russian and foreign economists. Particularly, the issues of progressive income taxation for individuals were studied by such authors as Angyridis, C. [1], Hodgson, H. [2], Schauer, P. C. [3], Dušek, L., Kalíšková, K., Münich, D. [4], Simonovits, A. [5], Pellegrino, S., Vernizzi, A. [6]. The distribution of individual income tax through the levels of the budget system were covered in papers of such authors as Färber, G. , Kühl, C. , Alt, D. [7], Adam, S. , Johnson, P. , Roantree, B. [8]. The optimisation of progressive income taxation rates and their influence on the standard of population's well-being were analysed by Saez, E. [9], Chahrour, R., Svec, J. [10], Fochmann, M., Weimann, J.[11].

3. Result

Introduction of the proportional income taxation in Russia had some effect as the growth of individual income tax returns for 81.3 billion Rubles at year-end 2001 or 23.7% in real terms. In the subsequent years, the returns yielded about 3.3–3.4% of the Gross Domestic Product versus 2.4% in 2000. The individual income tax share in the Russian Federation consolidated budget revenue has also increased over this time (Fig. 1).

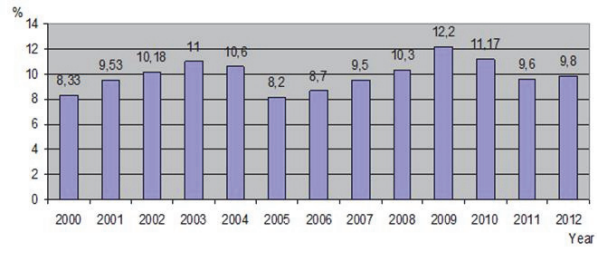

Fig. 1. The individual income tax in the Russian Federation consolidated budget revenue from 2000 through 2012, in percentage

However, the growth of individual income tax over this period was caused not only by switching to another taxation mode. Since 2001, the GDP has shown significant increase in values as well as wages being a GDP component due to increased oil prices. In addition, there were other factors such as increase of income tax rate from 12% to 13%, shifting some revenues from 2000 to 2001, inclusion of service members into the list of taxpayers and others. Nevertheless, introduction of the proportional income taxation in Russia did not solve the problem of shadow income legalisation. Thus, according to A. Siluanov, the Minister of Finance of the Russian Federation, the Russian shadow economy was about 15-20% of GDP in 2013. As a result, the Russian Federation budget system is in arrears of roughly 3 million Rubles of taxes as the business withdraws into the shadow. The Minister estimates the lost individual income tax as 2 trillion Rubles. According to the World Bank, the Russian shadow economy is 3.5 times the economy of the G-7 countries. Moreover, the shadow turnover and illegal money flow have been dynamically growing for 18 years, which was encouraged by low political administration and widely used tax evasion.

The key point of the progressive taxation supporters is implementation of the social justice concept and reduction of personal income inequality. Over the last three decades, the inequality of personal incomes has increased in many countries. In the Russian Federation, the income ratio between 10% of the well-to-do and 10% of the marginal population is constantly increasing and according to the Federal State Statistics Service, it was 16.4 times in 2013.In 2013, 20% of the well-to-do had 47.5% of total cash earnings and 20% of the marginal population – 5.2% only. Russia has a strong lead in USD billionaires in Europe and this despite the fact that there are over 5.5 million jobless people and 15.7 million live below the poverty line. Table 2 provides the distribution of incomes for different groups of Russian population.

Table 2. Distribution of total cash income in Russia

Year	Total cash income	Including 20% group of population, in percentage:					Gini Coefficient
		The first group (with lowest income)	The second group	The third group	The fourth group	The fifth group (with highest income)	
1995	100	6.1	10.8	15.2	21.6	46.3	0.387
2000	100	5.9	10.4	15.1	21.9	46.7	0.395
2005	100	5.4	10.1	15.1	22.7	46.7	0.409
2010	100	5.2	9.8	14.8	22.5	47.7	0.421
2011	100	5.2	9.9	14.9	22.6	47.4	0.417
2012	100	5.2	9.8	14.9	22.5	47.6	0.420
2013[2)]	100	5.2	9.9	14.9	22.5	47.5	0.418

The Gini Coefficient is a measure of statistical dispersion intended to represent the income distribution of a nation's residents, and is the most commonly used measure of inequality. It has been estimated to be 0.48 or 41.8% for Russia that is much higher than in European countries and only slightly lower than in South America. According to UN criteria, if it reaches 0.4, it shall be regarded as a red flag, and if the coefficient exceeds this value, it means that the inequality reaches the point where social instability may occur.

Thus, using the proportional taxation will result in steadily increasing gap between the earnings of the wealthiest and the poorest groups while the progressive taxation will help reduce this gap and will generally lead to easing of social tension. There is a belief among the economists that the excessive inequality slows the economic growth down. Different countries used various measures to re-distribute the incomes to solve the problem of inequality. The developed economies succeeded to reduce the inequality on average by about one third using a combination of social transfers and progressive income taxation.

The experience of the developed countries in employing the progressive taxation has shown that multistage rates are in use, i.e. the income splits into fractions with a dedicated rate specified for each fraction. In such countries as Switzerland, Luxemburg, France, the income is split into many fractions; therefore, the transition from one group to another one is gradual and smooth. The progression jumps in other countries, e.g. Poland, Austria, United Kingdom. The lowest the progression level, the simplest the taxation and as a result, the tax administration. Table 3 shows data of some countries that employ progressive income taxation.

The experience of the countries with the progressive taxation is very essential, as it may be useful in Russia bearing the significant inequality of incomes in mind. According to the statistics data, the monthly averaged salary in Russia was 29792 Rubles in 2013 with textile/garment manufacture (13059 Rubles) and agriculture (15264 Rubles) the lowest and financial activity (68704 Rubles) and mineral extraction sector (59012 Rubles) the highest. The Russian wage

level is low. Besides, there is such a definition in Russia as the minimum wage, which was 5554 Rubles as of 1 January 2014 and the best part of employees, primarily, of the government sector get their wages in this amount. Every quarter the Russian Federation government establishes the minimum level of subsistence per capita as well as for social groups. It was 8192 Rubles in the second quarter 2014 with 8192 Rubles for able-bodied population (the Russian Federation Government Regulation No. 905 dated 06.09.2014).

Table 3. Income tax rates in some countries

Country	Progression	Non-taxable income	Tax rates, %
Austria	3-stage	11 000 €	36.5, 43, 50
Belgium	5-stage	6 690 €	25.5 - 53
United Kingdom	3-stage	2 790 £	20, 40, 45
Germany	5-stage	8 130 €	14 - 45
Spain	7-stage	0 €	25, 30, 40, 47, 49, 51, 52
Italy	5-stage	0 €	23, 27, 38, 41, 43
Canada	4-stage	0 $	15, 22, 26, 29
Luxemburg	18-stage	19 265 €	8 - 40
Netherlands	3-stage	19 645 €	37, 42, 52
Poland	2-stage	0 €	18, 32
Finland	4-stage	13 099 €	25.6 – 49.1
France	7-stage	5 963 €	5.5, 14, 30, 41, 45, 48, 49
USA	7-stage	0 $	10, 15, 25, 28, 33, 35, 39.6
Switzerland	10-stage (for single people) 14-stage (for married)	0 ZAR	0.77, 0.88, 2.64, 2.97...11.50 1, 2, 3, 4, 5, 6, 7, 8 ...11.50

The 2013 UN-defined living standard rating places Russia between Mongolia and Romania with its position 59. Norway heads the rating; Denmark takes the second place; Canada is the sixth on the list; the USA hit the tenth and the United Kingdom occupies the thirteenth position. In view of the aforesaid, we believe social justice is the question of the day in Russia; therefore, we think that the progressive income taxation could reduce the income difference. However, some economists believe that the Russian progressive taxation shall be applied to excess profits only where their size should be excessive in fact. We support this alternative. The question is only at what level of wages the progressive taxation should be applied. Furthermore, the personal income exemption is being discussed, which is fair in the context of social justice. The majority of Russian economists tends to believe that the personal exemption should be equal to the minimum level of subsistence. 1.7% of Russian population earn half the subsistence level and 9.3% earn an income equal to the amount of one subsistence wage. Therefore, if the personal exemption is set at the subsistence level, 11% shall not pay the income tax. However, we understand that the problem of illegal or envelop salary will rise. It will need strengthening the tax control and increasing the tax administration costs.

4. Conclusion

We believe that the progressive income taxation may lower the social inequality and reduce income difference and poverty in Russia. Tax rate progression in Russia may be applied starting with an annual income in excess of 12 million Rubles. This taxation should be subjected to multistage progression as used in the developed countries. It is a good practice to establish a personal income exemption not lower than the subsistence level taking the aggregate income and the family size into consideration. Appropriate measures should be taken to enhance income tax administration and responsibility of employers who pays the envelop salaries. These measures shall not result in reduction of income tax returns to the budget system, as this tax is the dominant one that feeds the budgets of the Russian Federation regions and local budgets.

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Elaborating an Innovative Model of Educational Process Management, Designed for Adaptation to the Changes in External Institutional Environment

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Abstract

The work views the requirements to the modern educational process and its features. An additional set of competences is proposed and discussed, which is necessary for ensuring students' competitiveness in the modern labor market. The contours of the innovative model of educational process management are drawn, which is designed for adaptation to the changes in the external institutional environment. The authors prove the transactional character of costs of introducing the model and offer a classification of these costs.

Keywords: *innovative model of educational process management, educational process, institutional environment, transactional costs, cost approach, institutional approach.*

The modern stage of society development is characterized by the forming on a new economy – an economy based on knowledge. Information and knowledge become investment assets, providing competitive advantage, and, consequently, one of the main sources of wealth (Becker, 2009; Mintrom, 2009; Schultz, 1971). Under these conditions, the role of educational system dramatically increases, as it is designed or creating, distributing and confirming knowledge. At the same time the informational revolution requires its radical change to adapt to new conditions, including the modern institutional environment (Elmore, 1997; Schneckenberg, 2009; Vaira, 2004). The proposed work builds the contours of the innovative model of educational process management, designed for adaptation to the changes in the external institutional environment.

The model should, first of all, take into account the modern realia. At present, it is obvious that the traditional transfer of knowledge from the professor to the student is not only inefficient, but also useless. The recently adopted in Russia Federal state educational standard gives a new direction based on competence approach. Competence development of the students is a necessary but insufficient condition for turning knowledge into innovative valuable products. It is necessary to create conditions for easier and stimulating transfer of information and knowledge into innovative intelletual products. Thus, special attention should be paid to the development of the institutional environment of the educational process.

G. Konstantinov and S. Filonovich highlight the following new trends of the informational society development[1] (Константинов & Филонович, 2005):

1) The paradox of informational saturation, which was brightly expressed in the number of "internet-plagiarism" incidents at western universities (literature survey on topic: Park, 2003; Walker, 1998); the essence of the phenomenon is that the availability of information on the Internet demotivates the students for creating new knowledge. Moreover, the students passively receive the available information, taking the adopted knowledge for their own, while the new knowledge is formed on the personal interpretation of information, comparing it with personal experience and further critical analysis;
2) The paradox of uncertainty, connected with the volume of available information. It leads to the growth of alternatives and, consequently, creates uncertainty when making decisions. The search for more information

[1] *See also (Shenton, 2007).*

to reduce uncertainty only increases it (van Asselt & Vos, 2006).

3) The paradox of education, which consists in the fact that the value of the acquired knowledge (in a knowledge-based society) decreases with time. While the period of acquiring knowledge is 4—6 years, it approaches the period of the knowledge half-life (the period during which 50% of information becomes obsolete; in high-technology sphere this period is about two years; in other spheres it is longer, but it rarely exceeds 7 - 8 years). Thus, the simple transfer of knowledge is senseless and is not the main objective of education (Dahlman, 2009, p. 274; Frasher, 1969, p. 6).
4) The paradox of studying. In the traditional education, the most important component was remembering. However, the rapid deterioration of knowledge requires the skills of timely clearing information, or "the skill of forgetting". This fact was mentioned in the work by P.M. De Holan, N. Phillips, & T.B. Lawrence, (De Holan, Phillips, & Lawrence, 2004), devoted to the research of the so called "studying organizations".

During the formation of knowledge-based economy, the knowledge becomes a particular product and forms its own sector of economy – the sector of producing and improving knowledge (Britz, Ponelis, & Lor, 2013; Dunkin, 2002; Slabbert, 1996). The modern education must consider this fact. To be competitive, the graduates of educational establishments should not only be able to use the acquired knowledge. They should also be able to independently create new knowledge, in compliance with personal needs and the needs of the society.

The above trends and realia require the development of a number of qualitatively new competences of students:

1) Competences of intellectual leadership (leadership skills in intellectual activity): going beyond the frameworks of existing approaches, purposefulness, patience, inspiration, responsibility, etc.;
2) Skills of information processing and analysis, modelling, abstract and imaginative thinking;
3) Skills of interdisciplinary research;
4) Intuitive thinking based on the skills of knowledge and experience interpretation;
5) Intellectual cooperation and knowledge exchange.

Appropriate new institutions should be formed to develop the above competences.

In general, the economic system competitiveness in the epoch of knowledge-based economy depends on the degree of efficiency of knowledge creation and distribution. The higher the intellectual capital profitability, the higher the investment potential and competitiveness of the economic system (Н. Кочеткова & Крамин, 2011; Н. В. Кочеткова, 2011).

Transactional costs play a special role in forming the profitability of intellectual capital (Brewer & McEwan, 2010; Murphy & Louis, 1999), as they have informational character. The above transformations significantly change the institutional environment: there appears a lot more information, information deterioration becomes quicker, etc., consequently, the existing transactional costs increase, and the new ones appear. Ignoring this trend leads to the significant growth of transactional costs, and intellectual capital profitability reduction. That is why the innovative model of educational process management should be based of transactional costs management, which, in turn, should be based on cost approach.

In general, transactional costs management can be carried out not only by managing particular kinds of transactional costs (Rowan, Meyer, & Rowan, 2006). The institutional environment of the educational process produces a significant and complex influence on its composition and structure (Rowan et al., 2006). Its development can systematically reduce transactional costs. Thus, introduction of new institutions into the educational process can also increase the efficiency of the intellectual capital forming and using. Consequently, knowing the bases of institutional theory, ability to use them and create new knowledge in this sphere is the key characteristics (and competence) of the modern competitive specialist.

Thus, the innovative model of educational process management is based on the chain of value creation, which begins with investing into informational resources and ends at creating innovative products (see Fig.1).

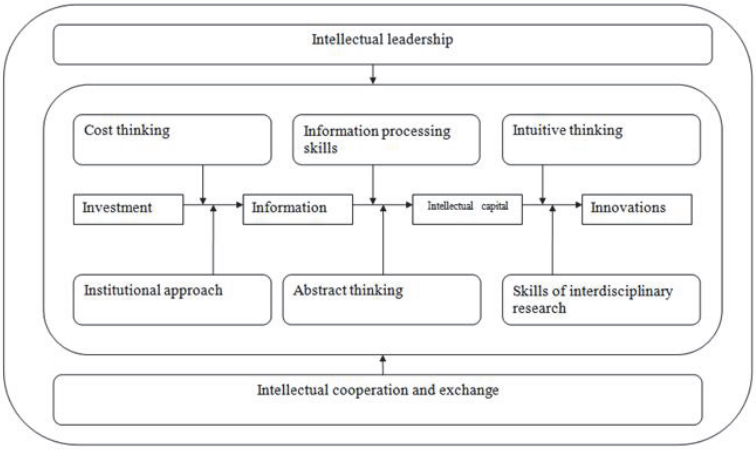

Fig.1. Innovative model of educational process in the knowledge-based economy.

The model shown in Fig.1 in the most general terms describes the process of investments transformation into innovative products. In the educational sphere one should extinguish several groups of investment objects: administrative-managerial personnel, lecturers, consumers of educational services. Besides direct acquisition of informational resources it is necessary to invest into the development of competences and skills shown in Fig.1, which are used for efficient transformation of information into innovative valuable products (including the stage of innovations commercialization). Besides, it is necessary to ensure the efficient use of the allocated resources. The administrative-managerial personnel should be interested in acquiring the cost and institutional approaches. Intellectual leadership skills, skills of cooperation and exchange should spread along the personnel of an educational establishment. The lecturers should be motivated not only to develop their own skills of information processing and abstract thinking, by to form these qualities in students. The lecturers should also be interested in developing intuitive thinking in students, as well as teaching to use interdisciplinary research tools. Intuitive thinking is also an inseparable characteristics of a successful leader which helps them to make right strategic decisions in due time under uncertainty and insufficiency of information. The modern scientific research cannot be carried out without interdisciplinary approach. A lot of inventions have been made recently at the verge of several sciences and sectors of knowledge. The high potential of interdisciplinary research has not been fully realized yet.

All above skills must be formed in students.

The above innovative model can face serious difficulties due to the low students' interest in forming these competences. The skills development can also contradict to the interests of the personnel of an educational establishment. Finally, opportunistic manifestations among the lecturers can hinder the process of skills transfer.

The most general solution of this problem is forming the stimulating institutional environment – a system of intra-organizational and public institutions (rules), providing the necessity of mastering these skills. The costs of creating such system should be attributed to the first group of transactional costs.

The second way of solving the above problem is to work in the sphere of agent's relations. In this case, transactional costs will be represented by agent's costs.

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Innovation Economics Development of the Region within the Frames of Cluster

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Abstract

In the context of economic ties globalization the economic actors in the certain region play a role of the agents participating in improving performance, obtaining positive dynamics of regions development and new job formation. Innovative development will make possible to increase competitive advantage both of the regions and of the country as a whole. The Republic of Tatarstan innovative development is based on maximization of inner potential in economic development of the territory as a result of competitive advantage intensification within the frames of the effective market institutions, the state support in the field of research and technology innovations, formation of techno parks and technology incubators. The program of the region innovative development implies clusters forming and further evolving on the basis of petrochemical sector enterprises, educational and research institutes located on the territory of Tatarstan.

Keywords: *innovation policy, intellectual capital, cluster, labor costs, productive efficiency.*

1. Introduction Method

Most studies show that differences in profitability within industries are much more important than differences between industries. The key to a resource-based approach to strategy formulation is understanding the relationships between resources, capabilities, competitive advantage, and profitability – in particular, an understanding of mechanism through which competitive advantage can be sustained over time. [9] In order to obtain competitive advantage, companies invest more and more capital in technology. Therefore, capital cost is more and more significant proportion in total cost. [8] But breakthrough innovations provide the innovator a significant comparative advantage that can often be sustained through time. These small innovations have a cumulative effect on resource advantage and, hence, on efficiency and effectiveness. [15] Intellectual capital disclosure comprises three categories: human capital, structural capital, relational capital. Human capital captures the knowledge, professional skills, experience and innovativeness of employees within an organization. Structural capital consisits of the structures and processes employees develop and deploy in order to be productive, effective and innovative. [4] Human capital is considered a strong complement to investment in physical capital. Human factors are important contributors to the increase in productivity and innovation via know-how diffusion. [5]

Lent defined innovation as a complex multiphased activity, where an artefact moves from initiation to adoption and implementation within a unit of adoption. [12] Innovation is an iterative process initiated by the perception of a new market and new service opportunity for a technology-based invention, which leads to development. Innovation strategy basically focuses on radical and incremental innivations. Only radical innovation could lead to significant growth. [11]

It has been suggested that in the information age a larger and larger portion of a company's economic value is associated with it is intanjible assets, intellectual property often being the most important. [3] Innovation process is based on knowledges. Knowledge is the outcome of learning. Knowledge can manifest itself in changes in cognitions or behavior. The knowledge can be explicit or tacit and difficult to articulate. The knowledge includes both knowledge in the sense of a stock and knowing in the sense of a process. [1]

Innovation process influences on the quality of tne product due to value based category. In this view quality is jointly determined by the product's conformance to specifications and the price (cost) of attaining that product. [13]

The results of innovative process could decline the weighted average cost of the capital (WACC) in the future. At the same time WACC is influenced on the economic value added (EVA). [14] Profitability of the company is based on value added strategy and value added growth. The value added strategies and growth in value are depended on company size, growth and corporate strategy. The highest correlation is between turnover and scale of production capacity. (.972 at $p < 0.01$). [6]

As a form of regional economy industrial enterprises and services integration, the industrial district is formed due to the scale effect increase of enterprise and regional market. The business basic competences include: human capital,

scientific research, informational capital. [2]

At present the innovative potential on the territory of the Republic has been formed of the base of petrochemical sector enterprises what is reproduced in Table 1. The process of identifiable (tangible) assets value creation in innovative economy makes no problem and is identified with such categories as efficiency (profitability) and capital cost. The indicators of performance, operating profitability of capital intensive manufacture in an innovative sector are, on the one side, linked with such categories as capital assets depreciation reserve ratio and coefficient of renewal, retirement rate, capital-labor ratio and workforce productivity. Therefore, the main share of enterprise assets in the given sector of economics makes capital assets within the structure of non-circulating assets.

On the other hand, nowadays competitive advantage of industrial enterprises become more and more dependent rather on the senior management and staff's capacities for elaboration and implementation of product, technology and managerial innovations than on disposable capital resource level and material assets. Introduction of the abovementioned innovations appears to be the background of the economic growth. But the process of intangible assets value creation is quite complicated. Key contribution to companies' competitive advantage provision is made by their innovative potential which, in its turn, is to a greater extent dependent on knowledge-consumptive business environment. The given conditions to the fullest extent possible reveal themselves in a cluster both on micro and meso-level and on macro-level as well. So, M.Porter has formulated the aftereffect of the regional and local business environment upon a company's competitive ability according to the following trends: factorial terms, terms of demand, the character and intensity of local competition, availability of relative and accompanying sectors. Geographical proximity and combination of manufacturing companies, customers and suppliers intensify pressure upon the process of innovations implementation.

Macroeconomic indicators of innovation policy in the Republic of Tatarstan within the period of 2008-2010.

Table 1

Indicators	2008	2009	2010
Persons with higher vocational education aged 20-29 in total population per 1000 people	173,7	173,7	173,7
Persons with post graduate education aged 25-64 in total population per 1000 people	3	3	3
R&D spending in Gross Regional Product, %	0,2	0,2	0,2
Public expenditures for education in Gross Regional Product, %	3,2	3,2	3,4
Enterprises' expenditures for innovations in the amount of shipped goods of their own production, %	2,6	1	1,4

2. Theory

The following factors of economic growth can be associated with innovation economics:

- capital quantity with quality;
- labour quantity with quality;
- natural resources quantity with quality;
- growth of technology (embodied in physical capital, unembodied in physical capital)
- education and human capital ameliorating the quality of labour. [10]

The following industry-based characteristics in the perception of various innovations stimulation measures can be distinguished:

- for chemical and consumer goods industries: budgetary co-funding of innovation projects;
- for iron and steel enterprises: introduction of conventional tax allowances according to the expenditures for research and development;
- for enterprises engaged in civil engineering: investment premium.

Characteristics of economic system innovation development (List of basic foundations and their content):

- Availability of objective critical situations in cycles: various types of crises depending on factors of inner and outer environment are taken into consideration;
- Methodology of studies: systemic approach considered in dynamics in accordance with objective laws of the system development;
- Object properties: technical including scientific research, economical, regional (territorial) in the light of social interests;
- Development planning and projections: alternative (multi-script) prognosis based on the patterns of economic system cyclic development and theory of crises;

- Prognoses intended use: elaboration of strategic priorities and ensuring their implementation on the grounds of financial and economic approaches;
- The subject matter of managerial activities: forecasting of crisis processes manifestation;
- External environment: markets: of innovations, of capital (investments), of personnel, of products and services.

Innovation management problems:

– determination of economic entities' innovation potential in order to minimize resources investment and maximize the results obtained;
– evaluation of innovation processes influence on the population's demands potential and structural changes;
– compliance of the new processes developers' innovation potential with innovation managers' competence requirements;
– determination of industrial innovation's moral depreciation signs and organization of facilities for secondary use of materials, energy, information and staffing support.

In a broader context, the long-wave economic model is based on such categories as rate of labour productiveness increment, capital employment ratio, profit return and absorbed expenses. (1), (2), (3) . The statistical analysis of temporal series and empirical regularities data selection helped N.D. Kondratiev to substantiate the theory of long wave's endogenous character. So, for instance, advance in technology is triggered by the demands of the certain industry and arrangement of such conditions which stipulate the possibility of the inventions application. Each consecutive stage is a result of cumulative processes collected during the previous phase. The innovation theory developed by Austrian economist, Joseph Alois Schumpeter, is one of such long-wave theories. In Schumpeter's theory, the ability and initiative of enterpreneurs, drawing upon the discoveries of scientists and inventors, create entirely new opportunities for investment, growth and employment. The profits made from these innovations are then the decisive impulse for new surges of growth, acting as signal to swarms of imitators. [7]

(1) $dy/dx=-\alpha(y-bk)$;
(2) $dk/dt= -\beta(k-gp)$;
(3) $p=y-R$, where
y —rate of labour productiveness increment,
α,b, β, g —composition ratios,
k — rate of capital employment ratio increment,
p — rate of profit return increment,
R — rate of absorbed expenses increment.

All of these categories can be improved simultaneously in case of innovation pattern for economy development. That is why the function of production formulated as (4) can be written in the following way (5):

(4) $Q1 =F(L,K)$
(5) $Q2 =F(L,K,U)$,
Q – total of output;
L – the amount of labour for the given output;
K – cost of capital invested in the given production;
U – cost of intellectual capital invested in the given volume of production.

Application of intellectual capital in productive activity requires both capital investments and labor costs. Therefore, the value of intellectual capital can be formulated by means of the following dependence (6), (7):

(6) $U=Fu(Lu,Ku)$,
(7) $Q3=F(L,K,Fu(Lu,Ku))$, where
Lu — labor costs for creating a new product, service or target;
Ku — expenses on research and technological development expressed in the statement of assets and liabilities.

3. Results

In an effort to raise the effectiveness of innovation activities based on the current knowledge an enterprise produces the assemblage of innovations (related to technology, organization and management, marketing and resources) and ensures efficient production of innovative items. Thus, the enterprise generates the dynamic growth of intellectual resources and intellectual assets one part of which is recognized on the balance sheet within intangible assets and the other part - as goodwill. If the investment is being made and capitalizing R&D costs is a visible signal that the organization sees R&D as a bridge to the future, not as a cost center that needs to be limited or reined in. [3]

The interrelation of labour costs and research-and-development expenditure can be evaluated with the aid of Student's sample correlation coefficient with n-2 degrees of freedom as exemplified by the enterprise OJSC «Nizhnekamskneftekhim» being the participant of territorial-production cluster in the Republic of Tatarstan.

The relationship between average monthly labour productivity of one workman and research-and-development costs turns out to be positive, as shown in tables 2,3.

Table 2. Data collection.

Period	2006	2007	2008	2009	2010	2011	2012
The average monthly labour productivity of one workman, thousand rubbles	201,7	242,5	324,7	339,1	483,1	623,1	623,7
The total amount of R&D, thousand rubbles	320	253	220	165	117261	193975	296009

Table 3. The results.

Rxy	n-2	T	α	t
0,93	5	5,66	0,1	2,57

$Rxy = \sum(Xi - X) / \sqrt{\sum(Xi-X)^2 \sum(Yi-Y)^2}$ (8)

$T = Rxy\sqrt{(n-2)} / \sqrt{(1-R^2)}$, (9)

where

Xi – the average monthly labour productivity of one workman in thousand rubbles in each period,

X - average of the sum of Xi in thousand rubbles,

Yi -the total amount of R&D in thousand rubbles in each period,

Y – average of the sum of Xi in thousand rubbles,

Rxy - the sample correlation coefficient,

T - the observed value,

n – quantity of the years.

4. Conclusions

The enterprises' innovative development within the frames of a cluster on the territory of regions is capable to ensure:

- the enlargement of enterprise industrial potential;
- build-up of aggregate demand both business and consumer's;
- implementation of the efficient quality system for industrial processes;
- effective utilization of state special purpose funding for investment programs of regions development;
- formation of institutional environment for corporate management as a single process which will make provision for innovative management system implementation.

All the above stated developments can be estimated in the context of such economic indicators as budget increase funded with the cluster participants' return of duties; variation of Gross Regional Product; work places enlargement in the region; increasing the share of investments in intellectual capital at the enterprises –cluster participants; growth in production of final output, goods, works and services.

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Revealing Prerequisites and Factors of Transactional Costs Formation in the Activity of Educational Establishments through Process Approach

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Abstract

The article is devoted to the study of one of the main types of transactional costs in an educational establishment – the costs of assets and processes management. The work uses the process approach of corporate management. The results will be used as the theoretical basis for building the overall architecture of information system, as well as for revealing and classifying the transactional costs in business processes.

Keywords: *transactional costs, institutional environment, educational establishment, information system, organizational-functional structure, process approach.*

Educational sphere is traditionally characterized by the high level of transactional costs: the uncertainty of the environment and the high degree of specificity of the used assets. Under globalization and increase of international competition, the issues transactional costs management are brought into the foreground (Dietrich, 2008, p. 1), at the same time the agents theory and transactional costs have never been fully applied for educational sphere (Brewer & McEwan, 2010, p. 7; Murphy & Louis, 1999, pp. 378-379).

The results of previous research (см. например McMeekin, 2003, pp. 3-13; Воронцова, Крамин, & Крамин, 2011; Крамин, 2007a) allowed to structure transactional costs of an educational establishment by the transactions type and to distinguish:

1) Transactional costs of interacting with the consumer of educational services;
2) Transactional costs of corporate management (here we understand corporate management as the activity aimed at achieving the balanced interests of all stockholders in the business);
3) Transactional costs of managing assets and processes.

The article is devoted to the study of one of the main types of transactional costs in an educational establishment – the costs of managing assets and processes. The work uses process approach[1] of corporate management. The research results will be used as the theoretical basis for building of the general architecture of informational system and revealing and classifying the transactional costs by business-processes.

In particular, the work has fulfilled the following tasks:

1. The universal business-processes were defined, which are implemented in the academic work in higher educational establishments.
2. The sequences and structures of business-processes are revealed.
3. The key links and structural subdivisions responsible for the business-processes implementation are revealed.
4. The features of processes in educational sphere are studied.

The overall formalized functional structure, determined by the general mission, objectives and tasks of an establishment, results in the organizational structure of each particular university, which, in turn, is the basis for distributing universal business processes, taking place in every university (Brewer & McEwan, 2010; Seng & Churilov, 2003). This is connected with a very important constituent of an informational system, aimed at servicing the educational process management, namely, the distribution of roles and control (Carroll & Teece, 1998). That is why each group of

[1] *See also reviews of approaches to analyzing educational establishments (Brewer & McEwan, 2010, p. 6).*

business processes, united by the goals achieved by them, was viewed separately.

The key functions are those corresponding to the main objectives of the activity, namely: admission commission, academic work, up-bringing and scientific work. At the same time, implementation of these activities would be impossible (Lunenburg & Ornstein, 2011), or at least difficult, without other subdivisions, such as managing the materials resources, personnel, legal support, informatization and general development. Out of these activities, legal support is not specific for an educational establishment.

At the same time, the organizational structure of an educational establishment abstracted from non-specific types of activity, represent a compressed hierarchy. Each level is designed to solve one task. However, the tasks within one level are highly differentiated.

The structural subdivisions are necessary and sufficient units for implementation of academic process with due quality according to the Russian legislation.

Many researchers agree that managerial structures at universities, formed in the period of administrative-command management system, do not allow the university to promptly react on the external changes and adapt to the new economic conditions (Грудзинский, 2004). The rigid structure does not let universities implement strategic management in many spheres of activity, hence the necessity to radically change the university organizational structure, which should lead to changing its business-processes. Besides, the university organizational structure is highly hierarchical and belongs to linear-functional type. These characteristics predetermine the high level of transactional costs, connected with the complexity and imperfection of informational streams inherent to such structure. The main ways of reducing transactional costs in this sphere are reducing the number of hierarchical levels and transition from the functional structure to cross-functional teams (Groenewegen, 1996).

Alongside with that, speaking about transforming the university management, many researchers and experts focus on priority development and broadening the economic departments, marketing structures, developing infrastructure for entrepreneurship support (business incubators), and strengthening the leading role of administration. However, the structure of departments and faculties is not altered as a rule, as it is taken for granted. Meanwhile the thesis is undoubted that it is the departments and faculties that should become the managing centers. However, the institutions of power delegation within the organization can significantly reduce transactional costs if properly formed and implemented.

Let us view the business processes of an educational establishment diachronically.

Academic work is the main business process at a university; consequently, it must be in the center of attention of the administration. The correct organization and optimization of academic work increases profit through reducing costs, including transactional costs. Providing the high quality of academic work allows to increase competitiveness of educational services, which has a positive impact on their consumer cost and price. An important feature of the correctly organized business process is its flexibility and ability to react to changes.

The research of academic work organization (Hepner & Dickson, 2013; Joseph & George, 2002; Watson & Schneider, 1999) showed that the general description should be made with functional approach, i.e. the systemic interconnection of such managerial functions as planning, processes organization, control, accounting, analysis, making managerial decisions.

Management in education is based on the classical bureaucracy pattern. The processes are initialized by written instructions. The results, the performance, the activities are carried out basing on formal documentation. That is why the business processes related to documentation are very important.

The main unified forms within the educational process are:

1. Order on admission
2. Group register (attendance of theoretical and practical lessons)
3. Order on transfer
4. Test/examination sheets
5. Course paper sheets
6. Control works sheets
7. Order on expulsion
8. Order on directing to probation period
9. Protocol of State Attesting Committee (decision on qualification assignment)
10. State Diploma

Within academic process organization:

1. Individual load
2. Individual plan of a lecturer
3. Weekly schedules (distribution of lectures and rooms among students groups)

4. Reports on the work execution (delivered lectures)
5. Protocols of department meetings, faculty meetings, University Council meetings.

This list of documents is necessary and obligatory, which predetermines the necessity not only to automatize their flow, but also to design a system of mutual reconciliation of their content, in order to obtain final information on the results of activities and processes serviced by these documents. Besides, their controlling fucntion implies the necessity to create a mechanism of interaction between subdivisions and structures when carrying out the activities under their responsibility.

Up-bringing in an educational establishment is aimed at forming the student's personality, their civil-legal conscience and developing their talents and capabilities.

The state policy regards up-bringing as an inseparable element of education, touching upon all levels and stages of educational system. That is confirmed by the students' activities carried out at the local, regional and federal levels. Consequently, the managerial process should pay due attention to this aspect of activity.

The issue of actual efficiency of up-bringing at university is very complicated. The main problem here is how to ensure harmony in creating and functioning of the up-bringing system. A university faces the danger of overestimating the value of mass activities. The effect of up-bringing usually shows not immediately, but after some time, probably a long time. The varied students life, the broad spectrum of students' interests, makes it impossible to trace which up-bringing activity or impact resulted in the certain up-bringing effect (positive or negative). The up-bringing work fulfils the following tasks:

1. Forming the modern scientific outlook and the system of basic values of the students:
   - Forming and developing of spiritual-moral values.
   - Creating conditions for realizing and implementing the essence and significance of civil-patriotic values.
   - Forming the system of legal knowledge.
   - Forming the system of aesthetic and ethic knowledge and values.
   - Forming the tolerant thinking and counteraction to extremism.
   - Forming the need to work as the primary need in life, supreme value and main way of achieving success in life.
2. Spiritual-moral up-bringing:
   - Forming and developing the system of spiritual-moral knowledge and values.
   - Implementation of knowledge connected with the moral norms and professional ethics in educational, productive and social life.
   - Forming the reproductive conscience and the idea of a family as the basis for restoration of traditional national moral values.
3. Patriotic up-bringing:
   - Increasing the social status of patriotic up-bringing of the youth.
   - Implementing the scientifically-grounded organizational policy of patriotic up-bringing.
   - Increasing the level of the content, techniques and methods of patriotic up-bringing at university on the basis of actual interaction of the educational subdivisions.
4. Forming the health-preserving environment and healthy way of life:
   - Broad propaganda of physical culture, sports, and healthy way of life by carrying out of various competitions.
   - Propaganda of the healthy way of life, struggle against smoking, drugs-addiction, bad habits.
5. Forming competitiveness:
   - Increasing students' motivation for self-improvement.
   - Forming orientation towards success, leadership and carrier behaviour.
   - Forming the qualities of a socially active personality.
   - Self-presentation skills, skills of argumentation, decision-making, organization of socially and personally valuable activities.

From the viewpoint of managerial system, the university must achieve good results in up-bringing, but academic process enjoys the priority, thus, the up-bringing activity is a necessary but limiting element.

Often the achievements of students' groups in competitions and festivals are viewed as an extra component for the university advertising campaign, giving certain advantages before other educational institutions. The modern normative accounting system and assets admittance principles do not admit such advantages. They are not subject to accounting and normative management.

In the management system up-bringing has no determined, universal business processes and, consequently,

directly estimated tangible results. At the same time the professional management of up-bringing among students as well as lecturers increases their conscientiousness, loyalty, creative activity, reduces the amount of opportunism. As a result, transactional costs are reduced.

Up-bringing activities can be estimated by the allocated funds and the results. As for estimations of its efficiency, it can be carried out not only at subjective level and by expertise, but also by institutional approach, by reducing transactional costs as a result of the up-bringing activities.

Let us consider the potential of scientific activity of universities in the aspect of transactional costs reduction. Universities specializing in the humanities and sciences will be viewed separately.

Humanities universities, where the educational activity does not imply laboratory research, study social-economic processes, objective laws and subjective elements, as well as modelling of these processes with a variety of cause-effect relations.

Technical and medical universities, where the scientific activity is mainly connected with laboratory research, are aimed at elaboration and verification of new concepts, as well proving the fundamental hypotheses.

At present, taking into account the governmental conception of the country's economy innovative development, we consider fundamental research to be of utmost importance. At the same time describing new relations in the social-economic aspect is very significant too.

The scientific research and numerous polls of university professors revealed several different approaches to scientific activity of an educational establishment, as well as to defining the results and efficiency of this activity. We can conclude that the following indicators characterize the results and efficiency of scientific activity:

1. The number of registered research results and invention patents.
2. The number of the completed laboratory investigations.
3. The volume of financing of scientific research by the state, the educational institutions and investors.
4. The number of published scientific articles with the research results.

It should be noted that the above-mentioned criteria are to a large extent subjective, as they are greatly influenced by such factors as the university potential depending on the historical development and existing experience, the type of the university (state, private, technical, humanitarian), and the status of the respondent.

Scientific work is the droit of the teaching personnel, the non-material asset of high specificity, having its own value and obliged to benefit the right-holder as well as the persons who possess the results of intellectual activity. It should be of use for the whole society, promoting the dynamic development of economic, social-cultural relations and technical potential of the country. Thus, management of scientific activity is connected with highly specific assets. The foreign and Russian researchers-institutionalists have shown that the level of assets specificity is directly interdependent with the level of transactional costs, having an opportunistic nature (Williamson, 1985, p. 296; 1996, p. 72; Williamson & Winter, 1993, p. 106; Крамин, 2007b; Попов & Симонова, 2005, p. 126).

Scientific work is the result of researchers' activity. Activation of research and control over it is done through personnel motivation and overall control over its efficiency. Thus, we can consider scientific activity as interaction with particular researchers. The number and quantity of scientific research determines the volume of their intellectual capital and, correspondingly, their value for the university.

The system of scientific work motivation in educational sphere possesses special features, which is not only material awarding for the research results. In this system we can highlight "self-motivation" as a key element, as assigning of a scientific degree presupposes carrying out research during post-graduate studies, according to the rules of Higher Attestation Committee of the Russian Federation. As a result, the direct indicator of university's scientific achievements is, first of all, the number of lecturers having a scientific degree, and a number of the theses defended.

The general specialization of a university, being the main fcator of scientific activity, results from the experience in a particular field, the topicality of the research, and the correspondence between the research themes and the general state and public interests.

Business processes in science should determine intensification of all positive factors influencing the final results.

Unification of business processes in scientific activity is subject to the principle of optimism and sufficiency, i.e., the pattern presupposes beneficial conditions for carrying out this activity. It is assumed that the system is static and balanced, there is no negative influence. The factors capable of misbalancing the system include: lack of financing, shortage of human resources, bureaucratic barriers, patent legislation issues, etc. These factors exist in practice. The level of transactional costs, in this case, is calculated in a standard way – by scenario analysis and project management technique.

The main provisions of human resources policy and the system of processes are typical for all universities. The system of selecting and evaluating the human potential of a university should meet the modern requirements and

determine the vector of personnel development not only towards increasing the lecturers' qualification, which is traditional for the Russian universities, but towards developing the key market competences of the personnel. We should abandon the traditional pattern by which only the lecturers were evaluated.

The level of the lecturers' qualification is very important, but it is not the only parameter of the personnel potential, which determines the efficiency and results of a university. Special attention should be paid to administrative workers of all levels, as it is their professional qualities that determine the adequacy of the chosen market strategy and efficiency of the tactics of achieving it.

Taking into account that transactional costs are of informational nature, the efficiency of informational streams significantly influences their level, and enables to sufficiently minimize them. The information technologies (IT) enable a university to increase the efficiency of all spheres of activity, thus the key measure is to create a reliable and efficient corporate informational environment (CIE) of a university. CIE informational systems are usually created as accounting systems for inputting and systematization of corporate data. Further they can be transformed into systems for business processes automatization.

Sometimes the systems have built-in algorithms of modelling and support of decision-making process. The main condition of CIE usefulness is the coverage of the main business processes by CIE services, taking into account the data/processes integration and full availability of the services and information for all users – from students to the rector, including the external ones – employers, parents, etc. The distinctive feature of modern IT solutions is their active impact on the processes already formed at a university, and initiating of the new integrated processes.

For the effective development and maintenance of informational systems it is necessary to arrange close cooperation of technical specialists and professors who are aware of the university management issues (Chang & Chou, 2011; Kerr, Burgess, Houghton, & Murray, 2012). The specialists need a tool providing the input of new and changing the existing notions in CIE, which reflect the sphere of education.

Speaking about the informational systems development, it is impossible to distinguish the complex and hierarchy of unified business processes, as they differ in each university. transactional costs, connected with the processes in the mentioned spheres of activity, should be evaluated and managed individually (Dietrich, 2008).

Thus, the work views business processes in an educational establishment as prerequisites, factors and specific features of transactional costs. The research serves as the basis for their quantitative evaluation and elaborating the techniques for their reduction.

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Factor Analysis of Occurring Transactional Costs in an Educational Establishment

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Abstract

The article views informational environment and specific features of internal institutional environment of an educational establishment in order to reveal the prerequisites and factors of transactional costs occurring during its functioning. The main directions of reducing the transactional costs of an educational establishment are defined.

Keywords: *transactional costs, institutional environment, educational establishment, informational system, organizational-functional structure*

The majority of researchers studying the issues of transactional costs management agree that these costs are of informational character (Williamson & Winter, 1993; Т. Крамин, 2006; Олейник, 2005). Besides, transactional costs are formed in an institutional environment, in the system of public rules and agreements, both formal and informal. Consequently, the subjective factors, determined by the behavior of individuals and groups, are of key importance in forming transactional costs (RW McMeekin, 2001; Robert McMeekin, 2003; Rowan, Meyer, & Rowan, 2006; Rowan & Miskel, 1999, pp. 378-379).

Taking into account these provisions, the proposed article studies the informative environment and the specifics of the internal institutional environment of an educational establishment in order to reveal the prerequisites and factors of transactional costs occurring during its functioning.

The topicality of the presented work is due to the fact that under informational economy and knowledge economy, towards which the world economy system is rapidly moving, the subjective factors in the educational establishment management system become more significant every year. The subjectivity of management is revealed in all management systems, from the process organization up to the issues of control and decision-making.

The analysis of university management system revealed the main elements influencing the informational provision and depending on the automatization of the educational process management.

The analysis was carried out on the data of the following educational establishments: Kazan State Institute for Finance and Economics (KFU); Kazan State University (KFU); Kazan Technological University; Samara State University for Economics; Institute of Economics, Management and Law (Kazan).

The subjective factors influencing the automatization of the management system, with this process referring to the control function of management, and determining the composition and level of transactional costs (Воронцова, Крамин, & Крамин, 2011; Крамин, 2007a), are most vividly seen in the form of organizational-technical elements:

1. Strategic goal and tasks of an educational establishment.
2. Interests of the parties – the lecturers, administration, community, employers, and students.
3. Organizational aspect. The existing organizational structure composed of the functional structure and official regulations. The styles of personnel management.
4. The level of control of goals achievement and tasks solving. The norm of control.
5. Other factors influencing the educational process and main informational streams management.

1. Organizational Aspect. The Existing Organizational Structure Composed of the Functional Structure and official Regulations. The Styles of Personnel Management

Building an organizational structure of a university consists in determining the university's structural subdivisions, taking into account their interaction when solving the tasks of innovative activity stimulation and strategic functions for their implementation[1].

The management of an educational establishment is carried out by an attested head, director, rector or other official of the educational establishment.

Article 12 of the Law "On higher and post-graduate education" states that "management of a higher educational establishment is carried out in compliance with the Russian legislation, the standard decree of the higher educational establishment and the charter of the higher educational establishment by the principles of combining the individual and collective authority… The general leadership of a state or municipal higher educational establishment is carried out by an elected representative body – the Academic Council, while the direct management of a higher educational establishment is executed by the rector …».

The experience of countries with the developed market economy, as well as developing markets, shows that under post-industrial economy the speed and quality of informational streams are key factors of any organization's competitiveness. This is still more important for high-technology, innovative sector, including education. The traditional linear-functional structure has a number of drawbacks and limitations, first of all, in the speed and completeness of informational streams (see Table 1). This is due to the subordination to one person, the rector, of many functional workers, which makes the necessary control impossible. This provision is true for operational managerial tasks.

Table 1. Problems connected with non-optimal organizational structures and managerial systems of a university

№	Managerial problems	Opportunities connected with the changes in organizational-legal forms	Risks connected with the changes in organizational-legal forms
1	Weak manageability of university structures	Increasing manageability by strengthening the federal and regional levels of university management	1. Decreasing manageability at the initial stage of introducing the new managerial system. 2. Gaps between the levels of university management, isolation and opposition of the university top-management to its other levels
2	Lack of flexibility of the university organizational structure	No new opportunities increasing the university rights for organizational development, compared to the existing legislation	Deformation of organizational structures due to orientation towards operational issues
3	Self-sufficient, lacking feedback, system of goal setting and performance assessment of universities	Strengthening the connection and impact of the regional educational system and labor market	1. Increasing centralization in making key managerial decisions. 2. Breaking the forming market tools of goal setting and performance assessment of universities
4	Orientation of university management to solving mainly the internal problems of the university	Shifting the university activity focus due to changing the mechanisms of university financing	Unpreparedness of the university management to the new conditions. Conflict between the "budget" and "market" thinking
5	Inefficient managing of state property	Strengthening control and transparency	Decreasing the level of responsibility of administrative management

When considering the organizational structure as the basic element of informational system, including the informational network and users' role s distribution, it is necessary to define the conceptual model of this structure.

Elaborating the structure model should imply not only elements of routine educational activity, but also the issues of the dynamic development of the educational establishment, first of all, in the field of innovative and scientific development, which, in turn, determines the informational environment of the university – the unity of informational infrastructure, corporate data and informational system aimed at automatization of the university tasks.

[1] *See also (Tolofari, 2005).*

Thus, the organizational-managerial structure of a university is a complex of managerial subdivisions of the university, relations and links between them occurring during implementations of the procedures of educational process management and the projects of the university innovative activity stimulation. The relations and links between the university subdivisions are expressed in the procedures of their activities' organization and mutual coordination.

The subjective factors determining the optimality of the organizational-managerial structure are the following: features of educational technologies; features of the students' contingent (preparation level of the matriculated; number of students; conditions of teaching, etc.); educational process organization (shifts; size of groups and streams, etc.); conjuncture of educational services market; nomenclature of majors, etc.

Assessing the existing organizational-managerial and functional structure of a university and adapting it to the market capabilities of activity stimulation, one should consider the following principles:

1) Functional division and specialization of managerial work. Subdivisions of a university should be divided into the main and auxiliary ones, and be formed according to the main stages of the managerial cycle;
2) Consideration of the complexity and specific features of works in accordance with the executed managerial functions. That is why the norms of the university subdivisions' functioning should be different for various types of managerial functions;
3) Proportion and contingency between managerial links, necessary for overcoming the "bottlenecks" in management;
4) Using the typical and unified elements for educational process management at a university;
5) Providing the necessary level of regulation of the university organizational-managerial structure. The objects of regulation are such characteristics as the composition and number of links, forms of relationships and links, etc.

The main goals of changing the organizational structure are improving the quality of educational services, increasing the flexibility of the educational process, reducing costs and, consequently, dynamic improving of the educational process, and the balanced development of all university subdivisions.

One of the constituent parts of reorganizing the university organizational-managerial structure for its rationalization, is elaboration of coordination mechanisms, promoting the adaptation to the new external conditions and increasing the efficiency of the university innovative activity.

Under uncertain demand for educational services, the university should change the rigid administrative management for the more flexible one (Brown, 1992), with elements of decentralization in the university subdivisions' management (a good example of such decentralization is Kazan Technological University).

Under dynamic changes of technology, the significance of the quality of educational process significantly grows. The more actively a university introduces new educational technologies and implements the projects of its innovative activity stimulation, the more often it turns to the horizontal pattern if cooperation, which characterizes the level of flexibility. One can suggest that the increase of the educational process quality directly depends on the degree to which flexibility allows to combine the external complexity and uncertainty with the limits of internal complexity of the university organizational-managerial structure.

Flexibility allows the university to rapidly change its activity in the market, directions of specialists training, and educational technologies, without disturbing the neutral subdivisions of the university.

A university with a high level of educational process organization is characterized by: decentralization, matrix organizational structure; non-authoritative management, high reliability of groups of lecturers and staff; support of promising suggestion for improving the educational process.

The specialists' training in new majors can be organized by the matrix principle, when at the first stages of preparation the educational centers are formed on the basis of inter-departmental cooperation. The final goal of the organizational structures' transformation is forming the multifunctional teams and minimizing the number of hierarchical levels. After setting up of a quality educational process, the centers are substituted for a classical system of specialists training. This form allows to attract the most qualified lecturers and us their experience, thus avoiding some typical drawbacks of forming the "new" subdivisions within the rational organizational-managerial structure of a university. This form can be used if the invited lecturers are materially motivated, especially under education commercialization.

Nowadays under transition to new curricula and teaching programs, competitive in the vague market, one should actively stimulate innovative work at university, for which it is necessary to form a rational organizational-managerial structure of the university.

The period of making new curricula and teaching programs, preparing teaching-methodological literature and software should shorten. For that, most optimal are the rational organizational-managerial structures of the university with horizontal coordination and informal interaction patterns based on mutual-decision making.

Thus, we can formulate the following primary tasks, occurring during the building of a rational organizational-managerial structure of a university for its innovative activity stimulation:

1) transformation of organizational structures in the described directions;
2) sufficient transformation of informational-communicative system for its innovative activity stimulation;
3) reorganization of the work with subdivisions; changing the professional instructions; retraining of the personnel;
4) formation of new schemes and principles of work organization in the new rational organizational-managerial structure of a university and analysis of economic effect after the transformations (calculation of the transactional costs reduction);
5) as the new managerial technology leads to the increase of informational streams, the costs of management computerization should be calculated;
6) making organizational decisions of creating new positions with advanced professional requirements, considering difficulties when searching for new employees.

Due to the above specific features, creation of a rational organizational-managerial structure of a university for its innovative activity stimulation should be carried out as an integral process with a possibility to revise the structure during its projecting.

To create a rational organizational-managerial structure of a university and ensure its functioning, qualified personnel is required, as well as experts in various directions of activity. Due to the multi-profile character of universities, there are specialists in all spheres of strategic development, who can be involved into the implementation of the programs for its innovative activity stimulation, either full-time or part-time. The content and structure of the sectors' functions can be broadened and revised during the functioning of the strategic development department of a university.

Together with creating and developing the specialized structures and departments at university, for its innovative activity stimulation, special attention should be paid to the development of direct contacts with the educational services market and the main engine of a university — the lecturers. While the subdivisions are engaged in technical issues and comparative analysis of various activities in the sphere innovative activity stimulation, the link of a lecturer with the educational services market should become a tool for directing their disciplines towards satisfying the educational needs of particular customers. Activation of innovative work under uncertainty increases transactional costs and requires new methods of their reduction.

2. The Level of Control of Goals Achievement and Tasks Solving. The Norm of Control

The issues of the controlling function implementation in higher educational establishments are not sufficiently represented in the professional literature. At the same time, the controlling measures are a traditional and one of the most significant items of transactional costs[2] (Speklé, 2001).

The "control" category at universities[3] is usually applied to the monitoring of students' knowledge and education quality control (Попов & Симонова, 2005). However, control is rarely viewed by object.

In the controlling function over the university innovative activity, several spheres of research can be distinguished:

1. the share of non-budget (market) component in the university educational activity and competitiveness of the educational services;
2. the quality and assortment of the offered services;
3. the demographic situation;
4. the market research and research in the sphere of university innovative activity stimulation;
5. pre-university and post-graduate services for educational services' consumers as structural elements of a university;
6. employment of graduates, promotion of educational services and goods, advertisement;
7. results of commercial and other profitable activity of the university.

Thus, the research revealed the main elements influencing the informational provision and depending upon the directions of the educational process management automatization, the rules and features of particular educational establishments' functioning. As a result, the factors and spheres of occurring transactional costs are found.

The main attention was paid to the organizational-functional structures of educational establishments and their informational systems. The main directions of their transformation for the transactional costs reduction are revealed. The

[2] *See also issues of analysis made on performance indicators (Van Thiel & Leeuw, 2002).*
[3] *See for instance (Lewis & Smith, 1994; Seymour, 1992; Trow & Clark, 1994).*

logical continuation of the research is the evaluation of transactional costs by the above groups of factors, as well as using the project management technique for creating a program of measures for their reduction.

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Numerical Methods of the Decision Differential the Equations for Continuous Models Of Economy

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Abstract

The review of some models of economy based on application of the ordinary differential equations is provided in article linear and nonlinear, and also the review of approximate methods of their decision. Expediency of use of this or that numerical metods of the solution of the differential equations is shown. For some equations of continuous models of economy in work the approximate method is offered and reasonable. Estimates of convergence of approximate methods are given in the corresponding functional spaces. Results of the numerical solution of these equations in the form of tables and schedules are also received. The comparative analysis of the received results is carried out.

Keywords: *differential equations, approximate methods, continuous models of economy.*

1. Introduction

The review of some models of economy based on application of the ordinary differential equations is provided in article linear and nonlinear, and also the review of approximate methods of their decision. Expediency of use of this or that numerical metol of the solution of the differential equations is shown. For some equations of continuous models of economy in work the approximate method is offered and reasonable. Estimates of convergence of approximate methods are given in the corresponding functional spaces. Results of the numerical solution of these equations in the form of tables and schedules are also received. The comparative analysis of the received results is carried out.

2. Theory

It is known [1,2] that some continuous models of economy, for example, investigating economic dynamics, defining evolutions of economic systems are closely connected with the differential equations, with systems of the differential equations of the first order which, in turn, at the decision lead to the equations of the highest orders. So, for example, when studying nature of growth of production in the conditions of the competition, the quantity it is defined as function of time, then, by drawing up the equation of balance of investments into production and research of speed of production, receive the following nonlinear differential equations for finding of quantity of production of Q(t) and determination of nature of its increase:

$$Q' = \alpha P(Q)Q. \quad (1)$$

$$Q" = \alpha Q' \left(P + \frac{dP}{dQ}Q\right). \quad (2)$$

At application of dynamic model of Keyes for research of the balance model including the main components of dynamics, account and profitable parts of economy, setting the national income as function of time, we receive the linear differential equation of the first order:

$$Y' = \frac{1-a(t)}{k(t)}Y - \frac{b(t)+E(t)}{k(t)}, \quad (3)$$

where Y-dynamics of the national income, a (t), b (t), k (t), E(t) - the set positive functions which are characteristics of functioning and evolution of this state. We will notice also that a (t) is a coefficient of tendency to consumption, the function which isn't reaching unit; b (t) - autonomous (final) consumption; k (t) - norm of acceleration; E (t) - the size defining the public expenditures.

We will consider also neoclassical model of growth in which labor productivity as the function of time determined through Y = by F (K is investigated, L) — the national income where F — uniform production function of the first order for

which is fair F (TK,TL) = TF (K, L), To — the volume of capital investments (business assets), L — the volume of expenses of work. We will enter into consideration k fondovooruzhennost size = K/L, then labor productivity is expressed by a formula:

$$f(k) = \frac{F(K,L)}{L} = F(k,1).$$

The purpose of a task is the description of dynamics of a fondovooruzhennost or its representation as functions from t time. As any model is based on certain prerequisites, we need to make some assumptions and to enter a number of the defining parameters, such as a natural increase of a manpower, an expenditure of investments at increase in business assets at depreciation and other.

As a result we receive the equation of rather unknown function k

$$k' = lf(k) - (\alpha + \beta)k, \qquad (4)$$

where function f (k) is defined above.

The received ratio (4) represents the nonlinear differential equation of the first order with the divided variables.

It is possible to give the equations for a market model with the predicted prices as examples of the differential equations of the second order. In simple market models supply and demand is believed usually depending only on the current price of goods. However supply and demand in real situations depend also on a tendency of pricing and rates of the change in price. In models with the continuous and differentiated on time by t functions these characteristics are described according to the first and second derivatives of function of the price of P(t).

We will review a concrete example. Let functions of demand of D and the offer S have the following dependences on the price of P and its derivatives:

$$D(t) = 3P" - P' - 2P + 18,$$

$$S(t) = 4P" + P' - 3P + 3.$$

The dependences accepted here are quite realistic: we will explain it on composed with derivatives of function of the price.

1. Demand "is warmed up" by rate of the change in price: if speed grows (P"> 0), the market increases interest in goods, and vice versa. Rapid growth of the price frightens off the buyer therefore composed from the first derivative function of the price enters with a minus sign.
2. The offer in even bigger measure amplifies rate of the change in price therefore the coefficient at P" as S(t) is more, than in D (t). Growth of the price also increases the offer therefore composed, containing P', enters expression for S(t) with a plus.

It is required to establish dependence of the price on time. As the equilibrium condition of the market is characterized by equality of D = S, we will equate the right parts of these equations. After reduction of similar members we receive:

$$P" + 2P' + 5P = 15. \qquad (5)$$

The ratio (5) represents the linear non-uniform differential equation of the second order concerning the P(t) function.

Thus, we see that many models of economy lead to the differential equations, both linear, and nonlinear, the first and second orders.

In certain cases it isn't possible to find the exact solution of such equations therefore there is a need to apply numerical methods to finding of the approximate decision of these of the equation. In this regard it would be pertinent to mention approximate methods of the solution of the differential equations.

The choice of this or that numerical method is defined by a variety of reasons. Some of them are features of this class of tasks, requirements imposed to the numerical solution in the field of science and appendices, possibility of computer facilities, and also scientific traditions, qualification of developers.

At the same time, it should be noted also theoretical aspect of research. If Runge-Kutt's method, despite the labor input, possesses considerable accuracy and is widely applied at computer calculation, however, it isn't possible to apply it to theoretical justification of the approximate decision for a wide class of tasks, in a type of the above. Whereas straight lines and projective methods possess this quality.

From a big set of direct methods [3,4] it is possible to allocate group of projective methods, such as Galerkin's method, collocations, subareas, spline methods. They are more convenient for theoretical justification of existence and an assessment of an error of the approximate decision, however, difficult realized in practice.

For the solution of the equations (methods of Ritz, Bubnova – Galerkina) the set of works is devoted to application of straight lines and projective methods [5,6] recently. It is connected with that questions of theoretical researches of these equations and possibility of finding of their optimum decision represent a great interest for modern science.

Despite the results received for research of the differential equations (see, for example, works [7-9]) now questions of stay and justification of approximate methods of their decision very are particularly acute.

3. Results

We will consider a task for the differential equation of a look [10]:

$$-\frac{d^2u}{dx^2}+\frac{du}{dx}+qu=f(x), x\in(0,1), q>0, \quad (6)$$

$$u(0)=u(1)=0,$$

or in an operator form: *Au+Bu=f*, where $Au=-d^2u/dx^2$, $Bu=du/dx+qu$. As D (A) we will take a set twice continuously differentiable on (0,1) functions meeting the set regional conditions. The power space generated by the operator *A*: H_A —space of the functions belonging to W_2^1, meeting the set boundary conditions. It is possible to take system of functions in qualities of basic functions $\varphi_i=sini\pi x$, full in H_A space.

Then the approximate solution of the equation (6) is looked for in a look:

$u_N=\sum_{i=1}^{N}a_i sini\pi x$.

Unknown coefficients of a_i are defined according to Bubnov-Galerkina's method from the system of the linear algebraic equations which is written down in a matrix look: $La=f$, где $L=\{L_{ij}\}, f=(f_1,\dots,f_N)^{\mathrm{T}}$, where

$$L_{ij}=\int_0^1\left(\frac{d\varphi_i}{dx}\frac{d\varphi_j}{dx}+\frac{d\varphi_j}{dx}\varphi_i+q\varphi_i\varphi_j\right)dx, f_i=(f,\varphi_i)=\int_0^1 f(x)\varphi_i(x)dx.$$

Then for the equation (6) the following theorem is fair.

Theorem. Let the operator $A^{-1}B$ be quite continuous in H_A.Then at enough big N method of Bubnov-Galerkina gives the only approximate solution of u_N, which meets to the generalized solution u of the equation (6) on norm of H_A.

The proof of the theorem is kept according to [10].

Further by way of illustration we will give examples of solutions of the differential equations for some models of economy.

For simplicity we will accept dependence of *P(Q)* in the equation (2) in the form of the linear $P(Q)=a-bQ$ function. Then the equation (2) will assume an air

$Q''=\alpha Q'(a-2bQ)$.

Accepting α = 2; a=4; b=1, we will write down Z matrix received as a result of the decision (table 1.).

Table 1. Results of the solution of the equation of speed of release (2):

Z =

	0	1	2
0	0	0	1
1	$5\cdot10^{-3}$	$5.101\cdot10^{-3}$	1.041
2	0.01	0.01	1.083
3	0.015	0.016	1.127
4	0.02	0.022	1.173
5	0.025	0.028	1.22
6	0.03	0.034	1.269
7	0.035	0.04	1.32
8	0.04	0.047	1.372
9	0.045	0.054	1.427
10	0.05	0.061	1.483
11	0.055	0.069	1.542
12	0.06	0.077	1.602
13	0.065	0.085	1.665
14	0.07	0.093	1.73
15	0.075	0.102	1.797

Three columns of the table 1 include: the first column - values t in which the decision is looked for; the second column - Q(t); and the third - Q´(t). The decision was received in 300 points in a Mathcad package. At the solution of the differential equation of the second order the vector of entry conditions consists of two elements: values of function and its first derivative in the initial point of an interval.

Further we receive: *Q′* = 0 at *Q* = 0 at and at *Q* = *a/b; Q″* > 0 at *Q* < *a* */(2b)* and *Q″* < 0 at *Q* >*a/(2b)*; *Q* = *a/(2b)=4/2=2* — function graph inflection point *Q* = *Q(T)*. 1 schedule of this function provided on fig. (one of

integrated curves of the differential equation (2)) carries the name of a logistic curve.

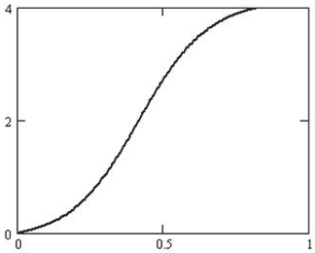

Fig. 1. Logistic curve.

For dynamic model of Keynes in the equation (3) believing key parameters of a task and, b and k constant numbers, we simplify to the linear differential equation of the first order with constant coefficients:

$$Y' = \frac{1-a}{k}Y - \frac{b+E}{k}. \qquad (7)$$

At a=0.1; b=4; E=5; k=2 and the initial moment Y=2 matrix of Zt received as a result of the solution of the linear differential equation of the first order with constant coefficients has two columns: the first column contains values t in which the decision is looked for; the second column contains values of the found solution of Y(t) in the corresponding points.

Table 2. Results of the solution of the equation of change of the national income (7):

Zt =

	0	1
0	0	2
1	0.033	1.879
2	0.067	1.756
3	0.1	1.632
4	0.133	1.505
5	0.167	1.377
6	0.2	1.247
7	0.233	1.114
8	0.267	0.98
9	0.3	0.844
10	0.333	0.705
11	0.367	0.565
12	0.4	0.422
13	0.433	0.278
14	0.467	0.131
15	0.5	-0.019
16	0.533	-0.17
17	0.567	-0.324

The decision was received in 300 points in a Mathcad package. At the solution of the differential equation of the first order the vector of entry conditions consists of one element: values of function in the initial point of an interval.

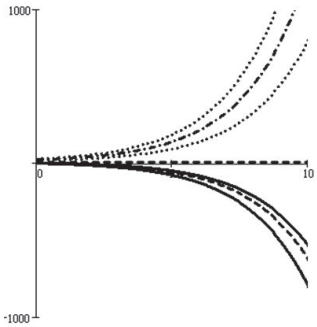

Fig. 2. Family of integrated curves of the equation (7).

If in an initial time point of *Y0* < *Yp* , the national income falls at set parameters of a, b, k and *E* over time. If *Y0* > *Yp*, the national income grows in time.

For a market model with the predicted prices, for the equation (5) we will receive the numerical decision in two cases.

We will consider a case 1. Let at the initial moment of P(0)=4 and P′ (0)=1, then Zw matrix received as a result of the solution of the linear non-uniform differential equation of the second order concerning the P(T) function have three columns: the first column contains values t in which the decision is looked for; the second column contains values of the found solution of P(t) in the corresponding points and the third P'(t) values.

Decisions were received in 200 points in a Mathcad package.

Table 3. Results of the solution of the equation (7) allowing to establish dependence of the price on time (a case 1):

Zw =

	0	1	2
0	0	4	1
1	0.05	4.041	0.662
2	0.1	4.067	0.348
3	0.15	4.077	0.059
4	0.2	4.073	-0.202
5	0.25	4.057	-0.437
6	0.3	4.03	-0.643
7	0.35	3.993	-0.823
8	0.4	3.948	-0.976
9	0.45	3.896	-1.102
10	0.5	3.838	-1.203
11	0.55	3.776	-1.281
12	0.6	3.71	-1.336
13	0.65	3.643	-1.369
14	0.7	3.574	-1.384
15	0.75	3.505	-1.38
16	0.8	3.436	-1.361
17	0.85	3.369	-1.327

We will consider a case 2. We will take in the initial moment of P(0)=4 and P′ (0)=-3, then Zw1 matrix received as a result of the decision has the appearance given in table 4.

Table 4. Results of the solution of the equation (7) allowing to establish dependence of the price on time (a case 2):

Zw1 =

	0	1	2
0	0	4	-3
1	0.05	3.852	-2.934
2	0.1	3.707	-2.84
3	0.15	3.568	-2.721
4	0.2	3.435	-2.581
5	0.25	3.31	-2.424
6	0.3	3.193	-2.253
7	0.35	3.085	-2.071
8	0.4	2.986	-1.882
9	0.45	2.897	-1.689
10	0.5	2.817	-1.494
11	0.55	2.748	-1.299
12	0.6	2.687	-1.108
13	0.65	2.637	-0.922
14	0.7	2.595	-0.743
15	0.75	2.562	-0.571
16	0.8	2.538	-0.41
17	0.85	2.521	-0.259

Results of the solution of the equation (7) allowing to establish dependence of the price on time in two cases are shown on graphics (fig. 3.).

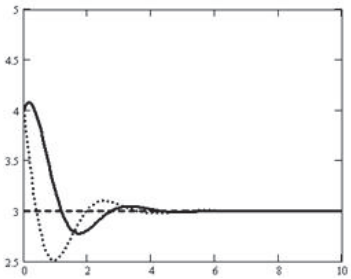

Fig. 3. Family of integrated curves of the equation (7) for cases 1 and 2.

From the schedule it is visible that all prices aspire to the established PSt=3 price with fluctuations about it, and amplitude of these fluctuations fades over time. That will be coordinated with known results from the economic theory [11].

4. Conclusions

Investigating various differential equations for continuous models of economy it is necessary to understand that Runge-Kutt's method of the fourth order is the most common for the ordinary differential equations. The formulation "the most common" is connected with the developed tendency in use of numerical methods. At formulas of an identical order of accuracy the main members of an error on a step often are disproportionate. For one equations one method, and for others – another gives a smaller error. In a similar situation of the recommendation in favor of this or that method have to be based on the "strong-willed decision" made taking into account traditions and practice of use of methods. The concept of practice of computing work is quite uncertain. However, despite such uncertainty, criterion of practice often bears in itself certain positive information which often at this stage of development of science can't be formalized or proved.

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Building a Model of the Modern Innovative Management System of an Educational Establishment

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Abstract

The work is devoted to building a model of the modern innovative management system of an educational establishment. The necessary prerequisites and objectives of the system introduction, as well as its key characteristics, are defined. The results of introducing the elements of the system in the functioning educational establishment are presented.

Keywords: *information system model, information management system, educational establishment, transaction costs*

The modern conditions predetermine a range of tasks, which educational establishment can fulfil only with the help of advanced information management systems. The need to introduce an *ERP*-system into management practice of a large university is unquestioned nowadays (Sullivan, 2009; Violino, 2008). The elements of an automatized information management system are now present in almost all universities, though the economic effect of their introduction is in most cases rather low (Xu, Rondeau, & Mahenthiran, 2011). While earlier the information systems in education attained mostly local goals (particular educational programs in various spheres, accounting, budgeting, personnel registering, etc.), nowadays, with the dynamic social-economic development of educational establishments, the goals are so vast that one cannot afford to distribute the efforts of working groups to different directions of development. Consolidation of the efforts of different department of a university will give a better result, both from the point of view of efficient use of economic resources, and from the point of view of increasing the quality of educational management (Аузан, 2006; Воронцова, Крамин, & Крамин, 2011; Олейник, 2005).

At present a large number of automatized information management systems for educational establishments are available. However, for a particular university or college, interested in the educational process automatization, the choice of the appropriate model has become even harder. The variety of platforms, of educational models, and developers can baffle even experienced managers of informatization departments. Moreover, the specific of educational activity implies a certain independence of educational establishments, universities in particular. The system should be customized for the specific demands of administration. This significantly complicates the design of the replicated information system and makes its introduction and customization much more expensive for a particular university, college, or school (Jones, 2009).

The work presents the experience of projecting, designing and introducing the information management system of a rapidly developing university with a network of large sustainable branches and a high degree of centralization of managerial functions. Ways of solving problems are proposed[1].

The goals of the system designing and introducing are defined:

1. Optimization of the functioning of personnel which deals with the educational process (Academic Work Department, Dean's Offices, Admission Department, Educational Methodology Department, Chairs).
2. Accounting of the professors' working time and using these data or detailed calculation of the costs of educational process.
3. Planning and predicting the teaching load in each discipline.

[1] *See also stage of ERP systems development (Esteves & Pastor, 1999; Sabau, Munten, Bologa, Bologa, & Surcel, 2009).*

4. Making prompt managerial decision (personnel policy, price-forming, planning financial results) at each level.
5. Increasing the efficiency of informational and communicational subsystems of the management system of the educational establishment.
6. Revealing, accounting and minimization of transactional costs (Воронцова et al., 2011; Крамин, 2007a, 2007b).

The software market research by the authors showed that up to date there are no *ERP*-systems for universities, satisfying the requirements of universality, simplicity of use and economic efficiency (West & Daigle, 2004). The western products are either not adapted to the Russian legislation or demand introduction expenses of more than 4% of gross income of the organization during 3 years, while the worldwide practice considers it optimal to spend 3% for maintenance and development of alit infrastructure, including technical maintenance and servicing. Moreover, each purchase must be grounded. In Russia this indicator is, as a rule, much lower: 0.5% - 1.5%.

The Russian software for reasonable prices are either lower in class than *ERP*-systems, or require significant overpatching for automatization of the business processes of a university. Due to that many Russia universities have faced a dilemma: which is the least evil? To buy a foreign product with a distinct introduction program and tangible result, but with large expenses and complete dependence upon the designers (each change in the legislation will require changes in the system), or a Russian one, which is cheap and easy to use, but in 2-3 you may face the risk of mismatch between the expectations and the results, or, still worse, of disability of the product to fulfil certain tasks.

All these factors prompted Institute of Economics, Management and Law (Kazan) in May 2006 to make a decision to create a special information system, meeting all the necessary requirements. The geographical remoteness of the Institute's subdivisions (7 training and 2 administrative buildings in Kazan, 7 branches in Tatarstan and Chuvash Republic) determined the architecture of the information management systems (IMS) of the Institute. It has a web-oriented interface and is based on 1C and J2EE technologies. The common data network with the branches and the high quality of connection allowed to use one server for accessing the system resources.

As practice shows, universities face significant obstacles in creating their own ERP systems (Carroll, 2009). We concluded that such system cannot be created to a classical pattern "examination-projecting-design-introduction-maintenance", as this cycle can be accomplished not earlier than in 3 years. By that time the project may become obsolete. The technique we used contains the same sequence, but is multi-layered. It means that initially only the general principles and logic of the system are rigidly determined, but the detailing of the system and the "design-introduction-maintenance" stages take place immediately after successful testing of the block, whose output serves as the input of the new block (Fig.1). This approach allowed to introduce the system gradually, without losing control over the general design process. For example, the "Admission Department" block was introduced when the "Students' Progress Registering" was still being designed. By today the whole educational process has been designed; working with the schedule has not been introduced; the systems contains data on all 1st and 2nd year students from the branches.

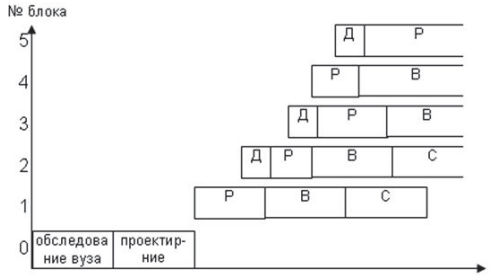

Fig. 1. Pattern of the information system forming. Stage: Д - detailing, P - design, B - introduction, C - maintenance.

The resource management at an enterprise presupposes accounting of all resources. A university is quite a unique services-rendering organization. By our estimations, costs of salaries of the teaching and administrative staff plus taxes amount to about 70% of the cost of student's training. That is why these costs require strict accounting. The modern accounting systems allow to successfully register and plan all costs which are not directly connected with educational process. That is why it is necessary, in our opinion, to arrange interaction between IMS and automatized accounting systems.

Two approaches to this task are defined. First, we can automatize the teaching load accounting through schedule-forming directly in accounting system (обсуждение вопросов внедрения показано в Hepner & Dickson, 2013; Joseph & George, 2002; Watson & Schneider, 1999). Second, we can create a software "superstructure" by different means. In IEML the task was solved initially by the first and then by the second method. To implement the second method, J2EE was used, as there was a requirement of distant working and unlimited scaling.

At present the actual data on the students' contingent and the fulfilled teaching load are systematically transferred from IMS to accounting system, and the data on the personnel – in the opposite direction. Further we are planning to use the change-server to synchronize both systems.

The final result will be a universal system. This is a complicated task, as the decision to create a unique system was made, in particular, with a view of maximal matching to the business processes of our university. The universality (applicability for the tasks of other educational establishments) is achieved by maximal softening the system limitations and using the system of most general assumptions of the functioning conditions.

As a result the main conclusion is made: the independent elaboration and introduction of IMS at university of is possible only under the following conditions:

- Available team of experienced designers, system analysts, specialists in software introduction and staff training;
- The university is developing so fast that the traditional management techniques appear to be inefficient;
- The university actively uses innovations and has know-how in staff management, in working with students, in various kinds of accounting, that is why the available software cannot be adjusted to the changes in the university;
- The university administration at all level should be interested in the result and fully understand the complexity of the work;

The peculiar features of the process of elaboration and introduction of the IMS of an educational establishment are:

- integration with standard variants of automatized accounting systems; the system is a separate configuration and has an open code with detailed description and possibility to overpatching by the user or a third party;
- involving a large scale of specialists: not only programmers and system analysts, but also lecturers, heads of departments, vice-rectors, which allows to completely reflect the details of the educational process in establishments of all levels, all property forms, and technologies in the information system model (Scholtz, Cilliers, & Calitz, 2012);
- continuous account, implementation and adaptation of new information technologies in education; the work of the new system in correspondence with accounting systems; for example, the model implements the transfer of the "semester" notion to the "studying period" parameter, which increases the model flexibility and allows to use it in schools. The model also involves a flexible format of the assessment scale, which can be adjusted to the one adopted in the educational establishment. Thus the universality and user-attractiveness of the system is increased;
- complete and hierarchical character of the model; the model contains all blocks necessary for the educational process management: admission department, students' contingent, teaching staff, teaching load distribution, schedule forming, load execution, payments; all other blocks are constituent parts of the mentioned modules, grouped in various reports; such a simple structure presupposes the possibility to overpatch and to fulfil all needs of the users.
- The first experience of introducing the elements of information system model shows that:
- it reduces administrative expenses for information flow and document processing, expenses for control over processes and ensures communicative functions;
- it significantly increases the influence of feedback from consumers of educational services to the university administration;
- it stimulates the administration and personnel to constant overpatching the system for the demands of its clients – the students. This fact has a positive effect on their loyalty to the educational establishment, increasing their attendance and progress;
- it increases the openness of the information for students and results in the more disciplined and coordinated work of all structural subdivisions, as any mistake is seen to other users and the competence of the worker can be doubted.

Thus, there are prerequisites for significant reduction of transactional costs of the organization. Moreover, the proposed architecture of the information system model, including the automatized accounting system, allows to promptly

reveal, estimate and minimize its transactional costs. Consequently, the reduction of transactional costs can be estimated in monetary terms.

In future we intend to develop the complex model of the information system of an educational establishment, as well as to train personnel for complete implementation of its possibilities (Chang & Chou, 2011; Kerr, Burgess, Houghton, & Murray, 2012). In this process, efforts of universities should be united in order to create the most high-quality and universal product, as well as to mutually use and improve it.

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Some Aspects of Ecological and Economic Education in the Process of Studying Geography in Pedagogical University

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Abstract

This article deals with basic issues of ecological and economic education in the process of studying geography in Pedagogical University.

Keywords: *geography, interdisciplinary communication, ecology, ecological and economic education, ecologization and economization of education, economy, economic and social geography, ecological and economic issues.*

At a turn of the twentieth and twenty first centuries as never before the problem of cooperation of the nature and society, that tries to find the ways how to break an economic and ecological impasse and to transfer the relations with the nature to the course of co-authorship. The intensified attention to these issues finds its reflection in education as well.

The utmost importance in the solution of issues of ecological and economic training co-educated youth is in detection of its contents, conditions for mastering fundamentals of modern sciences of the nature, society and the person.

To identify of a role of geography in ecological and economic training and education it is necessary to address to definition of geographical science in which, in particular, it is said that the geography represents "a system of the natural and social sciences studying natural and industrial geographical complexes and their components. The system of geographical sciences is united by close interrelation between the objects studied by them and a community of the final task consisting in complex research of the nature, the population and economy and in fixing the principles of cooperation between human society and the geographical environment" [3: 5].

As the researches of many scientists show, new strategy appeared in patriotic didactics, it is an economization and ecologization of school subjects of a natural and geographical cycle.

D. Zh. Markovic in his work "Globalization and ecological education" notes that creation of the new concept of ecological education assumes the need of critical judgment of a modern education system from the point of view of widely understood changes in development of civilization, including all complex of environmental issues as well.

The understanding of an education system should be transferred from pedagogical level to the level of moral responsibility. And the important place has to belong to ecological education because the mankind is faced by an issue of realizing the safe, from the ecological point of view, development [10: 21-22].

Ecological and economic education and teaching are two directions thanks to which ecological and economic competence of future geography teachers, which are ready to carry out their professional functions effectively, and in general, to life in modern society.

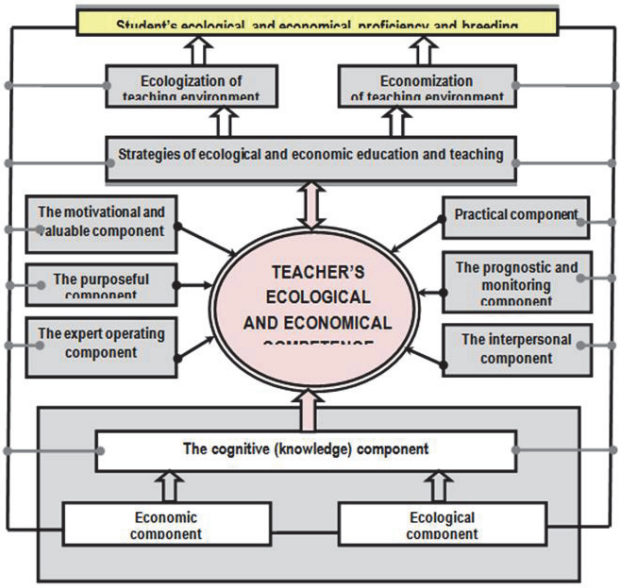
The ecological and economic accomplishment follows from the term ecological and economic education, it means a result of all ecological and economic education development, which includes knowledge of laws, categories, basic principles of ecology and economy, developed ecological and economic thinking existence, formation of ecological and economic skills. Concept the ecological and economic education includes two narrower concepts: ecological and economic proficiency and ecological and economic breeding which is the expected result of ecological and economic education and which can't be reached without ecologically and economically competent teacher.

Teacher's ecological and economical competence includes some components (Pic. 1). The cognitive (knowledge) component enters the information and analytical subsystem defining the directions of the analysis of information stream, selection and designing the maintenance of ecological and economic education, development of information and

methodical ensuring of ecoeducational process. The cognitive component is the main and it includes knowledge in the field of economy and ecology, ability to solve educational ecological and economic issues, ability to use various sources for obtaining ecological and economic information.

The analysis of the main tasks, which are set by economic and ecological components, brings forth that both of them pay much attention to a human factor as a main tool of solving its issues, both of them are also interested in forming person's new, competent and rational consciousness [7: 16-22].

The motivational and valuable component of teacher's ecological and economical competence is thought of as the motivation of economic and ecological education, interests defining student's behavior in ecological and economic activity, individual structure of ecological and economic values.



Pic.1. Model of ecological and economic education and teaching

The practical component is the ability to analyze and generalize the real economic and ecological events and situations, the ability to prove the point of view concerning economy and ecology, willingness for decision-making while being busy with educational tasks during classes and in out-of-class time.

The expert operating component sets the mechanism of organization the ecopedagogical process at the different levels, channels, devices, technologies of input of ecological and economic information in educational space.

Working in group, convincing communication, creation of relationship, and so on belong to the interpersonal component.

The prognostic and monitoring component traces the quality of economic and ecological education (the analysis and an assessment of compliance of students' economic and ecological culture level to requirements of the standard, information and methodical and material support level, the level of teaching personnel) and projects programs of students' individual development and the variable ecofocused educational models on the basis of the available resource opportunities.

In total all components there is an economic and ecological competence of the teacher which is directed on receiving the ultimate outcome – student's ecological and economic proficiency and ecological and economic breeding.

Ecological and economic proficiency is characterized by existence of the certain set level of ecological and economic knowledge, abilities, and skills of creative using the knowledge and formation of ecological and economic thinking at students. Ecological and economic breeding is a formation ecologically and economically significant qualities of the personality, such as enterprise, openness, efficiency, obligation, sense of delicacy, organization, rational thrift, diligence, feeling of the responsible owner, and others at students.

So, ecological and economic education and teaching are basic for the modern civilized person, because they give the person a certain world outlook orientation of the personality, form the value system.

The purposes and tasks of geographical and ecological and economic education are linked together and have a lot in common. So, a methodological fundamental of ecology and economy is complexity and system approach. But, exactly, complexity forms theoretical basis of geography as well.

The geography is guided by data not only science (mathematics, chemistry, biology, physics, etc.), but also other sciences as well, such as sociology, economy, ecology, political science, psychology, jurisprudence, and others. Allowing interdisciplinary communication is the principle of development of the content of geographical education on the basis of other disciplines influence, which helps the students to understand geography better by deepening in other subjects of special issues. As a result, students form a complete image of a complex of the interconnected issues of modern mankind and the activity position of a personal responsibility for their decision.

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Institutional Challenges and Economic Agents Forming a Competitive Market Environment

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Abstract

Enterprise (organization) as a slice of society on a global scale is the agent of a competitive market environment, self-production of which is the heart of its existence. Changes in the institutional environment and social values of the society have led to the convergence of historical organizational forms of enterprise: commercial and non-profit organizations, appearance of modern hybrid forms - environment serving organizations - ESO. They have the characteristics of active businesses and indifferent public organizations and institutions that are differentiated by the method of replenishment of financial resources. In a global economy there is also the transformation of the classical conception of the competition as a clash of opposing economic interests of agents to the antagonistic approach from the point of supercompetition - awareness of the effectiveness of alliances and cooperation of ESO. Integrated business groups - IBG: conglomerates of diversified ESO integrated as outsourced and virtual type of organization, financial industrial groups (FIGs), strategic network, successfully survive in a crisis. The research analyzed the conceptual model of the relationship between the government institutions of management, market structure of the competitive environment, the institutional challenges of ESO's environment and strategic decisions - competitive traps (patterns) of IBG.

Keywords: *economic agents, the convergence of historical organizational forms of business environment serving organizations - ESO, supercompetition, sustainable development strategy - SDS, integrated business groups - IBG, diversification, integration in outsourced and virtual form, financial-industrial groups, a synergistic effect, a model of interdependence, government institutions of management, the market structure of the competitive environment, the institutional challenges of ESO's environment, strategic decisions and competitive trap, patterns of IBG.*

1. Introduction

Enterprises and organizations form the behavior of economic agents (economic agents) which defines the basic characteristics of government. Like the society on a global scale, they are the only institutions among economic entities, self-production of that are laid down in the basic concept (base) of their existence, and the symbiosis of the state and enterprises are the only way of a successful mutual existence [10]. Almost every long going concern is a microscale model of the state. Its socio-economic status is related to socio-economic type of society and the state. Having entrenched in organizations, the following institutions as cooperation, discipline, obedience, leadership become decisive in the political life of the country also (put simply, notably the companies decide to pay taxes or not, pay salaries or delay, praise the authorities or defend independence). On the other hand, the activities of enterprises are affected by the entire institutional environment of the state and the macroeconomic environment factors (trend of growth (recession), the volume of industrial production, the dynamics of purchasing power of the ruble, the magnitude of unemployment, the tendency of the population to invest in corporate bonds, legal and economic discipline) which are functions of the indicators of economic agents, i.e. enterprises. The company, as such, is one of the main institutions of the organization of national production in the modern economy of Russia [3,7].

In modern conditions of postindustrial economy classical differentiation of the enterprises on commercial with the assets belonging to the private capital, and non-profit ones, being in public, state and municipal property, does not meet the realities of the global economic environment. Businesses which effective and aggressively respond to the challenges of the competitive environment. Their integrated business groups and internal bureaucratic, inappropriate to market changes organizations and institutions, performing the functions of public consumption, have different material, financial sources of replenishment of its own resources. Commercial enterprises do it through commercial contracts and deals in the sale of the results of their own activities to various environment economic agents. The second ones, non-profit enterprises, do it through subsidies, transfers which made or provided by external agents without the requirement of their compensation in kind. Changing of social mechanisms, social priorities, and institutional environment have led to a

convergence of historical organizational forms of enterprises (Fig. 1).

Fig. 1. Formation factors of ESO – environment serving organization

Public institutions (agencies, institutions, territorial offices, registration offices) have been involved in entrepreneurial activity, which previously was the exclusive domain of business structures, and a discriminatory behavior of private enterprises aimed at its own management utility have met growing public pressure to curb such organizational behavior leading to undesirable material and social consequences and violating ethical standards. These circumstances contributed to the fact that businesses entities focused solely on getting the target profit have assumed cost-based social obligations.

The public sector is under the influence of objectively growing need to really compete with the efficiency of commercial business structures through the creation of so-called intersecting organizations. Each of these organizations, according to Ansoff's terminology, a hybrid that has the features of private enterprise and the social structure [1]. These two types of organizations, as representatives of a single class, are called as organizations serving the needs of the environment - environment serving organization (ESO). The scope of their activities include the supply of goods and / or services to meet the community needs.

ESO class includes business structure, HEIs (universities), hospitals, religious institutions, government-owned institutions (such as registration offices, post office), common licensing services, notariate. In modern society the majority of employees and public servants are engaged in such organizations. Both of these categories - the concept of "enterprise" and the term ESO - organization serving the needs of the environment are identical, though not identical to the full extent.

2. Method

At the same time, it is difficult to recognize a state of the vast majority of domestic organizations serving the environment of various forms of ownership and sectoral affiliation, and commercial businesses (more than 6 million of companies in 1400 various industries have been registered in 2014 in a single register of enterprises and organizations of all forms of ownership and business models) as satisfactory [12, 15]. The practical use of strategic approaches to planning and management of ESO, the introduction of real economic activity of various economic agents of competitive and socially oriented market environment, the use of tools and methods of corporate sustainable development strategy - SDS will help to optimize their performance and efficiency of the formation of a convenient ("lean") environment.

Within the scope of the modern economic development the traditional attitude to the competition as a clash of interests opposing economic agents requires rethinking and revision. Canonical essence of competition has transformed into the concept of super (hyper) competition. According to V.S.Efremov, a well-known domestic expert in the field of strategic planning and management, in the context of hypercompetition, the cooperation, collaboration, strategic alliances are the only effective means of survival of the organization "Competition is a war, and start the war under the conditions of hypercompetition means to fight none of the above. One soldier does not make a battle"[5].

In a state of instability (cyclical crises in 1974 – 1975, 1980 – 1982, structural 90s, the global 2010 – 2014), the concept of diversification as a variant of the historic business expansion had been widely applied [1,6]. In translation from Latin "diversification" means 'change, diversity'. At a standstill a perilous concentration "of all eggs in one basket", and without taking into account a proven approach of balancing set of "apples and oranges" in the business portfolio of the commercial enterprises and ESO made by the consulting company McKinsey & Company may lead to the collapse of the

organization [9,14].

The problem of diversification is relevant nowadays as in the domestic and Western business practice it is quite widespread a point of view that in the current economic conditions the successful organization should be diversified, notably in many ways: with suppliers, markets, product range, types of activity [1,6,13]. Therefore Russian enterprises are jointed in holdings on the basis of vertical and horizontal integration, or by principle of foundation of conglomerates and/or strategic alliances, according to D. Lvov, integrated business groups - IBG [7]. The purpose of this alliance is to reduce risks and finding some balance in the context of increasing threats to unfavorable environment. Business associations in vertical and integrated corporates occur in the largest economy of the world, in the United States, too. However, there is the opposite tendency – split of large conglomerates [13].

In the economic literature it is customary to distinguish the related (vertical and horizontal) and unbound (conglomerate) diversification [6]. The task of related diversification is to provide additional competitive benefits, take advantage of the value chain of M. Porter for capitalization growth of organization, and flood of synergetic effect of sharing of marketing and research development according to R.Buzzel, B. Gale in order to minimize its cost [8,17].

Related vertical diversification combines several technologically successive stages of production of goods as opposed to unification processes within a single step. This is achieved by acquisition or inclusion in the organization of new productions included in the processing chain of an existing product, which leads to the replacement of traditional market planning and management of modern forms of corporate management, as well as to establish a clear outlines between the production system and the market.

Horizontal diversification has the form of involvement in economic activities the technological business processes of ESO within a single field of activity (industry or group of industries with similar characteristics). It can be fulfilled by two ways: through in-house production of the related to the main product or incidental lines of products, or through the acquisition of existing enterprises-competitors. This diversification has a positive synergistic effect, but increases the vulnerability of organizations from turbulence environmental and discriminatory behavior of economic agents of the market (from threats of inner circle).

The related horizontal diversification contemplates penetration of the company in close areas of activity, somehow contacting with the current one in a single phase of production, instead of a few industries (so-called latent diversification). Thus, this type of diversification is based on strategic adequacy and gentility of separate layers of ESO with similar value chains.

The unbound (or conglomerate) diversification involves invasion of the organization in any unconventional spheres of activity and manufacturing of new products not coinciding with the traditional profile. In this case the units of organization haven't common markets, resources, and technology. Based on the financial approach, the object of such diversification is not production but financial capital. It pursues the aim of an effective investment of available funds and formation of venture, flexible corporate business portfolio.

The integration processes in a post-industrial economy caused by the growing hypercompetition. Integration (from Latin *integratio* – "connection") is the process of organizational unification of industrial enterprises, ESO, retailers following from the strategic objectives and tasks of sustainable development. The same term characterizes the association of elements of the production process and the funds of the organization, too. Thus, not only organizational, but also technological and financial side of integration are manifested [3,6].

Currently the following types of integration of economic entities in integrated business groups can be distinguished [4,5].

Insourcing (internal) type of integration implies that all activities related to the production and final product realization are carried out in a single IBG. As a result, all necessary for obtaining the final product is created within the association, and can't be bought on the side. The primary resources (energy, raw materials, fuel and so forth) are arriving from an external environment only, and thus, manufacturing is not only technically, but also the organizationally united. Consumers buy finished goods issued on the manufacturer's initiative without participating with their ideas and resources in its creation. As a result, this process is unidirectional one. Management of the entire complex is carried out by managers of the parent company, but the companies included in the association compete for centrally distributed general resources (mostly financial ones).

Insourcing type of productive integration is based on the related diversification strategies and financial on the unrelated ones, product development and market.

Outsourcing (external) type of integration is based on involving external companies to perform certain operations associated with the manufacture and marketing of products. Thus, the production is becoming open instead closed, and technological cooperation between the participants is converted into the functional one.

The products are manufactured both on the basis of a strategic plan for sustainable development and partly on the

basis of contracts for which (not just for resources) between the enterprises there is a competition. The organizations decide the issues concerning the partners, volume and sequence of order processing independently.

The transition to a virtual method for the integration of the enterprises into the common business space and choice of the corresponding strategy are caused by the following:

- availability of the information infrastructure to collaborate virtually;
- compatibility of the internal organization and culture with information and technological infrastructure of common business space.

Associations on the basis of virtual integration allow the use of unique market opportunities that participants can't implement independently [5].

In choosing a method of vertical integration it is required to define the boundaries within which all business processes can be seen as the internal organization processes and beyond them - as external ones. The expansion of these boundaries entails greater concentration of production within the same organization, thereby increasing its presence in the industry as well as in the relevant market which leads to an increase of concentration rate (increase in the index of CR and IHH) and the monopolization of the market.

Specific organizational form of integration processes is the Financial Industrial Group (FIG), whose members can be connected internally as follows: financial liabilities promoting a sustainable development; synthesis of industrial and banking cooperation; mutual exchange of equity stakes; long-term strategic and transfer contracts; regular meetings of the leaders; cross-membership in the directorates [7,3].

To achieve their goals, FIG should include both production and financial structures acting as a parent and its subsidiaries, either partially or fully having merged their assets on the basis of the contract. They fulfill economic or technological integration for the implementation of the investment programs or programs aimed at improving their competitiveness.

The need of creation of FIG is caused by the vital strategic necessity to overcome the crisis of economic restructuring, strengthening and updating process chains, facilitating access to the world markets.

The optimum combination of the participants in the group creates the rational terms for enhancing the stability of FIG (based on the convergence of strategic objectives and interests of united economic agents) and efficiency by means of the implementation of various forms of flexibility and synergy. Along with that the list of participants isn't permanent. It must be developed by complicating of the goals and tasks of the integrated system, in changing in environment, owing to lower efficiency of individual participants. Thus, from a position of potential participants, the structural composition of FIG should be considered as an important interactive parameter of the current and strategic planning by internal efficiency and external competitiveness.

In the context of innovation competition and restructured Russian economy it is extremely essential that FIG is able to expand investment opportunities of industrial companies at the expense of borrowed capital thanks to presence of stable shareholders and banks. Public shareholders as a part of FIG will allow boosting the rational structural shifts in production. Integration into FIG in compared with the merger into a single company will allow avoiding weakening of motivations of grouped companies, optimize their production scale and price competitiveness.

The high level of value added tax, the pressure on the ruble money supply in the framework of macroeconomic stabilization measures pushed Russian organizations and enterprises to integrate in the form of holdings and a single corporation. But the integration of several competing groups in each of the monopolized sectors of the Russian economy (engineering and defense industry, petrochemical, chemical, mining) in the framework of FIG will mean a transition from supermonopolism to oligopoly competition prevailing in the industrialized countries. Thus, widespread trend towards associations and holding companies that collect in their structure of the one-type production and thereby recreating the former monopoly industry would be destroyed.

Integration processes in the post-industrial economy lead to the formation of strategic networks. A network is a set of enterprises and their associations coordinated by market mechanisms, and the chain of command is replaced by a chain of orders.

Network development began in the late eighties due to the worsening international competition and actively is continuing today. The networks can join together suppliers and customers linked technologically and economically and interested in cooperation, and distributors of goods who can co-operate on the principles of a participatory, freedom of partners identifying and information exchange, trust and respect for ethic social norms [2].

3. The Main Part

The President of Russia V. Putin [11] aims society and the government that the large-scale changes in the reproductive

structure of modern Russian economy, a significant improvement in the institutional environment of organizations which are necessary for their successful operation and harmonization with industrial and market-based policies, rapid elimination of disproportion caused by technological mixed economy can't be done by relying on market mechanisms of competition only. Analytical framework for the research of market processes can serve the cluster diagram of market structure, the behavior of the organization and functioning of the market that we recommend in this study (Fig. 2). It is known that the behavior of businesses and ESO are reflected in the structure and functioning of the market. In an effort of increasing their market share through mergers and acquisitions, they raise the level of market concentration, affect conditions of entry into the industry, and monopolizing it, change the market structure, which in turn, influences efficiency of functioning of the market, efficiency of distribution of resources at vertical integration, in the presence of the price pressure or arrangement at the horizontal can decrease at simultaneous increase of efficiency of their use in FPG and strategic networks (through the synergistic effect of a single administrative unit, joint storage of reserve stocks, discounts on bulk purchases, reducing the cost of capital, R & D cooperation, the effect of the spill marketing). The functioning of this market affects its structure and the subsequent behavior of economic agents whose excess profits may encourage other organizations to enter the industry. It helps to lower the concentration, impacts on production efficiency and innovation and creates a driving force for the competitive environment.

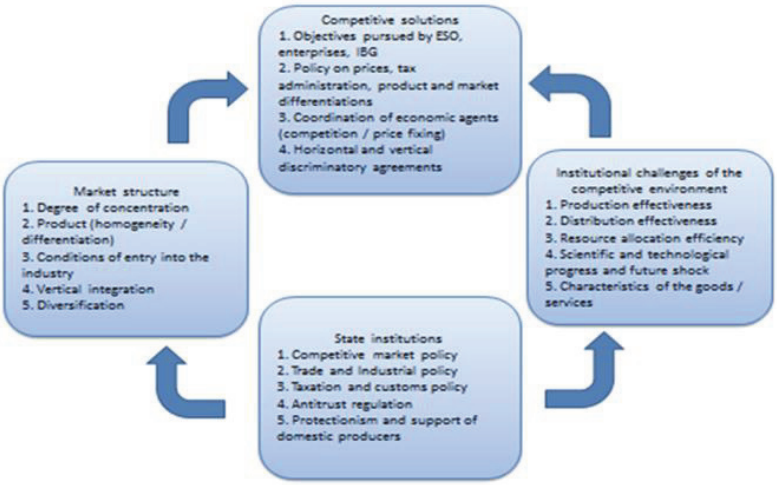

Fig. 2. Conceptual model of the relationship between state institutions, market structure, institutional challenges of the environment and competitive solutions organizations (IBG, enterprises, ESO).

Priorities for long-term development of the organization assign outlines of industrial policy and market of comprehensive system of SDS organizations. Transformation of marketing and logistics complex and Research and Advanced Development complex, strengthening or weakening their role in the organization reflect the direction of strategic changes of the latter. The need to differentiate their own products, develop of personalized methods of interaction with the end user increase the interest of economic agents to product management model (in the management practice of domestic manufacturers technology brand management are beginning to use).

Activation of market-based policy associated with large-scale reform of legislation at the turn of the centuries contributed to the establishment of stable relations between the major economic agents in the market, the emergence of new progressive institutions (FIG) and integrated business groups (IBG).

Comprehensive market imperfections are mainly caused by the state economic activity. Assuming part of loading on overcoming of imperfections of market economy and other barriers ('locking effects' on V.E.Dementiev's terminology [3]) of market coordination, FIG reduce appropriate loading on the state. Herewith they neutralize the locking effects, which characterize the state of coordination of economic activities, solving the problem of strategic resources maneuver between sectors and promoting the transfer of the developed and mature industries (step G-2 and M on Gompart's curve) to the category of donors of new strategic breakthrough.

Taking into account the above, it is represented to us that due to the insufficient level of competitiveness of many

industries and the real sector's enterprises, their unavailability to function in the conditions of the World Trade Organization (WTO) speed up the joining processes would be premature. Russia's accession to the WTO predetermines, in particular, the harmonization of tariffs capable considerably to reduce price competitiveness of many domestic producers whose stocks have been exhausted.

4. Results

Intermittence, hardly predictability of changes of the competitive environment change traditional ideas of entrepreneurship, business, production, the commercial and social public work of agents of the market environment. The period of globalization of economy reoriented policy of confrontation of competing companies and organization on policy of cooperation and partnership of successfully surviving companies.

Multinational (multilocal) corporations and alliances, the integrated business groups become the main subjects of global economy. According to many modern researchers the economic pressure of globalization is inevitable, and it will lead to refusal of traditional views of an industrial and trade policy, the issues of post-industrial macro - and microeconomics, conditions of the competitive environment of the national and local markets, the trends and benchmarks for sustainable development.

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Accounting and Analysis in Managing the Cost Of Innovation

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Abstract

The article reveals the theoretical and practical aspects of accounting and analysis in managing the cost of innovation. Innovation process is a process of successive transformation of ideas into goods including stages of basic and applied research, engineering development, marketing, production and distribution. The purpose of accounting and analysis in managing the cost of innovation is to find a solution that would best meet the needs of all participants in the innovation process, and provide the required level of profitability of the project costs.

Keywords: *innovation, innovation process, the life cycle of innovation, innovation cost management, innovation life-cycle.*

1. Introduction

Development of exchange relations in the Russian economy, its integration into the international economic system requires the development of economic relations in accordance with international standards. In global practice, management of scientific and technological progress and introduction of its results into production is called innovation [4].

The defining characteristic of IP is the innovation cycle, whose design and effectiveness of the realization determine final operation results of the whole management system of scientific and technological advance. The innovation cycle is composed of interconnected and interdependent elements - steps and stages that form a complex whole – a system. The end result of this process is an innovation as a change implemented and used [11].

Innovation cycle for a particular object (a new product, process) is called the life cycle of innovation (ILC).

Applying the concept of life cycle to management of innovation costs, in our opinion, is particularly important, as it allows a systematic and comprehensive approach to the study of processes that take place within the framework of the innovation process, to trace the formation of costs for product of labor, to assess their effectiveness based on final results rather than on interim ones [12]. It is necessary to clearly distinguish, define, identify and analyze all steps and stages of the innovation cycle, as this affects the specificity of formation and the amount of costs that can reasonably be attributed to innovation.

2. Theory

Innovation life-cycle, as a rule, is the period of time from the idea generation, creation and dissemination of innovations to its use and disposal. It can be considered as an object of study as a whole or in the form of relatively isolated independent processes with their goals, final product, and the structure of the processes for its realization [1].

Product life cycle has time, labor and cost estimates used to manage, and is the most important characteristic of innovation, whose content defines the sequence and features of the processes occurring when innovative project passes its separate stages and phases. All they can be characterized by a set of goals and objectives, the specifics of methods and means to achieve them, the organizational form and the magnitude of costs for their implementation, the uncertainty degree of the expected results. When managing innovation product life cycle, one can systematically affect the efficiency of the innovation process and the management of the enterprise.

Life-cycle theory as a control object has become widespread in the theory and practice of management in consideration of a problem. The relevance of studying cycles is caused by integrated systems approach to improving the management of economic and innovative development, accelerating the introduction of scientific and technological achievements into practice, increasing the commercial effectiveness of product and production [3].

The concept of innovation life cycle, in our view, can be used to solve problems in quality management and product costs. In the solution of this problem pre-production stage plays a significant role which creates conditions for increasing efficiency of the entire life cycle. It is the most important for successful realization of innovations. It is in the early stages that basic qualitative, cost and other technical and economic indicators of innovations start to form [6]. Making inefficient management decisions in the early stages of the product life cycle may entail unreasonably high costs in its later stages. At the same time technical parameters adopted in designing products and processes required for their achievement limit the effective impact on the cost in the subsequent stages. Therefore, developers should formulate and solve not only technical problems, but also the ones which are specifically associated with future costs, so costs must be seen from the stage of pre-project studies.

Separate consideration of the features of the total costs formation according to stages and phases of life cycle greatly enhances the cost management opportunities throughout the innovation process, improving its information security and contributing to the search for reserves to reduce overall costs [2].

Innovation life cycle is a complex multistep process which is characterized by various specific relatively independent components in the form of separate phases and stages. Nevertheless, it should be noted that the ultimate objective of the entire innovation process should be seen as dominant in the organization of the management of separate life cycle stages. Thus, inadequate account of consumption for the conditions of a market economy leads to disunity in the individual stages of innovation process. This is evident, first, in an underestimation of the resulting impact of an intermediate stage on another in getting optimal values, and secondly, in almost complete absence of account of the probabilistic nature of the innovations development in time and the associated high risk of getting the expected results in consumption [5].

The concept of innovation life cycle has already found its application in the development of the domestic complex quality management system (DCQMS) and received positive comments.

3. Results

Investigation of the current system of innovation cost management shows that it still does not meet the principles of consistency and comprehensiveness. Individual elements and units of cost management in the innovation process have evolved and are being still developed largely in isolation and without sufficient focus on the ultimate goals of management [9]. It is developed separately in each economic unit, without proper alignment between the individual stages of the innovation process, which ultimately reduces the effectiveness of cost management system. There are also significant opportunities to improve cost management at the individual stages of life cycle.

As certain shortcomings of existing methods of cost management can be named the following:

- lack of forecasting and control of the total costs, defining their structure by innovation life cycle stages;
- cost management by economic units, but not by product;
- cost planning based on performance criteria of a specific economic unit without considering the interests of all LC participants;
- lack of a strategy to reduce the cost by products and LC participants;
- lack of continuity in decision-making by life cycle stages.

Improving the efficiency of innovation and its life cycle is ensured by coordinated action of three groups of factors:

1) planning economic indicators which should precede engineering design, focusing the developers on the economically effective solutions. Economic planning made in an early stage of innovation development allows to include such consumer and cost options that guarantee commercial success and effect. Economic planning covers the entire life cycle of innovation, that is, the period during which it manifests the effect allowed for, costs of such a design are not more than 3-5% of the total appropriations for the development, but they are one of the most important factors for the effectiveness of innovations;
2) the very activity in R & D which should not be a limited autonomous system, and is an important element that plays an active role in ensuring not only technical solutions, but also economic tasks. The main purpose of this unit is to create a product with the specified technical and economic parameters that takes into account the latest scientific and technological developments and meets the best world standards;
3) production and sales of new products which forms and shows the final effect of R & D for both the producer and the consumer. It should be noted that the highest efficiency of the innovation life cycle can be achieved only if there is contingence of all the elements and processes for the development of the product, its production, organizational structures, management systems of production and marketing [7].

To manage the innovation process and to achieve high economic efficiency of the final result, it is important to

create an information base for decision-making and take into account the characteristics of each stage. The information content at different stages of the innovation process, in our opinion, should address the aspects presented in Table 1.

Table 1. Information base of innovation life cycle stages

Stage	Information
Pre-project	information about technological developments in the innovations market coming from the research and development departments, marketing departments; about enterprise's potential for the development and mastering new products, determining the degree and size of the risk; about target markets and trends. At this stage output parameters of the goods or services should be determined, as well as the need for products, the way to meet the needs, the main quality parameters based on the products attractiveness for customers, cost, schedules, scope and form of marketing
Projecting	information relating to new product ideas, their feasibility; differences and similarities of new and base products are revealed as well as new product compliance with specialization of the enterprise; the patent purity of the future product, its technical and economic characteristics are determined, the quality and consumer properties are evaluated; the economic efficiency of a new product is analyzed; demand and sales volumes are forecast; expenditures for creation and development of new products are determined, as well as lead time, the necessary resources for the production of new products, the payback period; entry into a market; profitability of new products is analyzed and assessed
The stage of organizing new product manufacture	Output planning for each unit engaged in the manufacture of a new product; creating a sample and technical testing; studying product prices and other commercial conditions in the limited market; choice of distribution channels, means and methods of advertising..

At the stages of research and new product development, it is important to establish a correlation of expenditure for these purposes, the volume of sales, operating costs and profits, as well as to assess the payback of the development, production, marketing and advertising (usually this period will not exceed five years from the start of mass production until the break-even point).

A decision to start manufacturing a new product is based on the calculation of sales, cost of production, the degree of satisfying demand and supply, the stability of relations with customers; capacities, resources; the total investmenst in production and distribution, the expected profits for the accounting period, positive cash flow.

To realize the target criterion of efficiency it is necessary to create economic controlling mechanism for costs and benefits whose main components should be planning, recording and analysis. Constructing cost management system should be based on the modern principles and methods incidental to market economy, and take into account international standards. In particular, it is necessary to use such concepts and methods of cost management as controlling, management accounting, functional cost analysis, modern methods of economic evaluation of innovative projects which are adequate for market economy [10].

Planning functions will include project, regulatory and planning calculations; budgeting preparation and development of production, the production itself, the cost of production and service management, and other complex costs attributable to individual products in proportion to the reasonable bases; preparing a plan to reduce the cost of production by items of cost and factors. A special feature of this function is to determine the total costs of the life cycle and to use them as a target criterion in planning costs for new products by separate stages, steps in each organization involved in the implementation of the product life cycle [8].

Accounting requires the following activities:

- scientific and technical substantiation of norms and standards;
- the creation of regulatory services,
- budgeting productive resources,
- operational control over compliance with the regulations and cost estimates,
- -taking into account changes in regulations,
- current accounting and control of administrative and general costs and their distribution,
- drawing up cost-information reports,
- establishing cost and responsibility centers. Regulation function includes the work to prevent and to reduce losses from inefficient, unproductive utilization of material, labor and financial resources, to take measures for the adjustment of the rules, regulations and plans (budgets) of all types of resources, to increase the volume of work and products, timely implementation of plans for scientific and technical development. All of these

activities should be aimed at achieving a given level of total expenses which is the main objective criterion.

The above mentioned work to be performed by the various functions of cost management should be linked to each other, and should be in accordance with the following principles:

- substantiating decisions to create and to manufacture new products along with already being manufactured or to replace obsolete ones;
- creation of scientifically-based norms and standards which at most reflect planned achievements of NTP and requirements of competition;
- planning production cost and its individual types, estimating costs based on progressive norms of expenditure of living labor and materialized labor, taking into account saving from the introduction of new technology and organizational and technical measures in the planning period;
- organization of cost accounting by their places of origin, centers of responsibility, identifying deviations of actual costs from the established norms, budgets by reasons, perpetrators of overspending or initiators of cost savings;
- systematic changes in the norms and standards of costs and their daily account to control economic efficiency of organizational and technological measures to improve the production and management;
- consolidation and analysis of information about deviations from the norms, estimates and about changes in rules and regulations by places of cost origin, by causes and perpetrators of deviations and initiators of change;
- improving methods for monitoring and analysis of production cost in all stages of the innovation life cycle, starting with the pre-production stage which includes project development of new products, to the exploitation by consumer;
- creation of an up-to-date information base which satisfies the requirements of operational management of economic processes and enables management to make better decisions about how to reduce costs and reserves and the cost of production;
- relationship of material and moral incentives to reduce costs in all stages of its formation and responsibility measures in case of overruns, wastage and losses in the design, valuation and costs planning stages;
- use of data consolidation and analysis of deviations from the norm, changes in regulations and budgets to make corrections, for vision and evaluation of the economic performance of units and evaluation of managers.

An important means of cost management system is a management accounting system whose the operation involves: determination of costs needed to achieve the planned objectives by centers of their origin, by product, by each project which are reflected in the planned indicators and regulations; account of actual costs and the identification of deviations from the plans.

4. Conclusions

For the effective operation of the developed control system all structural units whose activities affect the cost and result should be clearly defined. Each unit receives the status of the center of responsibility which is delegated the appropriate authority. When deciding on the establishment of organizational structures of management costs in the enterprise it is necessary to determine not only the unit responsible for the costs, but also cost objects, that is products and services. In the sphere of innovation cost object is a project development, event, order.

The purpose of the innovative project is to find solutions that can best meet the need, perform certain functions, which should provide the desired profitability level of the project costs. Perfection of the innovative project results can be expressed in quantitative ratio of outcomes and costs both for the project as a whole, and to some extent for its individual functions. The feasibility and value analysis enables to combine economic (cost) and technical aspects of a project, an item, a product. Cost analysis allows to minimize the costs and expenses which are necessary to carry out certain types of work (design, project and technological, research and experimental, etc.). Performance results utility in innovation is manifested in relative saving of follow-up costs when producing and operating, or directly when creating objects.

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Influence of Interaction between Higher Education Institutions and Audit Organizations on Graduates Training In Management, Economics and Finance Institute Kfu

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Abstract

The article is devoted to the relevance of the interaction between higher education institutions and target employers within new Russian education standards. The paper considers the effectiveness of existing work model of the Kazan (Volga Region) Federal University with audit firms and proposes further improvement of colloboration effiency.

Keywords: *the interaction of higher education institutions, target employers, audit firms, students' professional orientation, the quality of graduates training*

1. Introduction

In accordance with impelemtation of Federal State Education Standards for the third generation (hereinafter - the standard or FSES III), the interaction with the employer is an important aspect of Bachelor training. The standard requires the active involvement of employers' representatives as external experts in the education process. A similar standard for Master's training defines the proportion of the employers involvement to be not less than 20% of all the instructors, they must take the operating executives or senior manager positions in the relevant organizations. New Federal State Education Standards for bachelor's and master's degrees, the so-called III +, which entered into force on September 1, 2014, specify that the employers involvement in the education process should be carried out in the form of continous assessment, interim assessment, as well as review of assessment tools [3]. Table 1 shows the comparative characteristics of the standards related to the employers involvement.

Table 1. Changes in Federal State Education Standards as to employers involvement requirements

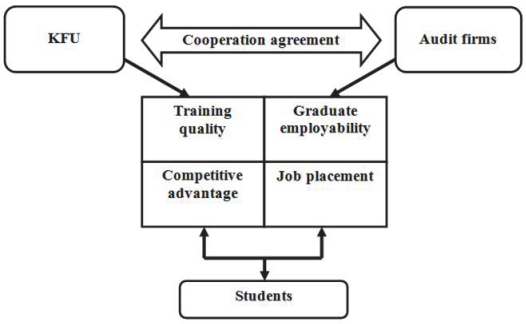
Name of the Standard	Quality criteria (Requirements to be met by employers involved)		Quantitative criteria (the number of employers representatives)		Areas of involvement	
	Bachelors	Masters	Bachelors	Masters	Bachelors	Masters
FSES III	Acting managers and senior employees of relevant organizations – traget employers as external experts		Not less than 5% Of all insrtuctors	Not less than 20% Of all Professors	Ongoing progress monitoring procedures, interim assessment	Assess education process quality in general and the work quality of individual Professors
FSESIII+	Employers as external experts whose work experience in the occupational area is not less than 3 years		-	-	Continous assessment, interim assessment. Varifying assessment tools. Evaluation of the education process content, organization and quality in general and that of the certain disciplines, internship and the work of individual instructors and Professors	

Aim of the study is to develop a phased cooperation model of higher education institutions and employers. The study is

conducted in Economics on the basis of Kazan (Volga Region) Federal University (hereinafter - KFU). The audit organization both regional and international ary considered to be employers.

2. Theory

In order to comply with the FES III + requirements in attracting employers as external experts it is necessary to organize the system of interaction on the basis of long-term contracts that would provide a permanent impact on the quality of students proficiency. The approach is based upon the contacts of the Institute of Management, Economics and Finance KFU (hereinafter - the Institute) with audit firms. Institute has established strong relationships with the leading audit firms that are involved in training Bachelors and Masters in Economics majoring in "Accounting, analysis and audit". The results of the interaction of KFU with audit firms are shown in Picture 1.



Picture 1: The results of the interaction of KFU with audit firms

The interaction lies on the cooperation agreements without finance involvement. In accordance with the agreement the audit firms participate in the education process, provide conditions for internship with an idea of graduate employability [1].

Each party is able to successfully achieve the results expected of the interaction. That is, getting audit firms managers involved in the training process, Institute meets the requirements of education standards and of the business community. The audit organizations having the access to the undergraduates and postgraduates training process could select the most promising candidates and test them during internship or advise on curriculum practical training. According to audit firms such while-training monitoring of the undergraduates and postgraduates has a positive impact on the employment policy.

The Institute has a cooperation agreement with the world's four largest audit firms (the Big Four) - PricewaterhouseCoopers, Ernst & Young, KPMG and leading regional audit organizations FBK –Volga region and AUDEX (the cooperation with the longest history is with the Kazan office of PricewaterhouseCoopers. The first agreement was signed in 2008).

The existing interaction structure of KFU and audit firms is shown in Figure 2.

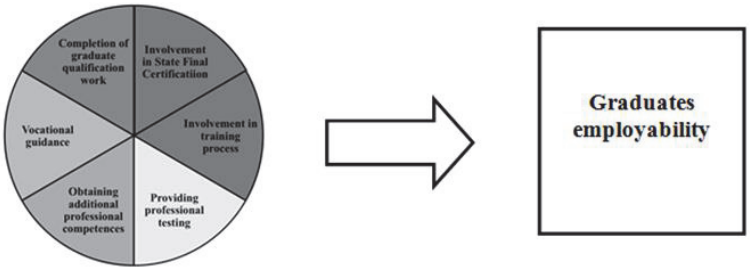


Figure 2: The existing interaction structure KFU and audit firms

Interaction with audit firms currently is carried out in several directions.

The first and the most traditional is participation in the Graduates State Final Certification. Representatives of these organizations act as legally competent members of the State Certification Commission. Based on the results, such participation from year to year secures high level of graduates knowledge majoring in Accounting.

The second direction is straightforward involvement in the education process. The plan of cooperation is developed and updated yearly with each audit organization and approved at the beginning of the academic year. Participation of audit organizations specialists in the syllabus of each course is agreed in advance with the Professors and includes a preliminary discussion of the issues the auditor is going to deliver. The students informed about the opportunity can interact with highly qualified specialist and ask the questions of their concern. The practical orientation of such studies reveals new aspects of the course and makes students interested in their future profession and encourages students to extend knowledge and consequently improve their performance [4].

The third direction of interaction is conducting proficiency testing of students whose major is accounting. Systematically since 2009 PricewaterhouseCoopers has been conducting such testing inviting those students who voluntarily want to have their proficiency assessed. The testing attracts from 150 to 200 students annually. Since 2014 AUDEX and FBK-Volga region, two regional audit companies, joined in provision of the testing.

Hence, it was decided to go forward and make the test mandatory for all graduates with the assisstance of the KPMG Kazan office staff and using their evaluation tools that contain a digital test to determine the ability to operate general economic categories and conduct accounting and analytical operations, computational and analytical task and an essay in English. The result is that in 2014 293 Masters and Bachelors majoring in Accounting were tested which makes 85% of total graduates number. And 52 of them fully complied with the KPMG starting requirements which represents 17.7% of the students tested. This was found to be a positive test result, but more attention, in our opinion, should be given to the training analysis of the rest 82.3% of students.

In a more practical context the assessment of performance by the professional community allows to ascertain the strengths and weaknesses in the students training and, on this basis, to modernize training process [5].

The fourth direction is that students receive additional professional competence in the framework of audit firms. In this regard, recently there has been a variety of forms and approaches. The Big Four provides our students majoring in accounting with the opportunity to have internships while studying. This allows the students not only to get an insight of the auditor's profession, but furthermore be motivated to continue study when they understand the value of the knowledge acquired. The AUDEX and FBK-Volga region provided students with opportunities to work on probation in 2013-2014 academic year and shape the selected students to the needs of the companies and thus target them at work in these organizations. As a result, the students received certificates which became an essential part of their professional portfolio [2].

The fifth direction of interaction is associated with an undergraduates professional orientation. Here, it is important to note the role of PricewaterhouseCoopers Kazan office. Over the last few years they have been organizing «Feel like an auditor», a business game, with second-year students, which is very important as during the first two years of study all students enrolled at the Institute have general curriculum without specialization/ majors. After the second year, students face the problem of major determining. This game is the best tool for making the right choice.

The sixth direction is participation of audit firms in the completion of graduates final qualifying work. While writing a paper on the topics related to the audit the students are coordinated and advised by the audit organizations and provided with papers, documents and advice. AUDEX and FBK-Volga region give the final review on the papers.

All these directions of cooperation are the results of sustainable realization and may have natural continuation. Such a conclusion can be drawn from the fact that it all began with an invitation of audit firms employees to participate in the State Final Certification and deliver certain lectures. Today's cooperation has reached a new level the main feature of which is the annually planned consistency [6].

3. Results

The main result of the Institute and audit firms interaction is recognition of graduates by the auditors alumni community which is evidenced by the successful graduates employment with audit organizations. For example, the KPMG Kazan office where, from the very beginning of its operation, 70% of staff is our graduates. The most striking example is the performance of the PricewaterhouseCoopers Kazan office, where 106 graduates are currently working and by September 36 graduates representing 10% of the class have received a job offer this year.

Analysis of interaction allows to form a phased cooperation model (Figure 3), which will visually represent the most efficient sequence of joint actions for the successful collaboration with any employer.

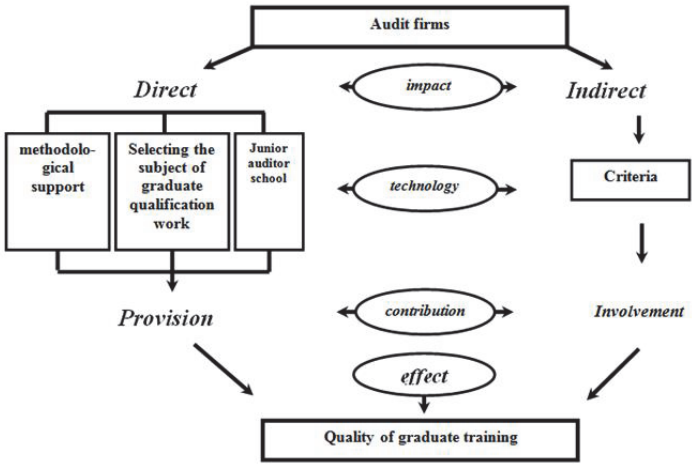


Figure 3: Model of the audit firms impact on the quality of graduates training

The other result of the interaction was the shift in the Institute education policy implying the fact that the graduates need specialization to work with audit organizations. In this regard, within the framework of Bachelors in Economics (major in Accounting, analysis and audit) the third year students will have an opportunity to choose audit as a major by taking relevant elective courses. In addition to general professional courses they will study the practical audit, information technology audit, taxation and international accounting standards, bank accounting in-depth [7]. The list those of proposed for specialization has been agreed with the audit firms which heavily participated in curriculum and made it relevant to the preparation of their future employees [8].

It should be noted that the aspects where interaction requires more effort could be divided into direct and indirect impact.

The technology to implement direct impact on training quality for audit organizations can be identified the following:

- firstly, it is the auditors' participation in the formation of methodological support of the curriculum. It is advised to form the training-methodical commission with the participation of audit firms and faculty members to validate the practical orientation of syllabuses. Practical orientation is the most vulnerable aspect, as teachers do not always have a practical experience. In this respect, providing teaching aid auditors facilitate methodological support and make the training content realistic to the audit practice;
- secondly, the participation of auditors in forming subjects list of final qualifying papers. This will make the work more practically significant for audit organizations and attractive for students and can also be implemented by the proposed training-methodical commission;
- thirdly, students who are most interested in the auditing could get training at Junior Auditor School to be jointly established on the basis of the Institute. Students of the School will be considered as qualified candidates pool.

All of the above will ultimately ensure the quality of training.

To define the indirect impact of the audit firms activities on the training quality, identified were criteria for assessing the audit organization performance which characterize its social activity.

Ultimately, this participation will also have an impact on the training quality in the audit field.

4. Conclusion

Given the growth rate on the audit services market it is found essential to separate major Audit from the major Accounting, analysis and audit in Economics.

Therefore given the interaction experience of the university and audit firms and to strengthen the influence on the auditors training process it is proposed to introduce the criteria characterizing the audit organization involvement that may link social and professional activities of the audit organization into performance rating. The criteria proposed to evaluate the audit organization participation in training process are given in Table 2.

Table 2. Evaluation criteria of the audit organization participation in training process

N	Criteria	Characterization
1 1	methodological support	percentage of audit firms employees who participated in the development and review of training materials of the curriculum
22	participation in the curriculum development	number of syllabus developed with the participation of the audit firms
33	consideration the issues important for the audit organization in the final qualifying work	number of final qualifying papers written by order of the audit organization
44	advice on the final qualifying work	proportion of audit firms employees advising on the final qualifying work
55	participation in the National Certification Commission	proportion of audit firms employees participating in the State Final Certification as Chairmen or members of the Commission
66	students' training and internship with the audit organization	number of students in relation to the number of acting employees / auditors in audit organization
77	conducting research and/or practical training of students	number of students who had internships and received certificates from audit organization
88	participation in the education process	the number of class hours / hours of distance learning, held by the staff of audit organization
99	professional orientation of students aimed at promoting the auditors image	having a work plan and its implementation
110	graduates employability	institutes graduates involved in the above mentioned activities
111	participation in collaborative research	The funds of contract research, the share of audit organization employees involved in the research

The fact that the rate of auditors participation in the education process has positive effects is demonstrated by a survey of second-year students choice of major - 148 people out of 230 expressed a desire to get training in audit considering Accounting, analysis and audit. Such an increase in the popularity of the auditor as a profession is a direct result of interaction.

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Remote Employment as a Form of Labor Mobility of Today's Youth

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Abstract

The article analyzes the current state of the labour market and describes new flexible forms of employment. Also the paper deals with the changes in the nature and content of the labour, which are connected with the transition to a post-industrial society. The article reveals the problems of accounting and evaluation of remote employment and analyzes the positive and negative socio-economic effects of different forms of flexible employment. Particular attention is paid to the study of the remote employment effect on the youth labour mobility.

Keywords: *non-standard forms of employment, remote work, flexible employment, telework, freelance, downshifting*

1. Introduction

With the transition to a post-industrial economy, there are dramatic changes in the nature and content of labour and labour relations, which are believed as a "response" to the call of some "revolutions": technological, organizational, motivational, consumer etc.

Nowadays we can see spreading of non-standard forms of employment, decentralization and global changes in the motives of labour behavior. Standardization and unification, which are typical for labour relations in the industrial economy, are being replaced by destandartization of labour in the post-industrial society, fickle hiring, fixed-term contracts and the development of flexible forms of employment become widespread.

The development of information and communication technologies and the Internet has opened a virtual space for work, has formed the Internet economy (e-economy) and the corresponding electronic markets (e-markets, virtual markets) and electronic business (e-business, e-commerce). Information and communication technologies have not only changed the structure of employment, the ratio of working and leisure time, but also opened up new avenues for self-employment. Modern communications make it possible to realize the intellectual capital, working at any distance from the place where the performance is needed. In this regard, science began to use the terms "remote work", "telework", "telejob".

The growth of non-standard forms of labour is most prevalent mainly in developed countries. In the U.S. they covered one third of workers, in Japan part-time jobs make up one quarter of the total number of jobs.

Remote work for the youth of today is a new form of employment, which has become possible due to the development of telecommunications technology. The youth actively moves to work in the conditions of flexible employment. It happens because of the fact that young people, representing the most mobile socio-demographic group, are characterized by a high degree of susceptibility to a variety of innovations, high level of labour mobility and intellectual activity. Young people have a set of socio-cultural, generational and value features, age characteristics, which distinguish this group from other age groups. Nowadays, Russian youth considers remote employment mostly as an additional type of labour, a form of labour mobility. According to young people's opinions, having the remote socio-labour practice allows a person to choose the type of activity, the organization, the manager or customer, the very place to work. All of this increases its value to young people.

2. Materials and Methods

The research was based on the analysis of current trends in the transformation of labor relations, conducted with using of methodological tools of leading scientific schools, as well as the results of empirical studies of flexible employment.

The founders of the scientific concept of remote employment are American scientists Jack Nilles and Francis

Kinsman.

Jack Nilles in the early 1970s, as the head of the first telecommuting project in the University of Southern California, noticed that in some cases it's easier to deliver work to the man, and not vice versa, and introduced the concept of remote employment, "telework" or "telecommuting" that involve working at a distance, outside the traditional workplace, when the transmission and receipt of information is carried out by using modern telecommunication technologies [6].

One of the most famous and worldwide recognized specialist in the study of remote and virtual office employment is Gil Gordon, editor of one of the best telework magazines "Telecommuting Review", co-author of "Telecommuting: How to Make It Working for You and Your Company" (1986) and «Teleworking Explained "(1993) [3].

Great contribution to the study of "telework" has made the International Labour Organisation (ILO). ILO experts within the concept of "decent work" explored remote employment, changes in the meaningfulness of telework, which allowed Vittorio Di Martino to publish a book "On the way to work at a distance" in 2001 [2].

Since the late 1990s in Western Europe and the United States there have been several large-scale empirical studies on various aspects of the transformation of employment and labour relations.

The most representative studies are:

1. The research of American freelancers (Sologig.com Freelance Survey), conducted in 2007 by market research firm Harris Interactive commissioned by the remote job exchange. Surveyed 2400 companies served by freelancers and 5600 self-employed.
2. The worldwide research of freelancers (Global Freelancer Survey of 2007), United States, FreelanceSwitch. The survey covered 3,700 freelancers of different professions from six continents.

To designate a new category of workers, U.S. researchers T. Malone and R. Laubacher introduced a special term "electronic freelancer" or e-Lancer [5].

Almost all self-employed workers, representing "computer professions" (programmers, web designers), are e-Lancers. Modern e-Lancers can be called "homeworkers" of the information economy era.

3. Results

Not many works are devoted to establishment and development of remote employment in Russia.

There is no holistic understanding of the concept of remote employment among Russian scholars and practitioners. First of all, it is connected with the blurring of the boundaries of the remote employment sphere, and secondly, with the complexity of determining the extent of the phenomenon and the parameter estimates due to the lack of reliable information about it and a significant discrepancy between the results obtained by different valuation methods.

Among Russian studies on remote employment, we should specially mention innovative researches that were carried out with the support of Science Foundation of HSE and, in particular, the work of D.O. Strebkov, A.V.Shevchuk etc. [7].

Analysis of the results of online surveys helped to create the socio-demographic and professional portrait of contemporary Russian freelancer. Freelancers are relatively young: only 3% of respondents are over 45 years old, four-fifths of respondents (79%) are older than 30 years, and 59% are aged 18-26 years. The average age of the total sample is 27 years.

Most freelancers have recently entered the labor market: 17% has more than ten years of professional experience, nearly half of respondents (48%) had less than five years.

Seniority of freelance activity is significantly shorter: 23% have worked less than a year; 24% work in the electronic market for 1 year; 30% - from two to three years; and only 4% - more than ten years. On average, total seniority of surveyed workers is seven years, and freelance work experience is three years. Most respondents said they did not have day-offs, and their working day on average was much longer than the normal working day of the office worker. Freelancers have a high level of education: 80% of respondents have higher or incomplete higher education, which is significantly better the average for Russia.

Depending on job searching method, freelancers were divided into three groups. The first group (14% of respondents) uses only market methods such as remote job exchange, websites, forums, social networks. 40% of respondents use only their social capital (relationships with customers, recommendations from friends, acquaintances and former clients). And 47% of respondents have the mixed strategy, using the market and social channels to find new customers.

The study allowed us to make a model of a modern freelancer:

F = f (A, E, IL, AIT), where

F – freelancer;
A - age;
E - education level;
IL- intellectual work;
AIT - access to information technologies.

The research of freelancers' behavior reveals both positive and negative aspects of telecommuting. The positive aspects are independent organization of the working day, independence in the control of labor and decision-making, obtaining a diverse work experience and working at home. Among the negative aspects there are financial instability, low wages, unstable workload, lack of social guarantees. Freelancers are quite often faced with full or partial non-payment, cancellation of completed order without compensation, etc. One of the ways to solve these problems is the conclusion of an official contract.

Table 1. Positive and negative effects of remote employment

	Positive	Negative
For employers	The use of flexible business processes and flexible staff Reduced labour costs Payment for results, not for time worked Increasing the share of outsourcing	The complexity of checking qualifications when hiring The lack of forms of control over the current production activities of staff Legal difficulties of the relationship between teleworkers and employers
For employees	The possibility of self-realization Opportunity to choose the ratio of work and leisure time The possibility of obtaining additional income Opportunities for retired persons, for persons with disabilities, for mothers with little children Saving the time, that is being wasted when you getting to your workplace/office	Legal difficulties of the relationship between teleworkers and employers Reduction of social guarantees organization of labour at home is not always effective the weakening of the collective values
For society as a whole	Improvement of the quality of life of the population Reduction of unemployment, the growth of labour market flexibility Equal access for all social groups and regions Improvement of the information society the solution of transport and ecological problems	Reduction of budget revenues due to the concealment of the earnings Increase in the proportion of gray salaries Reduction of the level of social protection of citizens The need to resolve conflicts between employers and teleworkers

Interesting research of the problems of flexible employment in Russia is a study conducted in the IV quarter of 2012 by online agency Recruitnet and named "Job 2.0."

According to the results of this study, 64% of surveyed companies have remotely working employees in their state, and 67% have a system of flexible employment. Almost all of the respondents plan to continue to use non-standard forms of employment. Study shows, that giving employees the opportunity for flexible schedule is one of the key factors to increase the company's attractiveness as an employer in today's labor market.

The main problems that face companies during the using of remote and flexible employment are unwillingness to effectively manage remote employees (37%), difficulties of team work (37%), risks of decreasing of the business security level (32%), inability to lead the person who is not in the office quickly (26%).

Also, among the reasons of the low active dissemination of remote and flexible employment at Russian enterprises respondents identify inertia and distrust of management to these forms of organization of the labor process.

On the other hand, there are some possible benefits of using of remote employment and they are all assessed as sufficiently important. First and foremost, it is an opportunity to hire qualified employees regardless of their location, as well as the opportunity to pay for the work results, not for the process.

The results of these two surveys of Russian remote employment (or telework) complement each other, revealing its essential features from the perspective of the employee and the employer.

It is advisable to divide the remote employment is not on a sectoral basis, but on areas of professional activity [10,11] :

With the transition to a post-industrial economy the new trends in the proportion of working and leisure time were discovered.

Firstly, the very concept of labor has transformed. It is gradually losing its dominant position in the human life. Labor activity is often seen as a mean to maintain a certain standard of living. At the same time, success, self-actualization and other life values are transferred to the sphere of leisure activity.

Secondly, leisure time changes its structure now. It is increasingly associated with the various types of self-realization and intense intellectual activity. This phenomenon is called "ecological leisure." Today, a certain part of the population begins to refuse the standards of "the good life" and goes to a different value system. In this context, we should mention the book of E. von Weizsäcker “Factor 5”, dedicated to finding ways to save modern society from the inevitable self-destruction [8]. Also, the authors explore the conflict between the interests of the sufficiency and employment.

The phenomenon of last years is downshifting - the transition from well-paid, but connected with excessive stress loads and taking all the leisure time job to a more relaxed, although low-paid job. The main symptom of downshifting is the rejection of a career, growing consumption, social status and style of life for the other values in life, especially family, hobbies, healthcare.

Moreover, among the youth of today, it has become fashionable to work outside the office. The number of freelancers is growing; they are people, who enter the labor market as independent service providers using the Internet. Modern communications allow them to realize their intellectual capital, working at any distance from the place where their activities are in demand. In this way, workers can organize the work process and determine the time of work and leisure by themselves. Held in 2008, "The first all-Russian census of freelancers" has created socio-demographic and socio-professional portrait of the modern freelancer. Two-thirds of them are male, four-fifths (79%) are under 30 years old, 80% have higher or incomplete higher education.

One of the main features of the information technology paradigm is flexibility. Moreover, the flexibility applies to both the production system and society in general, and to the organization of work and working time [1,9]. Labor activity gradually falls into the spheres of strict regulation and the possible variability.

According to Charles Handy, by bringing in a single portfolio both traditional and flexible forms of employment and forming a "portfolio" of thinking, you can control the flow of funds in different periods of life and various life situations [4]. In this sense, self-employment, part-time work can create a more sustainable and at the same time flexible foundation of material existence.

Overall, the proportion of self-employed in Russia is about 5-6 percent of the working age population - two times less than in developed countries. But it is constantly growing. Non-standard forms of employment restrain fall of living standards and rising unemployment, accelerate the formation of the middle class in Russia, as the middle class uses virtual space to work more actively than other social groups. In addition, non-standard forms of employment play a positive role in expanding of services market, lead to the development of new needs, form new motivations and employment strategies, and also they are an element of the development of innovative economic. Moreover, the spread of flexible employment corresponds to global trends of global labor market.

However, many forms of flexible employment still belong to the informal sector of the economy, which raises a number of serious social problems, and, first of all, leads to loss of a significant part of the state budget funds due to the hiding of income from taxation.

4. Conclusion

Thus, the transition to a postindustrial society caused major changes in the nature and substance of labour, labour relations and development of non-traditional forms of employment, strengthened their flexibility, contributed to the emergence of new motivations of labor behavior. New trends in the development of labor relations require further fundamental scientific, economical and practical study.

Due to the fact that many types of flexible employment is not recognized in the official statistics, it is difficult to estimate their scale. As a rule, official statistics don’t include freelancers and many other categories of employees, so data for most studies of non-standard forms of employment is collected through online surveys or telephone interviews.

Difficulties of statistical accounting of flexible forms of employment are associated with high heterogeneity of this segment of the labour market. In this case we are not talking about a single socio-economic phenomenon, but a conglomerate of different forms of employment. The boundaries between them are blurred and their status is unsettled. Depending on the choice of criterion, we have a new picture of flexible employment, which is changing with the criterion.

In this regard, one of the primary tasks in the study and statistical account of new, non-traditional forms of employment becomes systematization of flexible forms of work and employment on different criterions that can help to distinguish one type of flexible employment from another and definition of indicators, which can assess the directions of

flexible forms of employment and the efficiency of its use for employers, employees and society as a whole. In our opinion, the most productive at this stage will be the study of individual segments of flexible employment, whereby it will be possible to allocate unique and typical features of these forms, develop classifications and methods of statistical evidence.

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Systemic Approach in the Study of Problems of Territories's Sustainable Ecological and Economic Development

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Abstract

The article analyzes the problems of sustainable development of ecologic and economic system. Based on the system approach methodology categories reflecting the essential characteristics and evolution of the regional eco-economic system, the general characteristics of its sustainability are investigated. Factors for sustainable ecological and economic development of the territories are identified.

Keywords: *Sustainable development, ecologic and economic system, region, systemic approach, life support, value appraisal of natural resource potential, ownership relationships of natural resources.*

1. Introduction

The scientific knowledge methodology uses various theoretical approaches which help to study the processes and phenomena of objective reality. A systemic approach should be considered as one of the conventional methods of dialectical knowledge laws of society and nature development; it enables to scientifically analyze various systems in their interrelationship and interdependence.

The systemic approach is based on the dialectics of the objective and subjective, the unity of theoretical research and practical experience upon which we study a real system, its cognition and reflection take place in the human mind, and then system knowledge received influences practically the system, the conscious control of its functioning and development. Dialectical and comprehensive research based on systemic approach is the most effective scientific methods of research as opposed to mechanistic linear-causal way of thinking. Systemic approach is a qualitatively higher method compared to the narrow objective method of scientific knowledge, as it is based on knowledge from the individual to the general, from the abstract to the specific, from the unambiguous to many meanings, from one-dimensional to the multidimensional, etc.

Today's prominent foreign scientists involved in research of economy and natural systems, namely J. Forrester ("World Dynamics", 1971), Donella H. Meadows, Dennis H. Meadows, J. Randers, R. W. Behrens (" The Limits to Growth", 1972), E. Pestel ("Beyond the limits to growth ", 1987) and others, based their work on ideas of system dynamics that led to a number of serious theoretical conclusions and practical design of feasible models of the dynamics interaction of natural and economic processes, which are widely used in the practice of economic analysis in the developed world and in major international organizations when preparing summaries and forecasts for future development. At the same time it should be noted that integral systems are not the only form of objects existence of reality, and systemic approach in this regard is not the only form of society and nature cognition.

2. Theory

Ecological and economic system should be developed and improved preserving its integrity and ensuring the dynamic balance of all its elements. The negative environmental consequences of human activities are the result of increasing anthropogenic disruption of the dynamic balance of natural systems, which means decrease of stability and growing danger of its degradation.

The stability of the system in the general sense should be understood as preservation of its properties, the qualitative and quantitative characteristics of the elements and relationships under the negative destabilizing influence of the external environment. In other words, the system is stable, if under adverse external conditions, it is able to perform its functions at the appropriate level, to dynamically grow and develop.

Sustainable ecological and economic system is, above all, the ability of the economy to function normally in the ecological crisis, and the ability of the ecological system to maintain its properties and to perform the necessary functions in economic instability. Ecological and economic system is considered stable if, on the one hand, the economy is elastic with respect to the environmental crisis situation (under negative impacts of floods, droughts and other natural disasters), and on the other hand, the nature withstands high pressure associated with economic growth and its consequences.

Developing systems are characterized, on the one hand, by stability of the structure, and on the other, by the loss of stability, degradation under the influence of certain factors of the same structure and creating another new high-quality, stable structure. Here we see a real manifestation of the law of transition from quantitative to qualitative changes. The development process can be represented as a sequence of evolutionary cycles of change within one cycle with an abrupt state transition at the end of the cycle to a new level, which means the beginning of a qualitatively new cycle of the regional system development.

The consequence of cyclical development is irreversible process, i.e. it is impossible to transit from new to the old structure, which was already destroyed. Too stable system is incapable of development, since it suppresses any deviation from its hyperstability state. To go to a new quality, a system must be unstable at some point. However, the constant instability is also harmful for the development of the system as well as hyperstability, as it excludes consolidation of useful features in the regional system. Evolution of ecological-economic system is a constant dynamics of stability - instability state, due to the cyclical development of ecological and economic relations and the manifestation of the ecological and economic crises at different stages of social development.

3. Results

Sustainable regional ecological-economic system should be understood as the maintenance of life support based on the valuation of natural resource potential, the effective application of investment and innovation policies for environment management, the management of macroeconomic accounting of the nature's potential use for economic purposes, the development of all environmental businesses by organizing environmentally friendly production to create environmentally friendly products.

As a part of the ecological-economic system, stability and balance can be through the establishment of an effective economic mechanism to regulate the environmental sphere, taking into account the laws of natural systems and the objective economic laws in order to achieve optimal solutions of twofold task: improving the welfare of humanity, while maintaining an optimum state surrounding habitat.

Sustainable ecological and economic system of the territory is characterized by properties of self-organization, self-sufficiency, self-preservation. Under the self-sufficiency in the general theoretical sense one should be understand the best match between the substantial and attribute characteristics, between the form and content of the functioning and developing eco-economic system and its individual elements. The processes of self-organization are characterized by the space -structural aspect of the study of the regional eco-economic system, the relationship hierarchy of its components, allowing to reach balanced, sustainable ratio of environmental and economic interests of eco-economic system in the modern conditions of instability, cyclicality, public relations crisis development. In this context, the problem of components self-preservation of the ecological system in a deep systemic crisis, and accordingly, the preservation of economic processes, entities and characteristics of their development in the context of deepening ecological instability is very important.

To ensure the preservation of functional, structural and integrative properties of the ecological-economic system, the stability of its structure is of particular importance. The stable structures of the regional eco-economic system should be understood as its ability to withstand the constantly occurring changes in natural and economic components, which allow you to keep these changes within the required quality. The presence of stable relations guarantees the integrity of eco-economic system within specified quantitative and qualitative parameters in a specific temporal and spatial aspect of ecological-economic interaction.

In this regard, the concept of sustainable, dynamic balance is discussed quite rightly in the economic literature, it is characterized by a certain qualitative state of the ecological-economic system associated with a fairly long time balance when the internal elements of the economic and ecological systems can withstand the negative impact from the outside and do not violate, but maintain its functional properties.

The society which is balanced is able to respond to changing internal and external conditions establishing new balance corresponding to these changes, both within itself and within the whole environment of its habitat [1, p. 144-145]. In this respect, the main task of the present social progress is, in our opinion, to establish the necessary ratio between the development level and the quality of economic and ecological relationships in the region to ensure a proper quality of life

in all its diverse manifestations and characteristics.

Eduard Pestel, a prominent German scholar and public figure, a specialist in the field of automatic control theory and systems analysis was the most accurate in reflecting reality in the scientific analysis of the impact of economic growth on the environment. In his book "Beyond the limits to growth", prepared as a report for the Club of Rome, the author analyzes the global challenges of world development, and puts forward the theory of "organic development", in which he offers his own answer to the question: which option is preferable for human development - further growth, accompanied by a further depletion of resources and, finally, by complete degradation of ecology and resources, or zero growth, with all its negative consequences that inevitably will be expressed in endless internal and external conflicts that arise when distributing national wealth and, ultimately, in complete chaos [2, p. 83].

The theory of “organic development” is relevant primarily because it basically contains the provisions of the following kind: “For the welfare of people what has no money value - clean air, fresh water - is much more important. The current level of pollution is mostly the result of the negative effects that have been accumulated from previous years, when no one cared about restricting them somehow. So the future will be forced to pay for the present, if we, through ignorance, carelessness or impatience to get more benefits will force future generations to suffer from pollution caused by us and bear the costs of its cleanup” [2, p. 87-88].

System principles used in the theory of “organic growth”, namely systemic and interdependent development of all elements of the system, allowing them to grow without prejudice to each other; harmonious coordination of the development goals when new goals to meet the needs of the time, are set at least after reaching the old ones; flexible development of systems associated with their ability to go their own way regardless of the adverse effects of factors that do not affect the vital functions of the system. These principles allow to scientifically conduct multivariate analysis, and therefore they should be used to work out national models of ecological-economic development of the territories.

Model of sustainable ecological and economic development of the territory can be represented as an aggregate of economic, environmental, institutional innovations, and social factors.

$$Dt = f(E, C, I, M, S), \quad (1)$$

where

E - economic factors,

C - environmental factors,

I - institutional factors

M - innovative factors

S - social factors.

Economic factors play fundamental role in this system; they may be represented by a function of financial, tax and investment components.

$$Et = f(F, H, J), \quad (2)$$

where

F- financial factors,

H- tax factors

J- investment factors.

Institutional research approach involves scientific analysis of institutions ensuring sustainable ecological and economic development (Fig. 1).

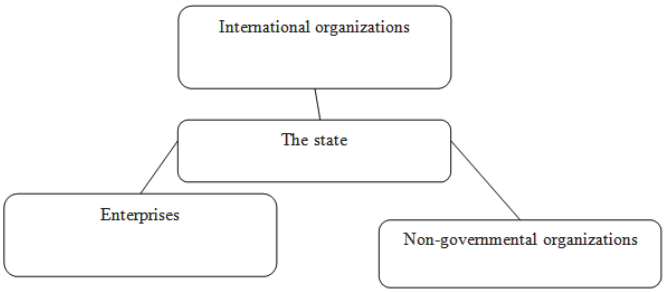

Fig.1. System of institutions in ecological and economic relations

The system of ecological and economic relations is characterized by interconnected and interdependent functions (Fig. 2).

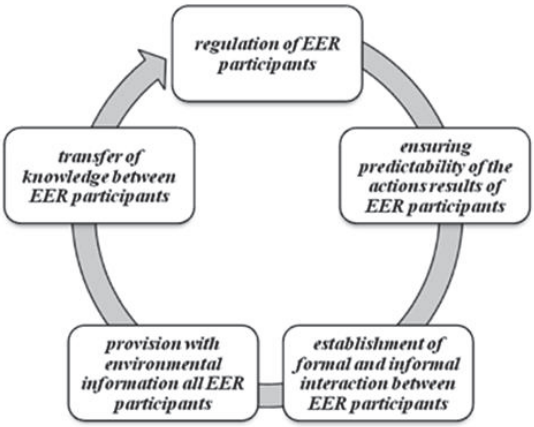

Fig.2. The functions of the institutional system of environmental and economic relations.

According to the Russian practice of forming the institutional mechanism of regulating ecological and economic relations one should highlight the following regulations (Table. 1).

Table 1. Laws regulating ecological and economic relations in the Russian Federation [3, p.424-425]

Laws	Sphere of regulation
"On Amendments to the Federal Law" "On the continental shelf of the Russian Federation" dated 30.12.2012 №287-FZ	improvement of legal regulation in the case of negative impact on the marine environment with oil spills
"On amendments to Administrative Offense Code of the Russian Federation"	differentiation of administrative offenses in the field of waste production and consumption.
"On amendments to some legislative acts of the Russian Federation"	upgrading penalties for production, circulation, including storage, transportation and sale of tigers, leopards and other rare and endangered species of animals listed in the Red Book of the Russian Federation, or protected by international treaties
Russian Federation Government Resolution "On Approval of the calculation rules of damage caused to mineral wealth due to violation of the subsoil legislation of the Russian Federation"	procedure for calculating damage as a result of selective mining.
Russian Federation Government Resolution of 11.10.2012 №1039	amendments to certain acts of the Government of the Russian Federation on the provision of water bodies in the use and maintenance of the State Water Register

4. Conclusions

Conceptual framework of sustainable ecological and economic development over time is filled with new content, expanding range of issues to be solved in the process of its implementation [4,5,6,7]. Thus, the final documents of Rio+ 20 summit reaffirmed the need for sustainable development by promoting sustained, inclusive and equal economic growth, creating more opportunities for all, reducing inequalities, improving basic living standards, promoting equal social development and integration, promoting integrated and sustainable management of natural resources and ecosystems that are consistent in particular with the objectives of economic, social and human development and at the same time contribute to the conservation of ecosystems and their regeneration and recovery and increase their resistance in the face of new and future challenges [8]. It was noted that with the participation of scientists on the basis of long-term forecasting system it is necessary to justify the global goals of sustainable development till 2030

To achieve the goals of sustainable ecological and economic development it is necessary to change priorities of socio-economic development of the region, putting a human being at the center of all economic and environmental problems, given, first of all, not only quantitative criteria for his/her well-being, but also the quality parameters of the standard of living, quality of life , life expectancy, preventing the negative impact of environmental factors on the health of present and future generations as an important factor in the reproduction of the labor force in the regional system.

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Creep and Floodplain Defluxion Study in the East of the Russian Plain

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Abstract

The phenomenon of a slow displacement of unconsolidated soil that is widely known by the term "creep" (from English creep - crawl) and "defluxion" (from German defluktion - drip, leak) covers almost all slopes of dry land. In order to identify the geomorphological role of this phenomenon stationary studies of creep and floodplain defluxion of small rivers in valleys of the Middle Volga are widely held. The relief of the investigated area (on the example of Raifa region of the Greater Volga-Kama Biosphere Reserve (GVKBR) "UNESCO") was created as a result of a long interaction between processes of internal and external dynamics. The territory of the reserve is very heterogeneous in morphology, genesis and history of a landform development. In the future, taking stationary study areas located on slopes and floodplains of small rivers as an example, it is very important to identify significant relationships and dependencies of the interaction between slopes defluxion and floodplain defluxion with modern geomorphic conditions.

Keywords: *relief, creep, floodplain defluxion, erosion-accumulative processes, incline, floodplain, slope.*

1. Introduction

Stationary studies conducted by the staff members of the Department of Geography and Cartography of the Kazan University that have been held for over 30 years (since 1983) and include studies of the intensity of modern erosion-accumulative processes in small river basins in the east of the Russian Plain, have identified a new phenomenon at the bottoms of river valleys – the floodplain defluxion (slow ground movement of floodplains down the stream). The study of floodplain defluxion is held in small river basins east of the Russian Plain. The floodplains of these rivers build up modern (Holocene) alluvial formations. They occupy large areas in the valley bottoms. Alluvium of floodplains and the first terrace above the floodplain have a structure typical to the moderately-humid type, in which the channel and floodplain facies are clearly distinguished and periglacial formations are absent. The width of a floodplain alluvium is defined as the sum of the spring tide's median height and the reaches' median depth.

In order to study slow movements of soil and ground on turf-covered slopes (creep), the authors have resumed studies and also started to hold stationary observations in the Greater Volga-Kama Biosphere Reserve by UNESCO. The research in this area started in 2007, and the ideas of a widespread expansion of slow soil movements on turf-covered slopes were further developed.

2. Methods

To solve an important research question in the study of the relief formation dynamics is to study the processes of creep and defluxion (Kurbanova *et al*., 2014, Pope *et al*., 2014). In this case the soil movement on slopes and on upper stratum of floodplain alluvium was analyzed in the longitudinal and transverse directions (at the soil surface along the surface slope), according to the river flow rate and the slope of the river, and according to the change of this displacement in relation to depth (Wilkinson *et al*., 2007; Dedkov *et al*., 2005).

The study of displacement in the longitudinal direction was carried out by means of benchmarks, driven into the soil to ground level and originally located strictly on a straight line perpendicular to the valley. The benchmarks' displacement was assessed annually relatively to this line.

The change of displacement in relation to depth was studied on plates inserted along the plumb line in the two walls of the dig site both parallel and perpendicular to the river flow till the depth of 1.5 - 1.7 m after 5 - 10 cm.

When organizing pin-point stationary study areas for the creep study the authors used a very simple in a technical relation technique by A.P. Dedkov, V.A. Duglav and V.I. Mozzherin. A total of 10 test dig sites were dug with the depth range of 1.4 - 1.8 m. As planned these dig sites were located on 3 lines. The first line lied on the left bank of the river Sumka, on the gentle forested slopes of the northwestern exposure; the second - on the right convex-concave slope of the south-eastern and eastern exposure and the third - on the gentle treeless (meadow) slopes of the right bank of the river Sumka. The distance between the dig sites on the lines was on average 250 - 320 m. (Kurbanova *et al*., 2014).

3. Results

Through years of research the floodplains of various levels were tested which were various relatively to the water edge and valley slopes, various in landscape confinement, exposure, geological structure and mechanical composition of soil. The catchment area of the studied rivers varied from 10 to 300 km2, the length – from 10 to 100 km, the width consisted of the first few hundred meters. According to the results of the stationary study on defluxion a considerable amount of field data was collected, methods of study were developed, a mechanism and conditions for manifestation of the soil displacement processes on slopes and floodplains were determined.

Our stationary observations of small rivers' floodplains of the I and III order according to the Straler-Filosofov system (with the length range of 2 - 12 km, with a catchment area of 5 - 73 square kilometers and slopes of 0.02 - 0.001) found that the floodplain alluvium is experiencing a very slow displacement down the valley. Observations were made in the valleys of the following rivers: Nurminka, Morkvashka, Ulema, Kolunets, Vala, and brooks: Nosov, Multasshe, Suladzhi, Temev (feeders of Mesha, Sviyaga, Vyatka, Kil'mez) in the Middle Volga.

The highest rate of displacement is observed in the dig site, laid at a river channel (dig site1). It exceeds the displacement of the soil in the dig site 4 (at rear seam of the floodplain) by 2 - 3 times. The displacement of plates along the slope to the river is 1.6 - 1.8 mm / year, what is more the displacement at the bed is also almost 1.5 - 2 times bigger than at the "rear part" of the floodplain. However, the analysis of the movement rate of the floodplain alluvium at river stations located both in the upper and in the lower reaches of the river, did not show any significant changes during the process of defluxion. On average, it was about 3 mm / year.

Observations of creep which took place on the slopes of the studied area were held in dig sites with the depth of 1.5 m. At the base of the dig's side wall the metal rod with the length of 0.5 - 0.6 m. was driven in horizontally. At the end of the rod with the use of a level a vertical guide line was put over which at the side wall of the dig site thin metal plates of 4 squire cm were placed strictly along the slope. Then the dig site was buried, the bulk soil was artificially compacted, and an accurate dig site fixation was done. After 3 - 4 years some dig sites were opened, and the measurements of the plates' deflection along the slope line were made.

The studied area (the gentle treeless slope of the right bank of the river Sumka) is located on the right bank of the Sumka river valley approximately 2.5 km to the northeast from the village Belobezvodnoe, azimuth 296 °, in the middle of the hollow surface inclined to the river Sumka of the II floodplain terrace. The dig site was laid in July 2007 and opened in August 2013. The soil depth is 1.58 m. 30 plates were driven into the side wall of the dig site. The data on the benchmark (plates) displacement are shown in Table 1. The steepness of the terrace surface does not exceed 4 - 5 °. The general slope of the surface as a whole is oriented to the south-southeast. The mechanical composition of the soil of the terrace top part is dominated by clay-silt varieties (upper section) and strongly sanded and medium loamy measures (in the middle and lower parts of the section). On the terrace' surface there is an abandoned field with herbaceous vegetation.

Table 1. Quantitative characterization of soil displacement on the right bank of river Sumka

Number of benchmarks	Depth, cm	Horizontal displacement component for 6 years, mm	Average displacement value for 1 year, mm
2	11,7	12,5	2,08
5	26,4	11,3	1,88
7	36,5	10,5	1,75
11	56,6	8,0	1,33
20	100,6	2,5	0,42
25	124,2	0,4	0,07
30	150,3	0	0

The change of displacement in relation to depth was studied by the plates inserted along the plumb line in the two dig site

walls both parallel and perpendicular to the river flow to a depth of 1.5 - 1.7 m in 5 - 10 cm. The position of the plumb line is tied to the rod driven into the dig's bottom. When laying the dig sites we considered their position on the floodplain or terrace.

Opening of dig sites happened after 3 - 4 years. After opening, the plates' deviation from the plumb line was recorded, i.e. the horizontal displacement component was measured. On the studied area the movement was not accompanied by any noticeable deformation of the soil surface, so we can assume that the movement of the particles was mainly parallel to the slope. The horizontal component and the slope angle (5 °) can determine the amount of soil displacement downslope by the formula:

$$a = \frac{b}{\cos 5^{\circ}},$$

where *a* - the amount of movement of the particles parallel to the slope, *b* - horizontal component of this amount.

The results have showed (Fig. 1) that the displacement of soil in relation to depth occurs at different rates. The average displacement value is 0.5 - 1.3 mm / year. With depth the movement rate decelerates and at a depth of 100 - 120 cm it is reduced to 0.1 - 0.5 mm / year, that is, almost dies out.

A comparison of the displacement value of soil and its content of fine particles shows that the decrease in the movement rate with the increase of the depth (Fig. 1) cannot be explained by changes in the mechanical composition of soil. Indeed, the smallest rates are observed in the lower layers of soil which have a higher content of fine particles.

For floodplains of small rivers of the Middle Volga, as for all of the channel facies of the normal alluvium the clear predominance of the coarse sand fraction is distinctive.

The marked decrease in displacement values in relation to depth is due to the mechanism of soil movement on slopes. These movements are of hydrothermal nature and are due to variations in moisture and temperature of soil, slope inclination of slopes and bottom channel, including freezing and thawing. Fluctuations in humidity and temperature lead to periodic changes in the volume of soil (Foulds, 2013; Panin, 1997). Thanks to them the soil develops tension which is directed in all directions. But the gravitational forces are added to the tension directed down the slope; therefore the displacement of particles down the slope exceeds the displacement in other directions. Since the fluctuations in temperature and humidity are greatest at the surface, it is quite natural that the surface soil is experiencing the largest displacement. Table 2 shows the morphometric data of some rivers of the Middle Volga and also the absolute values and movement rates of the alluvium displacement. The maximum rate of displacement was indicated by the benchmark which shifted to the largest value. Studies have shown that the maximum displacement occurred at the bed, the minimum - at the rear seam, with displacement which increased gradually.

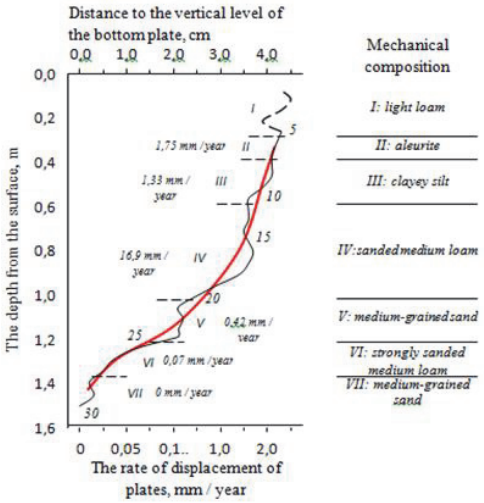

Fig.1. The curve of the average displacement rates of plates in the dig sites of the Sumka river valley.
Symbols of the curve:
In cursive the numbers of plates are signed. In semi bold and in a thick red line the average displacement rates of plates at separate layers (mechanical composition) are indicated. For the top four plates the rate curve is shown approximately (with the broken line) because the plates 1-4 lost a strictly horizontal position and lean in the dig's wall in all directions(disoriented).

At floodplains where there is a forest or bush vegetation, the shift is very slow (Table. 2).

Table 2. Benchmark displacement at floodplains of some small rivers of the Middle Volga from 1983 to 2003

River and basin	Basin area, km²	River length, km	River fall	Observation period, years	Floodplain condition	Maximum displacement, cm	Displacement rate, cm/year
Kolunets (Ulema)	21,0	4,0	0,010	15	Meadow	76	5,1
Nosov (Ulema)	36,8	9,3	0,002	15	Meadow	90	6,0
Knya (Burets)	73,4	12,0	0,005	18	Meadow	78	4,3
Morkvashka (Volga)	43,5	10,0	0,001	20	Bushes	22	1,1
Malinisky	3,7	2,0	0,020	15	Forest	5	0,3
Nurminka (Vyatka)	14,9	4,3	0,014	20	Meadow	98	4,9

For example, during 15 - 20 years at the forested floodplains (brook Malininsky, river Morkvashka), the benchmarks shifted by maximally 5-22 cm, i.e. the movement rate of the soil is 0.3-1.1 cm year, while at approximately the same conditions the movement rate of the alluvial in meadow floodplains of other rivers increases to 4 - 6cm.

The change of displacements in relation to depth was studied on the river Nurminka of the right feeder of Vyatka. The bottom of the river is occupied by the floodplain with the width of 20-30 m, the slope of the river in the upper reaches is 0,014, at the downstream - 0.008, the length of the river is 11 km. Up to the depth of 1.5-2 m the floodplain of the river consists of loam soil, sandy loam with occasional streaks of sand and gravel.

The study of defluxion for a sufficiently long period of time has made it possible to trace its dynamics in its 30-year time interval. In recent decades, with the beginning of economic reforms in the agricultural sector the fundamental changes took place. From 1989 to 2002 the area of lands decreased by almost 5%, with farm fields decreased by 5%, and the area of hayfields, pastures, wastelands (which started to overgrow with secondary forest) increased to 4.5%.

It was during this period that at such overgrown floodplains the average rate of displacement of the upper soil has decreased by more than 2 times - from 3.5 mm / yr to 0.8 mm / year.

The mechanism of a floodplain alluvium movement is apparently due to the fact that during the flood the floodplain soil acquires not only viscoplastic, but perhaps a plastic consistency contributing to its displacement. Moreover, at this time they experience a large hydrostatic and hydrodynamic pressure of high waters. These reasons, obviously, cause an intense displacement of the upper horizons of alluvium even with a small slope of the floodplain. But the flow of soil, similar to solifluction, apparently, does not occur, because the shifted layer completely lacks any textural features characteristic in solifluction.

4. Conclusions

The conducted research work on studying the topography at the Raifa Reserve territory was carried out in accordance with the methodology, the most optimal in terms of quality, time spent and technical capabilities (Sycheva, 1999; Dedkov *et al*., 2005; Rosenbloom *et al*., 1998).

Similar results of stationary studies of the soil movement on turf-covered slopes were obtained in different parts of the Middle Volga (rivers Ulema, Knya, Nurminka, Vala, Sumka) both on slopes and at bottoms of river valleys. The soil displacement was recorded in all dig sites to a depth of 80 - 140 cm (the average thickness of a displaced layer is 110 cm). Besides of the movement of the floodplain alluvium along the slope of the bottom of the valleys, within the study period it was observed that the alluvium moved along the slope to the river, i.e. during floods and high water, under gravity the hydromorphic soil experiences the shift to the mainstream. The horizontal component of the displacement amounts to 2 - 5 mm / year. Its maximum value measured by 2 plates in the digs number 7 and 9, is 9 mm / year. The same values were obtained in the other areas of the temperate zones (Kurbanova *et al*., 2014; Richardson *et al*., 2014; Knox, 2001, 2006, etc.) and they can be considered as typical. In relation to depth the horizontal component decreases particularly fast up to the depth of 25 - 50 cm.

The results showed that both creep processes on slopes and the displacement of alluvium in floodplains occur at different rates, but their distribution is indicative of a slow displacement of the slope and floodplain material. The rate curves are similar, although from the observations of the slope and floodplain processes, the rate in river valleys is higher by 0.5-1 times within 0.5 m than it is on slopes.

In general, the stationary observations of the accumulation intensity and the displacement of the floodplain clay sheet on small rivers of the Middle Volga showed that the bottoms of small rivers in addition to the accumulation developed a process similar to slope defluxion - viscoplastic soil shift that is due to the gravity. The average value of the soil displacement on slopes is 0.5 - 1.3 mm / year, of the floodplain alluvium - 1.5 - 5.2 mm / year. However, in all the dig

sites at the surface layer the average rate of alluvium displacement is 2 - 6 times more. With depth the movement rate slows down and at the depth of 50 - 70 cm (in floodplains), 100 - 120 cm (on slopes), it is reduced to 0.1 - 1.0 mm / year, i.e., almost dies out. Our own stationary observations confirm the existence of slow soil movements on turf-covered slopes and floodplains of small rivers.

Further studies of exploring the mechanism of formation of relief-forming processes, predicting and identifying the dynamics of the modern exogenous processes such as creep and defluxion, present a great interest.

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The Role of Vegetation in Conservation of Small Rivers in the Middle Volga

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Abstract

The numerous cases of the upper headwaters drying are observed in the plains of the Middle Volga region. The reasons of the streamflow change pertain to the reduction of forest vegetation and the change of its species composition. The studies have shown that over the past 120 years the quantity of the first-order watercourses has reduced by 1.5 times in the areas of coniferous and mixed forests, whilst in the forest-steppe zone the quantity of the first-order watercourses has decreased by nearly 2.5 times.

Keywords: *the river network, infiltration, forest types, phyto-diversity, forest regeneration.*

1. Introduction

Over the past 200-250 years human activities have led to significant transformations in natural landscapes. In most parts of the Middle Volga they transformed to natural-anthropogenic, and purely anthropogenic (agricultural and industrial).The condition of the small rivers' flows can indicate the impact of deforestation and plowing areas [5]. Many researchers have marked the structural change of the river network pattern in the areas from the middle taiga to steppe in the territory of the Middle Volga, as well as in the countries of Western and Central Europe [7].

They are manifested in disappearance of the upper parts of the river network, and in transformation of streams from constant to temporary ones. As a consequence, we observe the decrease of the total river network density, the reduction of the tributaries order, where the II-order rivers (as per Filosov—Straller's classification) turn into the I-order streams. However, the question of the determining factors having the direct impact on the rivers degradation is still being discussed.

An important component of the hydrological cycle in ecosystems is vegetation and its species composition [1, 2, 11]. One of the important aspects of ecological and hydrological studies is the identification of the role of vegetation in the regulation of moisture and its outflow through transpiration, infiltration, as well as the formation of surface and subsurface flows.

2. The Research Method and Sources

To determine the effect of different vegetation types and its species diversity on groundwater recharge, the detailed studies and descriptions of phytocenoses in different forest zones of the Middle Volga, have been carried according to the conventional geobotanic procedure [9]. To identify the role of forests and treeless basins, the researches used the study materials on water collection received by the former USSR Hydrometeorological Service in paired water catchment areas (forest and artificially deforested areas) in different parts of the country. The analysis of the direction and the change rate of the river network pattern as well as its quantitative evaluation were performed using heterogeneous-in time-mapping of materials, ranging from the late 19th to the 21st century. In addition, satellite images were used. The interpretation of satellite images was performed using SAS Planet and Google Earth. To verify the obtained results, the field expeditions were carried out.

3. The Research Results

The landscapes of the Middle Volga area considerably vary in vegetation types, species composition and diversity, as

well as in soil cover. We can distinguish 3 types of the modern natural-anthropogenic landscapes by the degree of the natural areas transformation caused by the human activity: forest, forests –field and field types [7].

The forest landscapes are characterized by forest areas from 70% or more and the internal zonation. In the northern part of the Middle Volga, in the southern taiga subzone, the coniferous and mixed forests are widespread. In the central part of the Middle Volga, in the areas of mixed and deciduous forests, the deciduous plantings are more common. The forest-field landscapes are relatively low in forest coverage - from 30 to 70%, feature a developed meadow-steppe and steppe vegetation with the forest patches. They are found in the south of the forest area and dominate in the forest-steppe zone. The specificity of the field landscapes is determined by a large area of development (70%), whilst the of the natural vegetation has remained in less than 30% of the territory. The agricultural plots are presented in varying degrees in all natural zones of the Middle Volga.

As noted by the domestic and foreign authors, forests, compared to other types of vegetation, have the most significant impact on the hydrological cycle [10, 12]. The optimal hydrological function is performed by natural forests with high species diversity. During the drillings, the expeditions of Kazan Federal University discovered that the depth of the aquifer in the forested landscapes is 10-15m, while in forest-field and field areas, it reaches 25-30m (Fig. 1).

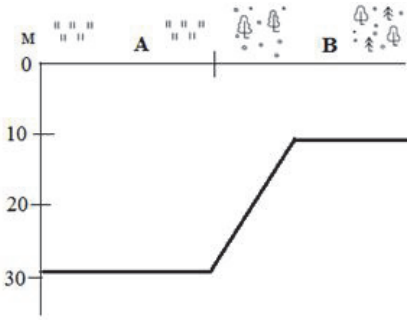

Fig. 1. The depth of the aquifer in forest-field and field landscapes (A) and in forest landscapes (B) of the Middle Volga.

The hydrological and field studies have revealed that territory deforestation determines the change in consumption of snow moisture in various natural-anthropogenic landscapes, leading to the reduction of infiltration and increase surface runoff (Fig. 2). These hydrological changes determine the lowering of groundwater levels in forest- field and field landscapes. A similar pattern is marked by J. Buchtele et al [3] in the Czech Republic, where deforestation has led to an increased surface runoff.

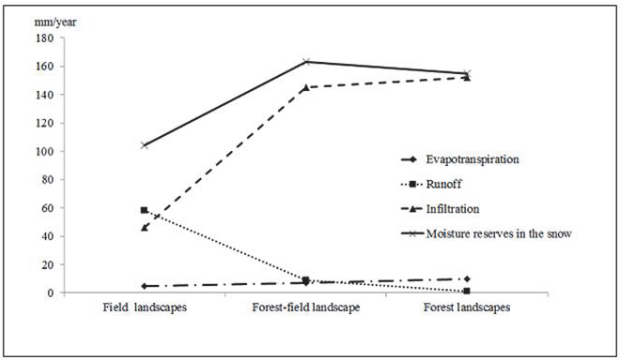

Fig. 2. The impact of vegetation on the groundwater recharge in various natural and anthropogenic landscapes

The regulation of the water cycle, according to various authors, is largely influenced by the biotic factors, such as plant species composition, especially their morphology, tree stand density, and others [2, 8, 11, 14]. The typological analysis of vegetation has shown that in the central part of the Middle Volga (Pre-Kama areas), within the southern taiga subzone and mixed forests areas, there are well-developed of pine and spruce forest formations, as well as pine-deciduous,

spruce-deciduous and spruce-silver fir-deciduous forest subformations.

Besides the relatively-indigenous forests, there are widespread secondary long- and short-derivative coniferous-leaved, broad-leaved and small-leaved forests. On the whole, the contribution of coniferous types in Pre-Kama area reaches 40%, whilst in deciduous types it does not exceed 60% of the total forested area [9].

Forest landscapes have also preserved in the Pre-Volga area, in the forest Zasuriye and Trans-Volga regions (The Cheremshan River valley). The Northern Pre-Volga region as well as the south-western regions of Pre-Kama to be situated to the zone of broad-leaved forests, whereas the southern Pre-Volga and Trans-Kama regions refer to the forest-steppe zone. In these regions, the forest vegetation is formed by the typical native and long-derivatives of lime trees and oak forest formations. On sandy substrates, along the river valleys, the fragments of pine forests grow. Whereas, among the forest vegetation of the Pre-Volga and the Trans-Kama regions, the biocenosis with the dominance of coniferous species does not reach more than 14%. Most of the forested area here is formed by the deciduous forests.

In determining the role of vegetation in the groundwater recharge, the most widely spread in the Pre-Kama and the Pre-Volga regions long-derivative pine forests with shrubs of boreo-nemoral type, as well as herbal limes of nemoral structure have been studied. The age of the studied forest stands is 80-140 years. The crown cover of pine plantings varies from 40-80%, and 60-70% for lime trees. The total projective cover of shrubs in phytocenoses reaches 30-40%, and 50-80% of grass tier. The species diversity of the vascular plants in the phytocenoses of these forest types ranges from 25 to 70 species / 250m2; whereas, the phyto-diversity in pine forest with shrubs averages 40 ± 3,5 species per 250m2, in herbal limes forests has similar figures (43 ± 3,2 species per 250m2 respectively). The Relatively high diversity of the plant species in different tiers increases the infiltration rate and the formation of the surface runoff. Similar conclusions on the enhanced infiltration in ecosystems with high species diversity, leading to the reduction of soil erosion, is expressed by a number of authors [4, 15].

Different plant species retain and transfer water in the soil, to various degrees. The studies have shown that the coniferous types, with dark-coniferous plantations among them, retain a relatively high level of precipitations, they have a relatively low transpiration and a high hygroscopicity of the forest floor [6]. A specific microclimate is created in the coniferous forests. Thus, according to M. Tesař et al. [13], on a sunny day under the canopy of spruce and deciduous forests, in a 5 cm layer above the soil, the temperature is 7 ° C lower than in the treeless areas located in similar conditions, which provides a relatively smaller evaporation and, consequently, a greater retention of moisture in the soil.

The analysis of the map, literary and expedition studies have shown the following results. The dramatic changes have taken place throughout the forest and steppe zone landscapes since the late 19th century to the present time, with the dominating agricultural influence. Depending on the extent of human impact a clear trend in the length reduction of the I and II order streams is observed, with their often complete disappearance and transition to dry ravine. More detail, this process can be observed on the example of the three river basins, varying in the degree of the human activity impact and in their vegetation composition. These are: the Kazanka river, the left tributary of the Volga river - in the southern taiga subzone (coniferous and mixed forests); the Arya river - in the deciduous forest area (broad-leaved and small-leaved forests); the Big Sulcha river - in the forest-steppe zone (broad-leaved forest, meadow and steppe vegetation).

Thus, during the last 120 years the forest area of the Western Pre-Kama region has decreased by 3.5 times on average, the number of the I order streams of the Kazanka river has decreased from 328 to 274, the II order streams - from 86 to 66 (See Table. 1). The detailed studies have shown that the streams length on the right bank of the Kazanka river have increased from 219 to 360 km, whilst the left tributaries' length has decreased from 169 to 120 km. This is caused by the drainage of the groundwater and the vegetation composition of the right bank, where the coniferous-small-leaved forests are situated, contributing to the conservation of soil and retaining of the groundwater and river deepness.

Table 1. The changing nature of the river network and forest coverage from 1870 to 1990 years [7]

Region	Index	1870s.	1990s.
The western Pre-Kama region, The Kazanka river	Forestation of the region (%)	38,8	11,1
	The number of the I order streams/ length, km	328/291,8	274/431,9
	The number of the II order streams/ length, km	86/174,3	66/234,4
The Northern Pre-Volga region, the Arya river	Forestation of the region (%)	26,6	18,3
	The number of the I order streams/ length, km	31/75,3	24/48
	The number of the II order streams/ length, km	9/43,4	8/16,8
The western Trans-Kama region, The Big Sulcha river	Forestation of the region (%)	51,1	22,6
	The number of the I order streams/ length, km	106/105,7	47/100,7
	The number of the II order streams/ length, km	27/59,7	11/70,1

During the study period in the northern Pre-Volga region, the forest area has decreased by 1.5 times, with part of the territory transferring into forest-field landscapes. The right bank of the Arya river with mixed and deciduous formations has become deforested and now refers to the "field" type landscapes. This has reflected in the reduction of the I order streams number - from 31 to 24, while the II order streams number has remained unchanged.

Over the same period of time, the forest area in the Western Trans-Kama region has decreased by more than 2 times, and is now generally represented by the "field" type landscapes. This has resulted in the Sulcha's I and II order streams decrease by 2.3-2.5 times, numbering from 106 to 47 and from 27 to 11, respectively. The structure of the Big Sulcha river has become greatly simplified (Fig. 4).

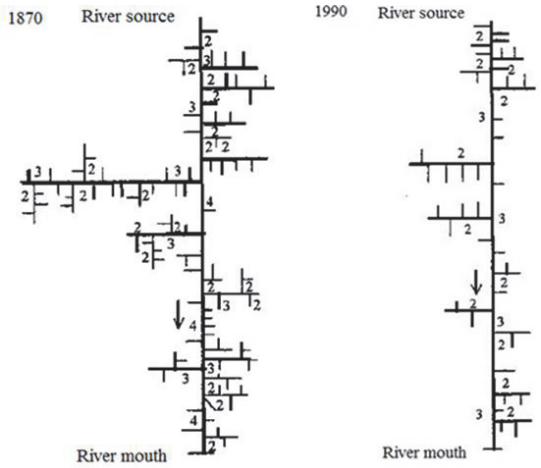

Fig. 4. The structure of the Big Sulcha river network (2,3,4 - order rivers)

The reduction of the I order streams number and their total length is most pronounced in the Western Trans-Kama region. The sharp reduction in the number of upper parts of the river network is impacted by the dominance of meadow-steppe and steppe vegetation plots in the region and the low contribution of the coniferous plantings. To a lesser extent the degradation of the small streams is observed on the Kazanka river. This is explained both by a greater percentage of forest land in the Pre-Kama area and the coniferous and mixed forests presence in its basin.

In the studied territory, the forest vegetation restoration occurs due to the presence of pine cultures. Thus, in the Pre-Kama area, the pine tree planting in the Nurminka river valley, has led to the restoration of springs and reservoir waters for the 20-year period. Consequently, pine forests stimulate infiltration and the replenishment of the subsurface runoff. According to our data, the artificially-planted pines of 30-50 years of age are distinguished by a simplified structure with a weak development of shrubs and a sparse grass cover (the projective cover it is not more than 50%). Their species diversity is average 26 ± 1,2 species on/ 250m2, which is 2 times lower than in the communities of natural origin. Thus, for reforestation we should plant coniferous, coniferous-small-leaved stands as the most dynamically stable types of forests, corresponding to the zonal features of the region.

4. Conclusion

The anthropogenic development of the landscape has led to a decrease of the forest area and virgin lands, as well as to the degradation of small rivers in all natural zones of the Middle Volga, determining the change in the small rivers structure, reducing the number of their upper-level parts.

The forest vegetation compared to the meadow-steppe and steppe type leads to a greater retention of moisture in the soil, providing high standing groundwater at the depth of 10-15m. A high forest cover of the basins provides an abundance of water-permeable soil layers. With the destruction of forests the runoff increase and the infiltration of precipitations reduces. The small rivers fed by the waters of these depths quickly lose their low flow and get dry.

In the forest and steppe zones, where the plowed areas do not exceed 70% and the coniferous, mixed and deciduous forests are present, the length of the I order streams has reduced by 1,5 times over the past 120 years. On

anthropogenically developed areas, with the dominating field landscapes and wild herbaceous vegetation, the number of small streams has decreased by 2.5 times. The river basins covered by the coniferous and mixed forests, have been deforested to a lesser extent, since the conifers contribute to a higher rate of precipitations, snow and rain transfer into the groundwater.

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Structure of the Chemical Denudation and Methods of Its Determination

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Abstract

The intensity of chemical denudation is instituted by three miscellaneous groups of methods. The regularities of allocation of magnitude of chemical denudation till a drain of dissolved solids for natural zones and mountainous zones of a world are detected. The method of tablets determines magnitude of chemical denudation on natural zones, and also its intrabasin differentiation on relief elements and lithological rocks.

Keywords: *chemical denudation, drain of dissolved solids, pattern of chemical denudation, method of tablets, denudational decrease, zonality of chemical denudation*

1. Introduction

The quantitative assessment of magnitude of chemical denudation can be received by different methods, which one are aggregated by us in three groups: drain of dissolved solids (DDS); account of loss of a weight of standard samples of rocks (method of tablets); design methods. Each group of methods rests on a different host material, gives an estimation of chemical denudation with miscellaneous detail and mirrors the aspects of dissolution of rocks, their chemical transforming and consequent offset of products of a chemical weathering. Depending on features of an applied method pattern of chemical denudation variously can be deciphered, which one is understood as a set of the genetic constituents, their proportion among themselves and absolute values of each of them. For geoecological and geomorphological of the purposes, and also for understanding a genesis of the separate constituents of chemical denudation its separation on surface and underground, natural and anthropogenicly conditioned, denudation of dissolution and weathering is most important [3, 4, 6, 7, 9-11].

2. Method

The DDS after separation denudational (litogenic) component allows rather precisely to evaluate chemical denudation both in dimensional, and in temporary aspects. The datas on this aspect of a solid discharge of the rivers are most suitable for structural partition of chemical denudation. The limitations, bound with usage of this method, are reduced to large dimensional (basin) to generalizing of magnitudes of denudation and to necessity of a very careful choice of methods of separation undenudational of a part of a DDS. Always it is necessary to allow for very irregular arranging of stations of hydrochemical observations and non-simultaneous period of observations.

The method of tablets which are built up in the experimental purposes in different conditions, allows extremely in detail to evaluate dimensional variability of chemical denudation, including inside a river basin and even on separate ground features [8]. This method well determines also discrepancies in dissolubility miscellaneous on lithologic to composition of rocks. The broad applying of a method is precluded by its large complexity.

The design methods are rather multiple and allow for the rather different factors which are capable to influence on magnitude of chemical denudation. Most widely they will be utillized for an estimation of extreme development of chemical denudation - karst. The greatest notoriety from these methods was received a so-called hydrometric method of Corbel [1, 2], which one use now will be utillized for accounts of intensity of karst denudation in regional studies. Though already for a long time most miscellaneous explorers resting on actual, instead of design material convincingly rotin an inaccuracy of theoretical assumptions of Corbel and their conflict with the substantial facts about progressing chemical denudation, specially about nature of its zonal variation. L.Jakucs [5] has described the Corbel's theoretical deductions as ".. one of most effective, but error doctrines of geomorphology".

3. Result

We for an estimation of intensity of chemical denudation utilis separate methods of all three groups. They allow from different stands to determine an oilpainting of dimensional differentiation of an offset of a material in a dissolved aspect.

The method of application of structural partition of a DDS of for account of intensity of chemical denudation was designed at detailed analysis of this process on Roshydromet's materials of overseeings by an river's water and chemical drain in East of Russian plain. The datas are recently collected and the hydrochemical database on 1120 stations of observations disposed on all continents is created except for Antarctica.

The mathematic-statistical treating of this database has allowed to reveal zonal differentiation DDS in different natural zones of plains and altitude zones of mountains of the Earth. From all diversity of the factors, defining intensive chemical denudation, basic are an water drain and lithologic composition of basins's. Water drain is integrated reflex of climatic conditions and, in communal, is zonal.

All natural zones on plains can be determined on 5 groups on intensity of chemical denudation (D) (Table 1).

Table 1. The natural zones groups on intensity of chemical denudation

Groups of natural zones	Natural zones	D, $t/km^2 \cdot year$
1.Zones of very gentle chemical denudation	tundra and woodtundra, semi-deserts of a moderate chord	< 15
2. Zones minor DDS	subtropical semi-deserts, steppe of a moderate chord	15-35
3. Zones moderate DDS	taiga and mixed forest, forest-steppe, subtropical steppes, savanna and equatorial forests	35-55
4. Zones of heightened chemical denudation	mediterranean, deciduous and subtropical forests	55-75
5. zones of strong chemical denudation	tropical forests	> 75

At magnification of a fraction of easily dissoluble soils in conditions of a wet climate the tropical maxima would be even more. The similar zonal proportion is slave of communal regularity observed in a geographic shell - to allocation of heat and a moisture at move from poles to equator. From more northern to more southern latitudes, as a whole, the temperatures increase, the amount of precipitation is augmented. At heats the chemical processes of dissolution flow past more intensively, as the energy of crystal lattice increases, and, therefore, for transferring in an ionic condition of members is spent less energy and the potential of chemical denudation appears in warm southern latitudes maximal. The factor of water is an indispensable condition of weep both chemical process, and offset of a dissolved material by the rivers. On communal allocation of climatic arguments, so, and magnitude of a pool sink, considerable influencing can render a continentality of internal regions of continents, interplay of a land and sea in regions with oceanic climate, availability of orographic barriers etc. From higher latitudes to low diverse proportions between means DDS can be supervised.

The held review of datas on DDS of the mountain rivers of a world allows to draw a conclusion that the greatest magnitude DDS is supervised in mountain deciduous, subtropical, tropical and equatorial forests. The least moduluss DDS - in mountain steppes and semi-deserts of subtropical and moderate latitudes. On magnitude of moduluss DDS all reviewed altitude zones of mountains can be sectioned into groups (Table 2).

Table 2. The altitude zones groups on intensity of chemical denudation

Groups of natural zones	Natural zones	D, $t/km^2 \cdot year$
1.Zones of gentle chemical denudation	mountain semi-deserts of a subtropical zone	15-35
2. Zones moderate DDS	mountain half-deserts of a moderate zone	35-55
3. Zones of heightened chemical denudation DDS	mountain steppes of moderate and subtropical zone, mountain taiga and mixed forests	55-75
4. Zones of strong chemical denudation	mediterranean, deciduous and subtropical forests	75-90
5. Zones very strong DDS	tropical forests	> 90

On an absolute value in mountains DDS it is more, than on plains. This is promoted some by the factors: higher pool sink, speckled lithologic composition of soils drained by the mountainrivers, considerable jointing, tectonic activity of mountain

territories. As well as for the flat rivers, the maxima is supervised in a wood zone in a temperate zone and in subtropic-equatorial forest zones. However oilpainting of a spatial distribution DDS in mountains more composite, than on plains. There is a maxima in subnival and glacial zones, it is possible to explain a genesis which one by a considerable water flow, greater carbonaceous capacitance of natural waters at under temperatures, considerable mechanical denudation, the magnitude by which one, definite on a drain of suspended solids, here is max among all mountain zones. The friable material, arriving at the expense of mechanical demolition, can be a padding source of solutes.

The relevant value has a geographic location of mountains, more sharp abatement of temperature with altitude. In mountains more rapid gang of mountain zones, rather than of natural zones on plains is supervised. All this constructs additionals for one more differentiated as contrasted to by plains of allocation DDS of the mountain rivers.

The spatial distribution DDS at a global level is learnt. Some locales and quadrants distinguished from each other by magnitudes DDS are chosen. The Asian region. The maximal magnitudes DDS are dated for its southeast pacific and southern indian quadrants, namely, to Southern China, Indochina, Zondes isl., Eastern India. Reasons of heightened chemical denudation - broad progressing of easily dissoluble soils and great many of precipitations. A consequent of weep of intensive chemical processes is originating karst territories. To chemical processes also favour good drain because of a raised and mountain relief, specially in headwaters. In basins of the rivers of Southern Asia a heat of air and the copious rain precipitations boost high speeds of chemical dissolution and weathering at the expense of a hyperoxemia of grounds and high contents of carbonates.

The considerable territories of Siberia of Russia, differ by low-level magnitudes of a drain of a dissolved material. The rivers here are disposed within the limits of temperate sharply of continental and subarctic climate. The dry cold climate considerably loosens processes of a chemical weathering. The availability of a permafrost in northern regions and, places, in central parts of considered territory loosens contact of melt waters in warm time with rocks. The moduluss DDS are inflected from 5-10 in northern regions of considered territory till 10-20 t/km2year to the south.

The offset of solutes by the rivers of Northern China is rather insignificant. The basins of such rivers, as Huanche, Haihe etc., originating on a Loess plateau and in Ordos, are in subhumid and temperate subarid zones. A dry and cool climate and infrequent vegetation do not favour to weep of processes of a chemical weathering. Differs heightened DDS European region. Three sectors on magnitude DDS - northen-european, central-european and east-european are isolated. Predominantly, territory of Fennoscandia goes into a northen-european part. The magnitudes DDS here seldom exceed 10-20 t/km2year. The climatic conditions have an effect unfavorable for weep of chemical processes. On a majority of Finland the products of breaking down of crystalline soils of the foundation of Russian gantry and fluvioglacial of deposition prevail. Only on an extreme southwest, in atlantic region of the Scandinavian mountains there are favourable lithologic, climatic and geomorphological conditions for weep of intensive processes of dissolution of soils all the year.

All rest of Foreign Europe is included in the Central European sector. Maximal magnitudes DDS here are noted. So, the moduluss DDS of the rivers originating in the Alpes, Western Caucasus, reach 250-320 t/km2year. In less humidified and low-level Carpathians the mean indexs are a little temperated and compound 60-100 t/km2year.

Doubtlessly, so considerable DDS promote large moistering of Western Europe, as a whole, soft temperate oceanic climate, availability of young mountains of the Alpine orogeny, widespread occurrence of easily dissoluble sedimentary stratas. Classic karst area Kras in Dinara mountains, where speeds of karst denudation of 90-100 mms/1000 of years and more here is. The karst on Caucasus is widely advanced. The remaining territory also differs by considerable progressing of karst processes and miscellaneous shapes of a karst relief.

The East Europe sector of locale encompasses predominantly Russian plain. The territory differs by considerable dimensional variability DDS, that, doubtlessly, is conditioned by variety of geographic conditions. In many respects, the diversity in allocation DDS is connected with lithologic by the factor. The period of development carbonaceous, carbonate-sulphour and sulphour Permian soils is selected Preuralian, where DDS reaches 120-170 t/km2year and more. Other leases of heightened values DDS (50-55 t/km2year) are dated for exits of soils, similar on composition, in limits of the arbor. Heightened DDS it is marked in Belorussia-Baltic, Moscow-Dvinean, Timano-Pechorian region and other karst areas of Russian plain.

In the North-American locale some sectors with miscellaneous intensity DDS are selected, his(its) minimum magnitudes are dated for islands of Canadian arctic archipelago, northern part of continent - to territory dated to Hudson to embayment, down to Central plains in the south and Great plains in west. Dominating moduluss DDS less than 10 t/km2year. The reasons it are quite obvious - unfavorable to weep of chemical processes climatic conditions (cold, continuous winters, short warm period, small amount of precipitation), availability of a permafrost and dominance of crystalline soils of the Canadian board which has been well washed out fluvioglacial depositions.

The rather low-level chemical offset in a southwest part of continent in internal plateaus, high upland-region and

plateaus, on a peninsula of Californium is instituted by a small amount of precipitation, small water flow. Area maximal DDS - Cordilleras, basin p. Mississipi, Central America. The greatest sink of a dissolved material is dated to western, well humidified mountain circuits (networks) Cordilleras, where on pacific coast even in winter time, due to influencing warm Alaska and Northen-Pacific currents, temperature is not lowered (sunk) below 0^0C. The moduluss DDS of the rivers of Alaska compound 40-80, in most favourable conditions reach 100 t/km2year . The western part of Cordilleras differs by intensive tectonic moves, here, in the field of the Alpine plicated zone the modern volcanism is advanced, frequently there are earthquakes, which one result in magnification of fracturing of soils, inflow of a padding detrital material.

The mesozoic plicated area of Cordilleras is less humidified, as is in an orographic shadow in relation to Quiet ocean and is deleted from Atlantic. Maximal DDS is supervised only within the limits of Rocky mountains. Greatest DDS is supervised on leases of progressing of karstic soils in basin p. Mississipi, St. Lowrence and specially in humid tropics of Central America.

Southern America is disposed predominantly in low latitudes, differs maximal on the Earth by a pool sink. All this promotes an intensive chemical weathering in a warm wet climate. However as unfavorable for chemical denudation of the factors the gentle progressing of easily dissoluble soils and strong pan out of products of an weathering appears.

The chemical offset in basins of the mountain rivers off from slopes of Andes (rr. is most significant. Magdalena, sources of Amazon), moduluss DDS 65-150 t/km2year. The flat rivers of basin of the Atlantic ocean differ maximal DDS in absolute expression by virtue of a huge pool sink (Amazon - 240, Parana - 40, Madeira - 32, Orinoko - 22 mln.t/years of solutes).

The Australian locale is legiblly isolated on two sectors - continental and insular. The highest moduluss of a sink are supervised in an insular part of locale, which one differs by extremely favourable conditions of weep of chemical processes - large water flow, high positive temperatures and dominance of a mountain relief. Within the limits of islands widespread of karstic rocks and applicable shapes of a relief.

The moduluss DDS on large islands of Oceania in some times higher(some times above) moduluss of a sink of the continental rivers also reach 50-150, maximum rating - 247 t/km2year - for p. Fly. Within the limits of the most Australian continent DDS is insignificant. Basic DDS is carried out a fluvial system Murray-Darling, disposed predominantly in a zone of dry steppes, subtropical semi-deserts, and does not exceed 5 t/km2year. The majority of continent is occupied by tropical and subtropical deserts, where the limiting factor for weep of chemical processes, as, however, and for all continent is the small of a pool sink.

And only in extreme east of continent, in limits of well humidified western slopes ancient and broken down during long-lived geologic time Large watershed ranges moduluss of a sink are increased up to 20 a little t/km2year, and the places, in favourable lithologic-and-petrographic conditions, where datas advance a karst in paleozoic calcareous stratas, - up to 30 t/km2year.

The African continent differs by the least moduluss DDS. Argument to this in broad progressing of arid and seven-arid landscapes, predominantly in flat nature of a relief, propagation of powerful crusts of an weathering and infrequent exits of easily dissoluble soils.

The considerable magnitudes DDS are supervised only in one area of Africa - in the Mediterranean Atlas. DDS of the largest rivers of this area reaches 90-180 t/km2year. Only in this locale of Africa most widely karst also is is full advanced, which one is dated for mountains and piedmonts referring to fissile in tectonic a ratio to the Alpine plicated zone.

The denudational part in communal fluvial DDS is counted. The offset of salts conditioned by processes of an weathering, is counted on a differential between communal fluvial DDS and sum of matters of an atmospheric genesis, and also anthropogenous genesis. On the average, is accepted, that 50,8% from a communal sink of hydrocarbonate-ions is compounded by(with) their denudational part. With allowance for it, the sink denudational component of a sink of hydrocarbonate-ions is valued in 865 mln.t. After count on hydrocarbonate-ions, the fraction of all ions having denudational genesis, from communal fluvial DDS will make 56%. Allowing obtained magnitude, the mean modulus of chemical denudation will make 16,9 t/km2year.

The determination of magnitude of chemical denudation grounded by a method of the account of loss of a weight of standard samples of rocks (method of tablets) on results of stationary overseeings by intensity of chemical denudation on territory Mean Volga river region and Kola peninsula for a period with 1988 on 1999 years.

The tablets of miscellaneous lithologic composition (gypsum, anhydrite, chalkstone) were gobed up in miscellaneous landscape conditions from tundra up to forest-steppes on different ground features - watershed, slope etc.

The intensity of chemical denudation is instituted by magnitude of loss of a weight of tablets, which one are re-counted in values of a decrease of a surface of tablets and are expressed per one mm / year. The minimum, maximal and mean values for tablets of miscellaneous lithologic composition and separately on ground features (watershed, slope)

were counted.

The mean values of chemical denudation, definite method of tablets, demonstrate, that among all tablets anhydrite, specially in a southern taiga, and more slowly all - chalkstone is diluted fan-in harder. The losses of a weight of anhydrite compound 0,7 mm/years in forest-steppes; 1,99 -в to a southern taiga; 3,22 - in northern taiga and 3,1 - in tundra. For chalkstone the denudational decrease compounds 0,58 - in a southern taiga; 0,78 - in tundra, and in forest-steppes and in northern taiga on some tablets even minor increment of a weight is supervised per separate years. For gypsum the magnitude of denudation has compounded: 0,27 mm/years in forest-steppes; 0,97 - in to a southern taiga.

4. Conclusions

Thus, the definite regularity is supervised: with magnification of locale, and in given we happen it of a part of a light or continents, the diversity of dimensional differentiation DDS is augmented, that is conditioned by the greater continentality of large locales, interplay of a land and sea. As a whole, in central parts of continents the sink dissolved is less, it increases to their western and eastern to peripherals. The area with maximal magnitudes DDS are high Alpine mountain-plicated areas of locales.

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Analysis of Human Capital Level and Inequality Interrelation

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Abstract

This article presents the results of the relationship between human capital and inequality in income distribution in European countries analysis. To test the hypothesis of research the cluster approach was applied, that allowed to divide investigated countries into 9 clusters. The study has concluded that countries with high level of human capital are characterized by a lower degree of inequality in income distribution. Correlation and regression analysis confirm the presence of feedback between the HDI and Gini index.

Keywords: *human capital, inequality of income distribution, European countries, Gini index, human development index*

1. Introduction

In any national economy, human capital is a leading factor of production, competitiveness maintaining and increasing. In the European Union markets competitiveness is considered in combination with increasing quality of life at the lowest possible unemployment rate. European countries don't differ greatly in human capital level, but its structure varies significantly in each countries. Income inequality is a barrier for economic growth and according to this indicator countries differ quite strongly. As an important factor, that can smooth population incomes out, a human capital, expenses for its creation, preservation and reproduction are marked. So, one of the human capital theory founders T. Schultz (1961) wrote that physical capital distribution is more uneven than human capital distribution, so with human capital stocks growth the declining of inequality in personal income distribution is taking place.

The role of human capital was described by G.Becker (1993), which proved that the persistent economic growth in the USA, Japan and Europe were related to investments in training scientific and technical personnel, that determines the growth of income per capita in the labor market. Chiswick B. (1974) showed that human capital, which was expressed in training costs and the returns on income, was one of the causes of regional differences.

2. Methodology

The purpose of the investigation is to analyze human capital role in the economic system. As an object of the study, 30 European countries were selected to examine human development index (HDI) and Gini index in them (data from Human Development Report 2013, 2014). The main hypothesis of the study is that countries with high human capital index are characterized by a lower value of Gini coefficient, that is, the countries with a higher level of human capital have a lower level of inequality.

Investigation methodology is based on cluster approach of international comparing. Wherein HDI includes estimation of four main welfare characteristics: life extension, health service level, education level, living conditions (GNI per capita). Analyzed countries are in groups with very high or high level of human capital comparing with other world countries. Gini measures the degree of inequality in the distribution of family income in a country. The subject of study is human capital level interrelation with economic inequality. Cluster analysis allows distinguishing common features and peculiarities of analyzing countries.

3. Results

The first cluster is represented by Slovakia for which relatively low HDI and Gini coefficient are specific (see Fig. 1). This

country is among those with very high capital level, but it generally loses the rest ones and its indicator is below the average for the group. One can expect the growth of this indicator, as there is a number of positive trends: increase of life extension, GNI, education level. Between 1990 and 2012, Slovakia's HDI value has increased from 0.754 to 0.840 that is an increase of 11 percent or average annual increase of about 0.5 percent. According to the Gini coefficient Slovakia has one of the lowest level of inequality among the analyzing countries, however there are certain problems connected with rather high unemployment and low income levels around the country that prevent human capital growth. Kamasheva et al. (2013) investigation distinguished the main causes of inequity in labor market and discriminating groups that is actual for European countries.

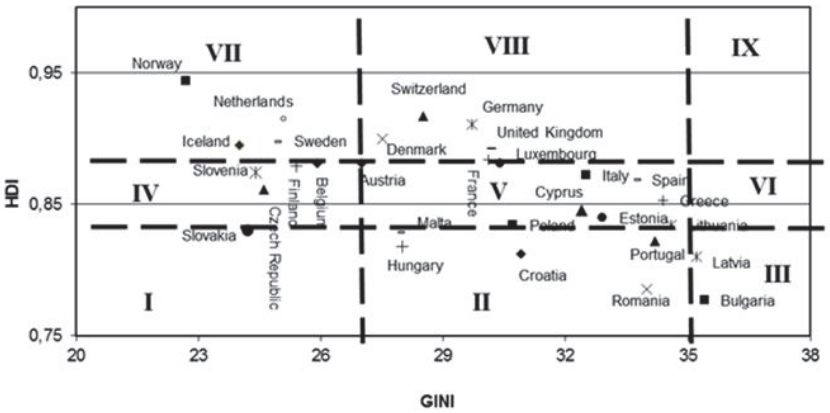

Figure 1. Results of cluster analysis

The second cluster unites countries with average Gini coefficient and low HDI: Croatia, Hungary and Malta. Index components tended to increase in Hungary and Malta. In Croatia there were fluctuations of GNI values, but since 2000 it has again begun to rise (16%). Malta is the leader among these countries because of large GNI growth. Malta's GNI per capita has increased by about 88 percent between 1980 and 2012. Other indicators of the countries in this group are similar. The level of inequality in Hungary and Malta is roughly the same. In this cluster Croatia significantly stands out. In 2010, the coefficient had its maximum, then it has declined slightly, but it hasn't broken the mark of 30% yet.

The third cluster is Bulgaria, Latvia, Portugal, Romania. These countries reflect instability in economic development tendencies, strong dependence on the world market, internal economical problems. Countries with the lowest level of human capital and small GNI are in this group. Romania has a minimum value, in addition there is no growth of indicators related to education, and in 2013 this led to a decrease of human capital composite index. Bulgaria is the country with the highest level of income inequality among all investigated. It should be noted that there is no changing tendency for Gini coefficient. The coefficient was reducing from 1998 to 2002, but then in 2010 there was its significant growth to the maximum (0.36) after which there has been a slight decrease. In Romania an inequality can be explained by a combination of historical, social and economic factors. The transition to a market economy was accompanied by recessions, which increased the inequality. The main labour market characteristics in Romania are lower than the average in Europe. Latvia, like Bulgaria, is a country with one of the highest levels of income inequality in Europe and this level was increasing in 2004-2009. The disposable income of the richest 20% in Portugal (the 5th quintile group) is 5.6 times higher than the income of the poorest 20% (the 1st quintile group). In Latvia the value of this inequality measure is 6.9. The index had been falling until 2009, but after that it began to grow and this trend has remained.

The fourth cluster contains countries with medium HDI level and low GINI: Czech Republic, Slovenia, Finland, Belgium. Finland and Belgium have similar composition of index structure. In the both countries there is a positive dynamic in all components of the index, although the changes are not significant that can be explained by the high level of economic development. Czech Republic and Slovenia are a bit behind the countries mainly because of lower GNI levels. The growth of human capital with the continuing positive dynamics can be expected in this cluster. In Belgium Gini coefficient is one of the most stable in Europe, this can be explained by the economic policies: the minimum wage is at a high level, distribution policy is effective and tax level remains unchanged. The share of social expenditure in GDP isn't reducing. Slovenia is also characterized by stable and relatively low level of inequality. Furthermore, according to the

OECD document, Slovenia was the most equal among the OECD countries at the international level in the late 2000s with a Gini coefficient of 0.24 and has managed to maintain this level of inequality. According to the Di Falco E. (2014) investigation, Norway and Slovenia had the lowest level of inequality (as measured by the Gini coefficient) in Europe in 2012, and that Spain and Latvia had the highest level. Czech Republic differs from the rest of the cluster. Because of the transition to the market system in the 90s there was an increase of inequality, but by 2013 its rate had fallen to 24.6%. The increased inequalities had an impact on household behavior in many aspects. The raising indebtedness, increased share of tertiary educated people or decreasing average number of household members to a certain extent have negatively affected the human capital. The rate of income inequality in Finland had been increasing during the period 1995-2000 afterwards it was stable on the level of 25%. The main reason of behind growing income inequality was the increase of income among high income groups, which was mainly driven by increase in capital income.

The fifth cluster consists of countries with medium levels of human capital and income inequality. They are Austria, Poland, France, Luxembourg. Austria is characterized by a low level of inequality among developed countries and by the lowest rate in this group. Income inequality in France has followed a U-shaped curve over the period 1980-2010. During the 1970s and the 1980s, income inequality has decreased (by 15%). Then, after a period of stability during the early 1990s, inequality started to rise. These changes relate mainly to the policies in wages and taxes. Since the mid-80s in Luxembourg high economic growth rate which led to the growth of living standards is observed. Though Luxembourg has one of the highest living standards for GDP per capita in the world, however, according to international standards the country belongs to the group of countries with relatively low levels of inequality. According to Fusco et all. (2013) the main reasons of increasing inequality in this country are associated with extension of labour market, increase of highly educated labour force share, institutional changes, social policy of income distribution.

The most numerous sixth cluster is formed by Lithuania, Italy, Cyprus, Estonia, Greece, Spain. On the one hand, in this group there are countries experiencing some financial difficulties at the state level (Italy, Greece, Spain). On the other hand Lithuania and Estonia belong to post-socialist countries in which for a long time economic equality policy had been led. According to Ballarino (2012) et al. study, state economical weakness is one of the causes of growing inequality in Italy, as ineffective state redistribution policy leads to income equality failure. Katsimi et al. (2012) study of shows that beginning from 2010 in Greece there has been reduce of GDP and of the minimum wage, which, combined with the cutting down of social policies spending has led to a reduction of inequality level possibly taking it back to the level it had three decades ago.

The Nordic countries Sweden, Norway, together with Netherlands, Iceland form the seventh cluster with low inequality and high HDI rates. These countries mostly confirm the hypothesis of an inverse relationship between human capital and inequality in the country. Salverda et al. (2013) study underlines the fact that in Netherlands despite of the slight increase of inequality the inequality of net equalized income of labour household has remained strikingly stable. Fritzell et al. (2012) note that income inequality in Sweden has increased substantially, especially from the mid-1990s and onwards.

The eighth cluster includes Denmark, Germany, the United Kingdom, and Switzerland with high human capital and middle inequality levels. According to Bjørnskov et al. research (2012), Danish income distribution has for very long been comparatively equally distributed. However, this was slowly changing towards a more unequal income distribution from the 1980s until 2010 years. Thus, Gini coefficient of disposable household income had increased from 25% in the 1980s to around 30% in 2006. McKnight and Tsang (2013) have concluded that the origins of modern inequality in the United Kingdom date back to the 1980 years. The main reasons of inequality changes, as in previous studies, scientists associate with the growing inequality on the labour market, social and tax policy of the state, demographic changes.

To the ninth cluster - countries with high values of HDI and Gini index - none of 30 analyzed countries was included. This result suggests the hypothesis that high level of human capital contributes lower inequality degree to be true.

The link between HDI and Gini index shows that the linear correlation coefficient between the selected indicators is (-0.61), that indicates a feedback. The similar result is shown by a non-linear correlation coefficient of Spearman (-0.61). At the same time regression analysis shows the highest value of determination for polinominal dependence of the sixth degree.

4. Conclusion

According to the study results it can be concluded that in investigating countries there are both common and multidirectional development trends. Thus in all the economies there is the growth of indicators forming HDI, that suggests an increasing role of human capital as a factor of socio-economic development, living standards and population

welfare raising.

Trends in inequality level are not revealed as it is strictly affected by crisis. Regardless of inequality degree Gini coefficient in the country may be growing, stable or falling. The global economic crisis has influenced inequality, reducing its HDI in virtually all countries; especially it has concerned the developed countries, where it has led to the income loss of the richest. However, the main causes of inequality are differentiations of wages in different sectors of the economy and of employed and unemployed incomes, education level increase (which is directly related to human capital), tax and social policies of income redistribution and economic growth expressed in wealth.

Cluster analysis has allowed to distribute investigated countries into groups with similar values of HDI and Gini coefficient. To the ninth cluster with a high level of human capital and income inequality no country was included. The analyzed countries do not differ greatly in terms of human capital, as they all have its stable growth. The main difference is in the level of GNI, which is higher in the developed European countries. The main components determining the degree of inequality are economic factors, as well as wage policy and taxes. Therefore, on the basis of cluster approach, it can be concluded that there is a relationship between the level of human capital and the degree of inequality in income distribution: among 30 investigated countries there was no one, in which high human capital level was combined with a high level of income distribution inequality. Correlation and regression analysis confirm the presence of feedback between the level of human capital and the degree of inequality in income distribution.

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The Comparison of the Interaction of Regional Industrial Clusters with the Financial Sector of the Economy

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Abstract

This article presents a comparative analysis of forms of interaction between real and financial sectors of the economy in different clusters in the regional economy. Significant differences between the nature of the interaction of real and financial sector, depending on the direction of the regional cluster is its orientation to the internal or external customer, as well as the nature of competition and pricing for the products.

Keywords: *The region, the industrial cluster, the financial market, the integration of industrial and financial capital, sources of financing of investment programs of the regional cluster.*

1. Introduction

The problem of interaction between real and financial sectors of the economy has always attracted the attention of economists in modern terms its importance increases even more.

Great attention of scientists and practitioners attract the interaction and integration of manufacturing companies and financial institutions.

A number of publications [1; 2; 3; 4] is devoted to particular aspects of the problem: practical aspects of functioning of the securities market, the formation and implementation of the credit potential of banks, the characterization of monetary policy and other.

These sources thoroughly characterize different forms of integration of industrial and banking capital, but cannot be considered as a comprehensive theoretical and methodological study of its content and role in the modern Russian economy. Not taken into account regional and sectoral factors that determine the motivation of the participants of the financial market and management of industrial companies in the development of relations and cooperation.

The work discusses the process of integrating real and financial sector on the basis of cluster approach. Compares the factors and conditions of interaction between industrial enterprises, participants of the stock market and the banking sector.

2. Method

In this article are based on research findings that revealed a tendency of relationship banking capital and industrial enterprises [5]. In General, for the Russian economy were identified two options for the institutional integration of the banking and industrial capital - with the leading role of the subjects of banking and real sectors of the economy.

Study of the Russian and foreign experience of functioning capital market confirm the emergence of new prerequisites of the banking and industrial integration in connection with the transition to a qualitatively different level of globalization and internationalization of the economy [6; 7].

In this article, apply the cluster approach to the analysis of forms and activity relationship of the real and financial sectors discussed feature of this interaction, depending on the characteristics of regional industrial cluster - orientation of trade relations, the level of competition and the characteristics of the pricing.

In the last decade, the study of the principles and mechanism of functioning of territorial clusters is one of the most important and popular areas of economic research worldwide.

The researchers of this problem under the economic cluster understand the concentration of similar, coherent or

complementary companies, which are characterized by active engagement, transactions and are in dialogue, the search for solutions to common problems.

They share a common infrastructure, labor markets and services, [8] including companies in the cluster have the same access and use the products and services of the financial market. As a result, the cluster contributes to the economic growth of each participant and the region as a whole.

From the point of view of interaction with the banking sector, we can say that the company is included in the cluster, is the preferred client for the Bank, because the benefits from growth expectations and the stability of the cluster. However, the picture is reversed in the event of an economic downturn and deterioration territorial cluster.

It is possible for the following reasons:

1) clusters increase productivity due to access to resources, information, and institutions,
2) clusters increase the share of innovative products, due to internal competition,
3) clusters accelerate the production process, attracting new firms and institutions,
4) clusters make it more understandable and predictable business environment in the area, which contributes to improving the quality of regional strategic planning.

This is an ongoing discussion about how to identify and determine the extent of formation and boundaries of the cluster. This is the starting point of the analysis factors in the development of the cluster, including analysis of the causes and characteristics of the interaction of industrial clusters with the institutions of the financial sector.

Many scholars have promoted the idea of diversification of methods of identification of the cluster, depending on the level of analysis - national level, sectoral level and regional level [8, 9, 10].

In these works there are two groups of methods:

- qualitative methods
- quantitative methods

Among the quantitative methods of identification of the cluster can be distinguished:

- the coefficient of localization (localization coefficients - LQ),
- analysis of supply chains (input-output analysis),
- dynamic structural analysis (shift-share analysis),
- Giniho coefficient of localization,
- Ellison and Glaeser index of agglomeration,
- Maurel-Sédillot index.
- The most well-known qualitative methods can be attributed
- Expert survey and management companies (interviews with experts and management of the firms),
- Questioning (researches question-forms),
- Situational analysis (case studies).

Localization coefficients compare the characteristics of branches (number of employees, sales and added value) at the regional and national level. The results of the LQ show the dominant localization of enterprises in the given branches [8]. The localization quotients for the number of employees is defined as follows

$$LQi = (zi/z) / (Zi/Z) \quad (1)$$

where:

- LQi is localization coefficient of the i-th branch (employees),
- zi is the number of employees of the i-th branch in a region,
- z is the total number of employees in the region,
- Zi is the number of employees of the i-th branch in country,
- Z is the total number of employees in country.

$$LQiv = (vi/v) / (Vi/V) \quad (2)$$

where:

- LQiv is localization coefficient of the i-th branch (turnover, value added)
- vi is the value of output (turnover, value added) of the i-th branch in a region,
- v is the value of output in the region,
- Vi is the value of output (turnover, value added) of the i-th branch in country,
- V is the value of output in country.

The focus of attention, for the purposes of the study, based on the above methods were selected two industrial cluster in the region of Tatarstan, Russian Federation.

Namely, the Energy and Petrochemical cluster of the cluster, which have significant differences on defined above criteria.

Energy cluster presents a power Generating company Network company Dispatch center and group repair and manufacturing industries. The feature of this cluster is the local market for heat and electricity, the main consumers are located within the region.

Petrochemical cluster includes a group of enterprises, including Nizhnekamskneftekhim, Kazanorgsintez, TANECO. Feature is the high share of exports. Two clusters operate in different competitive environment. This is also different pricing models - the price of the products of the petrochemical cluster is formed in market conditions, taking into account market conditions.

The energy complex is characterized tariff pricing in terms of actual monopoly.

3. Result

Today, the power of the Tatarstan Republic is as follows. Cluster-forming enterprises are involved in the generation of electricity. Around generation formed a powerful cluster of enterprises - manufacturers of power equipment, a cluster of companies that provide services in the delivery of energy to consumers, such as JSC "Grid company", heat network company, energy service and engineering companies, research and educational centers.

The study of the dynamics of sales and financial results, was the dependence of the industry on tariff policy, and, as a consequence, the ability to control the processes of formation of financial resources by non-market pricing. This fact has a powerful impact on the investment activity of enterprises of this group and interaction with the financial market.

In table 1 presents data on the structure of financing sources of investments into the fixed capital of the enterprises of the group.

Immediately draws attention to the fact that the major and in General the dominant source of are own funds of the enterprises of the group. It is interesting to see the change in this share over time during the reporting period. She fell from 82,4% in 2005 to 76,2% in 2006, which is explained by the reduction in profits due to low growth rates. This year 17.6% financing of the investment program of enterprises was carried out at the expense of the Tatarstan Republica's budget.

Table 1. Structure of investments in fixed capital by sources of financing (production and distribution of electricity, gas and water)

Year	Investments, total (%)	Own funds (%)	Borrowed funds (%)			
			Total	of these budgetary funds		
				total	including means	
					Federal	Regional
2005	100	82,4	17,6	14,8	9,7	4,5
2006	100	76,2	23,8	19,4	1,7	17,6
2007	100	85,4	14,6	4,4	1,8	2,0
2008	100	62,8	37,2	4,4	1,7	1,6
2009	100	92,5	7,5	0,4	0,3	-

Comparing these data are presented in table 2 the data for the entire industry of Tatarstan, there was clear difference in the trends and nature of interactions of real and financial sectors. In 2009, more than 60% of all investments in the industry of the Republic of Tatarstan was carried out at the expense of borrowed funds.

Table 2. Structure of investments in fixed capital by sources of Finance (all industries)

Year	Investments, total (%)	Own funds (%)	Borrowed funds (%)			
			Total	of these budgetary funds		
				total	including means	
					Federal	Regional
2005	100	72,4	25,8	2,2	1,5	-
2006	100	60,7	39,3	1,9	0,4	1,4
2007	100	61,5	38,5	-	-	-
2008	100	52,5	47,5	0,5	0,2	-
2009	100	39,3	60,7	0,5	0,5	-

However, despite the fact that enterprises of energy practically does not use the potential of the financial market to raise funds for implementation of investment programs, the level of their investment activity higher than for industry as a whole.

The refresh rate is at 15% per year, while the degree of wear of fixed assets in the energy sector is lower than for industry as a whole.

The coefficient update **=** (Capital expenditures for the year / The value of fixed assets at beginning of year) × 100% (3)

Petrochemical cluster presents dozens of companies, most large strategic enterprises of the Republic of Tatarstan are concentrated in the ownership of JSC "Tatneftekhiminvest-holding".

Below is the evaluation of the interaction of the largest enterprises of Petrochemical cluster in Tatarstan Republic with the financial sector in two main aspects: in conjunction with the banking system and in relationship with the stock market.

Connection with the credit and banking system is reflected in table 3 the credit history companies on the basis of interaction with commercial banks on the basis of data from financial statements of companies in 2005-2009.

Table 3. Credit history of the largest enterprises of Petrochemical cluster in Tatarstan Republic

The name of the borrower	The average loan term, years	The average loan amount, million USD	The number of borrowings	Occurred arrears
JSC «Nizhnekamskneftekhim»	7,4	95,8	8	no
JSC «Nizhnekamskshina»	0,6	2,9	12	no
JSC «Chemical plant named L.Y. Karpov»	3,5	3,8	2	no
JSC «Kazanorgsintez»	6,7	1 877	14	yes
JSC «Nefis Cosmetics»	no data	2,3	more than 60	no
JSC «Tatneft»	4	2 100	3	no

You can mark the active cooperation of the largest enterprises of Petrochemical cluster in Tatarstan Republic with the credit and banking system, and the degree of this interaction in most of the surveyed enterprises in the dynamics increases, which manifests itself in increasing amounts and types of loans. But the availability of loans from most of the enterprises of Petrochemical cluster in Tatarstan Republic, comparable with the volume of attracted credits, indicates non-market mechanisms for attracting financial resources in Tatarstan Republic's petrochemical cluster, which is a negative factor, because it does not contribute to the development of relations between the financial sector with industrial.

4. Conclusion

1. The study group of energy companies characterized by a high level of efficiency, ROI is above the average for the industry and the economy as a whole.

The reason the current system of tariff regulation, when all expenses are covered by the growth of tariffs, i.e. have to be paid by end consumers.

In such circumstances, the group's companies receive a significant profit, which is invested in the production. The investment process is intensive. The main source of investment it is equity - accumulated profit and depreciation of the company.

It can be assumed that with a projected shortage of domestic resources for the implementation of industrial investment, turn on mechanism of lobbying, which ultimately affects the adjustment of tariffs.

2. We found the dependence of the real economy and financial institutions on the characteristics of territorial-industrial cluster. The main parameters that characterize a particular type of cluster, and determining the orientation and activity of the integration processes with the institutions of the financial sector, the following:

- orientation of trade relations in foreign markets or the predominance of a larger share of sales within the region;
- vertical or horizontal linkages of enterprises within the cluster and the presence among these enterprises local monopoly;
- the nature of competition and pricing for the products.

On the basis of these parameters on the territory of the Republic of Tatarstan was revealed two main clusters, different relationship with financial institutions: power and petrochemical. In the energy sector pricing tariff and regulated

by the state. The petrochemical sector are more closely related to financial institutions and active use of modern financial instruments.

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Economic Development and Migration

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Abstract

At present population migration is a global problem that requires a serious and deep analysis of both how to address underlying causes of migration and its socio-economic consequences. Analyzing migration flows is necessary for both the source country and the recipient one. Migration issues in contemporary society are interrelated with the problems of economic development, with the problems of human rights and determine the features of the society development.

Keywords: *economy, migration, economic growth, economic development, society, industrial policy, migration policy.*

1. Introduction

There are many different theories and methodological approaches that examine the effects of labor migration within the economic system, both in the recipient countries and source countries. But there is not one that would be accepted as a general theory by all experts. The analysis of migration with the help of apparatus of various sciences including sociology and economics is necessary in terms of the existing relationship of migration and economic development processes that alter the levels of inequality and poverty in the economy.

Poverty and inequality in the economy are linked. Inequality can be seen as an uneven distribution of society's resources among different groups of the population. In this case, the main indicator of inequality is the quantity of liquid values that a particular individual possesses (they determine the social status of an individual). At the same time, poverty is also a decrease (resulting in decrease of liquidity values) in the level of intellectual and moral development of an individual. Thus, the poverty can be understood as an economic condition of individuals which implies a minimum quantity of liquid values and limited access to social benefits. The concept of poverty is determined by the level of economic development in a given country and the wealth of society (in fact, by the same parameters which are the main driving force behind the migration process). A more developed economy allows more diverse range of needs and increase of satisfaction. However, the richer the country is, the wider is the range of needs considered mandatory for a normal life (satisfying the needs which are recognized as optimal and are generated by evolutionary development of the economic system). Accordingly, the poverty criteria will vary depending on the development of the economy, and within countries, depending on the development of a region.

2. Theory

Considering involvement in the production of additional resources within the migration process, one should note a number of effects obtained by migration. Firstly, the process may allow to attract qualified labor force without expending additional resources to develop it (this is very unlikely in the Russian economy where the vast majority of migrants is unskilled). Secondly, (which is more likely), migration processes can disrupt the balance of forces in a particular region (given the scale of migration, ethnic and religious composition of the migrant population).

Accordingly, pluses of migration associated with increased labor force may overlap minuses associated with side effects from social instability in regions with increased migration. Moreover, since migrants tend to be willing to work for lower wages, they automatically fall into the group of the most poor. Simultaneously, with the poverty increase and income inequality, a replacement of the local people from their jobs occurs, which may also contribute to the destabilization of the social situation and the strengthening of the contradictions in a particular region.

Foreigners arriving to the Russian Federation to be employed workers are becoming a very common phenomenon.

However, the assertion that foreign citizens take up jobs from Russians cannot be justified. For example, according to the Federal State Statistics Service, in October 2013 the overall unemployment rate in Russia was 5.3% of the economically active population (in September 2013 - 5.2%). The total number of the unemployed in Russia amounted to 4 230 m. Even if to employ all the unemployed, migrants, who, according to the FMS of Russia, occupy about 5 m jobs, there would be available vacancies.[1]

At the same time, the effectiveness of the migration impact on the national economic system is largely determined by the quality of migratory labor flows. The type of labor migration flow will determine the effectiveness and socio-economic implications.

In recent years (2011 - 2013) the quota for the permits issuance to foreign citizens working in Russia has been remaining at the same level - 1,745,584 people[2]. That is 98,772 people less than in 2010, when it stood at 1,944,356 people[3].

Currently the Concept of State Migration Policy of the Russian Federation until 2025 is developed and it is approved by Presidential Decree of 13 June 2012. The Concept declares the need to construct a system to assess requirements for foreign labor. Here, one of the priorities of the Russian migration and integration policies is to find and balance the interests of the state and human rights.

According to the Russian Public Opinion Research Center, 65% of Russians admitted their negative attitudes toward immigration as it enhances the growth of crime and corruption. While 47% of Russians believe that newcomers make up for shortages of the low-skilled and low-paid work. A relative majority of respondents (53%) do not tend to think that immigration can solve demographic problems of the country (in 2005 - 46%) and enrich its culture (45%). Impact of immigration on the economy is also often evaluated negatively (40%). At the same time, 58% of Russians support the idea of attracting Russian-speaking immigrants while limiting the entry of representatives of other nationalities (2005 - 69%).

Over the past 7 years, Russians have become more negative about the presence of migrants in local government (from 71 to 86%), law enforcement (from 68 to 84%), education (from 63 to 81%), medicine (from 61 to 76%), catering (from 54 to 70%), public transport (from 53 to 68%) [6].

According to the Federal Migration Service of Russia, over the first half of 2013 more than 11.3m foreigners entered the country, which is 9.9% more than in 2012. At the same time 1.8 m have a work permit or patents, and almost twice as much, about 3.5 m, work illegally. As a result, last year federal budget fell short of more than 60 bn rub. Immigrants from neighboring countries represent more than 70 percent of foreigners arriving in Russia.

3. Results

Today, migrant workers are distributed unevenly over the territory of the Russian Federation. The most fraught places are Moscow, Moscow region, St. Petersburg. That is, it is actually the regions with the most rapid economic development, with the highest concentration of industrial capacity and financial resources. At the same time, it should be noted that between the official data and the real extent of labor migration there is still a significant gap.

Currently, in Russian economy migrants are employed mostly in construction - 42% of the total number of migrants. It should be noted that the proportion of migrants in the total number of workers in the construction is 16 percent. Real structure of migrants employment, as experts say, is somewhat different from the official data because of the strong misreporting in the services sector, including leisure and recreation, housing and public utilities and household chores. Migrants usually do unskilled work. Only a part of them has a complete secondary education: only 1.1% employees hold positions that require high qualifications.

Given the expert estimates of illegal migration (3.2-5.2 million) the share of migrants can reach 4.7-7.7 per cent of total employment in the Russian Federation[4]. By the end of the first decade of the XXI century Central Asian countries (Tajikistan, Uzbekistan), Ukraine and China have become the main source countries of labor for Russia[5]. Migration flow from Tajikistan to Russia is 16 percent of the total labor migration in the Russian Federation. Its economy is heavily

[1] *Unemployment grew in Octiber to 5.3%// Novye izvestia. 2013. №10*

[2] *On defining the need to attract to RF foreign workers and approval of quotas for 2013: RF Government Act, 3 November 2012 №1137/ SPS "KonsultantPlus"*

[3] *On defining the need to attract to RF foreign workers and approval of quotas for 2010: RF Government Act, 28 November 2009 №961/ SPS "KonsultantPlus"*

[4] *Chernina E. How migrants influence the economy of the country? News service of HSE portal/ http://www.hse.ru/news/media/ 69297044.html*

[5] *Ibid.*

dependent on remittances from migrant workers who, according to the World Bank, in 2011, accounted for 31 percent of GDP. In this case, we do not take into account the flow of migrants from Ukraine which grew in 2014. Not everyone who came from Ukraine at the moment can be seen as migrant workers, as some of them are ready to go back home after the change of the overall situation in Ukraine and its South-East.

The main flow of migrants (60 per cent) is to Moscow, other common areas are Yakutsk (15 percent), St. Petersburg (about 6 percent), Yekaterinburg (about 6 percent), Tyumen (2-3 percent). Other cities get a small proportion of migrants.

Functioning of the Russian economy is also connected with insufficient efforts of the State in pursuing innovative, structural and investment policy in order to increase the competitiveness of domestic production. In the context of economic sanctions against Russia by a number of states the importance of such a policy is reinforced. Russian industrial policy very often (and by many economists) is not perceived as a valid tool in the market economy, but rather as an element of strengthening the state's role in the market. It is not taken into account that the role of industrial policy during structural transformation of the economy should not be reduced to a flagrant interference in market processes, but it is rather used as a tool to support the targeted economic sectors (creating conditions for the advanced development) which are capable to increase the competitiveness of the national production. In accordance with this objective such directions of improving industrial policy as innovation policy, investment policy and structural policy should be formed. The combination of state actions should result in increasing the competitiveness of national production. At the same time, with a well developed system of production targets, insufficient attention is paid to such issues (which provide the conditions necessary for the development of production) as the availability of skilled labor. Moreover, since we are talking about the formation of new high-tech industries, the required qualifications of labor force should be high enough. Current migration is not able to provide a solution for this problem and rather exacerbates it when the most qualified employees without getting proper salary and not being able to solve their social problems, go abroad.

At the same time when applying the regression-correlation analysis we have constructed a model which determines the GDP rate dependence of the Russian economy on the growth rate of export earnings (X1), unemployment rate (X2), investment in fixed assets (X3).

$$y = 1{,}04 \frac{x_1^{0{,}18} \square x_3^{0{,}15}}{x_2^{0{,}33}} \varepsilon$$

This model covers the period up to 2012, i.e. till Russia's accession to WTO. The analysis in the model demonstrates the absence of autocorrelation in the excesses. The regression coefficient with growth in export earnings has little significance[6]. At the same time, the elimination of this parameter from the model is biased because the subtest evaluation shows the great influence of the growth rate parameter on the rate of GDP change.

Tightness of the overall impact of all the parameters on the rate of GDP change can be estimated as high (68% of the variation rates of GDP change due to the change of these parameters. Other parameters influence is 32%). Influence of parameters identified can be generalized: when increasing the growth rate of export revenues (from the sale of gas and oil) by1%, keeping other parameters constant, GDP growth rate increases by 0.18%; with an increase in the unemployment rate by 1%, keeping other parameters constant, GDP growth rate falls to 0.33%, with an increase in the growth rate of investment by 1%, keeping other parameters constant, GDP growth rate increases by 0.15% [4].

Thus, the change in unemployment, with migration processes directly influencing the unemployment rate in the region, is one of the most significant parameters affecting the economic development.

4. Conclusions

Successful and thoughtful migration policy can provide stability in the country, successful implementation of the objectives of industrial policy, as well as to expand the country's influence in the international arena, ensuring good relations with the countries - recipients of migrants.

Nevertheless, migrants contribute to economic growth and human development in both source countries and the recipient ones. They can contribute to the development of society through cultural diversity, through the formation of a sense of understanding and respect for different cultures. Migration is also potentially one of the basic ways to implement human rights.

It should be noted that in some countries the role of migrants is significant enough in the "upper" segment of the labor market, i.e. where there are qualified professionals, managers, scientists, high-tech industry workers. The demand for such labor is not caused by refusal of local workers from these types of employment, but by the absolute lack of

[6] *According to Student's t-criterion*

qualified personnel which ensure economic growth in the developed countries. Globalization (deglobalization) trends have a significant impact on employment in these sectors. Such workers do not usually meet opposition from migration and border regimes of recipient countries.

Thus, migrants are concentrated in the lower sectors of employment of the global labor market, leaving the "middle" to locals. In general, immigration flow characteristics is shown in Table 1.

Table 1. Immigration flow characteristics

Title of the labor flow characteristics	Nature of the characteristics
1. Duration	Regular, irregular, cyclical
2. Limitations to residence and work place	Contract, business
3. Legal status	Legal, illegal
4.Qualification level	High- skilled, low-skilled, unskilled
5.Demographic structure	Gender and age, marital status, ethnicity
6.Social structure	Education, social status
7.Immigration motivation	Making profit, relocation, change of social class, refugees, job search
8. Social and economic situation in the country which supplies or receives immigrants	Developed, poor, developing, natural or social disaster, non-democratic political regime
9. Labor application spheres	Industry, agriculture, retailing, services sector, science, construction etc.

Summarizing the above mentioned, and given the contradictions in the world economy at the moment (the current economic crisis and the imposition of economic sanctions against Russia), we can agree that over time of civilization de-globalization (disintegration) becomes the dominant process (according to Ross Levine and William Easterly). In this case, the aggravation of the political situation in Europe can be considered as a factor contributing (as hypotheses) to the beginning of a new cycle of de-globalization. At the same time, the period of de-globalization is always accompanied by increased cross-national conflicts and global trade weakening. And this process, in its turn, leads to enhancement of the crisis in all countries, which can stimulate migration and require greater state intervention for the regulation of labor market mobility. All European countries went through this process, when the first optimistic expectations of creating a common market gave way to increased regulation of the labor market and the creation of barriers to protect their market from migration from abroad.

Under these conditions, increased state intervention may be even despite the fact that the continuous adaptation to changing conditions (a state strict regulation prevents exactly this process) is necessary not only to improve, but also to maintain the already achieved level of life (and in the regulation of the migration process it may enhance or eliminate the imbalance in attracting personnel from abroad). In this case, it becomes necessary to determine the temporal boundaries of the period for increased state intervention and to determine the admissibility of the application of a regulatory tool.

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Coaching as an Innovative form of Staff Development in Organisations

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Abstract

As a result of the study it was revealed that coaching increases the propensity of employees to self-development and self-improvement which in its turn increases the efficiency of their activities. As to contribution of coaching in fulfilment of an employee's direct labour obligations and perspectives of his career growth, the effectiveness of this tool was also confirmed by the results of econometric analysis. It was found that an employee's awareness of effectiveness of coaching depends on the level satisfaction with the salary earned. A 1% change of the salary satisfaction index ceteris paribus will lead to a 0.89 % increase of the effectiveness of coaching. At the same time it was revealed that the most important factor in the effectiveness of the whole development process is the level of training and professionalism of a coach.

Keywords: *coaching, staff development, innovation, organization, self-development.*

1. Introduction

Currently, employees of a company are becoming the engine of its growth and competitiveness, regardless of the size and scope of activities. Investing in an employee is considered highly productive and is aimed at increasing his intellectual potential, self-development, and commitment. As a consequence, sales increase and the business becomes more competitive. One promising directions on this path is the use of modern techniques and practices conducive to revealing the human capital, its basic characteristics and the aspirations of growing involvement in the decision-making process. Among them, coaching is the most popular and actively implemented in organizations.

Foreign and Russian authors give several disparate definitions of coaching. Thus, R. Dilts, an international representatives of coaching, recognized in theory and practice, gives his interpretation of coaching as a process in which individuals and groups can act efficiently and maximize their abilities. [1] He includes here drawing out and using employees' strengths, helping them to overcome personal barriers and limits on the way of achieving better results, as well as improving the performance of team work.

At the same time, R. Dilts is focused on productivity of changes and accomplishing specific goals. In his opinion, the methods of coaching are oriented, first of all, towards the result, and not towards the problem. Therefore, they are entirely focused on the process of finding solutions. Their task is to develop new strategies of thinking and actions, rather than solving problems and conflicts of the past. [1]

Thus, according to R. Dilts, the characteristic of effective coaching is focusing on the task and intra-organisational relations between employees.

Additionally, R. Dilts talks about various forms of coaching, differentiating the traditional, small “C” coaching from the large “C” coaching. The first type is mainly focused on the behavioral level that corresponds to the process of assisting an employee in achieving or improving specific results of any activity. The methods of small ”C“ coaching are designed to help an employee discover his own resources and abilities, as well as to develop his conscious competence. The second one involves assistance in achieving goals at various levels of the organizational hierarchy. It emphasizes the importance of productive changes, focused on strengthening personal individuality and values, and turning dreams into reality.

In the works of J. Whitmore, coaching is treated as a particular style of management, conditioning a new corporate culture and based on openness, trust, coordination of actions and objectives of employees in an organization. Within this approach, coaching is not considered as a single tool of improving an employee's labour efficiency. Rather, first of all it is a system of events causing the emancipation of his labour and intellectual potential. [2] Coaching, the deep foundations of which are based on psychological principles and models, encourages not only employees, but people in general to realise and be aware of their enormous potential. Being sufficiently motivated, they can successfully implement it in their

professional field, and thereby solve the main problem of modern business - maximizing productivity and performance.

At the same time J. Whitmore notes that women demonstrate a natural ability to comprehend the philosophy of coaching, which in comparison with men, is closer to them in terms of style. As a result "... a growing number of women in the top management positions ... will strengthen the practice of coaching as communicative norms in business". [2]

J.K. Smart insists on active using of coaching so as to eliminate the gaps between the actual performance and expected standards. Coaching, revealing the potential of employees, improves their performance discipline, which is beyond the power of the traditional training. [3] Coaching can be a one-time event designed for the development of specific characteristics of an organization as well as an ongoing process of working with employees.

M. Reynolds considers coaching primarily as methods of development and personal development of employees through orienting them to awakening their activeness and transforming ideas into sustainable approach to work. [4]

Exploring coaching as the art of facilitating the performance, improvement, training and development M. Downey focuses on non-directive coaching. [5,p.48] The latter relies not on the knowledge, experience, wisdom and foresight of a coach, but more so on the person's ability to learn and think for himself.

J. Hurd offers coaching as an effective mean of acquiring and implementing the skills of an effective manager. Coaching, in his opinion, is a powerful feedback mechanism in the relations of managers and employees. Coaching can direct a new leader towards the transition to fundamental values and development of the practice and relationship skills necessary for being successful in this role. [6]

Positive characteristics of coaching in terms of stimulating an employee for independent search of solutions, in the opinion of J. Starr, involve his great labour and performance interest. Encouraging people to think for themselves and make decisions you increase their sense of responsibility for the area of their activity. [7]

Applied studies of the impact of coaching on organizational behavior of employees, their productivity, investment in social capital, etc. show sufficiently close connection between them. For example, in the research of S. Kim on the basis of the empirical analysis it is confirmed that the management coaching has direct impact on an employee's awareness of his hierarchical and status role, as well as his job satisfaction. [8]

However, in his study A. Ellinger, D. Bachrach, Y.-L.Wang, A. Baş argues that the greatest impact is evident on the lower and middle hierarchy levels of management coaching. [9] Similar results were obtained in the study of the effect of coaching on the labor intensity of employees at different levels of the organizational hierarchy. [10] The intensity of management coaching has positive effect on the productivity of an employee. At the same time, this effect decreases at higher hierarchical levels.

A group of researchers subjected to a detailed analysis the advantages of using a broad network of coaching and its role in enriching the professional life of the members of an organization. They concluded that the systematic use of coaching in organizations provides real and significant aid to the staff in acquiring knowledge and increasing their competence that contributes to their career and personal growth. [11]

2. Data and Methodology

Our research is aimed to find out whether coaching is an efficient process in an organization from the point of view of an employee who receives all the necessary information, methods of its development and other assistance.

The following hypotheses were formulated during the research:

Hypothesis #1. Coaching is an effective innovative form of developing employees' potential. The research was to find out whether coaching is an efficient process in an organization from the perspective of an employee who receives all the necessary information, methods of its development, and thereby reveals his capacity for self-development and self-improvement. The effectiveness of this tool was confirmed by the survey results.

Hypothesis #2. Coaching helps an employee in performing his direct job duties. During the survey respondents assessed the extent to which coaching in their organisations can benefit them in the performance of their direct job duties. This item was evaluated both by employees and coaches.

Hypothesis #3. Coaching provides opportunities for career growth. This hypothesis is based on the assumption that coaches in an organization share with employees not only the information about their actual job, but also reveal their hidden potential and resources that help employees to reach new career heights.

In the course of research 150 employees were surveyed in the spheres of accounting, taxes, control, and audit. Among the respondents there were 53 men and 97 women. The questionnaire consisted of 25 questions, among which were open and closed questions. Most of the respondents were employees aged from 21 to 24 (55%), 40 respondents were in the age category of 24-27 years, 8% of respondents were over the age of 27, and 7% respondents were under the age of 21.

In the survey, respondents were asked to rate the effectiveness of the system of coaching in the organization on a 10-point scale, where 1 is very poor and 10 is excellent. 5% of respondents rated the system of coaching in their organizations as ideal. The minimum score that the coaching system of an organization received was equal to 4, which meant that an employee is 40% satisfied with its work. The most popular number of the effectiveness assessment was 8. This answer was given by 30% of respondents. 70% of all surveyed employees of an organization covered the range from 7 to 9. Thus, for a larger part of employees efficiency of a system of coaching is at the level of 80%, which is an excellent indicator.

69% of all respondents indicated that coaching is also a great help in the implementation of direct duties in the workplace. 11% of all respondents did not evaluate coaching system, and 20% found it difficult to answer the question.

To the question if coaching helps career promotion 73% of respondents answered in the affirmative. Only 9% of respondents do not see the benefits that coaching provides for further career growth. 18% of respondents could not answer the question.

According to the study, 71% of an organization's employees are ready to become coaches themselves in the company and share their knowledge with new employees. 13% of respondents believe that at the moment they lack the experience to become coaches, and 4% of the respondents are already mentors in their organisations.

3. Discussion

To identify the most significant factors affecting the efficiency of the organization of coaching in companies there was carried out an econometric analysis and model construction. The answers given by respondents to the question to evaluate effectiveness of the system of coaching on the scale from 0 to 10" (1b) were taken in this model as the dependent variable Y. For the model construction the following factors were selected: x_1 - the quality of an ideal coach, "the reliability of a coach"; x_2 - the quality of an ideal coach, "professionalism"; x_3 - the role of coaching in performing of the direct duties; x_4 - the role of coaching in career growth; x_5 - the potential readiness to use coaching in business; x_6 - the gender role; x_7 - the role of coaching in formation of the corporate spirit of an organization; x_8 - the level of wages.

As a result of the econometric analysis the following econometric model (table 1) was obtained.

Table 1. OLS model (we used 150 observations, the dependent variable Y)

Variables	Coefficient	Standard Error	t-statistics	P-value	
const	7,75994	1,18928	6,5249	<0,00001	***
x_1	-0,337782	0,11957	-2,8250	0,00543	***
x_2	0,342367	0,1173	2,9187	0,00410	***
x_3	-0,632434	0,175358	-3,6065	0,00043	***
x_4	-0,985156	0,194866	-5,0556	<0,00001	***
x_5	-0,643742	0,159223	-4,0430	0,00009	***
x_6	1,28365	0,291912	4,3974	0,00002	***
x_7	-0,759027	0,224723	-3,3776	0,00095	***
x_8	0,897344	0,189951	4,7241	<0,00001	***

Table 2. Analysis of the model parameters

Mean of Dependent Variable	6,547297	St. Deviate of Dep. Variable	3,093409
Residual Sum of Squares	359,2321	Model bug	1,607608
R-squared	0,744622	Corrected R-squared	0,729924
F(8, 143)	50,66144	P-value (F)	1,61 e-37
log likelihood	-275,6229	Akaike Information Criteria	569,2458
Schwarz criterion	596,2207	Hannan-Quinn Criterion	580,2056

The coefficient of determination is equal to 0.744622, which indicates that the factors considered in the model explain 75% of the reasons of effectiveness of coaching in a company, 25% are the factors unaccounted in the model. According to Fisher's, a model is significant if Fcalc > Fcrit. In the model the P - value makes 1.61 e-37, which also indicates the

quality of the model. Based on the above, the regression equation is as follows:

$$Y = 7{,}76 - 0{,}33 \cdot x_1 + 0{,}34 \cdot x_2 - 0{,}63 \cdot x_3 - 0{,}99 \cdot x_4 - 0{,}64 \cdot x_5 + 1{,}28 \cdot x_6 - 0{,}6 \cdot x_7 + 0{,}89 \cdot x_8 + \varepsilon$$

The understanding of the effectiveness of coaching depends on employees' satisfaction with the salary. This can be explained by the fact that financial income growth is accompanied by career growth. This fact also plays a role in assessing the effectiveness of coaching since an employee has been working with the company for a long time and sees its advantages and disadvantages, and is ready to transfer them to the younger generation. A 1% change of the salary satisfaction index ceteris paribus will lead to a 0.89 % increase of the effectiveness of coaching.

Female respondents evaluated the effectiveness of coaching higher than male respondents. The average evaluation score of the effectiveness of coaching among women was 7,03 points out of 10, while men evaluate the effectiveness of this tool on the average as 5,70 points out of 10.

The level of training and professionalism of a coach is the most important factor in the effectiveness of the entire process of an organisational staff development. This fact was noted by 61% of respondents, who analyzed this quality as the most important for a coach. The rest of the qualities were distributed by nearly equal shares in the first place, having occupied from 7 to 14% of respondents. With increasing the significance level of professionalism of a coach to 1% the efficiency of coaching will increase to 0.34%.

The multicollinearity test showed that multicollinearity was not present. The heteroscedasticity model validation through the test of Wight led to the following results:

The null hypothesis: heteroscedasticity is absent.

Uncorrected R-squared = 0.826789

Test statistic: TR ^ 2 = 122.364781

The P-value is P (chi-square (43)> 122.364781) = 0.000000

4. Conclusion

Thus, coaching is an effective tool of improving efficiency of an employee and promoting him in the career ladder. Coaching process plays an important role in acquiring by employees new knowledge while performing their immediate responsibilities in the workplace. At the same time coaching helps an employee to develop not only professional but also personal qualities, and therefore improve them and reach new career heights.

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The Controlling Process of the Human Capital through the Effective Redistribution of the General Welfare

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Abstract

The controlling process of the human capital during the globalization of the world processes in the innovative development in the economy requires from all the economies an overall approach to tackling the general welfare in their countries. The progressive development of the society in general and innovation processes inside of the economic systems in particular depends on that. We come to a new understanding of the general welfare on that case: the best way of the achieving the general welfare won't be the marginal efficiency of the gain of the individual (personal well-being), but it will be the effective limit of the benefit of the society (general welfare).

Keywords: *The controlling process of the human capital, the innovative development, theory of the welfare, Pareto efficiency, distribution of the wealth, the accumulation of the capital, interest of the investments, retirement plans, index of the support, income differentiation, power and standard of the life.*

1. Introduction

British weekly magazine Economist [11] at the peak of the global crisis, said, that the "stragglers rise" was a good achievement, followed by a rise in living standards in the developing world economy. But all the trouble is that the "lift" is accompanied by a "recession" in the world's developed economies (US, Europe, Japan). This is indicated by the fact that the "fall" under the last recession was more pronounced in the world than that – which was accompanied the Great Depression in the 30s of the 20th century. Analysts of OECD countries do not expect a real recovery of the world economy before 2015. Finally, the unemployment rate itself, with the positive changes in the world economy, and does not cause problems for the development of labor market – so this situation is complicated by the fact, that the demographic situation in the employment of the active working population ,in developed countries, has a negative trend. On the other hand, the experts of the Economist continue to state, that the same United States as an example shows that a well-developed economy may "punch" different tests. For example, according to the USA Department of the Commerce statistics, the rate of GDP per capita over the last 150 years has consistently grown: From $13 thousand dollars. in 1869 – to $50 thousand dollars in 2009 (even in the most difficult period of 30-50 years of the 20th century). So, if you take the same indicator (GDP / person.), which will apply to all active working population in the world, the situation won't be so colorful – especially in developed economies. Since 1970, this figure (GDP / slave.) Had lost the positive momentum until the late 20th century, and then it went in different directions: in developing economies, it went up again- plus 4% to the level of 2010, while in developed markets, it went down again – minus 1% from 2010. Besides, according to the same Economist, in developed economies around the world observed the growth of debt by non-state institutions. For example, in the USA, the total debt in 2010 was amounted to $80 trillion dollars, which include financial business – $40 trillion dollars, non-financial business – $25 trillion dollars, Households – $15 trillion dollars. In the end, in all these countries, the public expects the biggest cuts in the state budget over the last 40 years. And the main question is that, where they may take the interest of investment savings as a source of general welfare.

2. Theory

The modern theory of welfare was originated in the 30s of the 20th century in the sequel and in connection with the theory of general equilibrium. Then the basic theorems of welfare have been rigorously formulated, and the discussion of the limitations associated with them had begun, and the ways to overcome them, and wordings were refined at the same time. The competitive equilibrium in the modern theory and Pareto optimality are regarded as something equivalent. In

fact, the proof of this equivalence became the fundamental theorems of welfare. The first fundamental theorem states, that if in a competitive equilibrium exists and if all the items were rated on the market, so the equilibrium would be optimal in the meaning of Pareto. It means that, when all the participants of the transaction maximize their utility, the socially efficient allocation of the total product, which maximizes universally, will be received. It is simply to say, that the first law of the welfare encourages to society to go after the market mechanism, which will tell the faithful and the optimal path to the prosperity in society. In other words: this theorem ,formally, expresses the old belief ,that the certain desirable properties belong for the economy of the perfect competition – in another way, in such economy, self-interest inevitably achieves the common good. The new thing in that state is that the establishing of a direct correspondence between the desired state and the position of general equilibrium, although, in principle, it is desirable state can be treated – and as a maximum of personal income, and as a maximum national dividend (R.Kouz) [2]. In addition, the strict wording of the first welfare theorem was proposed by A.Lerner – in 1934 [4], O.Lange – in 1942 [3] and K.Errou – in 1951 [1]. There are various ways to treat perfect competition and neoclassical postulates, but we should recognize one thing: in such deal, as a general welfare, there are no trifles – every person, in a different country ,that claims to achieve a civilized status, should be figured and read.

Otherwise, a complete degradation and degeneration waits the country.

3. Results

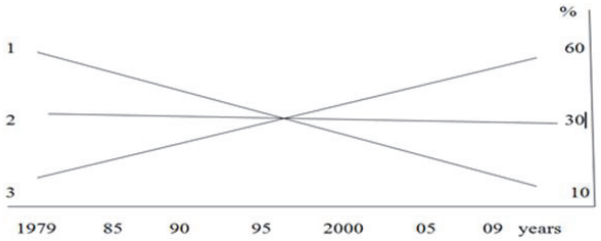
The statistics, which Actuated in the Economist [6], indicate to the following thing: that the average American family income is directly dependent on the level of education of its members: this income rose significantly – from $70 thousand dollars. to $100 thousand dollars per year, from 1975 to 2009 – in the case if one, of the members of the family, has the bachelor's degree. At the same time, this income wasn't exchanged – it has remained at the level of $50 thousand dollars per year – in the case of the absence of degree holders in the family. In this case, the number of holders of bachelor's degree (a measure of professional higher education) for this period of time in the United States increased from 20% to 30% of the total mass of young people from 25 to 29 years old. On the other hand, experts of the Economist [10] in their special review noted that in the same America-resident landlords (including their mortgage burden on the household budget) were not able to help their national economy out of the last recession. According to the publication, in the USA from 2001 to 2007 pledges homeowners doubled and reached the amount of $10.5 trillion dollars. Not surprisingly, that when from 1950 to 2005 Resident homeowners of America by the end of the first stable year, followed by another recession, output to 1% of GDP by the volume of its contribution to economic growth, then after the last recession in the world they are in the end of the first Rehabilitation of the year barely scored 0.5% of GDP – due to their participation in the growth of the economy, and then again "gone" in debt defaults and delinquency. Probably, by this fact the article in Fortune [5] by Browser Sh.Beyr dealt with the US tax code, which is today a differentiated approach to individual income sources, this problem is caused : if you work for hire –you should pay 35% of the income, if you play on the stock exchange – pay 15% on dividends and bonuses. The expert told that it wasn't true. According to his words, all the holders of income in the country should be put on an equal footing and they have to pay taxes on the same scale. Especially this fiscal imbalance, according to Sh.Beyr manifested in homeownership: for example, in Canada, unlike the USA, there is no collateral mortgage deduction, but there is not much difference in mortgage products, as well as a little in Canada concessional home ownership.

In Russia Statistics say the following thing: for the first nine months of 2013 there were more than 7.9 million rights to accommodations. This is 17% more than the same period last year (6.7 million rights), the press of the Federal Service for State Registration service, Cadastre and Cartography (Rosreestr). The Office also recorded a rise in the number of registered rights to residential premises acquired by citizens with a mortgage. Over three quarters of 2013 recorded 897.5 thousand. Rights, while in the first nine months of 2012 – 870 thousand rights. Number of registered land rights increased on 5% – from January to September, there were about 4.8 million. Rights to land, for the first nine months of 2012 – 4.6 million rights. In any case, the situation in Russia with housing is not much better than somewhere in the world, of course, the rights are registered – but the price of these rights increases with the increase in prices for the service of the right to housing. We return again to our basic idea: besides their own pension savings, a person in this world there is nothing that can give him the satisfaction of its wealth more reliable than the other criteria for the level and quality of life. These are the stimulus that accompany all conscious and active life of man, even when he has or has not already – no jobs, no housing, no family. Here at this in more detail.

Let's start form the USA. As noted columnist Fortune [8] A.Sloun, he disapproves of the fact that the decrease in personal savings dividends mandatory social insurance funds from the rich taxpayers. And he explains why he thinks so: now paid workers in America covered by insurance from personal pocket in the amount of 25% of the insurance package

– 75% of the generated payroll employer that guaranteed social insurance fund. Underpaid Americans cover their social insurance of personal transfers by only 10%, while the remaining 90% of its price covered by the employer and the Social Insurance Fund. These personal money, according A.Sloun, accumulate at 35% per annum in the social insurance fund. As a result, according to his calculations, ordinary Americans, at best while other income, be able to receive at retirement not more than a half over the fact that they themselves put off for life. And the author concludes: Americans are ready to list and more to the social security fund – only on condition that the state will be preserved their "hard-earned dividends."

The magazine Economist [9] averted the whole study to this important question: short, the main "problem" of all pension funds – their content on the part of non-pensioners working in each country. This is so-called "index of support" or «support ratio». Here, experts give the characteristic dynamics in the structure of the pension plan from wage earners in the private sector of the US economy from 1979 to 2009, which shows that the motivation of employees in planning their retirement plans has changed dramatically with the start of a protracted recession of the US economy in the 90 years of the 20th century (Pic. 1):



Pic. 1. Structural dynamics of pension plans in the USA economy, where:

1- Pension Plan DB (defined benefit);
2- DC pension plans and DB (together);
3- Pension Plan DC (some contribution).

However, the same experts warn that while good, in general, the dynamics of pension plans when the employee starts to take care of their future pensions, for him there exists the danger of motivation: the individual is prone to underestimate their need at present costs for pensions (DC) and overestimate their potential future earnings on these retirement savings (DB). Meanwhile, as noted in 2010, other experts, pension costs threaten to bring down the economies of many countries, in the next decade, public debt in their social obligations can grow to astronomical proportions. And the hardest of all the developed countries have to – especially so "age" of the economy, such as Japan, the US and the EU old-timers. Analysts believe the agency Standard & Poor's, for this group of countries is characterized by a relatively high level of the existing social security, while the rapid deterioration of the demographic situation. According to the experts of this agency, the public debt of Russia in their social obligations may rise in 2050 to 570% of GDP. S&P analysts believe that countries such as Japan, Russia, Ukraine will have a grand work to reduce its pension costs to an acceptable level [12].

On the other hand, we note that it is the labor market is the main source of capital accumulation and wealth in the country, and hence the incentive for interest from investors. Well-known Russian specialist in the theory of human capital V.V.Andrianova suggested at one time, a simple formula for calculating the value of its growth, in general, and to assess its quality changes, in particular. This formula is following:

$$\mathbf{HC = [(1 + r)^{t} – 1) / r] x A} \quad (1)$$

where it means:

HC – human capital (valuation);

r – the discount rate (extracted as root t-th power of the final value, fold increase in the level of average monthly nominal wage of the individual);

t – number of years of active life of the individual;

A – the value of individual life during his active time t (taking into account its consumption rate).

We lead this formula, because it interests us as an indicator of changes of human capital, where we focus our attention on the parameter **t** – at the time of the active life of the individual in any society. With regard to the human capital, we are here, we note that, to date, according to experts, only 5% of the total wealth in Russia formed due to the labor factor, the source of 20% of the total accumulation of capital and the factor of 75% of the wealth generated in the

Russian economy by a factor of natural resources or natural resource rents, as economists say. At the end of the 20th century, the World Bank (WB) has proposed a new concept of measuring national wealth (income and capital) of the country, which includes: human, natural and reproducible capital. Unlike traditional indicators of the wealth, a new concept of capital accumulation in the country provides the opportunity to judge both on the extent of accumulation of wealth, as a whole, on the extent of the accumulation of all the elements of accumulation against the general population (Table 1).

Table 1: The structure of the accumulation of wealth at the beginning of the 21st century in the world – by country (region) and on the main factors of this accumulation

Region	Altogether	В том числе, капитал:		
		Human	Natural	Reproducible
(in $ thous. doll. / per capita)				
Russia	400	200	160	40
USA and Canada	326	249	15	62
Japan, Australia, New Zealand	302	205	6	91
Europe	237	177	5	55
Near East	150	65	58	27

Source: The Complete World development report online [13]

4. Conclusions

The Economist Edition [7] in the material, devoted to the International Forum in Davos, has allocated two problems in the next decade – "failures" of global risk management and the increase of the wealth inequality in all countries of the world. The expert explained that during the previous two decades dominated by the so-called "Davos consensus" that takes the view: the problem of income inequality is not more important than the task of raising the standard of living of those who are at the bottom of the social ladder. How do we know that, the problem of income differentiation in society and the related differences in levels of opportunities to members of the public acquisition of personal wealth could only be solved in the complex and in conjunction with all available sources of savings in the country and the general mechanisms of redistribution of accumulated welfare.

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Improving Assessment of Enterprise Economic Efficiency in the Current Market Conditions

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Abstract

The article suggests and substantiates the main directions for improving the economic efficiency of domestic enterprises on the basis of complex assessment to achieve additional competitive advantages in the market. The process of enterprise efficiency presented in the scientific literature is largely descriptive and does not reflect methodological problems of establishing the optimal set of criteria and selection methods for determining and assessing the efficiency resulting in the models of improving enterprises efficiency that, in fact, has necessitated this study.

Keywords: *market economy, competitive advantage, economic efficiency, modern enterprise, performance assessment methods, quantitative criteria and indicators of performance, financial indicators, marketing, personnel, distribution, directions for improve economic efficiency.*

1. Introduction

Under market economy the research devoted to the essence of "efficiency" concept in its various manifestations is relevant, since it affects the successful selection of performance indicators and criteria, as well as verification of the directions for its improvement. Efficiency is the basis for constructing quantitative criteria of the values of the decisions made and reflects the process of productive forces development in close contact with the production relations. The unified scientific-methodological and practical interpretation of the company's efficiency for all levels and sectors of the economy is of great scientific and practical interest to all economic agents.

Under present conditions of the Russian economy enterprises need adequate tools to assess the efficiency of the enterprise. Such a mechanism would build effective communication and set specific tasks for the management, monitoring their implementation, tying them to the system of motivation and incentives.

Currently, most research papers in this area, are, unfortunately focused on adapting foreign techniques to modern problems of Russian enterprises.

The most important element of enterprise efficiency is a mechanism to measure and assess the performance of the company. Accounting and management reporting does not allow to obtain the necessary information about the real state of affairs: the financial parameters characterize only the historical aspect of the events which has already occurred. Ignoring such factors as existing relationships with customers and partners, knowledge and experience of staff, the level of advanced technology, does not allow the company to achieve long-term goals.

The research on the problems of economic efficiency and their impact on modern enterprises are reflected in the papers of Gadzhiev, M.M., Buchaev, Y.G., Tisdell, C.a , Seidl, I., Aptekar, S. , Ryazanova, Y., Hertenstein, J.H.a , Platt, M.B.b, Veryzer, R.W. CD, who examined the trends in the development of this issue [1,2,3,4,5]. At the same time the problem of complex assessment of economic efficiency remains unresolved. In order to solve this problem, we studied the publication of Loch, C., Stein, L., Terwiesch, C., Tian, Z. , Ketsaraporn, S. Shafaei, R. Cirtita, H.a , Glaser-Segura, D.A.b M., who explored the issues of complex assessment of enterprises performance under current market conditions.

2. Main Part

Traditional system of financial indicators should be supplemented by indicators related to other important types of company's performance: production, innovation, marketing, labor (Fig. 1)

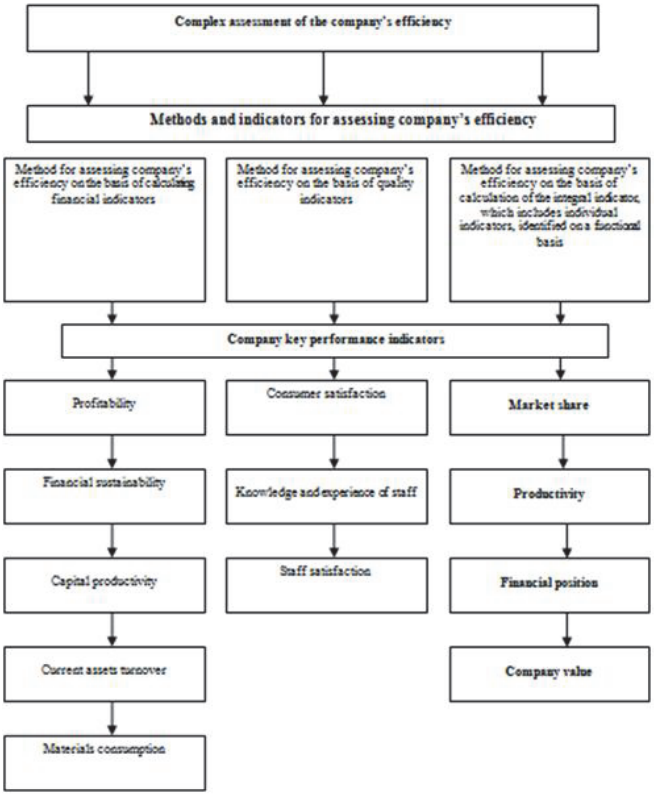

Fig. 1 Methods for assessing company's efficiency

Taking into account a study of the company's efficiency, internal and external factors affecting the efficiency of the enterprise, it is necessary to consider the field of enterprise activity in the context of two groups. The first group includes such functional areas of business as marketing, research and development, purchasing, production and distribution.

The second group considers personnel, finance and development of organization. The staff and finances are an important resource of any activity and play a key role in all stages of development and implementation of enterprise products. Other types of resources are the part of the procurement, acquired through the use of human and financial resources. Development as a functional area of the industrial enterprise is an activity aimed at increasing the attractiveness of the business and ensuring its growth.

Despite its independent significance in the present conditions, the possibility of enterprises development depends on the efficiency of their core activities, so this area is selected as the final component in the pattern of the core areas of business activity.

3. Conclusions

In the course of our analysis the following indicators for economic efficiency of enterprises are proposed.

1. Marketing. Marketing is now becoming a "management philosophy", the main elements of which are called market orientation, subordination to the interests of consumers, an offer of increased benefits to consumers. To evaluate the effectiveness of marketing we identified a number of indicators: market share, return on marketing costs, preserving and increasing the number of clients, relative quality of the product.
2. Research and Development. Evaluating the effectiveness of R & D is related to the assessment of scientific and technical potential of the company and can be done by a number of parameters that reflect along with R & D some other areas. These may include such indicators as research intensity, updated products, reduction of

rollout time.

3. Purchases. Evaluating the effectiveness of procurement may be done on the basis of such indicators as return on inventory, reducing supply time.
4. Production. Characterizing the efficiency of production, such indicators such as profitability of production (profit share in total sales), performance (efficiency of all factors of production), production flexibility, capital productivity, materials consumption, were indicated.
5. Distribution. As a relatively independent functional area of the enterprise sales can be assessed through the indicator of "return on distribution costs", in this case, the indicator "share of the market" can be used. Improving the efficiency of the sales increases capacity of distribution channels.

In the technological chain of products development such areas of business as finance, staff, development, are not separate stages, but affect all aspect of core productive activities.

1. Staff. The effectiveness of staff can be evaluated using the following quantitative indicators: sales per employee, training and remuneration of staff, return on training costs.
2. Finance. The effectiveness of corporate finance results in an increase of financial stability, solvency, profitability, profit margin and property status.
3. Development. Development effectiveness as functional area is an activity aimed at increasing the value of the company and ensuring the attractiveness of the business.

Proposed indicators for assessing the economic efficiency of enterprises will increase the competitiveness of their products, based on the use of mechanisms of effective management in a changing market situation.

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Labor Opportunism of the Personnel of Medical Institution

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Abstract

Methods of identification and quantitative assessment of level of labor opportunism of the personnel on the basis of the analysis of labor opportunism of the personnel of a clinical oncologic dispensary, forms of its manifestation in the organization in view of various hierarchical levels of official categories of workers are analyzed in this article. The special attention is paid to research of the reasons of emergence of labor opportunism of employees.

Keywords: *labor opportunism, regression model, opportunistic trap, stability of opportunistic balance.*

1. Introduction

The opportunistic behavior is defined by O. Williamson, as "prosecution of own interest, on insidiousness use" (Williamson, 1993). It implies violations of the assumed obligations, in the course of interactions of firms where often there are cases of violation of contractual obligations.

We consider labor opportunism as the deliberate hidden worker's violation of the assumed liabilities provided by the labor contract.

In economic literature there are descriptions of various forms of opportunistic behavior: adverse selection, "extortion", "moral risk", negligence - as consciously allowed negligence, their various versions and combinations. However for the majority of them the general conditions of emergence when collecting reliable information about behavior of worker demands big expenses are characteristic or is impossible in general, and "only small part of what people actually do at work can be controlled in details" (Nelson, 1981). The most widespread kind of opportunistic behavior of staff of medical institutions – "shirking" when the worker carries out the duties with smaller return, than it is required under the contract, or some duties carries out not in full, for example, when the doctor only superficially fills in clinical records, or execution of any duties shifts to nurses. To reveal this type of shirking is very difficult and expensive. Shirking leads to decline in quality of the performed work.

Labor opportunism is a source of the "behavioral" uncertainty causing considerable problems in the form of obvious and hidden losses. By E.V. Popov's estimates (Popov and Simonova, 2005), shrinking leads to decrease in productivity of activity on average by 34%, negligence leads to growth of expenses on average by 27,5%. Besides, the opportunism generates huge costs for protection against this type of behavior.

The labor opportunism extends promptly on the organizations, successfully "infecting" them with quickness of computer viruses. However unlike IT technologies organization haven't developed reliable protection programs from opportunism "viruses" yet. Often it is connected rather with the low level of study of its Russian specifics, environment and the reasons of emergence than with weak diagnostics and "blurring" of criteria of identification of forms of manifestation of labor opportunism (Bodrov, 2013, 2014). The problem is complicated by lack of techniques of assessment not only losses of the organizations from prosperity of sophisticated opportunistic practices of working collectives but also lack of any of acceptable methods of measurement of developed opportunism level in organization.

Most of researchers (Bose A. et al., 2010, Vafai K., 2010, 2002, Bevia and Corchon, 2006), etc. Consider imperfection of formal rules and contracts which, in their opinion, distort incentives of workers as the main reasons for labor opportunism of the personnel of the organization. So, for example, Bose A. (2010) considering the reasons of emergence of sabotage of workers in relation to the colleagues, came to a disputable conclusion that this problem can be overcome by means of change of the principles of compensation. He claims that the source of sabotage roots in envy of employees when one is more successful and productive, than the other. Respectively this distinction defines a difference in compensation therefore the incentive to sabotage disappears if wages are equalized for workers with different abilities and various contributions to result of teamwork.

In our opinion, this offer will lead only to sabotage strengthening, but not in relation to the colleagues any more, but

in relation to the management. Equalization in payment provides disappearance of incentive of increase in labor costs, and workers will seek to minimize them in every possible way, defining that limit to which it is possible to bungle without serious consequences, without causing complaints from the management.

Vafai K. (2010), considering methods of overcoming of individual opportunism of the head in the form of abuse of opportunities and abuse of power, and also in two types of group opportunism, namely arrangement to the agent and arrangement to the owner, suggests to derive the optimal contract which would protect the organizations from these types of opportunism.

A number of the conducted empirical researches show that the aspiration of heads of firms to receive information on the subordinates causes emergence of various forms of abuse of power. Thus the personnel of firms isn't able to take effective legal formal measures against these forms of manifestation of opportunism of the heads (e.g., Klitgaard, 1988; Peirce, Smolinski and Rosen, 1998; Timmerman and Bajema, 1999; Vardi and Weitz, 2004; Campos and Pradhan, 2007.

On our deep belief the nature of labor opportunism, especially in the Russian organizations, has informal character, it acts as "counterbalance" to existing formal legitimately accepted rules, supplementing their defects, outdated provisions and, created on this basis, inefficient communicative processes. The opportunism of personnel and heads of the organizations is directed on restoration of the broken balance between their mutual expectations. The labor opportunism of the personnel is response on manager's opportunism which is in abundance at the majority of the organizations.

2. Methods

2.1 Research model

For research of level of labor opportunism in an oncological clinic the questioning method was used. Two types of questionnaires were made: the first questionnaire – for an assessment of opportunism of staff of the organization (nurses and doctors), and the second – for heads of the organization (the chief physician, his deputies, chiefs of departments).

During research, on the basis of analysis of these questionnaires, there were constructed regression models which allowed defining the most significant factors conducting to labor opportunism of the personnel.

Using the received regression equations, the level of opportunism of employees and heads of hospital was calculated and stability degree of "opportunistic traps" was estimated.

2.2 Group of research

In this research continuous selection was used. The personnel of a clinical oncological dispensary participated in poll included 172 doctors and 442 nurses of all divisions and branches aged from 22 till 65 years, and also 42 heads of various levels of management, in all 656 people.

2.3 Instruments of data collection

Questionnaires include 31 questions which express various factors of emergence and manifestation of labor opportunism in the organization. Factors were revealed during interviewing of the group of experts which included representatives of various offices and categories of the medical personnel of oncology dispensary: the deputy chief physicians managing offices, doctors, nurses. Results of questionnaires were processed with use of a method of the smallest squares of the regression analysis (OLS).

In the analysis of questionnaires the conventional verbal and numerical scale of Harrington which is widely and effectively used in practice at the solution of various tasks by expert methods was applied for a quantitative assessment of the received results (Glotov and Pavelyev, 1984).

2.4 Analysis of data

Results of questioning of 618 medical employees of hospital and 42 heads of various levels were analyzed by means of a package of the applied Gretl programs. According to a research objective, necessary statistical calculations were carried out with use of correlation, the analysis of deviations, t-test and methods of the regression analysis.

3. Result

The regression analysis of the factors influencing opportunism of the personnel showed that it appeared the most significant of them - opportunism of the managers of hospital (X_{22_1}, model 2, tab. 1).

Table 1. Factors of opportunism of workers

Model2:OLS, used supervision 1-618
Dependent variable: X23 opportunism of workers

Variables	B	Std. Error	t	p
X_1	.09	.03	2.82	.01
X_4	.09	.04	2.41	.02
X_5	.01	.05	2.66	.01
X_{11_1}	- .13	.05	- 2.57	.01
X_{12_2}	.25	.05	5.08	.00
X_{14}	- .07	.03	- 2.74	.01
X_{22_1}	.33	.04	8.62	.00
R = .87 R^2 =.75 F = 267.77 p < .05				

The revealed factors were ranged on extent of their influence on the level of opportunism of employees of hospital (tab. 2).

Table 2. Rank of the factors influencing opportunism of workers

Variables	Name of a factor	B
X_{22_1}	Level of opportunism of the managers of hospital	.33
X_{12_2}	Level of trust of the office managers to workers	.25
X_{11_1}	Trust level to the managers of hospital	-.13
X_1	Workload degree	.09
X_4	Workload degree (managers tasks) which do not belong to administrative duty	.08
X_{14}	Dependence of the size of compensation of the worker on results of his efforts (the more he works - the more he gets paid)	- .07
X_5	Degree of satisfaction with work	.01

Factor X_{22_1} - opportunism of the managers of hospital has the greatest impact on opportunism of workers of an oncological clinic [R =.57, R^2 =.33, F=8.62, p < .01]. The opportunism of workers is reciprocal protective reaction to managers opportunism.

On the basis of the conducted research on data of model 2 (tab. 1) the equation of regression of opportunism of the personnel was constructed that allowed to calculate its quantitative level:

Y =.09X1 +.08X4 +.01233X5-.01X11_1 +.02X12_2-.07X14 +.331474X22_1 =.28 [1]

The obtained settlement data which range of changes is in the range from 0 to 1, testify to rather low level of opportunism of the personnel – the calculated value made.28.

It is characteristic that growth of trust of managers of offices to the workers (X_{12_2}, tab. 2) leads to growth of labor opportunism of the personnel which abuses trust [R =.50, R^2 =.25, F=5.08, p<.05]. Thus growth of level of trust to the managers of hospital from the personnel (X11_1, tab. 2) has the return impact on its labor opportunism, reducing it [R =-.36, R^2 =.13, F=-2.57, p <.05].

The opportunism of workers of an oncological clinic increases because of negative dependence of the size of compensation of the worker on results of his efforts (the more he works - the more he gets paid) (X_{14}, tab. 2 more) [R =-.26, R^2 =.07, p <.05]. The increase in the size of labor costs of the personnel doesn't lead to growth of compensation. Average value of answers to the matter of the questionnaire made 64 on Harrington's scale, it means that compensation of the medical personnel on average only for 64% is attached to work expenses.

The analysis of the forms of manifestation of opportunism of the managers influencing opportunism of workers is provided in regression model 3 which results are presented in table 3.

Table 3. Regression analysis of forms of opportunism of the managers

Model 3:OLS, used supervision 1-618
Dependent variable: X_{23} – managers opportunism

Variables	B	Std. Error	t	p
X_3	.07	.03	2.28	.02
X_4	.23	.04	5.30	<.01
X_{6_1}	.15	.04	4.12	<.04
X_7	.13	.03	3.87	.00
X_{8_2}	.16	.04	4.07	.00
R = .81 R^2=.67 F = 258.14 p < .01				

Results of an assessment of extent of influence of the revealed managers opportunism forms on opportunism of the personnel are presented in table 4.

Table 4. Extent of influence of forms of opportunism of the managers on opportunism of workers

Variables	Name of a factor	B
X_4	Workload degree (managers tasks) which do not belong to functions	.23
X_{8_2}	Unfair attitude of the managers of office towards subordinates	.16
X_{6_1}	Regular violations or procrastination of execution of the promises made by the hospital managers.	.15
X_7	Extent of control from the manager of office of process and results of the performed works (the regularity of rounds, filling of clinical records, controls terms of performance of instructions, check of the course of performance of long tasks, etc.)	.13
X_3	Requirements to perform the work which doesn't correspond to functions	.07

Apparently according to tables 3 and 4, in a greater degree opportunism of the managers is shown in regular loading of subordinates by the work (tasks) which doesn't belong to their functions. [R =.48, R^2 =.23, p<.01]. This factor causes the maximum irritation of employees.

For identification of the reasons of opportunism of the managers regression model 5 (tab. 5) was constructed where as a dependent variable the indicator (X_{22_1}) – "The level of opportunism of the managers of hospital" was applied.

Table 5. Regression analysis of opportunism of the hospital managers

Model 5:OLS, supervision used 1-618
Dependent variable: X_{22_1} – opportunism of the managers of hospital

Variables	B	Std. Error	t	p
X_2	.05	.02	2.59	.01
X_4	.07	.03	2.74	.01
X_5	-.06	.03	-2.02	.04
X_7	-.06	.02	-2.54	.01
X_{8_1}	.12	.04	3.03	.00
X_{8_2}	-.14	.04	-3.38	.00
X_{9_1}	.17	.04	4.26	.00
X_{9_2}	-.15	.04	-3.78	.00
X_{11_1}	.25	.04	5.86	.00
X_{11_2}	-.15	.04	-3.30	.00
X_{21_1}	.06	.01	3.56	.00
X_{22_2}	.68	.02	24.52	.00
X_{23}	.11	.03	3.92	.00
X_{30}	.05	.02	2.52	.01
R = .96 R^2=.93 F = 587.71 p < .01				

In the table 6 the factors revealed in model 5 are ranged according to extent of influence on opportunism of the hospital managers.

Table 6. Rank of factors of opportunism of the hospital managers.

Variables	Name of the factor	B
X_{22_2}	Level of opportunism of managers of offices	.68
X_{11_1}	Level of your trust to the hospital managers.	.25
X_{9_1}	Shifting their work to subordinates by the hospital managers.	.17
X_{9_2}	Shifting of their work to subordinates by the managers of office.	-.15
X_{11_2}	Level of your trust to the managers of office	-.15
X_{8_2}	Cases of the unfair attitude of the managers of office towards subordinates	-.14
X_{8_1}	Cases of the unfair attitude of the managers of hospital towards subordinates	.12
X_{23}	Level of opportunism of workers	.11
X_4	Workload degree (managers tasks) which doesn't belong to functions	.07
X_5	Degree of satisfaction with work	-.06
X_7	Amount of control of process and results of the performed works on the part of the manager of office	-.06
X_{21_1}	Efficiency and rationality of actions of the hospital managers.	.05
X_2	Do you know the indicators of productivity of your work?	.05
X_{30}	Age category	.05

Apparently according to the data of tab. 6, the opportunism of managers of offices (factor X_{22_2}) has the maximum impact on the level of opportunism of the managers of hospital [R =.82, R^2 =.68, p <.01]. It means that the opportunism of the managers of hospital for 68,3% depends on opportunism of managers of offices. Influence of opportunism of the personnel is very insignificant (X_{23} factor) [R =.33, R^2 =.11, p<.01].

These conclusions correspond to the received results of the analysis of labor opportunism of the personnel (see model 2, tab. 3) where the greatest extent of influence on opportunism of the personnel is rendered by opportunism of the managers of hospital (R^2 =.33).

The conducted research on data of model 5 (tab. 5) allowed to construct the equation of regression of opportunism of the managers of a clinic and to calculate its quantitative level:

Y =.05X2 +.07X4-.07X5 –.06X7 +.12X8_1-.13X8_2 +.17X9_1-.15 X9_2 +.25X11_1-.15X11_2 +.06X21_1 +.68X22_2 +.11X23 +.05X30 = .40 [2]

Predicted level of opportunism of the managers of a clinic made .40 that significantly exceeds the level of opportunism of the personnel which made .28.

4. Discussion

The received results of the conducted research allow to claim that a source of labor opportunism in a clinic is interdependence of opportunism of the management of hospital and managers of offices. Nature of this interaction generates the corresponding wave effects by which the level of opportunism of all personnel of a clinic is defined. For check of reliability of this conclusion models 6 and 7 of pair regressions were constructed at which on the received coefficients of regression it is possible to estimate force of mutual influence of these factors.

Table 6. Influence of opportunism of managers of offices on opportunism of heads of hospital

Model 6: OLS, supervision used 1-618
Dependent variable: X_{22_1}-opportunism heads of hospital

Variables	B	Std. Error	t	p
X_{22_2}	.94	.01	70.11	.00
R = .94 R^2 =.89 F = 4916.55 p < .01				

A dependent variable was X_{22_1} - opportunism of heads of the hospital and independent - X_{22_2}-opportunism managers of offices.

This model 6 reflects close dependence: change of level of opportunism of managers of offices on 1 will lead to change of level opportunism of heads of hospital on.94. In model 7 these variables were swapped:

Table 7. Influence of opportunism of heads of hospital on opportunism of managers of offices

Model 7: OLS, supervision used 1-618
Dependent variable: X_{22_2}-opportunism managers of offices

Variables	B	Std. Error	t	p
X_{22_1}	.94	.01	70.1181	.00
R = .94 R^2 =.89 F = 4916.55 p < .01				

Model 7 reflects dependence, equivalent on influence force: with a growth of level of opportunism of heads of hospital on 1 - level the opportunism of managers of offices will grow on.94.

The equilibrium constructive relations between key official categories are a condition of effective self-development of an oncological clinic. Balance in the labor relations form the comfortable moral and psychological labor atmosphere which doesn't constrain a creative initiative of the personnel, and itself is a powerful system motivator of labor activity.

For verification of this assumption the assessment of level of stability of the opportunistic balance which developed between heads of hospital and managers of offices was carried out.

In the formalized look the condition of stability of opportunistic balance can be presented in the form of the following dependence:

$$\frac{\mathrm{OpH}}{\mathrm{OpM}} = 1 \to \min \quad [3]$$

Where OpH – level of opportunism of heads of a clinic

OpM - level of opportunism of managers of offices.

Both parties are interested in minimization of level of opportunism as both suffer from the fact of its existence therefore this dependence is directed to a minimum. However, the equality condition in levels of opportunism can be met and at rather high values.

Level of opportunism of managers of offices was determined by results of the corresponding correlation and regression analysis. On the received coefficients of regression the regression equation is constructed [4]:

$Y = -.05X_2 + .06X_{6\_2} + .06X_7 - .12X_{8\_1} + .18X_{8\_2} - .18X_{9\_1} + .14X_{9\_2} + .07X_{10} - .11X_{11\_1} + .17X_{11\_2} + .06X_{20} - .05X_{21\_1} + .08X_{21\_2} + .71X_{22\_1} + .05X_{23} = .39$ [4]

Having substituted average values of the corresponding variables in this equation, the average quantitative assessment of level of opportunism of managers of offices of a clinic was calculated: Y =.39

Similar calculation of level of opportunism of heads of a clinic was carried out above on model 5 (tab. 5) and made .40 (the equation of regression [2]).

Stability of opportunistic balance in a clinic is almost ideal as it is most approached to 1:

$$\frac{\mathrm{OpH}}{\mathrm{OpM}} = \frac{.40}{.39} = 1.01$$

This result is very close to the equilibrium.

5. Conclusion

Excess of level of opportunism of one of the parties causes aspiration of other party to restore the broken balance, having lifted own opportunism to an appropriate level. As it, as a rule, occurs in rather short-term period of time, the first party perceives strengthening of opportunism of the opponents as a direct call and starts increasing in reply in even bigger measure the level of opportunism. Then again opponents join this process that leads to emergence of a peculiar effect of competition which has destructive character. As a rule, it brings the organization into a condition of an opportunistic trap.

Anything similar isn't present in an oncological clinic where the long-term stable condition of opportunistic balance at rather low level was created. In this equilibrium situation there is no incentive to change or violation of the reached opportunistic balance unilaterally as the result of similar violation will be worse, than the developed equilibrium compliance.

The level of opportunism of the personnel is influenced by opportunism of the managers of a clinic (regression model 2 (tab. 3)). Thus the numerical value of opportunism of the personnel calculated on the equation of regression of model 2 makes.28 that is much lower than opportunism of the managers of a clinic (.40).

Stability of opportunistic balance of interaction of opportunism of the personnel and the managers makes 1.4

$$\frac{OpM}{OpP} = \frac{.40}{.28} = 1.40$$

It means that the opportunism of the personnel isn't primary, its role is supporting, subordinated and is response to manager's opportunism. Considering that the tendency of interaction of opportunism of the parties, according to a formula [3], strives for equilibrium compliance, the tendency to growth of level of opportunism of the personnel in the short term to reach managers opportunism level is quite probable.

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Correlation of Balanced Socio-Economic Development of the City and Its Attractiveness (in the Case of Russian Cities with Population over a Million Citizens)

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Abstract

This article evaluates balanced socio-economic development of the city and its influence on the territorial attractiveness. The hypothesis, that the cities which are developed in socio-economic balance are more attractive and more competitive, is taken as a base of the research. The article classifies the cities according to their level of balance and evaluates the rate of Russian cities with population over a million.

Keywords: *city, balanced socio-economic development, attractiveness of the area, migration balance, investments attracted*

1. Introduction

City is a complicated multilevel system, which includes a number of subsystems and elements which develop in interrelation and affect development of the city as a whole. Therefore the concept of the balanced development of the city is used more frequently. This concept includes proportional progressive development in several directions: demographic, ecologic, innovative etc. Balanced development of the city may also be viewed from the point of social and economic development. Social development of the city assumes creation of comfortable living conditions, enhancement of the social structure, maintenance of the wealth level at the high rate, and opportunities for the self-realization of the citizens.

The second key aspect of the city's development is the economical aspect. It includes the economical situation in the city as a whole, the purchasing power of the citizens, the presence of human resources, conditions for beginning and running a business, payback of the investments etc. The correlation of social and economic indexes predetermines the level of city's development balance which in its turn may affect the level of the territorial appeal. Therefore, the research of the balanced socio-economic development of the city and its affect on the territorial appeal is relevant.

There is no clear term for the concept of the balanced development in science. The concept of the balanced socio-economic development of the territory will be described as the proportional simultaneous increase of the social and economic rates according to their correlation.

In the international practice the concept of the balanced development is often identified as the concept of sustainable development. The concept of sustainable development in conditions of competition between the cities for the finance, material and human resources becomes more relevant than ever. However, Lele S.M. [3] mentions that there is no common approach in definition of this concept. Some scientists consider sustainable development of the territories at different levels. Scientists Lanfranchi M. , Giannetto C. [2] and Pileček J. ,Chromý P, Jančák V. [8] consider sustainable development of the peripheral village territories as a concept that is directed to raise the attractiveness of these areas. Other scientists (L. Van Grunsven [1], B.A. Portnov, D. Pearlmutter [10] and other) focus on the sustainable development of the cities which take the leading part in the process of socio-economic development of territories and regions.

Due to the fact that there is no common approach in definition of sustainable development, there is also no common approach to the method of the evaluation of sustainability of development, and the definition of the factors which ensure the sustainable development.

As S. Moreno Pires, T. Fidelis and Ramos [7] mention in their article, various rates are used in evaluation of the sustainable development. At the same time these rates cannot be summarized what leads to the difficulty in the comparison of sustainable development of different territories. B.A. Revich, T.L. Kharkova, E.A.Kvasha, D.D. Bogoyavlensky, A.G. Korovkin, I.B. Korolev [11] emphasize socio-demographic rates as the key factors of the sustainable

development. Mahon M. ,Fahy F., Cinnéide M.O. [5] take the quality of life as base factor.

It should be mentioned that frequently the researchers take the migration level (Pobiner J.A. [9],M. Lerch M [4] and others) the amount of attracted investments (Menghinello S., de Propris L., Driffield N. [6] and others) as the rates of sustainable socio-economic development. However, these rates are usually considered separately. The innovation of this research is in considering the migration level and the amount of attracted investments as a complex when evaluating the balanced socio-economic development of the city.

2. Method

The hypothesis, that the cities which are developed in socio-economic balance are more attractive and their competitive level is higher, is taken as a base of the research. This hypothesis may be explained by the fact that social and economic rates are interrelated. That is why the increase of some rates must lead to the balanced increase of the other rates. In other case, the fail in one of spheres (social or economic) will slow the development of the other sphere and by these means prevent the rise of level of the city's attractiveness. To test this hypothesis the research was done. The subject of the research was the following Russian cities with population over one million citizens: Volgograd, Yekaterinburg, Kazan, Nizhniy Novgorod, Novosibirsk, Omsk, Rostov-na-Donu, Samara, Ufa and Chelyabinsk. These cities were chosen due to their high level of development and attractiveness at the moment.

The research included several stages. Different methods were applied during each stage. On the first stage it was necessary to determine the level of social and economic development. To achieve the goal the method of correlation and the method of comparative analyses were used. The calculation of the correlation of social and economic development goes according to the formula:

$$r = \frac{\overline{xy} - \bar{x} * \bar{y}}{\sqrt{(\overline{x^2} - (\bar{x})^2) * (\overline{y^2} - (\bar{y})^2)}},$$

where r – correlation coefficient, and x, y – the rates which correlate with each other.

From the very beginning it was necessary to choose the key rates of the social and economic development. Thus, the following rates were chosen to evaluate the level of the social development of the cities with population over one million citizens: housing (per one citizen), subsistence wage, amount of children in kindergartens, amount of people who do sports, amount of crimes etc., At the same time the migration balance was chosen as the key rate. Initially there was an assumption that the territory with high level of social development will be comfortable to live in and the amount of those who came would increase and amount those who leave would decrease, so the balance of the migration would be positive. This assumption was tested on the base of correlative analyses of the migration balance and main rates of the social development. The result demonstrated that the migration balance has a strong interrelation with the rates of social development of the area and might be used as the base rate in evaluating the level of the social development of the area.

To evaluate the economic development the following rates were chosen: the average number of workers, number of loss-making companies, the cost of the minimum amount of food necessary for living etc. The amount of attracted private investments was chosen as the key rate as it reflects the attractiveness of running a business on the territory of the city. The same way the correlative analysis was performed with key rates of the economic development of the territory. It was confirmed, that amount of attracted investments may reveal the level of economic development of the territory as it is strongly interrelated with other economic rates.

Therefore it was proved that migration balance and amount of attracted investments may be the basic rates in evaluation of social and economic development.T

After defining the key rates of social and economic development the comparative analyses of the cities with population over one million citizens according to the level of balance of socio-economic development was done. To illustrate there was created a matrix with two axis: migration balance and amount of attracted investments. Initially there was calculated the average level of each rate and there were marked sections named "above average level" and "below average level" on both axis. Therefore the following four cells of matrix were selected:

1) if migration balance and amount of attracted investments are below the average level, the cities have balanced, but relatively low level of development;
2) if migration balance is above the average level and amount of attracted investments is below the average level, the cities have misbalanced, but relatively high level of social development;
3) if migration balance is below the average level and amount of attracted investments is above the average level, the cities have misbalanced, but relatively high level of economic development;
4) if migration balance and amount of attracted investments are above the average level, the cities have balanced, relatively high level of development;

The average rates of balance of migration and attracted investments during the five-year-period (from year 2008 to 2012) were calculated to put each city with population over one million citizens into the appropriate position in the matrix. The average rate was calculated to evaluate reasonably the level of development of the cities excluding yearly moves due to other factors (for example economic crisis).

After defining the level of socio-economic balance of the cities, the evaluation of the cities' attractiveness was performed. Comparative analyses using ranking method was taken as a base in evaluating attractiveness of the cities. Social development rates were used along with economic rates in this ranking. The rate of the city (R) was calculated according to the formula:

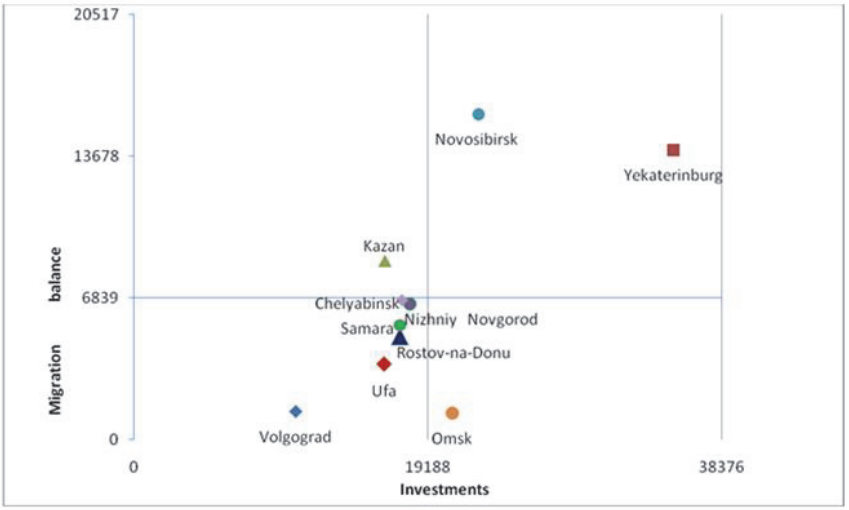
$R=\sum_1^n(R_n * r_i * r_m)$,

where R_n - the rate of the city's attractiveness according to socio-economic development level, r_i– coefficient of correlation of the investments attracted to the economy of the city, and r_m– coefficient of correlation of the migration balance.

Further analyses of the data received, confirmed the hypothesis proposed in the beginning of the research.

3. Result

During the determination of the social and economic balance level of each city with population over a million citizens, the average rates of migration balance and attracted investments were calculated. The cities were set up in the matrix of socio-economic balance according to these rates (Pic.1)



Pic 1. The matrix of socio-economic balance of the cities.

As a result the cities in the matrix are set up as follows:

1) Volgograd, Nizhniy Novgorod, Rostov-na-Donu, Samara, Ufa, Chelyabinsk are thecities which with balanced, but relatively low level of development;
2) Kazan is the city with misbalanced but relatively high level of social development
3) Omsk is the city with misbalanced but relatively high level of economic development.
4) Yekaterinburg, Novosibirsk are the cities with balanced high level of development;

Furthermore the level of attractiveness of the cities with population over a million citizens was determined according to the calculation of the rates. It allowed setting up each city in its place in the chart of cities' attractiveness (the top score is 1) (tab. 2)

Table 1. The chart of attractiveness of the cities.

Rate	City	Coefficient
10	Volgograd	8,6629
1	Yekaterinburg	30,1054
3	Kazan	23,0693
5	Nizhniy Novgorod	21,2094
2	Novosibirsk	23,9646
9	Omsk	16,7604
6	Rostov-na-Donu	18,4735
7	Samara	17,8456
8	Ufa	17,5831
4	Chelyabinsk	22,0528

This research determined the level of balance and attractiveness of the Russian cities with population over one million citizens.

4. Conclusion

According to the research done, there was made a conclusion that the initial hypothesis that balanced socio-economic development predetermines the higher level of the city's attractiveness.

The cities with population over one million citizens which according to the classification are in the group of cities that possess balanced and relatively high level of development (group 4) take leading places in the attractiveness chart. Yekaterinburg is on the 1-st place, Novosibirsk is on the 2-nd place. The strategy of these leading cities is to preserve the level of social and economic balance.

Kazan is on the 3-rd place. It relates to the 2-nd group of cities, the group of cities that possess misbalanced but relatively high level of social development. The social aspect ensures relatively high level of attractiveness of the city. However it should be mentioned that Kazan still gives in attractiveness to the cities with balanced and relatively high level of development. This proves the thesis that the cities that develop proportionally in both social and economic aspects are more attractive.

The next in the chart of attractiveness are the cities that possess balanced but relatively low level of development (group 1.) Such exposition of the cities in the chart disproves the correctness of the hypothesis. According to the hypothesis these cities must have been higher in the chart than those of groups 2 and 3.

However the research revealed reverse result. On the basis of this it may be concluded that the initial hypothesis is correct only in definite conditions. In case if the level of development of the city is above average, the main priority will be balanced development in both social and economic directions. If the level of development is below average the vital for the city will be the strategy of creating the points of growth which will help to withstand competition and raise the level of self-attractiveness. It will set the base for the future balanced socio-economic development.

Thus, during the research it was found that the balanced development of the city actually affects its attractiveness. At the same time it is necessary to choose the development strategy according to the level of socio-economic development: whether to raise the level of development balance, or to create the points of growth to raise the level of the city's attractiveness and competiveness.

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The Analysis of Indicators of Information Illumination of Capital Cities in Mass Media as a Factor of their Appeal

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Abstract

Article is devoted to processes of management of a brand of the million-plus cities of Russia on the basis of the analysis of indicators of popularity of the cities for increase of their popularity. The analysis of positioning of the cities by external mass media in comparison to perception of the city it consumers is carried out. As a result of the analysis conclusions are drawn on success of a municipal government in different spheres of development of each million-plus city of Russia and recommendations about elimination of their weaknesses are made.

Keywords: *city, branding, mass media, appeal of the territory, image of the territory, information illumination.*

1. Introduction

The qualitative, well-founded brand always has essential impact on social, economic and cultural processes. Branding measures these features, estimating their strong and weaknesses, attractive characteristics.

Branding of the territory is the modern instrument of attraction of attention to it. The increasing competition between the cities forces the city authorities to increase efficiency of the held events for management of a city brand. Also search of a method of an assessment of a brand of the city as way of determination of efficiency of the carried-out branding is actual.

Now everything becomes more noticeable the competition especially between capital million-plus cities which compete in strengthening and development of the communications with bodies of the federal authority, in increase of appeal of the territory to business, involvement of tourists, investors, and also in creation of comfortable conditions for activity directly of residents of the capitals. Understanding by the city authorities of need of maintenance of constantly growing standard of living, and also popularity and popularity of the territory pushes them to carrying out not only competent active social and economic policy in the city, but also to activization of the thought-over communicative work – demonstration of hospitality, openness of the territory, its readiness for dialogue and cooperation.

Problems of development of marketing of the territory become more and more actual and are investigated by many foreign and Russian scientists. Theoretical and practical bases of branding of territories are studied by Min K.S., Martin D., Jung J.M. [7], Bagautdinova N., Gafurov I., Kalenskaya N., Novenkova A. [1], which are concentrated on search and justification of use of marketing approach to advance of the territory, formation of its branding and increase of popularity and appeal of the territory, development of its human resources. Batista e Silva J., da GraçaSaraiva M., Loupa Ramos I., Bernardo F. [2] investigate processes of management of branding of the territory, its specifics, influence of a brand of the territory not only on tourists, but also on appeal of goods and services of local producers. Montanari F., Scapolan A., Codeluppi E. [8] in the article "Identity and social media in an art festival" place emphasis on the importance of carrying out cultural actions for development of image of the territory. Need of correct positioning of this or that event emphasizes Robinson S. [10]

The cities as object of studying act in works of Heritage Z.a, Green G.bg. [4] Kashnitsky I. [6] in the work "Migration of youths in Russia: Impact on sex-age structures" considers development of appeal of the city to youth which will lead to increase in a young intellectual and working resource. Sepe M., Pitt M. [11], Rakhmangulov A.N., Kopylova O.A. [9], Hu R., Blakely E.J., Zhou Y. [5] in the works pay attention to the social and economic capacity of the territory, comfort of residence of the population in this or that city. Value of investment appeal of the territory was considered by such authors as Blanc-Brude F., Cookson G., Piesse J., Strange R. [3] Thus, it is obvious that the overall objective of development of the territory consists in growth of welfare of residents of the territory taking into account preservation of social and

economic and ecological balance.

2. Method

For an assessment of efficiency of the carried-out branding of the city, for the analysis of the indicators influencing all components of branding it is necessary to choose an effective technique. The carried-out content analysis is based on a communicative component of branding of the city, namely on an assessment of popularity of the city and as this popularity of the city in environment is combined with its popularity among internal consumers. For the analysis the cities-milionniki of Russia are chosen.

The Russian million-plus cities develop everyone in the way, at each of them the features of management and development, the problems and strengths, the experience. Popularity of any city depends on a set of factors, existence or which absence allows to estimate popularity of the city on different aspects.

For carrying out an assessment of popularity of the city 10 Russian million-plus cities (Novosibirsk, Yekaterinburg, Nizhny Novgorod, Samara, Omsk, Kazan, Chelyabinsk, Rostov-on-Don, Ufa and Volgograd) are investigated. Moscow and St. Petersburg aren't included into the list of the analyzed cities in connection with their special status of the cities of federal value and the world cities, and also in connection with features of their economic development.

For a full-fledged assessment of a communicative component of branding of the city 2 main directions of the analysis are chosen:

1) frequency of illumination of information on the city in federal print media on the main aspects of management of the territory;
2) interest of consumers of Internet resources in information search about the city in concrete aspect of management of the city.

For the content analysis 4 most popular federal newspapers among reader's audience were chosen: Russian newspaper, Independent newspaper, Kommersant, News. The analysis of illumination of each city was carried out on 8 main aspects (for 2012): policy, economy and municipal economy, culture, religion, sport, social sphere, incidents and lawsuits, science. For receiving indicators of interest of consumers of Internet resources in information search about the city in concrete aspect of management of the city it was used a scale of quantity of search queries on the Yandex.ru portal, considered in the territory of Russia. Comparing the received ratings of the cities, it is possible to estimate popularity of the city at mass media, and also among consumers of information, to analyse complexity of process of branding of the cities and to develop effective measures for increase of their popularity.

3. Results

On the basis of the obtained data on information popularity of the cities it is possible to draw conclusions on success of a municipal government in different spheres of development of each million-plus city of Russia.

Table 1. Totals of illumination of million-plus cities in federal newspapers for 2012 (quantity of lines)

Subject	Volgograd	Yekaterinburg	Kazan	Nizhny Novgorod	Novosibirsk	Omsk	Rostov-on-Don	Samara	Ufa	Chelyabinsk
Policy	1900	1057	2067	1192	1217	1868	637	345	834	1496
Rating	**2**	**7**	**1**	**6**	**5**	**3**	**9**	**10**	**8**	**4**
Economy and municipal economy	2411	1376	1947	1535	1288	2063	1969	2621	1075	1629
Rating	**2**	**8**	**5**	**7**	**9**	**3**	**4**	**1**	**10**	**6**
Culture	1678	1011	1238	892	527	965	219	259	56	107
Rating	**1**	**3**	**2**	**5**	**6**	**4**	**8**	**7**	**10**	**9**
Religion	129	83	1296	34	0	0	0	0	0	65
Rating	**2**	**3**	**1**	**5**	**8**	**8**	**8**	**8**	**8**	**4**
Sport	1537	922	4879	908	986	2343	682	722	636	1329
Rating	**3**	**6**	**1**	**7**	**5**	**2**	**9**	**8**	**10**	**4**
Social sphere	1782	962	846	770	1236	1272	1152	746	645	514

Rating	**1**	**5**	**6**	**7**	**3**	**2**	**4**	**8**	**9**	**10**
Incidents, lawsuits	3301	3143	6505	1088	3340	3262	3551	3411	1221	2334
Rating	**5**	**7**	**1**	**10**	**4**	**5**	**2**	**3**	**9**	**8**
Science	0	200	583	170	86	953	678	47	48	452
Rating	**10**	**5**	**3**	**6**	**7**	**1**	**2**	**9**	**8**	**4**
Total point	**26**	**44**	**20**	**52**	**47**	**29**	**46**	**54**	**72**	**49**
Total rating	**2**	**4**	**1**	**8**	**6**	**a**	**5**	**9**	**10**	**7**

Analyzing data from the above-stated table we can draw a conclusion that such cities as Kazan (1 place), Volgograd (the 2nd place) and Omsk (the 3rd place) are leaders in amount of information in federal printing editions. It should be noted that Kazan in 2012 was the absolute leader in illumination by those of policy, religions, sport, and also incidents and lawsuits. Volgograd is in the lead on illumination of subjects of the social sphere and culture. Omsk won first place on illumination of scientific subjects in federal newspapers. Least of all information in 2012 meets about Samara (the 9th place) and about Ufa (the 10th place).

Practically in all considered cities one of the highest rates are indicators on aspect "incidents and lawsuits". It can be explained to that journalists always hunt for scandals and incidents, after all similar headings attract more and more readers. Therefore similar sensational cases long time don't descend from the front pages of newspapers and are discussed still long time.

Table 2. Search queries on the Yandex.ru portal in 2012 on million-plus cities (amount of inquiries)

Subject	Volgograd	Yekaterinburg	Kazan	Nizhny Novgorod	Novosibirsk	Omsk	Rostov-on-Don	Samara	Ufa	Chelyabinsk
Policy	9427	8188	1257	6122	1053	6611	1810	4156	6690	2680
Rating	**1**	**2**	**9**	**5**	**10**	**4**	**8**	**6**	**3**	**7**
Economy and municipal economy	6077	14811	17062	44609	9157	5610	5608	5464	8050	10096
Rating	**7**	**3**	**2**	**1**	**5**	**8**	**9**	**10**	**6**	**4**
Culture	19929	39184	20770	23009	24774	20880	14630	22757	18006	24488
Rating	**8**	**1**	**7**	**4**	**2**	**6**	**10**	**5**	**9**	**3**
Religion	0	0	7451	176	47	93	0	107	401	0
Rating	**8,5**	**8,5**	**1**	**3**	**6**	**5**	**8,5**	**4**	**2**	**8,5**
Sport	67221	29014	71551	42980	58956	11607	43046	69792	61626	19449
Rating	**3**	**8**	**1**	**7**	**5**	**10**	**6**	**2**	**4**	**9**
Social sphere	197	542	0	445	628	170	0	0	0	0
Rating	**4**	**2**	**8**	**3**	**1**	**5**	**8**	**8**	**8**	**8**
Incidents, lawsuits	46985	24056	29611	23160	22556	24469	23537	32740	25450	17647
Rating	**1**	**6**	**3**	**8**	**9**	**5**	**7**	**2**	**4**	**10**
Science	743	10464	7843	0	19656	158	26299	31504	1890	2050
Rating	**8**	**4**	**5**	**10**	**3**	**9**	**2**	**1**	**7**	**6**
Total point	**40,5**	**34,5**	**36**	**41**	**41**	**52**	**58,5**	**38**	**43**	**55,5**
Total rating	**4**	**1**	**2**	**5,5**	**5,5**	**8**	**10**	**3**	**7**	**9**

The rating given in table 2 shows how often users the Internet request information on this or that million-plus city of Russia. Having analysed amount of requests on various categories for the cities, the rating in which the leading cities became Yekaterinburg (1 place), Kazan (the 2nd place) and Samara (the 3rd place) was received. The most popular inquiries in 2012 in Internet resources are requests for a sport subject (71 551 inquiries), "incidents and lawsuits" (46 985 inquiries), and also requests for economic subjects (44 609 inquiries).

Least of all the population is interested in questions of the social sphere: the greatest number of inquiries on this subject in Yekaterinburg, but this number makes only 628 inquiries a year. Also people practically don't request information on subjects of religions, except for the city of Kazan (7 451 inquiries). We can explain it to that Kazan is the capital of the Republic of Tatarstan where representatives of 115 nationalities live.

Chelyabinsk and Rostov-on-Don appeared the last in this rating. Their information activity it appeared the lowest for the analyzed period.

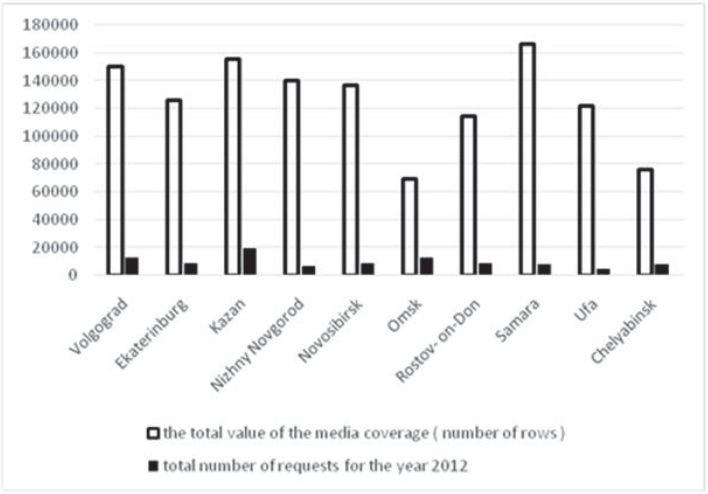

Fig. 1 Ratio of total value of indicators of illumination and quantity of search queries on the cities million plus cities of Russia

The above chart shows a ratio between amount of information which is covered in federal newspapers and the general with amount of inquiries in the search engine Yandex.ru on any subjects. The smallest difference between the studied two criteria is revealed in the cities of Omsk and Chelyabinsk, in them information in mass media, especially on problems of the social sphere, economy and culture is least of all lit. The amount of inquiries on these cities is also small, however the difference is significantly less, than for example in Samara, Volgograd and Kazan. These cities are widely covered in newspapers of federal value, but amount of inquiries in comparison with amount of information in mass media are very small.

4. Conclusion

When carrying out comparison of indicators in all 10 million-plus cities on the allocated aspects it is impossible to allocate the city - the leader in all indicators. In most cases Volgograd and Kazan, sometimes and Samara, have one of the highest rates. The special attention is paid to the city of Kazan as to the city with rough rates of development in many spheres (political, economic, sports, cultural).

On the basis of the obtained data on information illumination of the cities in the central press it is possible to draw a conclusion on need of carrying out more purposeful work for capital cities in the field of ensuring safety in them for minimization of processes of distribution of information on various incidents (especially in Ufa, Volgograd, Omsk, Yekaterinburg) as it is adversely reflected in appeal and reputation of the cities in general. For the authorities of Yekaterinburg, Nizhny Novgorod, Kazan an important task is maintenance of the status of the cities with developed economy. Activization of work on their competent lighting in this sphere is for this purpose necessary.

In Novosibirsk, Yekaterinburg, Nizhny Novgorod it is necessary to pay close attention to aspect of culture which doesn't find due reflection in the press. Perhaps, creation of special events (carrying out actions, exhibitions, concerts) which will draw attention of members of the media and residents will be effective steps. A problem subject practically for each city (except for Kazan) is low illumination of a religious component. The authorities of the cities need to carry out the analysis of level of interest of inhabitants religious subject and if necessary to give it attention in mass media more.

Unfortunately, the social aspect of a municipal government doesn't find due reflection in capital cities, it emphasizes their insolvency and a low social orientation in the development. Therefore as the recommendation it would be desirable to advise local administrations to speed up work in the social sphere. These actions could cause interest as from the press, and directly from inhabitants and respectively to increase quality of life in this territory.

The carried-out content analysis allowed to trace not only the level of information illumination of various subjects in mass media, but also to analyse activity of the carried-out work in the field of a municipal government in the Russian capitals for correction of work of their separate services and committees that in turn will positively be reflected in appeal of the territory in general.

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Analysis and Possibilities of Increasing of Labor Potential in the Regions of the Volga Federal District (Russian Federation)

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Abstract

The article proposes a method of estimating of employment potential of a territory and results of the comparative analysis of employment potential of the Volga Federal District regions based on the method. There were also identified some problems of the regions and suggested ways of solving them.

Keywords: *labor potential, index of labor potential of the region, absolute rate of labor force, working time fund, mechanical population growth, gross regional product.*

1. Introduction

Labor potential is one of the subsystems of the human potential, its core. Effective reproduction of the human potential of the territory, as well as accelerate sustainable economic growth possibilities depend on forming, distribution and use of labor potential of the region. Necessity of improvements in labor force using is determined by objectively existing factors: the reduction in growth of the labor force because of general demographic trends; continuous increase in the number of employees allocated to non-productive sphere. The problem of measuring and forming the optimal set of qualitative characteristics of the labor force is relevant both in theoretical and practical aspect: due to the constant growth of the highly skilled workforce demand in regions it is necessary to estimate the employment potential of the region.

2. State of the Issue

At present the theory of labor potential is in its formative stages. There is yet no consensus on its conceptual framework, universally accepted theoretical and methodological approaches to understanding the nature and structure of the labor potential of the region, as well as mechanisms for its evaluation are not developed. There is a tendency to calculate labor potential of the region in several stages: a quantitative assessment of the labor potential of the region and calculation of influence of qualitative factors on the investigated parameters, using the index method. Quantitative assessment is an exact characteristics reflecting labor potential of the region. On its basis we can make a comparative analysis of the regions and construct a rating. At the same time, a qualitative assessment is a more complex process that characterizes the region, its own specific features and peculiarities more accurately.

3. Review of the Literature

Labour market is an essential element of the market economy, which is why many authors: Cho J., Lee T., Jung H.;[1] Galarza F.B., Yamada G.[2]; Bevelander P., Pendakur R.[3] refer to this concept. Deep investigation of the labor market is impossible without study of different aspects. For example Spiegel U., Gonen L.D., Weber M.[4]; and Viola I., Marinewwli N.[5] consider labor market through the prism of labor potential and define its basic concepts. Study of the theoretical aspects of the labor potential of the region is represented in the works of such authors as Russo G., Tedeschi F., Reggiani A., Nijkamp P.[6]; Crouch C.[7]; Muffels R., Wilthagen T.[8].

The main problem is that there is no consensus in defining of the boundaries of human resources, which are the basis of labor potential in the region, but almost all of the authors believe that correct mathematical calculations can

become a key regulator of characterizing the degree of development of the region. Lack of awareness in the study of this category, according to George T.E., Yoon A.H.[9]; Kanbayashi H., Takenoshita H.[10]; Marx P.[11] inhibits the possibility of intensive development of the labor market.

4. Research Methodology

The first step is to analyze the structure of the labor force in the region. Absolute figure in the labor force is the sum of number of the able-bodied citizens and the number of working teenagers and the elderly. The labor force is fixed at a certain date, and so it becomes the torque indicator. However, such an indicator is not very useful for planning and economic calculations, so the interval is calculated as the arithmetic average rates (per month, quarter, year) form the torque indicators. Thus, it is possible to determine the total working population at the beginning of the period: $S_{\text{общ.}} = S_{\text{тр.н.}} + S_{\text{пенс.}} + S_{\text{подр.}}$[1], where - $S_{\text{общ.}}$ is the total number of the able-bodied citizens at the beginning of the period, $S_{\text{тр.н.}}$ - the number of the able-bodied citizens at the beginning of the period, $S_{\text{пенс.}}$ - the number of working pensioners, $S_{\text{подр.}}$ - the number of working teenagers up to 16 years. The number of employed people ($S_{\text{зан.}}$) is also important.

An important indicator in the calculation of the labor potential of the region is the working time fund. It is calculated for a single individual. The total working time fund can be also calculated. A one- year interval is taken as a calendar period.

$$\Phi_{\text{общ.р.в.}} = S_{\text{общ.}} * \Phi_{\text{инд.р.в.}} \text{ [2]}$$

To calculate the time fund both individual and general, we use 8 hours working day rate which is prescribed in the law. On average, if people have a five-day working week they work 247 days days per year is. On the basis of the data available, the personal working time fund ($\Phi_{\text{инд.р.в.}}$) is calculated as the product of a working day rate by the number of working days per year. Substituting the obtained data into the formula [2] we obtain the general working time fund of the total able-bodied citizens ($\Phi_{\text{общ.р.в.}}$).

The decisive parameter for the calculation of the full labour potential of the region is U - the amount of output per person per 1 hour in cash equivalent (RUB). This indicator is calculated by the formula: $U = \frac{\text{ВРП}}{\Phi_{\text{инд.р.в.}} * S_{\text{зан.}}}$ [3] where ВРП (GRP) - a gross regional product (indicator measuring the gross value added, calculated as the total gross production minus its intermediate consumption) $S_{\text{зан.}}$- the number of the employed population in the region.

The data obtained can be used to find the total regional labor potential, which is expressed in the volume of output in monetary units. Using these data, the formula of the labor potential of the region is as follows: $\text{Т}_{\text{п.р.}} = U * \Phi_{\text{общ.р.в.}}$ [4]. To compare the figures of the labor potential of the region we can make their indexing $I_{\text{Т}_{\text{п.р.}}}$. The essence of this method is to assign index equal to 1 to the average figure, and determine other indices on the basis of the proportions in relation to the average figure.

To analyze the influence of qualitative factors that have the most significant impact on the labour potential of the region, the following parameters were chosen: fertility, mortality, migration, education, investment, health care. The hierarchy analysis was chosen for this method. We represent the data.

Table 1. Distribution of the coefficients of the parameters' impact.

Significance	Mortality	Fertility	Migration	Education	Investment	Health care	Geometric mean	Vector of local priorities	Coefficient of influence of the parameter
Mortality	1	1	1/2	1/4	1/4	1/3	0,466545488	0,063692767	6,369276684
Fertility	1	1	1/2	1/4	1/4	1/3	0,466545488	0,063692767	6,369276684
Migration	2	2	1	1/4	1/4	1/3	0,659794956	0,090075175	9,007517469
Education	4	4	4	1	1	1	2	0,273039901	27,30399007
Investment	4	4	4	1	1	1	2	0,273039901	27,30399007
Health care	3	3	3	1	1	1	1,732050808	0,23645949	23,64594902
Amount	15	15	13	3,75	3,75	3,99	7,32493674	1	100
							eigenvalue=	6,073032898	
							consistency index=	0,01460658	
							attitude consistency=	0,0117795	matrix matched correctly

The table shows that the most weighty factors of the selected parameters affecting the labour potential are the following: education, health care, investments. An important factor is the calculation itself.

Birth and death rates have generally accepted calculation formula: $К_{р.} = \frac{N}{\overline{S}} * 1000$ where N is the number of births; $\overline{S}$- average number of population per year. The death rate is calculated the same way: $К_{см.} = \frac{M}{\overline{S}} * 1000$, where M - the number of deaths. These factors indicate how many births and deaths are accounted for 1,000 people. In order to reflect the process of natural population movement in the region it is necessary to find the difference between these two coefficients, so in the final formula, which produces the sum of the coefficients of the quality parameters affecting the labour potential of the region, the mortality rate is a negative indicator in absentia.

The evaluation of the mechanical population growth, which also affects the labour potential of the region is also important. The following formula for the calculation of the migration level is used: $К_{м.} = \frac{П-В}{\overline{S}} * 1000$ where П is the number of arrivals in a given territory, B is the number of emigrants from the area. These indexes are fundamental and have the greatest impact on the coefficients of the labor potential of the region. Assessment of health care is based on comparing the level of expenditure on the budget line in the region. The same way is used to estimate the investments, so the regions comparison is based on the inflow of capital, that can be both external (foreign) and internal (investment entities of the Russian Federation). As for the evaluation of regions in terms of education, it is advisable to consider the ratio of number of people with higher and specialized education to the number of able-bodied citizens. This assessment allows to reflect the level of education in a given region more accurately.

Having both components of the labor potential coefficient of the region, we can calculate it with the formula: $K_{Т_{п.р.}} = I_{Т_{п.р.}} * \sum_{i=1}^{6}(K_i * x_i)$, where $K_{Т_{п.р.}}$ is the coefficient of the labor potential of the region, $I_{Т_{п.р.}}$ is the index of the labor potential of the region, K_i is the coefficient of influence of i-th factor, x_i is an indicator of i-th factor. This formula shows the links between quantitative factors and qualitative factors of the labor potential of the region.

5. Empirical Research: Main Results

The coefficient of the labor potential of the region is an indicator of production capabilities of labor resources accumulated in the region in terms of influence of the factors that are close to the real economic situation of the region. Creating close to reality conditions for the coefficient calculating is really desire of the subject, that is conducting a research of this phenomenon. The peculiarity of this factor is that it can mathematically realize the impact of any factors affecting the labour potential of the region.

Table №2. Final results of the calculation of the labor potential of the regions in VFD for the end of the year 2012.

Subjects of VFD	Quantitative index of labor potential (Iт.п.р.)	The rate of natural population movement	Migration rate	Ratio of expenditure on education per capita	Ratio of health expenditure per capita	Ratio of investment per capita	The coefficient of the labor potential of the region
Republic of Bashkortostan	2,136	1,4	-2,31	1,04	1,00	0,86	136,41
Republic of Mari El	0,215	0,6	-3,33	0,89	0,71	0,67	7,15
Republic of Mordovia	0,249	-4,5	-4,15	0,85	1,12	0,90	2,12
Republic of Tatarstan	2,471	2,3	3,15	1,14	1,01	1,84	366,32
Republic of Udmurtia	0,639	2,4	-2,53	1,15	1,16	0,57	42,83
Republic of Chuvashia	0,386	0,7	-2,20	0,89	0.86	0,79	19,63
Perm region	1,515	0,6	-0,31	1,15	1,13	0,91	127,14
Kirov region	0,394	-2,8	-4,20	1,05	0,83	0,57	3,32
Nizhny Novgorod region	1,425	-4,2	2,12	0,93	1,15	1,18	110,17
Orenburg region	1,171	0,8	-3,48	1,01	1,05	1,12	66,75
Penza region	0,427	-4,1	-0,27	0,76	0,91	0,79	15,09
Samara region	1,627	-1,8	2,57	0,97	1,02	0,96	143,95
Saratov region	0,860	-2,9	-0,36	0,90	0,73	0,68	33,20
Ulyanovsk region	0,438	-2,8	-2,50	0,82	0,98	0,86	12,59
VFD	1	-0,7	-0,42	1	1	1	70,05

Investigating the coefficients of the regional labor potential in the table №2, we can draw several conclusions. Obviously, the Republic of Tatarstan has the best parameter of the labor potential in the Volga Federal District, which is ($K_{Т_{п.р.}} = 366{,}32$). It is obvious due to the indicators that were observed in the demographic, social and economic spheres. The

main role belongs to the positive dynamics of natural and mechanical population growth, as well as substantial amounts of investment in fixed assets in the region. The second place is taken by Samara region ($K_{\text{T}_{\text{n.p.}}} = 143{,}95$), the third place has the Republic of Bashkortostan with the index ($K_{\text{T}_{\text{n.p.}}} = 136{,}41$).the Nizhny Novgorod region has quite law results ($K_{\text{T}_{\text{n.p.}}} = 110{,}17$), though Nizhny Novgorod, the capital city of the region is the center of the PFD. The region took only the 5th place after the Perm region ($K_{\text{T}_{\text{n.p.}}} = 127{,}14$). The lowest rates of labor potential are registered in the Republic of Mordovia ($K_{\text{T}_{\text{n.p.}}} = 2{,}12$) and the Kirov region ($K_{\text{T}_{\text{n.p.}}} = 3{,}32$). The average index for the Volga Federal District is ($K_{\text{T}_{\text{n.p.}}} = 70{,}05$).

The figures above show a high differentiation between the PFD subjects. We can see difference not only in the economic development of the regions, but also in the results of the socio-demographic policies in a particular region. After analyzing these data, we can note current and competent policy conducting in the Perm region. The Government of the subject distributes and spends funds effectively in all spheres of the region It can also be seen in comparison with the Udmurt Republic which does not have competent policy of attracting investment in fixed assets, and does not minimize the mechanical loss of population. The coefficient of the labor potential of the region would be much higher if funds from the budget were distributed evenly. For example, instead of excessive spending money on education and health care, there could be financed some measures to reduce mechanical loss of population. Actually the region has become a workforce donor preparing a healthy and educated population to other regions.

6. Conclusion

Thus, the existence of a high level of differentiation between the regions of the Volga Federal District was revealed. Tatarstan has become the leader in terms of the labor potential, whereas the Kirov Region and the Republic of Mordovia took the last places. A factor analysis shows the main problems of the regions such as natural and mechanical population loss, low levels of literacy and health, as well as low investment attractiveness of the regions. In addition, the price of labor remains extremely low, leading to stagnation of labor potential, reducing motivation to effective work and creativity, self-improvement and focus on qualitative change in the parameters of the environment. These conclusions were based on the ratio of labor potential of Mordovia and the Kirov region.

The regions of the Volga Federal district are experiencing the effects of the demographic crisis of the 90-ies. In half of the regions there is a natural decline in the population. The solution to this demographic problem is possible by creating conditions for socio-economic assistance to promote fertility: increasing the size of the payments of the parent capital, as well as creating additional benefits for young families and so on

Creating a positive growth trend in terms of the labour potential of the region is possible only with a uniform regulation of demographic, migration and socio-economic policies as well as taking into account specific problems of each region.

Thus, in the Republic of Bashkortostan, Perm region and Orenburg region we can observe the basic problem of mechanical loss of population. This problem can be solved by creating conditions to attract the highly skilled workforce. Mechanical population decline is directly related to errors in the current social policy in the regions. If the level of education and health care is higher than in average, the housing policy and wage levels still have much to be desired. It is necessary to implement programs to improve housing affordability and increase in average wages.

We can observe a difficult situation in the social sector in Kirov, Penza, Saratov, Ulyanovsk region and the Republic of Mordovia. Apart from the problems in the housing sector and the low level of wages they have even a lower level of health care and education. These problems can be solved only with a full modernization of material and technical resources and professional development of the staff working in the health sector. Changing the priorities in the education system, for example, distance learning will improve the overall level of education of the population.

Almost all regions of the Volga Federal District have the lack of investment in fixed assets. Solution of this problem is possible using the experience of the Republic of Tatarstan in creating special economic zones and reducing administrative barriers for business. Proper regional policy will contribute to solving social and demographic problems, which will have a positive impact on the labour potential of the region.

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Role of Russia in the International Integration of the Financial Capital

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Abstract

This paper presents the system of calculations which allow find a place of the Russian Federation in the international integration of the financial capital by indicators of export and import which presented in this article. The analysis of trade relationship between 64 countries was conducted to the period from 2001 to 2012. For the purpose of evaluation of integration processes at the first analysis stage was made matrixes on export and import of goods which were further transformed to the partner matrix reflecting 16 types of trade interaction between two countries. From 2005 to 2012 increase number of the economic partners of Russia. In the article was calculated straight index for distribution the countries on extent of influence on process of the international integration of the financial capital.

Keywords: *import, export, partner matrix, strength index, center, periphery.*

1. Introduction

The international integration of the financial capital serves in modern conditions as a factor of strengthening of national welfare in countries, increasing in rates of economic growth, an employment rate and growth of socio-economic indexes. Integration of the financial capital - this movement of the capital between the countries including export, import of the capital and its functioning abroad also represents objective economic process when the capital leaves economy of one country for obtaining higher income in other country. [3,4]

Rapid growth in the last decades of international trade of the different countries all over the world was followed by rapid development of the international market of the capital which promotes growth of world economy. One of the main indicators of integration of the financial capital is export and import of goods between the countries. Also investments, cross-border bank operations belong to such indicators. However in modern conditions the most of underdeveloped countries depend on the economies which were more developed. High diversification of levels of economic development is observed.

Process of the international integration of the capital has essential impact on economic development of Russia for which typically huge volumes of export of natural resources to many countries in the world. In connection with what it is necessary to define a place of Russia in system of the international streams of the financial capital.

2. Review of Literature

Different economists in their treatises were analyzing the effects of the integration of financial capital. Lothian J.R. in his studies paid attention to the development of a framework for the analysis of the effects of the financial integration. [10] Arnoldb I. J.M., Chena J., Ewijka van S.E. and Hnatkovska V.V. evaluated the effect of the flow of financial capital to the economy of the country-participant in financial integration. [2, 6, 8]. In the theory of the world system analysis a great attention is paid to the effects of economic and closely related to them financial integration. It is necessary to notice the treatises of Changhua Y., which are devoted to the study of "center-periphery" countries' interaction. [5] The impact of the economies of developed countries-"centers" on the economy of underdeveloped countries-"peripheries" was studied in the work of Dos Santos, T. [7]. Among the methods determining the effect of a single country to the process of international integration we should note the method of Valentin Piana, which is based on the analysis of international integration in terms of exports and imports. [1,11] Worth noting that foreign scientists in their studies have not paid much attention to Russia and to analysis of its' integration with the CIS countries.

3. Method

Basis for this calculation was taken as a method of constructing a model matrix of integration indicators of financial capital, such as export and import.[9]

At the first stage of the analysis identified the countries that have trade relations with Russia. Then the list of countries was expanded to 64 through the inclusion of key partners on export and import partner countries of Russia.

Next was built matrix of export and import for each country in the line is a binary variable equal to (1) for the five major partner countries and (0) for the other countries. In that way this matrix allows to determine, for each of the countries the main directions of integration of the capital.

The second step we made matrix binary descriptions of the trade relationships between countries. This matrix was built on the Foundation of the analysis of two structural matrices for export and import respectively. Relations between the two countries may correspond to 16 different models of relations. Trade relations between state A and state B can be characterized by four conditions:

1. For B, A is a major export destination
2. For B, A is a major import source
3. For A, B is a major export destination
4. For A, B is a major import source

For each offer, we build a binary variable which will accept value 1 if the statement is right also zero otherwise. "The binary description" of model of two countries can be received, having simply approached four binary variables in the same order as we presented in the relations of the countries of A and B. If the country A cost that for creation of a binary variable across at first we take binary value from a export matrix on crossing of the country B on verticals and the countries of A across, further binary value from structural model on import on crossing of the country of B on verticals and the countries of A across, further from structural model value of the country In across and the countries of A down, and from import value of the country In across and the countries And down.

As a result we receive 16 types of interaction between the countries: 0000 - the countries "ignore" each other; 0001 - B is an important provider for A; 0010 - B is an important market for A; 0011 - B is very important to A, but the reverse is not true; 0100 - A is an important provider of B, but A can ignore B; 0101 - They both need each other as providers; 0110 - One flow is important for both: the exports of A to B; 0111 - A depends on B, but B needs A's supply as source; 1000 - A is an important destination for B, while A can ignore B; 1001- One flow is important for both: the exports from B to A; 1010 - They both need each other as exporters; 1011- A depends on B, but B needs A market as destination; 1100 - A is very important to B and can afford to ignore it; 1101- A is very important to B but A needs B as a source 1110- A is very important to B but A needs B as a destination; 1111 - They need each other on an equal foot.

Then, the number of connections for each type of interaction was determined. The formula that avoids duplication, considering the specificity of the model matrix's construction, was used for the interaction with types 0000; 1111; 1010; 0101.

$N_{bdr} = N_{bd} / 2$ *(1)*

where N_{bd} – the number of links, N_{bdr} - the real number of links

At the final stage, the Strength-index was calculated for each country in the dynamics according to the following formula.

$I_p = N_{bd}{}^{*}I_{pcode} + N_{bd}{}^{*}I_{pcode} \ldots.$ *(2)*

where N_{bd} is the number of binary descriptions of trade relations, I_{pcode} - the code of Strength-index in concordance with the binary description of trade relationships. (Table 1)

Table 1. Codes of binary description.

Binary description	0000	0001	0010	0011	0100	0101	0110	0111	1000	1001	1010	1011	1100	1101	1110	1111
Strength score	0	2	2	1	6	4	4	3	6	4	4	3	7	6	5	4

4. Results

This method of analysis of the integration of financial capital in terms shows the asymmetric structure of relations between the countries. The dynamics of the global partnership is characterized by the absence of a two-way relationship: Share of relationships by type 0000 was 82% for 2001, 2010, 2012, 81% in 2005 from all trade relations during the period under review. Binary description, which means dominance of the countries, without any lack of relationship, weak

dominance (two types) of 27% and 25% of 2005, 29% and 25% in 2010, 28% and 25% in 2012, whereas the symmetric integration - 6% in 2001, 5% in 2005, 2010, 2012. Which indicates an increase between integrable countries and it has a negative effect on international flows of financial capital. (Figure 1)

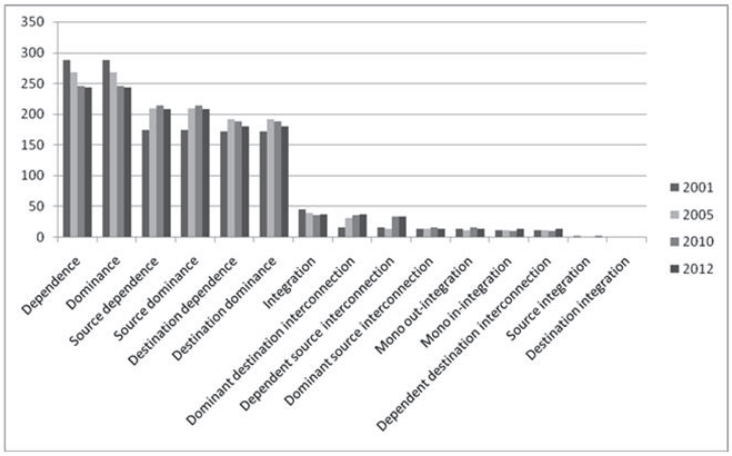

Figure 1. Structure of partnerships.

Analyzing the performance of the Strength-index during the period from 2001 to 2012, we can conclude that more points of integration in terms of exports and imports appeared. This analysis does not take into account some of their main partner countries, but due to its insignificance in the international arena, it did not affect the overall picture arrangement in the world. USA and Germany are based on a hierarchical system, where in 2001 the US has 385 on a scale of Strength-index, Germany - 432 in 2005, in 2010 the US -313, Germany - 370, in 2012 the US - 321, Germany – 370 (Figure 2)

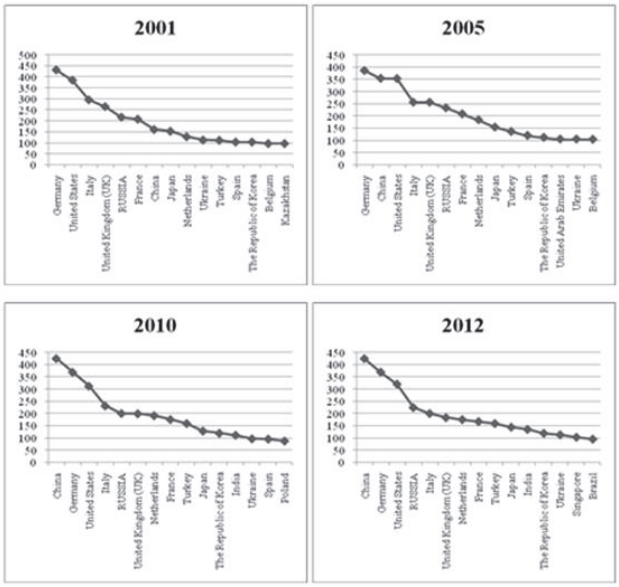

Figure 2. Strength indexes of top 20.

It is worth noting that during the analyzed period, China ranked first world exporter. As well as Republic of Korea showed a high rate of growth in terms of exports.

As for Russia, from 2001 to Russia of 2005 showed a positive dynamics of the Strength-index from 217 to 233 points, from 2005 to 2010 fall to 201, and in 2012 again there is a positive trend. Analyzing the binary values of Russia in the model matrix from 2001 to 2005, there was a mutual integration of financial capital with Ukraine and Belarus. In 2010 and 2012 there is an overall increase of relations with all countries, the share of energy exports to Europe is growing, as well as it is observed that Russia is a center for the integration of the CIS countries. (Table 2)

Table 2. The dynamics of integration relations of financial capital of the Russian Federation.

Name		2001	2005	2010	2012
Absence of relationships	0000	72	68	76	70
Source dependence	0001	10	14	9	12
Destination dependence	0010	4	2	2	1
Dependence	0011	10	11	12	12
Source dominance	0100	10	14	9	12
Source integration	0101	0	0	0	0
Mono out-integration	0110	0	0	0	1
Dependent source interconnection	0111	1	1	1	1
Destination dominance	1000	4	2	2	1
Mono in-integration	1001	0	0	0	1
Destination integration	1010	0	0	0	0
Dependent destination interconnection	1011	0	0	1	1
Dominance	1100	10	11	12	12
Dominant source interconnection	1101	1	1	1	1
Dominant destination interconnection	1110	0	0	1	1
Integration	1111	4	2	0	0
Strength Index		217	233	201	225

5. Conclusion

To summarize, we can conclude that the relationships related by the integration of financial capital are rapidly evolving; the poles of integration are changing. The dynamics of growth of exports from China and the Republic of Korea can be an example of this point. The positions of the United States and Germany as the integration centers are strengthening. Russia showed a positive trend in the growth rate of integration ties in the world for the period from 2001 to 2012, thereby strengthening its position in the post-Soviet space and with a number of other countries.

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Comparative Analysis of FDI Determinants in Russia and Brics Countries

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Abstract

In recent years changes in direction of foreign direct investments (FDI) started to attract more attention of economists. In this paper different economic indicators and variables as a factor of FDI growth are investigated. In the first part weregiven different classifications of FDI determinants. The second part was based on quantitative analysis of FDI determinants in BRICS countries. Data for analysis was provided by World Bank database of economic statistics. The last part includes polynomial regression model for Russia's FDI inflows and their dependence on different variables.

Keywords: *polynomial regression, foreign direct investments, FDI determinants, variables*

1. Introduction

In recent years the correlation between foreign direct investments is being investigated in economic literature, especially after the crisis in 2008. Special attention is being attracted to an influence of FDI to GDP and key determinants of foreign direct investment flows.

This paper offers unique classification of determinants of FDI and their qualitative analysis based on BRICS countries – Russia, China, India and Brazil.

2. Review of Literature

In this section, we provide brief literature reviews which investigate the determinants of FDI inflows across various economies. The classical model for determinants of FDI begins from the earlier research work of Dunning (1973, 1981) which provide a comprehensive analysis based on ownership, location and the internationalization (OLI) paradigm [6]. The empirical studies based on aggregate econometric approach are made by Agarwal (1980), Schneider et al (1985). Later on Lucas (1993) examines the determinants of FDI inflows for select East and South Asian economies during 1960 to1987 by using a model based on a traditional derived-factor of a multiple product monopolist[1,9,11]. The study finds that FDI inflows are more elastic with respect to cost of capital than wages and also more elastic with respect to aggregate demand in exports than domestic demand. Garibaldi et al (2002) analyze the FDI and Portfolio investment flows to 26 transition economies in Eastern Europe including the former Soviet Union from 1990 to 1999 [7]. The regression estimation indicates that the FDI flows are well explained by standard economic fundamentals such as market size, fiscal deficit, inflation and exchange rate regime, risk analysis, economic reforms, trade openness, availability of natural resources, barriers to investments and bureaucracy. However, the portfolio flows are poorly explained by the fundamentals. The study of Nonnenberg and Mendonca (2004) finds that the factors such as the market size measured by GNP, growth rate of the product, the availability of skilled labor, the receptivity of foreign capital, the country risk rating and stock market behavior seem to be the important determinants of FDI flows for developing countries comprising of 33 countries from 1975 through 2000[10].

3. Classification of FDI Determinants

Different sources offer different classifications of FDI determinants. Summarizing them we could segregate five major groups of factors of attracting FDI into economy:

1. Economic factors: market size, cost of primary factors of production, quality of primary factors of production,

GNP;
2. Infrastructure: transport services, communications, financial institutes;
3. Economic policy;
4. Ease of doing business;
5. Geographical characteristics of market.

Among different international classifications the most interesting one is the United Nations Conference on Trade and Development (UNCTAD) index of investment potential. Since 2002 UNCTAD is publishing a yearly report of world investments where the investment attractiveness of countries-recipients of FDI is being described. UNCTAD segregate four basic factors of investment attractiveness for a region or a country:

1. Market;
2. Cost and quality of labor force;
3. Natural resources;
4. Infrastructure development.

These are the main groups of FDI determinants. Every one of them includes more specific factors:

Market • Market size (GDP); • Purchasing power (GDP per capita, Purchasing power parity); • Market growth potential (GDP growth).	Infrastructure development • Transport o Road net density o Share of roads with hard coating o Length of railroads • Power resources o Electricity consumption • Communications o Mobile cellular subscribers o Internet subscribers
Cost and quality of labor force • Labor cost per unit of production; • Labor productivity.	
Natural resources • Fuel and ores stocks • Agriculture resources	

Every investor finds the most profitable combination of four main determinants and chooses the most advantageous region for investments.

All these factors have a significant impact on FDI flows but this classification does not embrace the whole specter of FDI factors. To see the whole picture, we should look at them from a position of investor.The basis of every investment project is a combination of three major parameters: *reward, risk* and *liquidity*. Obviously, the best scenario should be based on high profitability and reward, high liquidity and low risk. Some sources in addition to *risk* and *reward* take *time.* But from the investor's point of view this is not correct, because time itself is one of the determinants of profitability. Thus, every factor determining FDI inflows to the economy one way or another has influence on one of three major parameters. According to this we offer different investor-orientated classification (Table 1.)

Table 1. FDI determinants.

	Group of factors	Determinant	Variable	Source
Profitability	Market capacity	GDP value	US$	WorldDevelopmentIndicators. World Bank Database
		Growth potential	GDP dynamics, %	
		Effective demand	Average wage, US$	
	Labor potential	Labor force	Number of people	
		Labor productivity	Share of GDP per person employed	
		Education	Index, rating	InternationalHumanDevelopmentIndicators. Educationindex
	Infrastructure potential	Transport services	Goods transported (million ton/km)	WorldDevelopmentIndicators. WorldBankDatabase
		Power sources	Electricity production	
		Communication	Mobile cellular subscription per 100 people	
	Financial potential	Taxes	Total tax rate, % of commercial profits	WorldDevelopmentIndicators. World Bank Database
		Cost of capital	Discount rate, %	
		Cost of starting a business	% of income per capita	Doing business

Risk	Government policy	Strength of investor protection	Index (1-10)	Doing business
	Administrative factors	Registration of business	Time in days	
		Registration of property	Time in days	
		Dealing with construction permits	Time in days	
	Political factors	Rating of political instability	Index, rating	Failed State Index
Liquidity	Stock markets	Capitalization	Billion US$	WorldDevelopmentIndicators. WorldBankDatabase
	Closing a business	Recovery rate	Cents per dollar	Doing business

Apparently, this classification also cannot be universal. The main limitation for this classification was the ability to analyze all of the factors quantitatively, so only those factors which could be calculated were added to the model.

4. Analysis of FDI Determinants

Statistical data for the analysis was provided by open sources such as World Bank database, "doing business" reports, ratings and government's statistical databases. The analysis was based on four BRIC countries - Russia, Brazil, China and India for the period between 2007 and 2012.

All the factors of FDI inflows which could be calculated were put in unified database. At the first stage the correlation between the share of world FDI inflows of every country and each determinant for the whole period. Results of these calculations shows that set of FDI determinants cannot be unified for each country.

For example, the best match with chosen determinants has China. Most of the factors have a very strong correlation (over 0.9) with FDI inflows. In the meantime India has almost no correlation at all.

For Russia, the most important determinants appeared to be:

- GDP value
- Average wage
- Labor force
- Electricity production

5. Model Specification

At the first stage as model of evaluation of determinants of FDI inflows in Russia was offered a linear regression model with four variables from the above. It was assumed that these variables could allow figuring the degree of influence of each one of them to the dependent variable – the share of Russia in FDI world inflows. However, initial results have showed their low significance and low values of t-statistics despite the high coefficient of determination. This fact could be explained by multicollinearity between the independent parameters of regression. Evaluation of correlation coefficients between variables shows their strong linear dependence, so they cannot be used in an adequate model.

Table 2. Pair correlation of variables

	GDP (trillion US$)	Labor force (million people)	Average wage (hundreds US$)	Electricity production (trillion kWh)	FDI (% of world inflows)
GDP (trillion US$)	1				0,93
Labor force (million people)	0,79	1			0,80
Average wage (hundreds US$)	0,99	0,74	1		0,92
Electricity production (trillion kWh)	0,96	0,91	0,93	1	0,92

As the parametersdegree of influence on dependent variable cannot be adequately calculated, it was decided to build four different non-linear polynomial regression models. To measure the degree of influence of independent variable on the result the K. Pearson correlation ratio for non-linear regressions was calculated. The formula for this ratio is given below:

$$r = \sqrt{\frac{\sigma_y^2 - \sigma_{yx}^2}{\sigma_y^2}}$$

For every regression equation coefficients of determinations and t-statistics were calculated as well.

1. Relationship between FDI in Russia in % of world FDI inflows and GDP values.

$Y = -0.0084604x^2 + 0.0352237x - 0.003909$, where
Y – Russia's FDI share of world FDI inflows in %.
x – GDP value in trillion US$.
R^2=0.91; t-statistic – 42.85; r=0.96.

2. Relationship between FDI in Russia in % of world FDI inflows and average wage in hundreds US$.

$Y = -0.00045x^2 + 0.00802x - 0{,}00251$, where
Y – Russia's FDI share of world FDI inflows in %.
x – Average salary in hundreds US$.
R^2=0.89; t-statistics – 36.35, r=0.94.

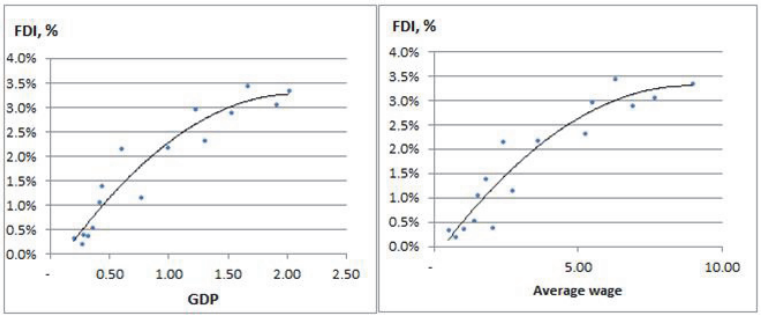

Figure 1. Scatter diagrams of relationship between Russia's share of FDI world inflows and GDP value (left side); Average wage (right side)

3. Relationship between FDI in Russia in % of world FDI inflows and labor force in million people.

$Y = -0.0007x^2 - 0.1054x + 3.7151$, where
Y – Russia's FDI share of world FDI inflows in %.
x – Labor force in millions people.
R^2=0.90; t-statistics – 38.01, r=0.95.

4. Relationship between FDI in Russia in % of world FDI inflows and electricity production in trillion kWh.

$Y = -4.9994x^3 + 14.425x^2 - 13.686x + 4.2859$, where
Y – Russia's FDI share of world FDI inflows in %.
x – Electricity production in trillion kWh.
R^2=0.88; t-statistics – 30.8, r=0.94.

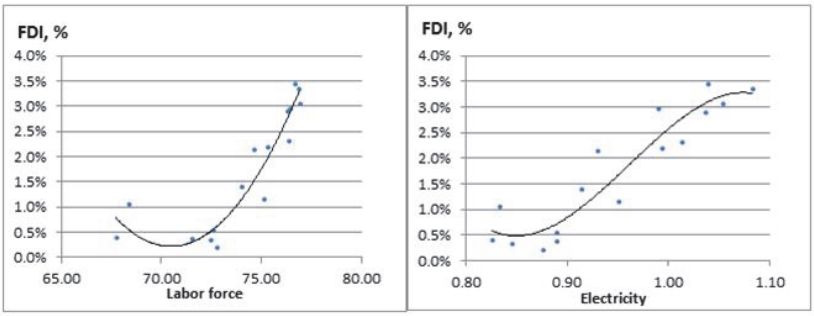

Figure 2. Scatter diagrams of relationship between Russia's share of FDI world inflows and Labor force (left side); Electricity production (right side)

Thus, these regression models show strong Russia's FDI share of world inflows on independent variables. According to the values of R2 and *r*, highest dependence of the FDI inflows can be seen on the labor force and GDP values.

6. Initial Results and Conclusion

The initial results of analysis show that indeed there are many methods and classifications to describe investment climate and potential of the particular region. There is no unified classification for every country even among developing ones. Most of developing countries could be characterized by very high correlation between their FDI inflows and major economic and investment climate indicators such as average wage, tax rates and "doing business" indicators. There are many ways to make FDI inflows consistently grow by managing these parameters.

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Innovation Potential of the Economy of the Region, the System of Indicators

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Abstract

The article focuses on the existing approaches to evaluation of the innovation systems, analyzes the set of indicators involved in assessment. The article touches on the current tendencies in the state innovation development, marks their weak points and suggests the perspective ways for further effective development of the innovation system

Keywords: *innovation potential, innovation systems, innovation assessment methods, systems of indicators, regional economy*

1. Introduction

In the modern economic literature a great attention is paid to the importance of the efficient use of the innovation potential in terms of the global economic crisis. The significant task is the choice of the most adequate system of the innovation potential assessment that would make possible the precise and competent evaluation of the innovation degree of every region. The statement of this problem is closely related to the fact that the modern economic world faces the imperfection of the existing methods of innovation potential assessment.

2. Theory

There is a number of approaches to the innovation system evaluation [6]. In the first place comes the approach suggested by the World Bank in 2004 within the program "Knowledge for Development" (K&D), it is proved to be one of the most full and complex approach applicable to evaluation of the knowledge-based economy. The devised methodology (The Knowledge Assessment Methodology, KAM) [1] deals with comparison and estimation of the readiness of the countries for transition to a new development model based on knowledge, it uses 76 indicators and several aggregated indices that contribute to the Knowledge Index (KI) and the Knowledge Economy Index (KEI) [2].

The structure of the Knowledge Economy Index makes up of the following indices:

1) "General indices" (such as the annual growth rate of GDP, the Human Development Index (HDI));
2) "Institutional mode of the economic system functioning" that includes: the level of the tariff and non-tariff barriers; the quality of economic regulation (the expert assessment of the price control; regulation of the banking, international trade and business development); the degree of compliance (the expert assessment of the crime rate etc.);
3) "Education and human potential": the literacy level of the adult population; the level of involvement of the population of the corresponding age categories in the secondary and higher education;
4) "Innovation system" (as definite environment): the quantity of the research workers in the sphere of R&D, the quantity of the lodged and approved patent applications; the quantity of the publications in the scientific and technical journals (all in calculation per million of the total population);
5) "Information infrastructure": the number of fixed and mobile phones, computers per mille; the number of the internet users per mille.

Besides the system of indices suggested by the World Bank it is common to apply the so called "cluster approach" in the analysis of the knowledge flows within the national innovation system, which consists in ascertainment of the close horizontal and vertical interactions between certain firms and industrial sectors united in clusters on the basis of their technological ties, supplies processes, knowledge and skill interchange. This approach was employed in the theory of clusters. First, the basics of the cluster approach were introduced by N.D. Kondratyev in his research of the dynamics of innovations. Kondratyev proved that innovations are spread unevenly, emerging in groups, i.e. clusters. Later J. Schumpeter associated the long periods of imbalance of the economic system that come out in the low-frequency

fluctuations of the conjuncture and are accompanied by the occasional concentration of the innovations into clusters with their further synchronic distribution. The most significant contribution to the cluster theory was made by the American scientist M.Porter [5]. This theory is based on the notion that the most competitive on the global scale firms of the same industrial sector are usually accumulated in one region, and this is specified by the wave nature of innovations that are spread through the most competitive companies and affect the suppliers, the customers and the competitors of those companies.

The mechanism of the positive impact produced by cluster evidences in the following interrelations:

- the new producers coming from other economic sectors accelerate their development by means of R&D promotion and provision of the financial support needed for the implementation of the new strategies;
- there is a free information interchange and rapid spread of innovations via the suppliers or consumers who are linked to multiple competitors;
- the interrelations within the cluster itself, often absolutely unpredictable, lead to new ways of competition and bring forth totally new possibilities;
- the human resources and ideas display new combinations.

The most important distinctive feature of the cluster is its innovation-directivity. The most effective clusters usually form in the conditions of the present or forthcoming breakthrough in the sphere of techniques and production technology with further occupation of the new market niches. The transfer from one basic innovation to their integration within one cluster is not a mere formal procedure, but the transition to more qualitative category belonging to macrolevel.

According to M.Porter, clusters may affect the competitiveness in three ways:

- increase of productivity of firms and industrial sectors;
- creation of the opportunities for the innovation and production growth;
- encouragement and facilitation of the new businesses formation processes that would support innovations and cluster's expansion.

Apart from the global statistic indices and the cluster approach to the analysis of the innovation systems there are developed *indicators of the international flows of the intellectual capital*, but due to the theoretical vagueness of the assessment indices of the advanced technology products only a limited number of the important distinctive features of that flows are fixed. The data that belong to these indices are the information on the technological payments, the global diffusion of patents, the international activity of the research consortiums. The growth of the values of these indices is the sign of the increase of the foreign knowledge flow that could have negative impact on the "national innovative capacity" [6].

The technology balance of payments indicator [3] measures the "know-how" flows (licensing or the sales of patents, trademarks, technological know-hows and intellectual services such as personnel training and R&D maintenance). This indicator reflects the transfer of technologies and experience that do not mandatorily require the purchase of the machinery and equipment. However, the works on the technological balance of payments guide (as applied to the advanced technology products and services) edited by International Monetary Fund were suspended owing to the mentioned vagueness.

According to the Global Competitiveness Report Survey [7] (24 innovation-related indicators), on the basis of the regressive models it is possible to derive the general innovation index and in addition some thematic subindices (and the ratings of the countries in accordance to them). The viability of the innovations in the economy is estimated via its national innovative capacity.

A similar approach was applied to evaluation of the innovative strength of the national innovation system in the survey OEC NIS based on the OECD information data: Educational Database, Patents Database, Main Science and Technology Indicators, OECD Science, Technology and Industry Scoreboard 2007 [4]. In accordance with this survey the national innovation system can be characterized by the following groups of indicators:

1) "innovation forces": nationwide level investment into the activities correlating to R&D: private, public, municipal, nationwide expenses on R&D as a percentage of GDP;
2) national "institutional environment": common macroeconomic conditions, specific stimuli for the innovation activity, the use of information technologies by the constituent subjects of the national innovation system, the quality state of the infrastructure;
3) "knowledge base" as an up-to-date and upcoming outcome of the NIS functioning: the volume of the patents, the researchers' employment rate, the quality performance of the national system of education, the work force quality;
4) "openness", the degree of internationalization of the NIS: the state's international market share of the advanced technology products; international cooperation share in the scientific results;

5) "terms of financing": the level of development of the national financial markets, the terms of investment (the interest on short and long term credits), the venture capital investment into the science intensive and high technology sectors of industry;
6) "sectorial specificity and specialization": a great number of indicators reflect the scale, innovation result and the competitiveness of the science intensive and high technology sectors of industry.

3. Results

Thereby, reasoning from the written above, we acknowledge the fact that there is a tendency to describe the national innovation system with due regard for the indicators of favorable environment for the innovation processes progression and the indices of the intensity of the investment volume into the innovation activity growth. While on the subject of the methods applied to the assessment of the national innovation system the European experience is necessarily worth mentioning: the differential characteristic of European Community consists in irregularity of the economic and sci-tech development of the EU countries, that is practically insuperable in short terms. The European accounts of the innovation activity state in the EU countries, European Innovation Scoreboard (EIS), are annually issued since 2000. During this period the list and the quantity of the EIS indicators-indices have undergone considerable changes. The number of indicators increased from 18 to 29, in particular the number of indicators derived from Community Innovation Survey (CIS) – from 4 to 7. After two fundamental revisions in 2003 and 2005, when nearly 30% of all the indices were modified, there were only 13 of the indicators common for the earlier surveys left. The list of the countries under examination grew up to 27, although they differ in the actual presence of their primary data.

EIS indicators are grouped with the view of displaying the key criteria of the innovation process. From the survey we can single out three groups of indicators:

1) *the driving force of the innovation* (and here there ate three subgroups: human resources, financial resources and the state support);
2) *the activity level of the enterprises* (includes some subgroups as well: innovation investment cost undertaken by the enterprises, developed intersectorial relations, entrepreneurial ability, the innovation potential level;
3) *the production output* (it comprises two subgroups: innovation enterprises index and index of the innovation results of innovation).

In spite of the fact that the European system of indicators definitely evolves from year to year, still there are remaining disadvantages in assessment. The major among them is as it was already mentioned the heterogeneity of the economic and sci-tech development of the countries, EU members. For instance, the list of indicators used in calculations does not allow proper assessing the innovation potential of every single country. This can be traced on the example of Norway. If to be guided by the suggested methods of assessment it is fraught with improper conclusion regarding Norway as relatively backward country in the aspect of innovation development, due to its low position in the rating table alongside with Czech Republic, Greece and Spain. But in fact Norway is the world's pre-eminent innovation power in the field of electroenergetics, development of the marine recourses and mining.

4. Conclusions

Summarizing all the written above we can conclude that the current innovation policy on the national and world level is mainly carried out in compliance with the narrow definition of the innovation system that emphasizes the innovation approach based on the scientific progress. But for the system perspective the sole condition of attraction of the public and private investment into the R&D sector is not enough. It is necessary to draw strategic inference from the fact that the organized research works prove to be the main tool in transformation of the innovations into commercial value and that the ability of the firms to take part in such research works vary greatly. Too much attention is paid to the industry that traditionally was science-intensive. The idea that the innovation in the technological sectors of the entry-level (small production, experimental laboratories) stimulates the innovativeness and competitiveness still remains poorly understood in many countries.

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Forecasting the Export Energy Policy of Russia in Terms of Volatility of World Prices on Resources

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Abstract

Forecasting the export energy policy is an important tool for creating Russia's development strategy for the long term. The dependence of the budget on energy prices makes us look for new and more effective methods of assessing and predicting the impact of internal and external risks to the domestic economy. In terms of volatility of international oil prices on the quality of the prediction depends on the stability and balance of revenues and expenditures of the federal budget.

Keywords: *oil market, forecasting, energy policy, export policy, volatility of resource prices*

1. Introduction

The budgets of the largest exporting countries energy resources are largely dependent on macroeconomic indicators such as exchange-traded commodity prices, global economic growth, as well as the needs of the global economy in this commodity.

For this reason, in the economic literature, much attention is paid to the analysis of trends and prospects in the global oil and gas markets, as well as the calculation of risks and potential losses from price deviations from the targets. In this approach, economists differ significantly. Several scientists analyze the oil market in the first place from the position of the concept of asymmetric information [1,2]. Other authors are developing various scenarios of the situation on the commodity markets through a variety of econometric models and techniques of risk management [3,4,5,6]. Some authors recognize the central role Exporting Countries, OPEC, particularly Saudi Arabia, and urged making forecasts based on the analysis of socio-economic development of the country [7]. We can also highlight the research that argues that trends and movements in global commodity prices is the basis of the interaction of traditional and spot markets [8].

We can also mention the concept of forecasting commodity prices in real time on the basis of detailed analysis of volatility over the last 20 years [9]. For Russia, the issue of quality and comprehensive forecasting of energy prices for Russia is also very actual, and some works of Russian scientists are devoted to this problem [10,11,12].

2. Theory

Prediction of long-term socio-economic development of the Russian Federation for the period up to 2030 - is one of the most important documents of the Russian economy. This paper describes the main directions of development of the economy, as well as the expected results. Based on the long-term prognosis is developing a strategy targeted programs, and other planning documents.

In the long-term prognosis there are considered three scenarios:

- Conservative;
- Innovation;
- Target (formable).

Conservative scenario (Option 1) is characterized by moderate long-term growth of the economy on the basis of active modernization of fuel, energy and raw materials sectors, while maintaining the relative backlog in civil high- and medium-tech sectors.

In the conservative scenario modernization of the economy will focus mainly on foreign technology and knowledge.

Innovation scenario (option 2) is characterized by increased investment focus of economic growth. The script is

based on the creation of a modern transport infrastructure and competitive sector of high-tech industries and knowledge economy, along with the modernization of raw complex.

Target (forced) scenario (option 3) is designed based on the innovation scenario, while it is characterized by forced growth, increased private savings and the creation of a powerful export sector products with high added value.

Scenario A - low oil prices (less than $ 80. Per barrel).

Scenario C - high oil prices (more than $ 80. Per barrel).

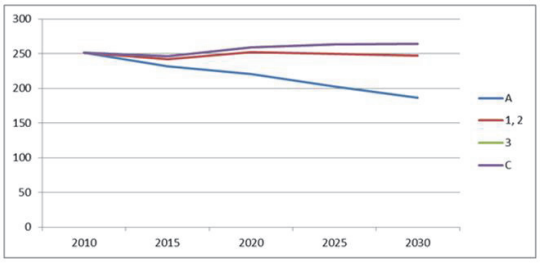

Fig 1. Export of oil, million tons

Figure 1 shows the scenarios of oil exports. Scenarios 3 and C coincide.

Let's consider a scenario in terms of low oil prices. Exports will decline quite rapidly. In 2010, exports amounted to 251 million. tons, in 2015 exports fell by 19 million and reach 232 million tons. By 2030, exports will be below 200 million tons - 186 million tons, which is almost a third lower than the 2010 level.

Data for the conservative and innovative scenarios are identical. Exports will fluctuate. In 2015, there will be a decrease in the volume of exports, but exports in 2020 will be increased by 10 million tons, and then again followed by a decline.

Compared with the export of oil, natural gas exports will grow under all conditions. According to the conservative scenario in 2030 the export of natural gas will be 238 BCM, up 50 BCM more than was exported in 2010. According to forced scenario exports compared to 2010 will increase by 79 BCM. The highest rates of growth in export volumes of natural gas will be at innovative development of the economy (Figure 2).

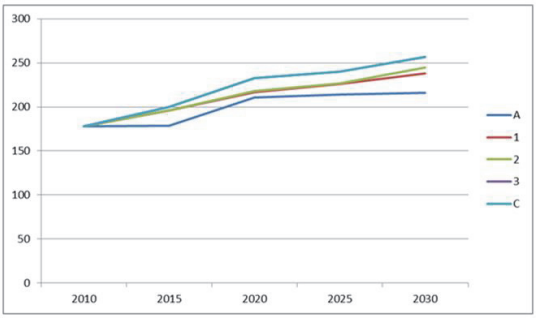

Fig 2. Export of natural gas (pipeline), BCM

3. Results

Based on analysis of long-term forecast, we can make the following conclusions:

- Export of petroleum products will decline;
- Exports of natural gas will increase in all scenarios considered;
- Export and production of oil will rise or fall depending on the scenario development;
- Production of gas (natural) will increase in all scenarios.

We can forecast the volume of mineral products in foreign trade in the medium term with the help of regression analysis. For the analysis we use the data of the Federal State Statistics Service from 2000 to 2012.

Used for the regression analysis data are shown in Table 1.

Table 1. The main parameters of oil and gas industry (2000-2012)

	y Volume of mine-eral products in exports as% of total	x1 Average export prices for crude oil (US. Dollars per ton)	x2 average export prices for natural gas, for 1000 m3	x3 Средние экспортные цены на нефтепродукты (долл. США за тонну)	x4 Average export prices of petroleum products (US. Dollars per ton)	x5 Extraction of natural gas, bln. M3	x6 Exports of crude oil, mln. tons	x7 Exports of natural gas, bln. M3	x8 Exports of petroleum products, mln. Tons
2000	53,8	175	85,9	174	324	555	145	194	62,7
2001	54,7	151	101	148	348	551	162	181	63,5
2002	55,2	154	85,7	149	380	563	188	186	75,4
2003	57,3	174	106	181	421	581	223	189	77,7
2004	57,8	226	109	234	459	591	258	200	82,4
2005	64,8	330	151	348	470	598	253	207	97,1
2006	65,9	412	216	429	481	612	248	203	104
2007	64,9	470	234	465	491	604	258	192	112
2008	69,8	663	354	676	488	613	243	195	118
2009	67,4	407	249	387	494	527	247	168	124
2010	68,5	546	273	529	506	593	247	174	133
2011	71,1	744	343	727	512	612	244	187	132
2012	71,4	754	348	750	519	592	240	179	138

After we calculated the correlations between the independent and dependent variables, we will leave 3 important indicators- x2 - the average actual export prices for natural gas; x7 – exports of natural gas; x8 - exports of petroleum products. The coefficient of determination R^2 = 98,1%, which means that it is the high quality model.

On the basis of the regression analysis form the equation type y = ax + b.

y=23,248+0,019*x2+0,093*x7+0,183*x8

This equation is necessary to predict the volume of mineral products in foreign trade.

Substituting in this equation the values of x, and we get the forecast for the next five years (Table 2).

Table 2. Forecasting of volumes of mineral products in exports by 2018.

	y Volume of mine-eral prod-ucts in exports as% of total	x2 average export prices for natural gas, for 1000 m3	x7 Exports of natu-ral gas, bln. M3	x8 Exports of petro-leum prod-ucts, mln. Tons
2000	53,8	85,9	194	62,7
2001	54,7	101	181	63,5
2002	55,2	85,7	186	75,4
2003	57,3	106	189	77,7
2004	57,8	109	200	82,4
2005	64,8	151	207	97,1
2006	65,9	216	203	104
2007	64,9	234	192	112
2008	69,8	354	195	118
2009	67,4	249	168	124
2010	68,5	273	174	133
2011	71,1	343	187	132
2012	71,4	348	179	138
2013	74,6	378	181	149
2014	76,3	403	180	156
2015	77,9	428	179	163
2016	79,5	453	178	170
2017	81,1	478	177	177
2018	82,8	504	176	183

4. Conclusions

Thus, we can conclude that, regardless of changes in energy prices and the absence of significant external shocks volume of mineral products in Russia's foreign trade will increase by an average of 1.5% per year, reaching in 2018 82% of the total volume of goods that Russia exports.

The analysis does not allow to evaluate the factor of geopolitical instability, released to the fore in 2014, as a result of which the price of oil dropped to the lowest level during the last 5 years. However, the scenario of high oil prices estimated price of a barrel from $ 80, and the scenario of low prices- less than 80 dollars. That is the least likely course of events, as most experts predict the price of oil is in the range from 80 to 100 dollars per barrel.

However, it appears that in the medium-term impact of foreign threats will have no significant impact on the performance of the commodity complex in Russia, especially in connection with the conclusion of the contract with the Chinese People's Republic and the start of the world's largest construction project of a gas pipeline.

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Regional Innovation System Development: Comparative Analysis of the Republic of Tatarstan and Volga Federal District Regions

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Abstract

The article comprises a set of theoretical and practical suggestions about the development of regional innovation system in the Republic of Tatarstan and realization of regional innovation policy according to strengths and weak of the environment. To understand the opportunities and threats toTatarstan innovation system comparative analysis with Volga federal district regions was hold. As a result the overall ranking of Volga federal district regions was made. Further improvement of Tatarstan innovation system was described by SWOT-analysis.

Keywords: *innovation, regional development, Russian Federation, Volga federal district, the Republic of Tatarstan*

1. Introduction

Innovation, scientific and technological progress in the modern conditions have become the basis for sustainable economic growth of almost all countries of the world, they can better meet the needs of the society in the various types of products and services at substantial savings of natural resources and raw materials, lead to fundamental changes in the technological method production.

Currently one of the most important tasks of government in Russia is the translation of the domestic industry from raw material orientation to the sphere of high technologies. This will dramatically expand the competitive potential of the Russian economy by increasing its comparative advantage in science, education and high technologies and on this basis will have opportunity to use new sources of economic growth and welfare.

Implementation of such a transition at the same time throughout the country is impossible, so it is advisable in the first stage of advancing the promotion of regional innovation development and further replication of their experience. There is no universal set of policy actions to encourage innovation at the regional level. Nevertheless, the common ingredients for a successful regional innovation systems are available. Best practices, mainly applied to the development of individual strategies, the management of the regional innovation system and therealizationof the strategy by local stakeholders.

The Republic of Tatarstan is one of the most developed regions of Russia, and there are all prerequisites for the activation of innovation process, manifested in a significant high-tech manufacturing capacity, the active work of research and education centers, the existing elements of innovation infrastructure. Therefore, at the present time a policy for the development of the innovation system is actively implemented in the Republic of Tatarstan. However, to force the different components of the regional innovation system create expected from the implementation of this policy added value, the government of Tatarstan have to build a mechanism to overcome existing weaknesses and threats to get effective returns on opportunities in the external environment.

2. Literature Review

Economists have different opinions concerning the main factors of regional development. Forexample, corporative social responsibility is considered as an important factor of regional development, and the level of economic activity directly influences the indicators of social-economic development [3,9]. Investment into fixed basic capital of leading regional

companies is also the main factor ofattractiveness of the region [4] Marketing approach based on determination of instruments emphasizingthe attractiveness of the region is of particular interest[6].

Innovations play important role in increasing the competitiveness of the regions in the modern globalized world. First innovations were introduced in the model of economic growth in 1957 by Robert Solow. [11] He didn't only prove empirically the impact of innovation on economic growth, but also defined their role as a key, which it remains to this day. A significant contribution to research in this area was made also by R. Lucas [5] and P. Romer [10], who explored the concept of human capital and knowledge dissemination, respectively, emphasizing their relationship with innovation.

The development of innovation at regional level is closely associated with the so-called concept of regional innovation systems (RIS).One of the authors of RIS concept Philipp Cooke determinedRIS as a set of links in innovation chain including companies and organizations which directly generate knowledge, enterprises which use this knowledge and various structures which perform intermediary functions. Regional innovation policy will be efficient only ifregional government coordinate activities of these three components [1,2].To this extent, regional innovation systems research in today's Russia is of particular interest.

3. Methodology

The study is based on a comparative analysis of the Republic of Tatarstan and other Volga federal district regionsin the period from 2005 till 2012 year.Set of indicators listed in Table 1 was chosen to compare regional innovation systems.

Table 1. Set of indicators explaining regional innovation system development

	Indicator name
X1	Created (developed) advanced production technology in the region
X2	used advanced production technology in the region
X3	Expenditure on technological innovation in the region
X4	Volume of innovative goods, works and services in the region
X5	The total number of elements of innovation infrastructure in the region

Firstly for carrying out the ranking of Volga federal district regions on the development of innovative systems average value for the first four indicators is calculated for the period from 2005 year till 2012 year according to the formula:

$$Xmean = \frac{\sum_{i=1}^{n} x_i}{n}$$, where

Xmean - the average value of the indicator, Xi - indicator value in the i year, n- number of years.

The indicator value X5 is taken cumulatively for the 2012year. Next, absolute values of the indicators are converted into indices for comparison and overall index of regional innovation system development is calculated by the formula:

$$Rtotal = \sum_{j=1}^{5} \frac{x_j}{x_{\max}}$$, where

Rtotal - general index of the regional innovation system development, Xj - the value of the indicator "j" of the regional innovation system development,Xmax - maximum value of the indicator "j" of the regional innovation system development.

The data used by the authors is drawn from statistical yearbooks "Regions of the Russian Federation: socio-economic indicators" for the period 2005-2012[7].

Further improvement of Tatarstan innovation systemcan be described bySWOT-analysis whichallowes revealing the strengths and weaknesses of the regions' present-day innovation environment, as well as innovation opportunities and threats.

4. Basic Results

The total number of elements of the innovation infrastructure (X5) in the regions of the Volga Federal District, including the Republic of Tatarstan, at the end of 2012 year is shown in Fig. 1. [8]

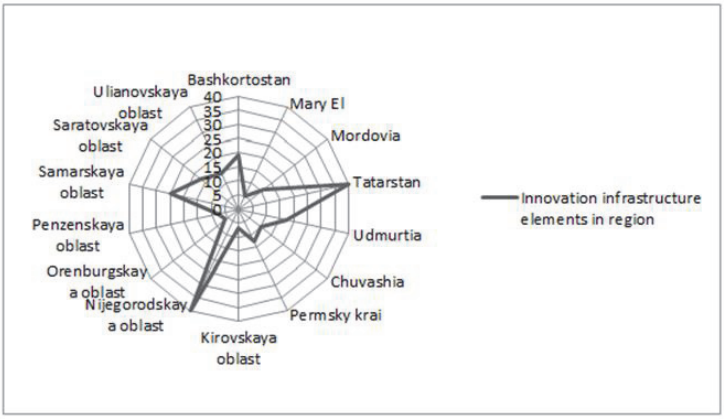

Fig. 1. Innovation infrastructure elements in Volga federal district regions

AsitshowninFig. 1, Tatarstanisoneof the leaders in Volga federal district in the number of innovation infrastructure elements.In Tatarstanthere are 9 technology transfer centers, 9 government bodies for the coordination of innovation, 6 venture capital funds and 2 centers of scientific and technical information, moreover the total number of industrial parks and business incubators - 14.

The results of innovation systems comparative analysis of the Republic of Tatarstan and Volga federal district regions are presented in Table 2.

Table 2. Innovation systems comparative analysis of the Republic of Tatarstan and Volga federal district regions

Indicator / Region	X1		X2		X3		X4		X5	
	unit	index	unit	index	million rubles	index	million rubles	index	unit	index
Bashkortostan	6	0,1	5356	0,28	7533	0,38	33458	0,23	19	0,47
MaryEl	3	0,05	592	0,03	312	0,02	1218	0,01	5	0,12
Mordovia	7	0,12	1828	0,10	3484	0,18	14055	0,10	11	0,27
Tatarstan	13	0,22	3103	0,17	19809	1,00	145517	1,00	40	1
Udmurtia	7	0,12	3755	0,20	2930	0,15	8034	0,06	17	0,42
Chuvashia	6	0,1	1919	0,10	2382	0,12	9906	0,07	10	0,25
Permskykrai	15	0,25	4299	0,23	10924	0,55	48730	0,33	13	0,32
Kirovskayaoblast	2	0,03	2032	0,11	1411	0,07	6178	0,04	7	0,17
Nijegorodskayaoblast	58	1	18804	1,00	18110	0,91	64454	0,44	40	1
Orenburgskayaoblast	3	0,05	569	0,03	3726	0,19	8096	0,06	6	0,15
Penzenskaya oblast	10	0,17	939	0,05	1768	0,09	4399	0,03	8	0,2
Samarskaya oblast	29	0,5	5310	0,28	17522	0,88	127414	0,88	25	0,62
Saratovskaya oblast	15	0,25	4443	0,24	3521	0,18	10190	0,07	17	0,42
Ulianovskaya oblast	8	0,13	1441	0,08	1191	0,06	14891	0,10	14	0,35

The overall ranking of innovation system development in Volga federal district regions is shown in Fig. 2.

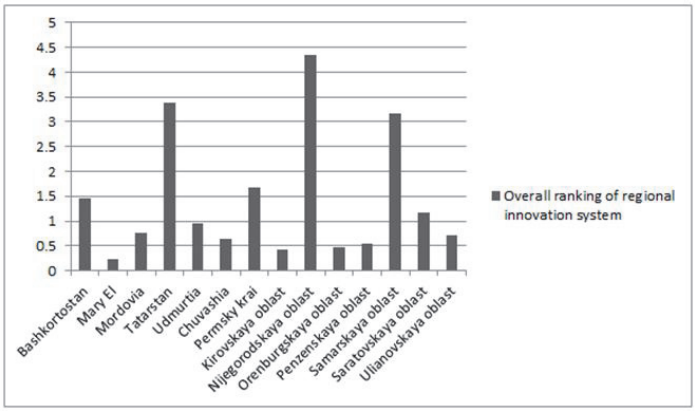

Fig. 2. Overall ranking of innovation system in Volga federal district regions

As seen in Figure 2, the Republic of Tatarstanhas the second rank after the Nijegorodskayaoblast on the development of the innovation system in the overall ranking of the Volga federal district. However, there are challenges in the area of innovation. The manufacturing sector, scientific infrastructure and manpower in Tatarstan have high degree of specialization in relation to the dominant industries. This dependence is constantly reproduced, and each group of participants has no incentives to deviate from this specialization. Process innovations in such regions are widely spread, but product innovations are rare.

In this regard, the application of policy to improve the efficiency of regional innovation system in Tatarstan is very important and requires the immediate adoption of the cardinal, but considered management measures. For this purpose, SWOT-analysis of the Republic of Tatarstan innovation developmentwas conducted.The results are presented in Table 3.

Таблица3. SWOT-analysis of the Republic of Tatarstan innovation development

Strengths	Weak
1. The development of the manufacturing industry. 2. The critical mass of R&D / higher education organizations in Kazan and in the whole region. 3. Oil revenues fill budget resources to support innovation. 4. The political will in support of innovation. 5. A good image of region for russian investors. 6. Goodqualityoflife.	1. A very limited number of globally oriented companies. 2. Reduce in number of students getting scientific and technical education and the insufficient number of graduates. 3. Lack of innovation culture in the business and research communities. 4. Limited linkages between research institutions and industry. 5. Limitation of mechanisms for monitoring and evaluation of innovation policy.
Opportunities	**Threats**
1. Practical transformation of Tatarstanuniversities to the national research centers. 2. Increasing the number and quality of applications for innovative research in Tatarstan. 3. Access to a large number of markets as a result of Russia's entry into the World Trade Organization. 4. Increase of public funding for innovation	1. The management and financing of research institutions and universities at the federal level does not contribute to market-oriented R&D. 2. Federal programs supporting innovations do not provide sufficient support for market-oriented R&D and innovation at an early stage of development. 3. Weak competition policy at the national level. 4. Inadequate and unstable protection of intellectual property rights at the national level.

5. Conclusion

The results of SWOT-analysis together with the regional innovation competitiveness analysis demonstrate that by the present time in the Republic of Tatarstanthere are proper opportunities to foster innovation development and further modernization towards technical and technological re-equipment of key branches, implementation of new technologies and resource saving.

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Investment Potential of Subjects of the Volga Federal District of the Russian Federation as a Factor of the Territorial Development

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Abstract

Evaluation of the investment potential of various regions of Russia is an important tool to determine the quality and effectiveness of management areas. The attractiveness of the region for investors is one of the key factors of territorial development. One of the most important tasks of the state and regional authorities is to counter the outflow of capital abroad and the creation of a favorable investment environment. The level of investment is one of the key indicators used by national authorities to assess the quality of regional governance. Integrated assessment of the investment potential of the regions of the Volga Federal District of the Russian Federation have been allocated seven subspecies potentials within each of them have been identified particular indicator.

Keywords: *investment potential, regional development, territorial development, investment environment.*

1. Introduction

The most important part of the economic policy of any country is the investment flow. A necessary condition for the development of the economy is the high investment activity. It is achieved through growth in realized investment resources and their most effective use in the priority spheres of material production and social sphere. Along with this in the literature there are different approaches to identifying the causes of the investment activity of economic agents and methods for their assessment. Some scholars as the main criterion for assessing the investment attractiveness index recovered foreign direct investment [1,2], while others placed more emphasis on territorial marketing activities and regional authorities to raise funds. [3]

Holding current economic reforms in Russia testifies to the special relevance of the analysis of the problems of investment sphere and define its role in the successful implementation of the course of economic reforms needed in the Russian regions.

Over the last decade in Russia, many new approaches to the assessment of the investment potential and investment activity were designed [4]. Some scientists believe that the main indicators of the investment potential, are investments in energy infrastructure or basic capital of the largest companies in the region [5,6,7]. Others believe that the main characteristic of the investment attractiveness is a resource potential [8]. Several authors claims that the characteristics and components of the investment potential are different for each country and each territory [9, 10, 11].

2. Method

There have been allocated eight subspecies of potentials to make an integrated assessment of the investment potential of the regions of the Volga Federal District of the Russian. Thus, production capacity was characterized GRP per capita and labor potential is defined through the average annual number of employed in the economy, life expectancy and the number of students of educational institutions of higher education per 10,000 population.

In turn, consumption potential includes the actual number of households per capita number of own cars per 1000 inhabitants and a total area of residential premises, falling by an average of 1 inhabitant. Infrastructure capacity characterized Length of railways for general use, density of public roads with hard surface 1000 sq. km. territory.

Financial capacity is determined by such parameters as the regional budget surplus, tax revenues, fees and other mandatory payments to the budget of the Russian Federation, the profitability of goods sold (services). Innovation

potential is calculated as the proportion of organizations implementing technological innovation in the total number of surveyed organizations in percent, the proportion of organizations implementing organizational innovations in the total number of surveyed organizations in percentage, the number of advanced production technology and the share of innovative products, services . The natural-resource potential was determined by the ratio of the area of the region to the area of the Russian Federation and the availability of natural reserves of mineral resources.

Thus, the total potential of the region was formed from private capacities, which, in turn, were calculated based on characterizing their performance. In order to determine the numerical value of each parameter, we used the formula $p = \frac{p_c}{p_{max}} \cdot 100\%$. After calculating the percentage of each index, the values obtained were formed and were divided by the number of indicators themselves in this particular potential, and then undertook share equal to the weight of the potential expert assessment in accordance with the formula $I = \frac{\sum_{j=1}^{n} p_{i,j}}{n_i} d_i$. It should be noted that this formula can only be used when there are assumptions about the equivalence of indicators in the calculation of particular indicator. To determine the weights of the indicators we used private data techniques "Expert RA", in which the production potential is assigned the weight - 0.7; employment - 0.7; consumer potential - 0.65; infrastructural - 0.6; Financial - 0.6; innovation potential - 0.4; natural resource - 0.35

3. Results

We represent obtained estimates of the potential of each individual in the tables (№1-7).

Table 1. Production potential of subjects for 2007-2011, the PFD.

Year	Rep. Of Bashkortostan	Rep. Od Mari El	Nizhniy Novgorod region	Samara Region	Rep. of Tatarstan
2007	51	27	49	63	70
2008	52	27	50	62	70
2009	48	30	49	54	70
2010	49	31	52	57	70
2011	49	29	49	54	70

The table shows that the production potential of the Republic of Tatarstan (RT) in the time interval from 2007 to 2011, is the highest, the nearest competitor - the Samara region, since 2008, has a tendency to decrease. The lowest potential - in the Republic of Mari El.

Table 2. Labor potential ofl subjects for 2007-2011, the PFD.

Year	Rep. Of Bashkortostan	Rep. Od Mari El	Nizhniy Novgorod region	Samara Region	Rep. of Tatarstan
2007	62,3	43,6	65,3	66,3	69
2008	63	44	65	66,3	69,3
2009	63,6	44	65	65,33	69,3
2010	63,3	44,6	64	64,3	70
2011	63,3	44,3	63	63,3	70

As for the labor potential, within 5 years of the analyzed stable leader is RT, the second is Samara region, which labor potential is characterized by instability, as since 2008 it has been a downward trend, resulting in 2011 it overtook Republic Bashkortostan and the Nizhny Novgorod region.

The results of the consumer potential are represented in table 3.

Table 3. Consumer potential of subjects for 2007-2011, the PFD.

Year	Rep. Of Bashkortostan	Rep. Od Mari El	Nizhniy Novgorod region	Samara Region	Rep. of Tatarstan
2007	56	43	53	63,6	54,6
2008	58,3	43,6	55,3	63,6	56
2009	59	45,3	55,6	63,6	57,3
2010	59,6	46,6	58	63,6	58,6
2011	60,3	46,6	59,3	62,6	60,3

From the data presented in Table 3, it can be noted that the most stable consumer potential for all five years has the Samara region. The Republic of Tatarstan consumption potential though is the third largest, but it is significantly inferior to the Samara region.

The next table shows infrastructure potential of regions of PFD.

Table 4. Infrastructure potential of subjects for 2007-2011, the PFD.

Year	Rep. Of Bashkortostan	Rep. Od Mari El	Nizhniy Novgorod region	Samara Region	Rep. of Tatarstan
2007	48,5	21	49,5	57	48
2008	44,5	19,5	48	56	48
2009	47	19	49	52,5	48
2010	45	17,5	46,5	49,5	48
2011	45,5	16,5	46,5	49	48

Based on the comprehensive data on private infrastructure capacity, the highest rates are observed in the Samara region, although, unfortunately, their values tend to decrease, the same pattern is observed in the Nizhny Novgorod region, and the Republic of Bashkortostan, and the Republic of Mari El. On their background indicators of Tatarstan Republic, despite their average level, appears to be stable. This is due primarily to the active construction of roads in preparation for the Universiade in 2013

Financial potential of the region - is the maximum possible amount of own and borrowed funds accruing region that can be used to ensure stable operation and development of the regional economy. The results are represented in table 5.

Table 5. Financial potential of subjects for 2007-2011, the PFD.

Year	Rep. Of Bashkortostan	Rep. Od Mari El	Nizhniy Novgorod region	Samara Region	Rep. of Tatarstan
2007	27,9	-7,2	41,2	14,7	30
2008	49,7	6,5	3	36,1	40
2009	26,2	5,1	-1,5	38	37,2
2010	23,4	4,9	7,3	35	17,1
2011	35,6	13,3	17,6	20,3	17,3

The table shows that the financial capacity of all study subjects - vacillates. This difference is due to the annual fluctuations in the values of the surplus (or deficit) of regional budgets. Furthermore, considering the particular indicators on financial capacity, it should be noted instability and reduced profitability of sold goods (works, services) by region, as well as the instability of income taxes and other obligatory payments to the consolidated budget of the Russian Federation.

We estimate the innovation potential of regions that characterizes how the region is free in its development from the traditional sources of economic growth. The results are shown in Table 6.

Table 6. Innovation potential of subjects for 2007-2011, the PFD.

Year	Rep. Of Bashkortostan	Rep. Od Mari El	Nizhniy Novgorod region	Samara Region	Rep. of Tatarstan
2007	14,25	9	20,75	33,5	23,25
2008	18,5	13,25	22,25	33,5	24
2009	16,5	9	25	26,75	27
2010	14,75	9,5	28,75	25,5	28,75
2011	16,25	8,25	31,5	23,5	31,5

Despite the high potential for innovation in 2007 in the Samara region, it has a progressive downward trend. In turn, in RT and the in the Nizhny Novgorod region there has been a gradual trend towards its increase. This can be explained by the increased share of organizations implementing technological and organizational innovation in the total number of surveyed organizations, as well as an increase in the share of innovative products, works and services in these regions of Russia.

Next analyzed potential is natural resources potential, that characterizes the region in terms of development of the traditional commodity sectors, the level and quality of production and processing of energy resources. The resulting data

are presented in Table 7.

Table 7. Natural resources potential of subjects for 2007-2011, the PFD.

Year	Rep. Of Bashkortostan	Rep. Od Mari El	Nizhniy Novgorod region	Samara Region	Rep. of Tatarstan
2007	19,5	3	27	8	13,5
2008	19	3	27	8	12,5
2009	19,5	3	27	8,5	15,5
2010	20,5	3	27	9,5	18
2011	20,5	3	27	9,5	18

Table 7 shows that the maximum value of natural - resource potential belongs to the Nizhny Novgorod region, this is due to the high percentage of mining among the surveyed regions. On the second place - the Republic of Bashkortostan, it advantageous to look at the background of other regions PFD due to the maximum value of the index, as the ratio of the area of the region to the area of the Russian Federation.

4. Conclusions

After we calculated all the partial potentials, there was found total investment potential of each of the studied regions. To this there were added together all the partial potentials. The results are shown in Table 8.

Table 8. Total potential of subjects for 2007-2011, the PFD.

Year	Rep. Of Bashkortostan	Rep. Od Mari El	Nizhniy Novgorod region	Samara Region	Rep. of Tatarstan
2007	279,45	139,4	305,75	306,1	308,35
2008	305	156,85	270,55	325,5	319,8
2009	279,8	155,4	269,1	308,68	324,3
2010	275,55	157,1	283,55	304,4	310,45
2011	290,45	160,95	293,9	282,2	315,1

Thus, analyzing the aggregated data for the total investment potential of subjects of PFD analyzed time period, it can be noted that the stable leader despite internal variability in this case is the Republic of Tatarstan.

Declines in 2009-2010 can be explained by the global financial crisis that had a significant impact on the economy of Russia.

In order to improve the investment potential of the regions, it is necessary to develop an effective investment policy at the regional level, which key principles should be next:

- creating conditions for effective functioning of the market for goods, services and capital on the basis of equal competitive regime for entrepreneurs and investors;
- Development and implementation of a favorable regulatory legal regime of economic activities of domestic and foreign investors, ensuring the stability of the economic environment for investment;
- Openness pursued region's investment policy; ensuring clarity and transparency of the investment process available to all investors the information required for the implementation of investment activities;
- The balance of public, social, political and economic interests of all participants in the investment and financial markets;
- Mutual responsibility and fulfillment of undertaken in accordance with the law of obligations by both the executive branch and the other participants of the investment process;
- development a positive image of the region, which will increase capital investment from both domestic and from foreign investors.

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Model of Forming Socio-Cultural Identity of University Students VIA Learning a Foreign Language

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Abstract

The main idea of the article is the role of a foreign language in forming socio-cultural identity. The authors refer to the idea that learning a foreign language is not just about the language but also involves learning about the culture. They outline that learning a language makes people more tolerant towards other cultures and gives them "extra knowledge" and "extra understanding" of people. This article has reported the results of the research in this pedagogical issue. The authors present the model of forming socio-cultural identity of University students through learning a foreign language, which consists of 4 components. Further research can be carried out on various elements.

Keywords: *socio-cultural identity, foreign language, model, components, impact, knowledge*

1. Introduction

It is clear to everyone that foreign languages are essential nowadays. The process of learning and speaking a foreign language should be analyzed as a social phenomenon. Learning a foreign language can often improve one's career prospects. Knowing a foreign language gives an edge when competing for an important position. The more languages you know the easier the integration in a multicultural community and labor market is. A foreign language becomes an instrument of socio-cultural change of an individual development.

According to Byram theory a foreign language is more than just a means of communication (Byram, Morgan, 1994). Studying a new language means discovering new worlds connecting with other cultures. Exploring other cultures helps expand personal horizons and become a responsible citizen. Kramsch identifies ways how language and culture are bound together. Language expresses cultural reality, language embodies cultural reality, and language symbolizes cultural reality (Kramsch, 1997). Socialization is linked to language ecology, as it deals with language, not in isolation, but as found in the natural context, where cultural and societal, as well as personal and situational, factors shape language evolution (Kramsch, 1997). Language and its link to identity cannot be denied (Edwards, 2014) (Gudykunst, Yule, 1996) There are historical, social and contextual circumstances which may affect the degree to which language indexes one's ethnicity (Fishman, 2001). Pavlenko & Blackledge's explain how the individuals negotiate their identities (assumed, imposed and negotiable) (Pavlenco, Blackledge, 2004). Noam Chomsky said that "Language is a process of free creation; its laws and principles are fixed, but the manner in which the principles of generation are used is free and infinitely varied" (Mariou, 2012). Yule adds that "using the term culture to refer to all the ideas and assumptions about the nature of things and people that we learn when we become members of social groups. It can be defined as "socially acquired knowledge" (Keysar, Boaz, Sayuri, Hayakawa, and Sun Gyu An. 2013). Moreover, other authors that have influenced our research are the works of McKay (McKay, 2003), Sandra (Mariou, 2013), Kramsch (Kramsch, 1997), Spradley (Mariou, 2013), and Byram and Morgan (Byram, 2005).

2. Methodology

This study has done by using digital library books, papers.

There is a range of education theories, each with their background in a different psychological and epistemological tradition (Grigorieva, 2014). To form socio- cultural identity through foreign language learning is of the great importance. Its social relevance is based on scientific solutions for practical challenges of social, cultural needs of the society.

Forming socio-cultural identity requires the strategy based on different types of research approaches.

3. Discussion

For any design based on the conceptual analysis of the situation, some ideal image of a desired future is put forward and starts functioning; explore development trends become apparent; the changes that will open the way to useful and limit or eliminate the possibility of adverse trends are planned. A modeling and the use of the model is closely related to the prediction (Galishnikova, 2014)

The effectiveness of the organization of the process of the socio-cultural identity formation by means of a foreign language requires a systematic approach to solving this problem, the definition of the purpose and content of the pedagogical process, and structuring methods, means and forms of organization of the process. Thus, this requirement proves the coherence of developing and implementing of the structural educational model focused on the development of this quality. Educative potential of the subject "foreign language" in the formation of this quality can be enhanced through the development of a pedagogical model of the socio-cultural identity formation through the learning of a foreign language (Mardanshina, Zhuravleva, 2014).

Having chosen the model of design as a form of pedagogical process, we note that in our case - is the form in which develops a single pedagogical process of formation of the socio-cultural identity of pupils by means of a foreign language, with its own purpose, content, methods and techniques of training , training, education and development. According to the structure provided by our pedagogical model is divided into 4 parts.

The target component of our model includes social order, purpose and principles of the pedagogical process. The **substantial component** is the content of the pedagogical process. **The processual component** is process (complex technologies and the forms and methods of work). **The estimating component** includes the criteria of socio-cultural levels of self-determination formation and self-determination of the stages.

Social order of this process is a graduate having his social role determined, during which he makes himself as a citizen, fulfills his professional aims, knowing that he is the subject of his own development.(Baklashova, 2014)

The basic principles of our research are: the principle of tolerance in international relations, the principle of reliance on Cultural Values, the principle of self-creation, the principle of development, the principle of Individuation, the principle of unanimity of the socio-cultural and professional fundamentals. Using the principle of unity of the socio-cultural and professional start in the process of education is of particular interest for our study (Zalyaeva, Solodkova, 2014).

It should be noted that any model as a formalized structure will work only if it's substantive content. As the basis of the model we put the following ideas:

- The specificity of the content of socio-cultural identity formation model in the mode of innovation development and in the context of socio-cultural identity formation is determined by the economic and social aspects of society, cultural traditions, national and universal values (Khusainova, Rahmatullina, 2014);
- The content of the sociocultural identity formation model is determined by the dominant social relationship involving student-centered teaching, love to him in conjunction with a sensible insistence;
- Content is the system of social and cultural knowledge, beliefs, attitudes; - The content model of the formation of socio-cultural identity provides for the development of humanitarian culture of personality based on the integration of global and regional factors on the basis of a systematic, interdisciplinary approach (Kramsch, C. Steffensen, 2008).

Designing pedagogical model of the sociocultural identity formation we identified necessity to develop innovative technologies based on the integration of the various blocks. (Gorelova, 2014) Each block represents a relatively independent block, integrated into the context of the project. It includes both the basic positions and exemplary program activities implemented in the educational process and in extracurricular activities in a foreign language. Each unit has a rule of actions and its specificity, and it is integrated into the process of foreign language teaching.

According to the survey results, it is the teaching method, defined by us as tested endorsed and systematically functioning structure of the activity of actors in the training and learning process that plays an important role in the technology structure. To apply the above-mentioned socio-culturally oriented technologies we offer the following forms and methods of work: traditional methods, methods of intensive training, research methods, methods of problem-creative nature.

The study of the educational potential of the subject "foreign language" and the results of the research allow us to state that on the basis of its teaching material one can develop the personal qualities that make socio-cultural identity. Personality traits (diagnostic indicators) have their symptoms (criteria) that would reveal the level of their development.

On the basis of theoretical and empirical generalizations within the designed model we have defined quality

characteristics and criteria of creative activity on the high, middle and low levels, resulting in a received level model of the development of this quality (Ismagilova, Polyakova, 2014). Recognition of age and individual characteristics is a fundamental pedagogical principle, which helps select the forms and methods of teaching and educational activities (Kalganova, 2014).

We consider the presented pedagogical model of the formation of socio-cultural identity in the process of learning a foreign language to be a system of integrated components of the process mentioned above to tackle the tasks of the desired identity formation.

4. Conclusion

In general, the model of the formation of socio-cultural identity through the learning of a foreign language is an interesting and relevant area of scientific research, since on the one hand it reflects the need of the vocational education system for a new socio-cultural oriented technology, and on the other hand, such studies contribute to the development of scientific apparatus in pedagogy.

This model is an initial methodological basis of the problem research and provides, in our view, a holistic psycho-pedagogical approach to its solution.

Though offering a model with extremely high levels of sociocultural final determination, we cannot expect all students to be able and be willing to achieve the highest level of development. There will be stereotypes influencing people throughout life. However, the use of this theoretical model will foster in students critical thinking and strategic readiness to work with the socio-cultural information.

Table 1. Model of forming socio-cultural identity of university students via learning a foreign language

Target component	
Social order	a graduate having his social role determined, which he makes himself as a citizen, fulfills his professional aims, knowing that he is the subject of his own development
Target	the effective organization of the socio-cultural identity formation process: preparing students for an active and full cooperation in the modern multicultural world via a foreign language, the creation of conditions to promote the vision of students' growth prospects through a foreign language learning, taking into consideration the internationalization of society, stimulating students' activity and motivation.
Tasks	• Raising students' awareness of the importance of socio-cultural identity via a foreign language in the global human processes; • The selecting and including pedagogical tools in the educational process; • The inclusion of students in a variety of social activities and relations to master the system of social roles; • Activation of communicative competence of students in a foreign language • Increasing interest rate in a foreign language learning.
Substantial component	
Content	is determined by natural, economic and social conditions of modern life, cultural traditions, national and universal values, as the native language, with the ideas about cultural diversity of the learning language the variability and diversity of the training programs content for foreign language required for the formation of socio-cultural identity of students, continuity in the content of teaching foreign language system (secondary school-University) humanities specialization of the content of foreign language considering the experience of folk pedagogy, opportunities of harmonious development of personality developing humanistic culture based on the integration of global and regional factors increasing the motivation of learning
Processual component	
Forms and Methods	Independent Research Projects of students: cultural studies problem based tasks, mini-conferences, debates, panel discussions, business games, seminars on geography, "brainstorming"; case studies, historical projects, creative book projects, Internet researches, teaching local history, extracurricular activities; poster presentations
Stages of the identity formation	Preparatory Organizing Fixing

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Color Palette of Emily Dickinson Worldview: Linguistic and Literary Approach

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Abstract

The main purpose of this article is to reveal the semantic functions of different colors in Emily Dickinson's creation. Linguistic and literary studies approach is used to conduct a parallel study of writer's worldview coloring both in poetry and in letters. It comprises a set of theoretical statements, the ranking of preferable colors in Dickinson's creation. Color description is linked to the traditions of semantic and stylistic analysis of a literary text.

Keywords: *poem, letter, world perception, color palette, image creation, semantic function, integrated approach.*

1. Introduction

It is generally known, that people use three primary representational systems – visual, auditory and kinesthetic (referred to as VAK learning styles) – to experience the world. However, depending on a person and the context, they may choose the one most appropriate and preferred representational system. When learning something new and depicting it, some people may prefer to see it or to imagine it, others need to get a feeling for it or just to hear how to do it.

In general, a whole range of interrelated emotional and associative additions (colour, light, sound, space, distance etc.) contributes to the perception of the world.

Following the analysis of Emily Dickinson creativity, we concluded that she focuses mainly on visual style. Therefore, in this article we refer to color as one of the primary elements of her artistic system and its specific stylistic function in the formation of an image. Emily Dickinson color palette is varied, and color adjectives are used literally and figuratively.

It is recognized by many scientists that Emily Dickinson is a writer of unique power and quality (Dobson J., Longsworth P., Monteiro G., Pollak V., Salter M.J. Urbanowich M.). Some scientists refer to the theme of color designation in Dickinson's poetry. G. Johnson mentions her sense of color [Johnson, 1985]. N. Tandon and A. Trevedi note that "she was fascinated by the phenomena of nature, by the variety of its color and sound and with her characteristic analytical mind, she explored the complex implications of her experience" [Tandon, 2008].

We conducted a parallel study of Emily Dickinson coloring both in poetry and in letters integrating linguistic and literary analysis.

2. Scope of Research

The proposed research has both linguistics and literary studies focus. 1764 poems and 1047 letters written by Emily Dickinson in different periods of her life serve as the research object. Taking into account the scope of our research, we intended to identify:

- changes in author's priorities of color selection;
- changes in the emotional and mental state;
- permanent and non-permanent features of the author's literary texts content organization depending on the period of time when literary works were created.

3. Theoretical Background

Words for colors form a separate lexico-semantic group. Group constituents, their semantics and correlation are historically volatile, and it is determined by the variability of consciously chosen extra linguistic reality.

The semantic development of color words resulted in coexistence of direct, figurative and symbolic meanings of the words at different stages of language development including modern language. This interrelation of meanings is actively used in different kinds and genres of artistic creation.

Individual color designation connotations of different authors are usually based on objective properties of the lexical system elements implemented in the language or on potential properties of words for colors. Although a writer uses common language meanings and relations of the words, while creating his vision of the world he rethinks these meanings and thereby promotes both further development of intersystem relations within the semantic group and the inclusion of these elements in the interaction with other lexico-semantic groups.

Color characteristics due to their semantic and emotional intensity serve as a medium of translating the aesthetic ideals of the author. They represent his assessment and his attitude towards the world he describes, provide the disclosure of writer's ideas and views. In other words, color characteristics reflect author's perception of the world.

Color perception in a literary text has its own specificity that differs substantially from the immediate visual sensations inherent to everyday human activities. The importance of color in the formation of the ideas of beauty is generally known. From the outset of human civilization the emotional effect of color enhanced the feeling of joy of life. As an element of a poetic atmosphere of narration, it always participates on a par with others in the creation of an artistic image.

It should be noted that the research of figurative and poetic function of color words in fiction aimed at identifying the author's individual features of using color designations is of a particular interest.

Monographic works of Russian scientists R.V. Alimpieva, S.V. Bekova, L.A. Kachaeva, L.V. Zubova are justifiably considered to be the starting point in the research of symbolic and emotional functions of color words in fiction. Their research shows that color terms can serve as a visual means; they provide tools to identify the subtext, and express characters' thoughts and feelings. Color lexicon builds their perception of the world and contributes to special emotional spirit of a literary text.

In this way, color adjective gains a new aesthetic content in a literary text, which implies the emergence of a new aesthetic meaning. It turns to a special philological and aesthetic unit capable of complementing author's individual style, and thus showing the coloring of his creation and even the coloring of the literary movement.

Therefore, the research of color description in Emily Dickinson letters and poetry can be organically linked to the traditions of semantic and stylistic analysis of a literary text.

4. Semantic and Stylistic Analysis

We examined Emily Dickinson's letters and poetry written between 1842 and 1886. The statistical analysis of color usage in Emily Dickinson creation is revealed in Table 1 in descending manner.

Table 1. Color usage in Emily Dickinson letters and poetry (1842-1886)

Rank	Color terms in letters	Color terms in poetry
1	gold, golden	gold, golden, gilded
2	blue	red (ruddy, blood, bleeding, scarlet, crimson, brick)
3	green (evergreen, emerald); red (blood, bloody, scarlet, ruddy, reddish)	purple
4	white	white
5	brown	yellow (orange, amber, brass)
6	pink (rosy, rose-colored)	blue (indigo, lilac, violet)
7	black	green (evergreen, emerald)
8	silver	silver
9	purple	brown (umber, hazel)
10	yellow (fawn colored, gamboges)	pink
11	grey	grey
12		black

Thus, the most widely used colors in poetry and letters are gold, red, purple, blue, green and white. Yellow is frequent in poems, but not in letters. Dickinson refers to these colors, because they are often found in nature. She borrows colors from the very nature. Nature for her is an artist who paints the world. Natural and artistic beginnings merge.

Both in poetry and in epistolary works the poet reflects on colors and natural color palette.

In her letter to Mrs. Holland (August 1876), she asks, "*how nature would look in other than standard colors".* Due to the drought *"the grass is painted brown»,* and this unusual color attracts her attention.

Addressing to Samuel Bowls after Christmas 1869, she designates green and gold as immortal, unfading, eternal colors.

In the letter to the dear friend (no date), Dickinson thinks about her favorite colors, "*perhaps I love the azure and gold myself".* However, then she concludes, *"perhaps we should learn to love and cultivate these ruddy hues of life"*, as in the poem to Mrs. Julia Howe, *"I take my life upon the red".*

If we consider in depth the use of the white color, owing to the wealth of figurative and symbolic meanings, it is widely used in the literature. Color adjective "white" is capable of transmitting conflicting human ideas about life and death.

This is confirmed in different religions and literature. In religion, it is the symbol of innocence, purity, holiness, chastity.

In accordance with the author's world perception, all semantic nuances of the adjective "white" – nominative, metaphorical and symbolic – are reflected in the poetry and epistolary heritage of Emily Dickinson in historical, philosophical and psychological contexts.

Specificity of Dickinson's relation to nature is largely due to the influence of transcendentalism. Transcendentalists deified nature, gave it a spiritual force, wrote about melding with nature, which was necessary and beneficial for the development of a personality.

The poet uses a rich palette of natural colors. She takes the whiteness of snow. The phrase "white as snow" is used in the description of objects, concepts, things that are not related with snow – "a little shell of a snail, so whitened by the snow". In this case, it is a snail shell, the color of which is compared with white snow.

"A little snow was here and there
Disseminated in her Hair -
Since she and I had met and played
Decade had gathered to Decade".

"Snow in hair" means gray hair. Emily Dickinson describes a meeting with her friends whom she did not see many years, replacing an epithet "white" with the description of the natural phenomenon.

Considering a person as a part of nature, Dickinson puts him in a dress from the purest snow (it is about the worthy person):

"Why, I have lost, the people know
Who dressed on frocks of purest snow".

She emphasizes a spiritual unification of the person with the nature. Moreover, personification is used when describing nature. She dresses the hills in clothes that are worn by the person. Nature, thus, is represented spiritualized, *"Hills take off their purple frocks, and dress in long white nightgowns"*. The adjective of "white" gets metaphorical sense, the description of snow is introduced as an image of "a white shirt". The nature is animated, and season change assimilates to change of clothes.

Color "white" is often used in combination with nouns designating articles of clothing in direct and figurative meanings. On the one hand, we meet a traditional combination "white" with articles of clothing: "white hat", "white dress", "white frock". On the other hand, we know that Emily Dickinson was "a woman in white", and it becomes her image. In 1851 Dickinson visited the concert of Jenny Lind, a coloratura soprano from Sweden (the evidence is the letter to her brother Austen, June 22, 1851). Jenny was dressed in a white dress. Since 1851 Emily Dickinson began to give preference to white color, including clothes. Thus, white color probably becomes the symbol of art and selectness for the poet. In this case, "white" is projected on person's state. White clothes are the symbol of an artistic gift; the metaphor of "white wings" is the symbol of inspiration. In the context of letters and poems "white" becomes the synonym of "saint" and acquires one more figurative meaning. The phrase "white hands" is used in the meaning of "pure", "innocent", "chaste", "sacred hands".

Emily Dickinson often uses an adjective "white" both both in poetry and letters in the meaning of "joyful", "light" connecting it with the image of the house colored by the nature:

"… my House, which Nature painted White".
"White House the Earth".

It should be noted that Dickinson uses the white color describing a disease state of a person. The word "white" gets a semantic shade of fragility reminding the comparison with a short-lived moth.

The adjective "white" gets philosophical sense in relation to the death in one of her poems written in 1861, *"the dead shall go in white"*.

The similar idea is repeated in the letter to an unknown addressee of the same year, *"… - We can take the chances for Heaven – what would you do with me if I came in white"*. In the poem written in 1863 the adjective "white" is used twice, *"white – unto the White Creator"*.

Thus, the death in Emily Dickinson's perception is associated not with gloom but with light. Bright perception of death is connected with transition to higher stage of existence. Both in poems and in letters "white" is sometimes replaced with the color of alabaster that, in turn, causes visual association with a cemetery.

The adjectives "blond" and "fair" can be referred to the semantic row of white color, and can be considered as contextual synonyms. "Blond" is used not only literally as the hair color (blond), but it also gains additional meaning of "light", "blessed", "blessing of god" – *"God's little Blond Blessing"*. The same applies to the adjective "fair". The literal sense is blond for hair color and some figurative senses are "fair rotation" for season change, «fair expectation" – pleasant expectation, "fair judgment"; for designation of shades is "fair Verdure".

5. Conclusion

White color in poetry and epistolary heritage of Emily Dickinson acquires the following generalized symbolic meanings: "poetic gift", "joyful, light", "granting the hope", "sacred, chosen", "white clothes", "white house", "white day", "white flowers".

The originality of Dickinson's art is her impressionistic "photographing" the subjective impressions and dividing them into smaller components. The storyteller is like "an apparatus" to capture and fix the impressions of the world perception, which turns to the perceiving person with its sensual side.

The main art functions of Emily Dickinson's color lexicon are:

- strengthening the verbal images expressiveness and their emotional impact on the reader;
- participation in the expressing the content idea and the emotional spirit of a poem, including author's estimates, views and feelings;
- creation of the author's poetic images.

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The Effects of Education on Tolerance: Research of Students' Social and Ethnic Attitudes

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Abstract

The paper considers the concept of tolerance in different scholars' works and applies it to determine the notion for the Russian educational environment. Tolerance is viewed as a quality of a person which firstly is formed in the course of socialization throughout life and manifests itself in various fields. A significant role of education, combined with sports and social events in the personality development of each participant of the process is proved. Ethnic, social and personal tolerance were studied and analyzed.

Keywords: *tolerance, toleration, personal, ethnic and social tolerance.*

1. Introduction

It is universally known that the future of any country lies in the hands of today's young people. Therefore, the purpose of the youth training and education is to teach them to get along with each other, to understand human diversity, to be aware about social problems and improve behaviors that counteract those problems. In 1995, the UN adopted the "Declaration of Principles on Tolerance," which reveals the essence of the key concepts of human relationships – tolerance [Declaration of Principles on Tolerance, 1995].

Tolerance is a term that means respect for different views and beliefs, behaviors and practices. Tolerant person usually exudes confidence, he/she is tolerant to other points of view, takes a proactive stance. Steven A. Weldon [Weldon, 2006] considers that "Tolerance … is a fundamental principle of the liberal democratic creed. It requires citizens to uphold and secure the rights of groups, even those they find objectionable, to participate fully in political, social, and economic life".

Tolerance issue was considered by many scholars in different time periods from different perspectives: J. Himelhoch [. Himelhoch, 1950], P. Terenzini, A. Cabrera, Colbeck, C., Bjorklund, S., Parente, J. [Terenzini etc., 2001], Henderson-King D., Kaleta, A. [Henderson-King, 2000], Brown W. [Brown, 2006], Hogg M [Hogg, 2001]. Skiba P. and Simmons A. [Skiba, 2008] pointed out that the disproportionate representation of minority students in special education programs has its roots in a long history of educational segregation and discrimination. We should note Henderson-King D. and A. Kaleta's [Henderson-King, 2000] point of view on the understanding of tolerance. In their research they examine the effect that diversity-related courses and campus organizations have on students' intergroup tolerance and sociopolitical beliefs. Their findings indicate that such undergraduate experiences can buffer students from declines in intergroup tolerance that are exhibited among the general student population.

All the above mentioned notions that have found their rightful place in the "Declaration of Principles on Tolerance"[Declaration of Principles on Tolerance, 1995] and in some researches, we have combined in one notion that reveals our understanding of the essence of the concept under consideration - fundamental human rights, the dignity and worth of the human person, respect, acceptance and appreciation of the variety of cultures, respect for different views and beliefs, behaviors and practices, experience of living in deeply divided society or multicultural one, participation in political, social, and economic life.

Furthermore there are a number of opinions which express the interrelatedness of the tolerance concepts and identity. For example, for Brown W. [Brown, 2006] the main question of her book is how "tolerance talk" as she used to

call it, turned into the beacon of multicultural justice and civic peace. Toleration, according to Brown, came to be linked to the politics of identity.

Yoonmi Lee [Lee, 2000] sees national identity in psychological terms as "an awareness of difference" - "a feeling and recognition of 'we' and 'they'". National identity is a person's identity and sense of belonging to one state or to one nation, a feeling one shares with a group of people, regardless of one's citizenship status. Lee Y. [Lee, 2000] cites the following: “The national education system came to assume a primarily responsibility for the development of the “nation”, with spreading the standardized language, culture and a national identity. It helped to construct the “subjectivities of citizenship”.

So the above researches have proved that a person's national identity results directly from "common points": multicultural justice and civic peace; respect the right of the individual to preserve his or her identity, including nationality, name and family relations; self-esteem, self-consciousness; person's identity and sense of belonging to one state or to one nation, a feeling one shares with a group of people, regardless of one's citizenship status. Moreover, one should respect national symbols, language, culture, traditions [Kalganova, 2014]. The expression of one's national identity seen in a positive light is patriotism.

2. Theory

It is interesting to note Bernard William’s idea concerning concept of tolerance understanding. Williams B., cited by Oberdiek H. [Oberdiek, 2001] holds that tolerance is impossible virtue because we are required to tolerate the intolerable. Moreover he stressed that “the practice of toleration will remain necessary for the indefinite future”. According to B.Williams, tolerance, leads us to cross-national, cross-generation, cross-gender, cross-religious understanding, …tolerance mandates cross- “X” understanding, where “X” is anything that leads to misunderstanding and enmity. As for the students they are well aware of racial, religious and social differences but we cannot say for sure that they are convinced in their views. We fully understand that intolerance surrounds society; it penetrates all spheres of social life, consequently, it may be rather difficult to monitor what is learned in a non-educational setting. That is why, it is important to teach tolerance because young people are aware of racial and gender differences since early age.

A study conducted by Bracy N. [Bracy, 2011] is to some extent in common with that of B.Williams. Bracy N. explores the student’s attitude towards public high schools high-security environments employing police officers, security cameras, and metal detectors, as well as strict discipline policies to keep students in line. These changes undoubtedly influence the social climate of schools, yet Bracy N. emphasizes that it is very little known how students experience and perceive these measures. The scholar examines students’ perceptions of high-security school environments and concludes that students express feeling powerless as a result of the manner in which their schools enforce rules and hand down punishments.

Many years of teaching experience, analysis of literature on studies in pedagogy and psychology allow to suggest that tolerance means worldview, lifestyle, self-esteem, behaviors and practices or traditions. Besides in a statement of tolerance education plays the important role.

Careful analysis of the Russian and foreign researches in the field of our interests, interviews and opinion polls conducted show that the most common areas of understanding of this phenomenon or the concept of tolerance are: religious tolerance, racial and ethnic tolerance, political tolerance, tolerance against persons with disabilities, gender tolerance and sexual orientation-tolerance, educational tolerance.

We understand “tolerance” as a quality of a person which, firstly, is formed in the course of socialization throughout life and manifests itself in various fields. Secondly, it is the quality of a person that is required as internal installation of each individual. In the third, it is the ability and talent of human empathy, complicity manifested in different situations in the culture while respecting the traditions of people of different nationalities and religion.

Analysis of the concept of "tolerance" actualizes the problem of the study of three types of tolerance: ethnic, social and tolerance as a personal trait (personal tolerance). Ethnic tolerance is an attitude to the "other" on the basis of their ethnicity. As for social tolerance, it is an effective interaction with the representatives of different social groups [Gorelova, 2014]. Tolerance as a personal trait (personal tolerance) includes primarily system of values where respect for the individual and the recognition of his/her rights and freedoms are of key importance.

The education sphere plays a significant role in the development of human contacts at all levels, in various aspects of human activity [Galishnikova (2014), Grigorieva (2014), Ismagilova, Polyakova (2014), Mardanshina, Zhuravleva (2014)]. Involving students in the learning process contributes to the development of the personality of each participant in the process, raising the level of general and professional culture, the disclosure of internal potential students, and, as a consequence, the formation of personal, ethnic and personal tolerance [Baklashova (2014), Zalyaeva, Solodkova (2014)].

By education we mean both training and education, securing the latter a leading role in the formation of a proper level of tolerance (low and high).

3. Methods and Approaches

Theoretical analysis, the investigation and synthesis of progressive pedagogical experience, observation, comparison, questionnaire, mental experiment.

4. Results

The research was conducted during January 2013 to September 2014 and consisted of the following stages:

1. Selecting 117 respondents from the students of the Kazan Federal University (first-year students, General Economics division, the Institute of finance and Economics) who were planning to participate in XIII World Student Games in Kazan (Universiade 2013, July 2013) as volunteers [Khusainova, Rahmatullina 2014].
2. Organization and testing of the selected experiment participants to determine the level of ethnic, social and personal tolerance (express questionnaire "Tolerance index" (G.U. Soldatova et al.), sociological indicators of social and ethnic tolerance, "Ethnic Affiliation" test (G.U. Soldatova, S.V. Ryzhova)). The test results were analyzed by quantity and quality.

Fig.1 Quantitative analysis of tolerance (first-year students) (117 respondents)(January 2013)

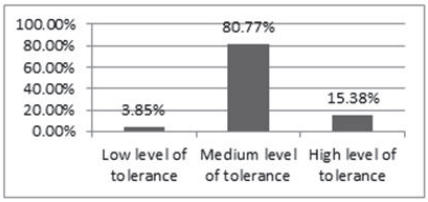
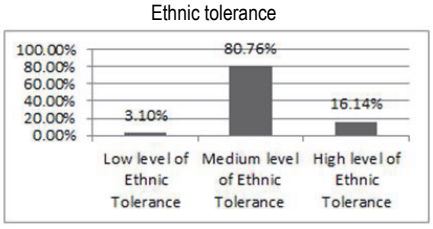
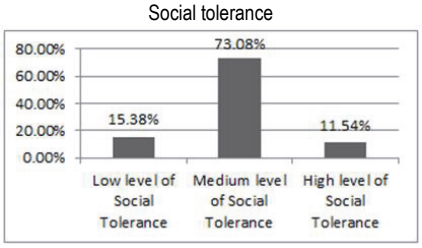
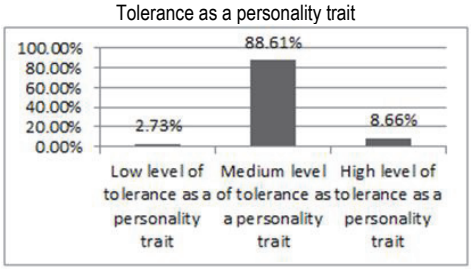


Fig.2 Qualitative analysis of tolerance (first-year students)(January 2013)







Control questionnaire of students (117 respondents) after their participation as volunteers in the Universiade 2013 (July 2013), as well as after holding International Youth Forum "Together we are strong!" (21-22 May, 2014, Institute of Economics and Finance, KFU) where an experimental group of students also participated (research and creative work implying intensive communication in the foreign language). The test results were analyzed by quantity and quality.

Fig.3 Quantitative analysis of tolerance (second-year students) (117 respondents)(September2014)

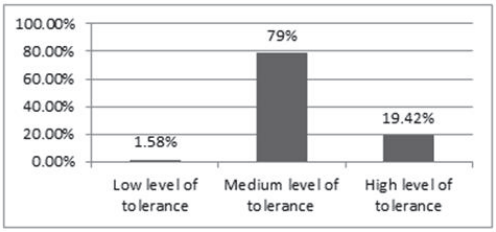
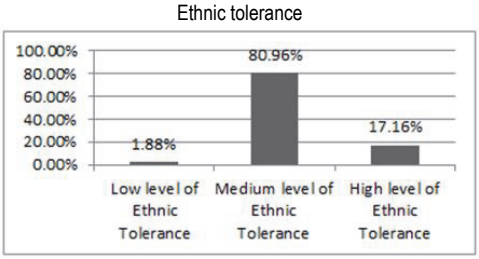
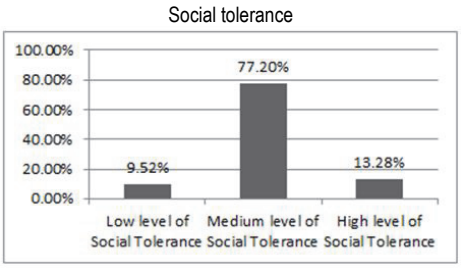
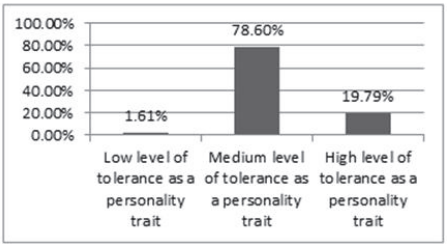


Fig.4 Qualitative analysis of tolerance (second-year students)(September 2014)





Tolerance as a personality trait



Changes in the tolerance level are presented in the tables.

Table 1. Change in the tolerance level of the students resulting from participation in sports and social events (quantitative analysis)

Low tolerance level	Medium tolerance level	High tolerance level
-2.27%	-1.77%	**+4.04%**

Thus, quantitative analysis results in:

1) Negative dynamics of low tolerance index (-2.27%)
2) Positive dynamics of high tolerance index (+4.04%)

Table 2. Change in tolerance level of the students resulting from participation in sports and social events (qualitative analysis)

	Low tolerance	Medium level of tolerance	High level of tolerance
Ethnic tolerance	-1.22%	+0.2%	+1.02%
Social tolerance	-5.86%	+4.12%	+1.74%
Tolerance as a personality trait	-1.12%	**-10.01%**	**+11.13%**

Thus, the result of a qualitative analysis is the following:

1) Dominating of a negative dynamics of medium tolerance index on the "Tolerance as a personality trait" subscale (-10.01%);
2) Dominating of a positive dynamics of high tolerance index on the "Tolerance as a personality trait" subscale (+11.13%).

5. Conclusion

The study conducted with the use of variative techniques proves a significant role of education, combined with sports and social events in the personality development of each participant of the process. Results are the following: raising the level of general and professional culture, the disclosure of students' internal potential, and, as a consequence, the formation of personal, ethnic and social tolerance.

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Teaching English for Undergraduate Students: Motivational Aspect

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Abstract

The paper dwells on the importance of motivational aspect in a foreign language acquisition within undergraduate course. Motivation is viewed as a foremost aspect in acquiring high language proficiency level and its correlation with future career prospects. To identify the level of motivation a two stage questionnaire survey was organized with undergraduate students of Kazan Federal University. It proved the strategies described in the paper as well as defined the motives which could act as recommendations in designing the syllabus.

Keywords: *motivation, language acquisition, undergraduate students.*

1. Introduction

All activities people perform are driven by some forces which come either from inside or outside. Motivation is a complex, actively and continuously discussed phenomenon which found its reflection in all actions observed in the society, whether we speak about professional, educational or everyday matter. If in psychology it refers to as initiation, direction, intensity and persistence of behavior [Geen, 1995]. As well as, to the factors that activate, direct, and sustain goal-directed behavior [Nevid, 2013].

In education, motivation is given a characteristic of an internal drive which pushes someone to do things in order to achieve something [Harmer, 2001]. Although, Penny Ur thinks that this term is easier to be explained from the point of view of 'motivated student'. This is the one who is willing or even eager to invest effort in learning activities and to progress [Ur Penny, 1996].

We agree with the viewpoint that motivation in education can't be fully explained through psychological glance alone. To understand what motivation in education is we have to appeal to the specialized setting of education and look at its qualitative differences.

Motivation and success in education are interconnected. Success in a foreign language acquisition is linked to motivation in particular. As well as Gardner, R.C., Dornyei, Z., Oxford, R.L., & Shearin, J., we believe that attitude and motivation play a major role in a foreign language acquisition [Dornyei, 1990; Gardner, 1985; Oxford & Shearin, 1996]. Foreign language is a subject that is needed in constant motivational level especially if is acquired in simulated, unreal conditions lacking the communication with native speakers.

All subjects (excluding the practical course of a foreign language) within the curriculum of non-linguistic higher educational establishments (HEE) in Russia are taught in Russian language (admitting, though, some exceptions, which depend on the concrete HEE). However, increasing collaboration, exchange programs, have made universities introduce a recent trend of reading lectures of major specialties, like economics, management, in a foreign language, preferably English. University education in Russia is becoming more mobile, it strives to meet the needs of social and economic development [Galishnikova, 2014]. It happens not only because of the 'transition to Bachelor-Master Degree structure but also the introduction of new Educational Standards' [Ismagilova and Polyakova, 2014]. 'University graduates should be able to interact cross-culturally, participate in international mobility programs and scholarships' [Gorelova, 2014].

In connection with this, HEEs have to solve several problems. Firstly, how to make students interested in a foreign language acquisition from the beginning of their undergraduate course and keep it on just about the same level up to the end of it. Students have to 'get education corresponding to international standards inside their own higher education institution' [Grigorieva, 2014].

Secondly, HEEs have to define main motives the students have to a foreign language acquisition and on their

basis to compose main components of substantive motivation.

2. Discussion

Foreign language acquisition at HEE is a challenging task for some undergraduates. It could be explained by difference in overall language proficiency level that students possess, their negative experience in learning a foreign language, emotional component, etc. So, at the beginning of undergraduates' education experience they have to be tested and the answers are to be thoroughly analyzed. Moreover, educators should be aware of finding out students needs, as this information will certainly help with academic success [Whyte, 2007]. Having known the needs teachers may design assignments, in-class activities, and discussion questions to address these kinds of needs [McMillan and Forsyth, 1991].

When teachers get the complete picture of the undergraduates they are going to work with they could set expectations. Expectation have to be realistic, easy to be achieved but challenging and stimulating. Standards that teachers introduce could be high enough to motivate undergraduates but not unapproachable. To develop the drive to achieve, students need to believe that achievement is possible - which means that you need to provide early opportunities for success [American Psychological Association, 1992; Forsyth and McMillan, 1991; Lowman, 1990]. Explaining what undergraduates should do to succeed in a foreign language acquisition, strengthening their positive sides could bring adequate motivational results in the long run. Inclinations and emotions, attitudes and ideals can serve in the role of the motive [Kudryavtseva, 2014].

Unfortunately, there is still no unique formula for the development and improving motivational level. Many factors could affect undergraduates motivation: interest in the subject matter, perception of its usefulness, general desire to achieve, self-confidence and self-esteem, as well as patience and persistence [Saas, 1989]. Teachers and educators could appeal to the motives. To study a foreign language in HEE means to associate your language skill with your future career in a certain professional field. Not all students can do that. Some undergraduates express the idea of uselessness of a foreign language skill for their future career. While studying, undergraduates have two closely connected and interrelated motives: academic and professional. Professional motives equal the result of an educational program whether academic motives are found within the process of education. Undergraduates tend to be stronger motivated when they have specific rather than general goals for a foreign language acquisition. Motives could be of intrinsic (produced by a person himself) and of extrinsic (outside impacts) origin. Undergraduates are said to be intrinsically motivated if they: attribute their educational results to factors under their own control; believe they have the skills to be effective agents in reaching their desired goals, also known as self-efficacy beliefs; are interested in mastering a topic, not just in achieving good grades [Wigfield, Guthrie, Tonks, Perencevich, 2004]. Extrinsic motivations could be positive or negative. Common extrinsic motivations use at educational process are: rewards, competition, punishment, high/low grades, grants, etc. Factors that motivate undergraduates may change over their lifetime.

Gardner R. C. and Lambert, W. E. distinguish two types of language learning motivation: instrumental and integrative motivation [Gardner and Lambert, 1972]. Instrumental motivation is characterized as the desire to obtain something practical or concrete from the study of a second language. Instrumental motivation underlies the goal to gain some social or economic reward through L2 achievement [Hudson, 2000]. Learners with an instrumental motivation want to learn a language because of a practical reason such as getting a salary bonus or getting into college [Lesson2, 2014]. Undergraduates usually have a clear instrumental motivation for language learning because they strive for fulfillment the HEE's requirements. Integrative motivation is identified as the learner's orientation with regard to the goal of learning a second language [Crookes and Schmidt, 1991]. Those undergraduates who have integrative motivation, learn a foreign language to be able to use it as a source of communication and knowing the people and culture of this language. See Table 1 [Bailey, 1987].

Table 1. Differences in integrative and instrumental motivation

	Intrinsic	Extrinsic
Integrative	L2 learner wishes to integrate with the L2 culture (e.g., for immigration or marriage)	Someone else wishes the L2 learner to know the L2 for integrative reasons (i.e., Japanese parents send kids to Japanese- language school)
Instrumental	L2 learner wishes to achieve goals utilizing L2 (e.g., for a career).	External power wants L2 learner to learn L2 (e.g., corporation sends Japanese businessman to U.S. for language training).

It is really helpful when teachers assist undergraduates in developing more specific goals for foreign language

acquisition. Teacher could act as a 'consultant who has the knowledge of communication practices but needs to negotiate with the students on how best to explore these practices to meet the objectives they have' [Solodkova, 2009]. The identification of motives could help educators formulate suitable motivational techniques. Though, it could be a hard thing to do due to the personal differences of undergraduates.

There are general motivational strategies approved by many researches as: Lowman J., Weinert F. E., Bligh D. A., McMillan, J. H., and Forsyth, D. R., Sass E. J. [Bligh, 2000; Lowman, 1990; McMillan and Forsyth, 1991; Saas, 1989; Weinert and Kluwe, 1987]. To make undergraduates interested in a foreign language acquisition, to help them identify preferences and attitudes to life and set connections between foreign language and future career, educators take into account: the usage of different teaching methods and forms of learning a language; the creation of positive atmosphere and rapport in the classroom; the enthusiasm of the teachers; the relevance of the material studied; professional component of tasks; well-planned language lessons; setting challenging tasks; clear undergraduate/teacher expectations; delivery of real incentives; proper and quick feedback. Communicative competence can be achieved by: 'proper guidance, facilitation, motivation and collaboration' [Zalyaeva and Solodkova, 2014].

Appeal to positive emotions, creation of true to life atmosphere, where undergraduates feel closer to foreign language environment will certainly be reflected in high motivational and language proficiency level.

3. Methods and Approaches

Theoretical analysis, observation, the investigation of progressive pedagogical and psychological experience, questionnaire, and comparison were used in this research.

The aim of the research was to find out what motives, extrinsic or intrinsic, for foreign language acquisition prevail among the first and fourth-course undergraduates to assist teachers in choosing the right tactics and so, to increase the quality of education process, i.e. to help teachers of English model their activity according to the needs and motives of students and design syllabus.

The survey was conducted from March 2014 to October 2014 at the Institute of Management, Economics and Finance of the Kazan Federal University, General Economics division. The questionnaire was completed by 64 first-year undergraduates of which 40 (62,5%) were female and 24 (37,5%) were male, and 71 fourth-year undergraduates of which 44 (62%) were female and 27 (38%) were male. They were surveyed anonymously. The choice of courses, in particular the first and the fourth, is determined by necessity to compare the results of respondents who are at the beginning of their study at HEE and respondents who have been studying for some years at HEE to solve the problem of this research. The questionnaire results were analyzed by quantity and quality.

The questionnaire comprised 11 questions with variants of answers to choose. There were 2 types of questions: closed questions requiring the students to circle 'yes' or 'no' answer and open question which supposed students to choose the variant which appeals to them.

4. Results

The researchers tried to find answers for the questions specifically suited to the aim of the research, like: undergraduates' personal motives for foreign language acquisition (Q4); factors influencing on undergraduates' in their English language acquisition (Q5); techniques and methods making English classes motivating (Q6); conditions contributing to student's motivation (Q7); (Q8) is designed to find out which of the tasks students prefer during their English language classes; (Q9) concerns a positive atmosphere in the classroom; (Q10) is devoted to find out if motivation is a teacher's priority alone; the satisfaction of undergraduates' personal and professional interests and motives through Foreign language teaching at HEE (Q11).

The data analysis of the responses to the questionnaire provides the researchers the following results in percentage received shown in Table 2.

Table 2. The ratio of extrinsic or intrinsic motives for the first and fourth-year students

Type of motives	First-year students	Fourth year-students
Extrinsic	62, 5% (40 чел.)	29, 5% (21 чел.)
Intrinsic	37, 5% (24 чел.)	70, 5% (50 чел.)

Thus, quantitative analysis results in prevalence of extrinsic motives of the first-year students who usually don't realize

the importance of foreign language acquisition for their future professional life at the beginning of undergraduate course and learn a foreign language to be able to use it as a source of communication for their personal purposes and knowing the people and culture of this language, not to be punished by their parents or teacher. Just as, the fourth-year undergraduates have intrinsic motives to a great extent that is explained by their realization that the modern society requires foreign language skills for associating with students' future career, prosperity in a certain professional field and their competitiveness on the labor market.

Interpretation of the main factors influencing students motivational level showed the almost equal percentage chosen by both first-year and fourth year students. See Table 3.

Table 3. The ratio of motivational factors

Motivational factors	First-year students	Fourth year-students
enthusiasm of the instructor	20,3%	19,7%
relevance of the material	12,5%	12,7%
variety	19%	18,3%
active involvement of students	14%	15,5%
rapport between teachers and students	7,8%	11,3%
appropriate difficulty level	4,6%	12,7%
all factors	21,8%	9,8%

5. Conclusion

On the basis of the considered theoretical and experimental data, we have concluded that teaching English for undergraduate students in its motivation aspect includes the following conditions:

- taking into account students' needs, their interests, aspirations, habit of mind, particular temper and character;
- usage of certain motivational strategies. These include the use of: authentic professionally-oriented materials; game situations; collaboration in large and small groups in order to develop speaking skills, the interchange of views on the basis of team play; scenarios of possible professional situations dramatization of texts and dialogues; etc.
- organizing the process of education basing on skills integration principle;
- providing the highest possible students' involvement in educational process;
- establishing proper superintendence of foreign language lesson (accurate planning of the lesson, available teaching objectives to implement, clear guidance to tasks).

Motivational aspect is crucial for the activation of all psychological processes - cogitation, apperception, understanding and mastering of foreign language material. Ultimately, motivation increment, development of knowledge and intellectual activity will increase the efficiency of education process. The quality of foreign language training in the future will be the factor of specialist competitiveness on the labor market.

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The Role of Course Evaluation and Needs Analyses for Syllabus Design: An Application to "English Language" Course for Master-Degree Students in Economics

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Abstract

The article considers the adjustment of the course design process to the new education paradigm. The transition to the competence approach imposed by the New Standards of Higher Education requires fresh perspective to syllabus construction and implies flexibility to be used by course designers. The authors highlight the importance of amalgam of formative and summative assessments, needs analysis and pre- and post-course evaluation to be mandatory instruments to this end. The experiment conducted by the researchers proves the need of balanced and broad-based approach to the syllabus design that would lead to better performance and greater learners' satisfaction. Some recommendations are submitted for approval to the HEI authorities as a practical outcome of the experiment.

Keywords: *syllabus design, competence approach, needs analysis, course evaluation, formative assessment, summative assessment*

1. Introduction

The transformation of system of Higher Education in the Russian Federation in recent years has set certain challenges to those who are involved in the process of teaching and curriculum development. The introduction of New Standards of Higher Education has shifted the education paradigm from skills centered to learning centered. [Gorelova, 2014] The new reality both in the sphere of education and in the working environment that graduates will face after getting the Degree forced HEI authorities to develop certain framework for course development. This framework will allow State Education Authorities to control the final result according to the set of competences imposed by the Standard.

As far as English language ability is concerned the Standard requires Master-Degree students to have it at the level that will allow successful professional communication [Baklashova, 2014]. To meet the requirements of the Standard and to follow the learning-centered approach needs analyses and course evaluation are crucial. The syllabus that was developed by the Foreign Languages Department for Economics, Business and Finance sets the following objectives to be achieved while taking the "English language" course:

- To master the ability to understand various texts in the field of the professional interest.
- To develop the ability to use language flexibly and effectively for social, academic and professional purposes.
- To develop the ability to use language as a means of oral and written communication for professional and academic purposes.
- To form the ability to maintain life-long learning as a means of professional and personal development [Ismagilova and Polyakova, 2014].

The course is divided into six inter-related modules that are all aimed at mastering language for science abilities:

1. Text organization and the structure of the article;
2. Summaries and effective reading;
3. Critical reading and writing;
4. Writing an academic essay;
5. Written presentations;
6. Presentations and debates [Ismagilova and Polyakova, 2014].

Materials selected for each module are based on broad spectrum of professional interests that graduates may show enthusiasm to research and encourage academic and professional development [Galishnikova, 2014].

The main objective of the article is to prove the significance of needs analyses and pre- and post-course evaluation

to achieve the required level of English language proficiency maintaining the desired level of learners satisfaction which does not prevent from successful learning process [Kudryavtseva, 2014].

2. Theory

The importance of the needs analyses for Syllabus design is an indisputable issue. It acts as terminus a quo for materials selection, assessment criteria and activities that the course will be based on. Many articles were published about this problem by [Alderson, 1980, Berwick, 1989, Brindley, 1989, Crocker, 1981, Hawkey, 1980, Robinson, 1983].

As for needs analyses definition it could vary but it will be based on the learner as the central part of the analyses anyway.

Widdowson [Widdowson, 1983] distinguishes "goal-oriented" and "process-oriented" definition of needs. The key feature of this approach is the importance to evaluate the present language ability of the learner and to recognize the target situation where the learner will use the language. The "goal-oriented" definition is correlated to the objectives set while designing the syllabus whereas the "process-oriented" definition relates to pedagogic aims.

Hutchinson and Waters [Hutchinson and Waters, 1987] make a distinction between "target needs" and "learning needs". The target need refers to what the learner needs to do in the target situation and the learning need refers to what the learner needs to do in order to learn. They further subcategorize target need into (1) necessities; what the learner has to know in order to function effectively in the target situation, (2) lacks; the discrepancy between necessity and what the learner already knows, (3) wants; what the learner actually wants to learn or what they feel they need. The learner's "wants" may or may not conform to those perceived by the teachers or course designers. The learning need is equated to the route of learning. This concerns things such as how learners learn the language, why they learn it, what resources are available to help them learn.

Altman [Altman, 1980] focuses on types of learner needs that are derived from individual differences within learner-centered language teaching framework. According to Altman, learners should be placed properly based on their age, level of language proficiency, maturity and time available. This condition requires institutions to have flexible educational arrangements to provide all learners full access to courses that are appropriate according to their needs. Thus, the content and mode of learning will be influenced by the options available. The types of modifications of learning resources are made accordingly to meet the individual differences with regard to time, goals, mode, or expectations of learning.

Although needs analyses should be considered as the initial stage for designing the course, changes concerning learner needs may be made during the course with regard to the learners. Having obtained information about learner needs a course designer will be able to produce a specification of language skills, methods of teaching and class activities to meet them.

McDonough [McDonough, 1984] states that the language needs of the learner should be the bases for course development. He says "information on his or her language needs will help in drawing up a profile to establish coherent objectives, and take subsequent decisions on course content".

As for course evaluation some scholars divide it into two levels: learner assessment and course evaluation.

Learner assessment is considered to be a strategic point at the beginning and at the end of the course. Following this perception there are three basic types of assessment: placement tests, achievement tests and proficiency tests.

Course evaluation helps to identify how successfully course objectives were met and what amendments to the course the designer should introduce to achieve better results in the future.

Alderson and Waters point out four main aspects to consider while developing course evaluation programme:

- What should be evaluated?
- How can the course be evaluated?
- Who should be involved in evaluation?
- When (and how often) should evaluation take place?

The final stage could be further divided into implicit evaluation – takes place during the course, and explicit – takes place at the end of the course. Direct Observation technique is one of the ways to identify the level of learners' satisfaction with the way material is presented, the success learners make and the difficulties that arise. "The course Questionnaire" and "Course Forum" are the options to conduct explicit evaluation. The Questionnaire should be organized in such a way to stimulate the willingness of the responders to give full and thoughtful answers and the Forum allows for anonymity, perhaps eliciting more genuine responses. The ultimate objective of all these methods is to receive learners' attitude towards the subject matter, instructional methods, activities and teacher's role in the course.

3. Method

To prove the significance of thorough needs analyses and proper pre- and post-course evaluation the authors of this article set an experiment. Out of all Master-Degree graduates one group of learners was chosen as a reference group where all types of analyses and evaluation were implemented. Both formative and summative assessment was conducted.

The goal of formative assessment was to monitor student learning to provide ongoing feedback that could be used by instructors to improve their teaching and by students to improve their learning. The goal of summative assessment was to evaluate student learning at the end of an instructional unit by comparing it against the Standard.

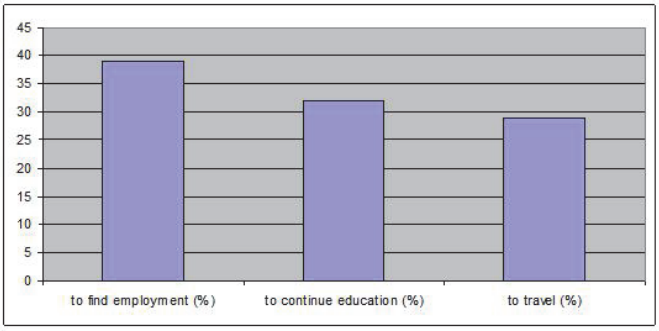
The total number of the students taking Master-Degree was 105 graduates. The reference group comprises 12 post-graduates.

To conduct a thorough needs analysis questionnaires and informal discussions with learners were held before the course. During the course learners' performance was assessed via assignments of different types, a final project as a form of summative assessment was analyzed after the course. This combination of pre-course, mid-course and post-course analyses was conducted in order to see the progress and the gaps of the students throughout this course. The accumulated results were used as a feedback to be further used as a basis for introducing the following year's course amendments.

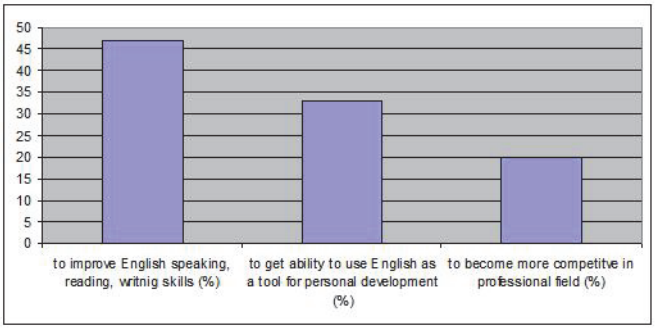
4. Results

The questionnaires that were used as a pre-course needs analysis produced large amount of information about learners. Interpreting Three Section Pre-Course Evaluation Report the following results were obtained:

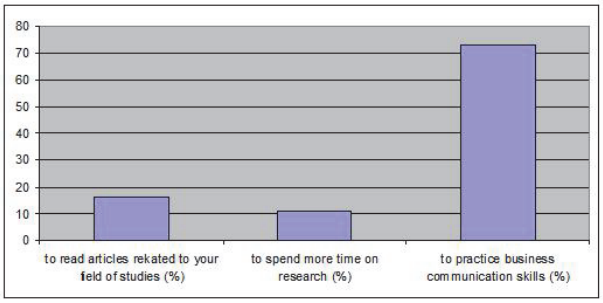
Section 1: What do you need English for?



Section 2: What do you expect from this course?



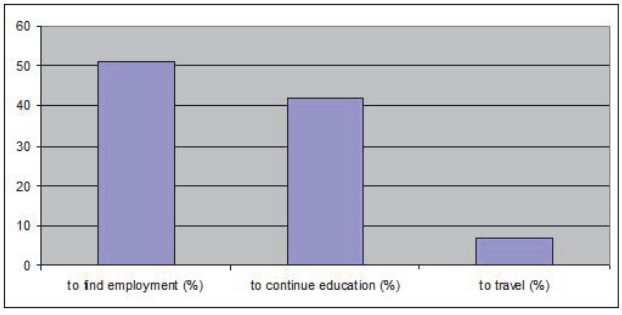
Section 3: How do you want this course to be organised?



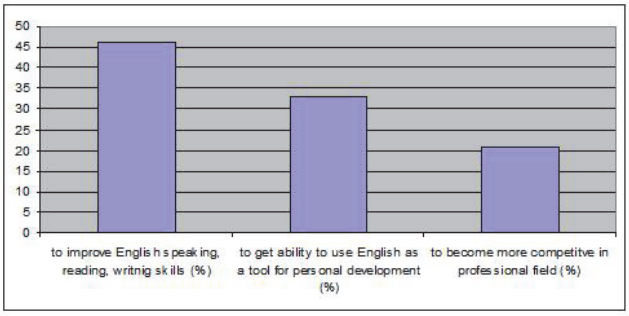
Pre-Course Evaluation Report clearly showed that learners' needs, expectations and desired classroom activities were not exactly the same as the developers of the course initially contemplated. In particular 73% of the learners expected the course to be Business English training rather than English for Science which did not match the objectives of the course. On the other hand, 40% wanted to find the job after improvement of English language level, but only 20% saw language as a tool to become more competitive in the professional field. It could happen partly due to lack of preparatory sessions to the programme and partly due to low level of English language ability showed by the graduates [Mardanshina and Zhuravleva, 2014]. Moreover, informal discussion that allowed getting ideas and thoughts spontaneously showed that students wanted to get Business English course rather then English for Academic Purposes as it was set in the curriculum.

In the reference group the results of the Pre-Course Evaluation Report were the following:

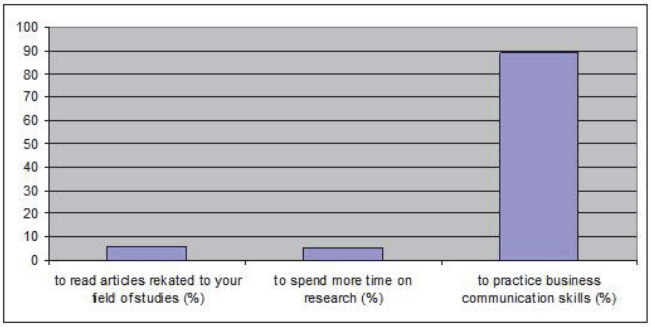
Section 1: What do you need English for?



Section 2: What do you expect from this course?

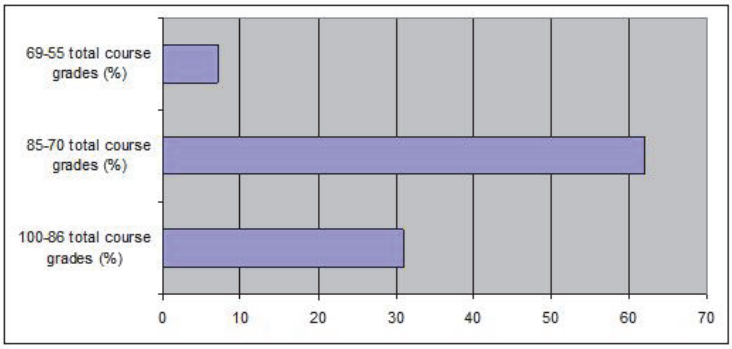


Section 3: How do you want this course to be organized?

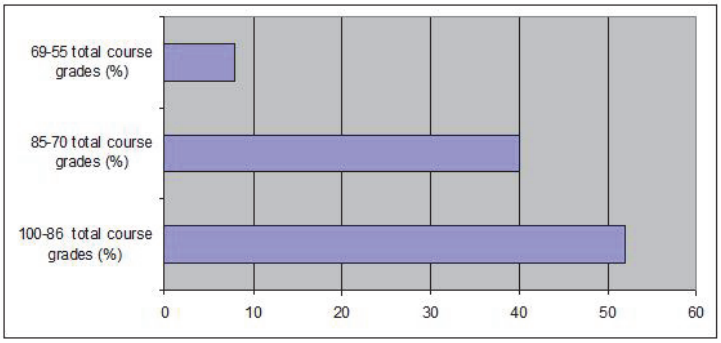


The results of the reference group were more impressive. Only 5% were ready to devote time to the research whereas 89% expected to practice Business communication skills. Nearly half of them wanted to improve their English language skills to find well-paid job. Around 40% wanted to continue education and 33% were planning to develop personally with the help of the course. The obtained data convinced the designers to introduce some changes to the original course to make it more flexible and integrated. Each module was altered and some Business communication activities were added. Mid-course needs analysis was an effective tool to assess learners' performance. Assignments during the course were used as a means to ascertain real problems during this course. The mid-term project demonstrated that learners in the reference group showed better performance and higher level of satisfaction from the learning process than those excluded from the experiment.

Final assessment results (total)



Final assessment results (reference group)



After analysing the feedback from the post-course needs analysis the final project results hypothesis of the research was proven. The fact that less than 10 % of the learners showed low results justifies the approach chosen by the researchers. However, only a third of all post-graduates out of total number could accomplish the tasks at a high level performance while over half of the reference group projects were better structured and delivered due to the adjustments made throughout the course which led to higher level of motivation and self-appreciation [Zalyaeva and Solodkova, 2014].

5. Conclusion

The results of the experiment conducted by the authors clearly showed that both needs analyses and course evaluation are indispensible aspects of syllabus design. To improve the quality of education process and to achieve better final assessment results the following recommendations were developed and introduced to the HEI authorities:

- For more successful learning process it is necessary to organize English language entry test for those who apply for Master-Degree programme.
- Pre-course training session will help graduates to get a better understanding of the course objectives and will increase motivation [Grigorieva, 2014].
- English for Business Purposes training added to the curriculum will lead to increase the awareness about the content of the Master-Degree programme in general and English language course in particular.

The amalgam of these measures will encourage graduates to spend more time on research and it will result in greater scientific input made by them to the HEI.

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Building Research Competence of Graduate Students by Means of Teaching English for Academic Purposes

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Abstract

The purpose of the article is to study the potential of the "English for academic purposes" course for building research competence of graduate students. The article examines approaches to designing the syllabus for the course and determines its role in the development of learners research and academic skills. The article describes and analyses the course syllabus, highlights methods, materials and techniques used in the educational process, as well as typical practical assignments.

Keywords: *graduate program, foreign language, academic reading, academic writing, syllabus, research paper.*

1. Introduction

Changes in modern educational system and an integral participation of the Russian Federation in international academic environment require significant improvement of the current higher educational curriculum in order to meet the increasingly stringent requirements [Gorelova, 2014]. In addition, the ambitious targets set by the Russian government for a number of leading Russian higher educational establishments to be included in the list of world's leading universities also imply a radical change in priorities of higher education and focus on research. Thus, the capacity to conduct scientific research competently and reasonably as well as the ability to report on its results become important and relevant not only for researchers and faculty members, but also for undergraduates and graduate students[Baklashova, 2014].

However, in Russian universities, and this problem is typical for most of them, there are no distinct guidelines for building curriculum. The aim to build students' academic skills is generally not achieved as there are no specific courses in the curriculum, which implies the familiarity of leaners with the specifics of scientific discourse [Ismagilova, Polyakova, 2014]. At the same time, the existing realities require students and would-be professionals to have a deep knowledge of the latter not only in Russian Language, but in English as well [Khusainova, Rahmatullina, 2014], since the visibility of scientists in the world academic environment is only possible if the publications in the leading peer-reviewed journals are in English [Kalganova, 2014]. This begs the question of revising the curriculum for graduate programs in general as well as the syllabus for the "English Language for Specific Purposes" (ESP) in particular [Grigorieva, 2014], as the Russian higher education system is undergoing significant changes designed to affect the quality of training and graduate competitiveness in the world job market.

Based on the above mentioned conditions, requirements and contradictions, it seems appropriate to adjust the syllabus of the course "English Language for Specific Purposes" and make it more academically oriented, focusing specifically on reading and writing for research.

2. Materials and Methods

The main methods used are the methods of descriptive analysis of the existing second language learning theories as well as the method of authors' teaching experience post evaluation.

3. Theoretical Background (Syllabus Design)

The status of the English language as an International language for academic communication increases the demand for ESP courses and changes the criteria to the course content, which needs to take into account the requirements of the changing educational environment and address professional and academic needs of learners [Chostelidoua, 2010].

Generally, English for Academic Purposes (EAP) professionals are often engaged in materials development activities because commercial textbooks and other instructional materials fall short of addressing their students' specific language learning needs [Stollera et al., 2006].

The authors share the opinion that approaches to designing syllabuses for EAP courses vary, and there is a tendency that "syllabus had to remain flexible. It could be supplemented by a variety of existing authentic material" [Edwards, 2000] and adjusted to the set requirements.

The methods for classifying syllabuses differ, thus one of the most functional concepts is the approach presented by Massoud Rahimpour [Rahimpour, 2010], where the following types of syllabuses are distinguished:

a) A **structural syllabus** is a kind of syllabus in which the content of language teaching is a collection of the forms and structures, usually grammatical elements such as verbs, nouns, past tense and so on.
b) A **notional/functional syllabus** is the one in which the content of the language is a collection of the functions that are to be performed when language is used, or of the notions that language is used to express. For example, informing, agreeing, apologizing, requesting, promising and so on.
c) A **situational syllabus** is one in which the content of language teaching is a collection of real or imaginary situations in which language occurs or is used For example. Seeing the dentist, asking directions in a new town, buying a book in a bookshop.
d) A **skill-based syllabus** is one in which the content of the language teaching is a collection of specific abilities that may play a part in using language.
e) A **content–based syllabus** is not really a language teaching syllabus at all. In content-based language teaching, the primary purpose of the instruction is to teach some content or information using the language that the students are also learning. The students are simultaneously language students and students of whatever content is being taught. The subject matter is primary, and language learning occurs incidentally to the content learning. An example of content-based language teaching is a science class taught in the language the students need or want to learn.
f) A **task-based syllabus** is one in which the content of the teaching is a series of complex and purposeful tasks that the students want or need to perform with the language they are learning.

The authors of the article having evaluated their past teaching experience as well as the needs of the potential learners both academic and professional have chosen a task-based approach to syllabus design as the course developed has a clear and specific objective – to teach graduate students to use the English language for performing their academic work.

4. Results

The implementation of a task-based approach within the framework of "English for academic purposes" determines sequencing and content selection of a program dedicated to graduate students teaching. To illustrate the basic components of a course we should also mention that EAP is designed to enable students to use English effectively in the academic contexts they will encounter in their studies[Galishnikova, 2014]. Thus, the program should focus on the following: formation of reading and writing skills though the introduction of the basics in types of reading (skimming, scanning, critical reading) and research paper sections (abstract, introduction, paragraph design and conclusion).

5. Discussion

The formation of reading and writing skills for research is a closely interrelated process: it is impossible to master academic writing without the ability to read, analyze scientific literature according to the major and extract the information needed [Mardanshina, Zhuravleva, 2014].

While doing a Master's degree a student collects material and makes a draft of his future research paper – Master's thesis, and also reports on its main provisions in the publications. Consequently, all the disciplines studied should contribute to this process directly and indirectly, including "Foreign Language" course [Zalyaeva, Solodkova, 2014]. Therefore, a teacher faces much more complex tasks:

- to teach academic reading;
- to teach academic writing;
- to motivate students to use the skills acquired when writing the master's thesis, as well as in their future research.

Student's introduction into the course usually begins with the analysis of the research paper (written in English) structural elements, revealing the typical features of each component, as well as considering the requirements for each section. A research paper in English usually comprises the following sections:

- title;
- abstract;
- keywords;
- introduction;
- materials and methods;
- results;
- discussion;
- conclusion;
- acknowledgements;
- references.

The materials for this type of work are the research papers of eminent scientists, who can be found in international citation databases, such as the Scopus and the Web of Science. The choice in favor of these databases is not random, because it is the Scopus and the Web of Science where leading academic publications are indexed, and their study may give an idea about the current state of a particular scientific field. In addition, within this section of the course an individual approach to studying is implemented [Kudryavtseva, 2014], as each student analyzes the article in his/her scientific field, collecting information for future research from competent sources.

While studying the structure of a research paper it is necessary to analyze its typical language elements inherent in scientific texts. They may include:

1. high lexical density and terminology;
2. quantitative predominance of nouns over verbs;
3. non-personal constructions [Coffee, Curry & Goodman, 2005:28].

Having identified the peculiarities of the language structural elements, students proceed to the analysis of the research paper actual substantial component. The process begins with the development of two basic skills - skimming and scanning, as well as with critical reading. Skimming involves reading key parts of the text to get an overview of an author's main line of argument. There are two basic skim-reading techniques. Start-finish technique implies that the central ideas of the article are noted briefly in the introduction, discussed in detail in the body of the text and reviewed briefly in the conclusion. [Harwood, 2005: 52]. The first sentences strategy assumes that the first or opening sentence of each paragraph introduces the main point(s) to be discussed in that paragraph. Reading only the opening sentences of the paragraph often gives you a clear understanding of the author's reasoning and the structure of the argument than just relying on the introduction and conclusion [Spector-Cohen, 2001: 374].

Considerable importance is also attached to the ability to read and assess the abstract to the article, since it is a reference material and it introduces the content of the article, without requiring any access to the entire text. The significance of this ability is manifested in the process of finding literature on the subject of research.

Scanning is based on finding specific information and requires the ability to analyze the titles, subtitles, or content of the books and journal volumes [Ikeda, 2006: 391].

While reading critically, students learn to take notes which is the first step to writing a research paper. Ability to take notes involves the ability to highlight the main ideas in the text and summarize them in the form which is different from the author's one. [Anderson, 2009] In other words, paraphrasing is one of the key writing skills, otherwise, there is a risk of being accused of plagiarism. Students learn such techniques of paraphrasing as replacement by synonymous lexical units, changing the sentence structure, replacement of parts of speech and etc. [Bailey, 2011: 52]. They also learn to use competently references and quotations within a text.

Having combined and changed the key points of the initial paper if necessary, students get their first piece of academic writing – a *summary*. The experience gained and the skills developed may assist students in making a review of relevant research papers, quoting their authors and referring to them. All these constitute the initial research skills.

Particular attention is paid to the *abstract* of the research paper. The abstract section in a scientific paper is a concise digest of the content of the paper. An abstract is more than a summary. A summary is a brief restatement of

preceding text that is intended to orient a reader who has studied the preceding text. An abstract is intended to be self-explanatory without reference to the paper, but is not a substitute for the paper [Yakhontova, 2001: 408].

Our observations show that abstract has definite structure and content including the aims of scientific research, materials and methods implied by the author, findings and conclusion.

An important implication of our findings is that all the previous activities, performed by a student preparing for his/her Master's degree, serve as a basis for the development of critical thinking skills: process of actively conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from different sources within one subject scope. The following exercises can be implemented in the course of instruction: *compare the concepts brought forward by two different authors on the topic of …*; *use the examples presented in the first article to illustrate the basic conceptual issues stated in the second one*; *combine the causes discussed in one article with the effects studied in the other* and vice versa.

The next stage of our research is devoted to the study of a research paper writing process. At this point four patterns of a paragraph typical structure are introduced to the students [Bailey, 2011:100-101]:

There's no doubt that well-structured paragraphs help the reader to understand the topic more easily by dividing up the argument into convenient sections. The purpose of this detailed paragraph organization patterns analysis lies in the fact that students are supposed to master the technique of paragraph development. Initially the students are taught how to arrange a paragraph out of disjointed sentences. The second subsequent and more complicated task deals with the development of an idea within the framework of a topic given. For example, the students may be proposed to develop the idea stated in the sentence below: "It has been argued that rises in the rate of home ownership can increase the rate of unemployment" in accordance with a paragraph structure.

6. Conclusion

Summing up the results, it can be concluded that the potential of "The Foreign Language: Advanced Level" syllabus for students doing their Master's degree is broad and universal. Having regard to the globalization and internationalization processes which are currently affecting the system of higher education, the solution of problems such as building the capacity to conduct scientific research competently and reasonably as well as the ability to report on its results in English, will make a significant contribution to the development of Master Degree Students professional and research competencies and will facilitate their success in today's global educational and scientific domain.

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The Resposibility for the Faithfulness of the Accounting Statements of Enterprises

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Abstract

The article discusses the criteria of the faithfulness of financial reporting, defines the content and the degree of the accountant and auditor's responsibility for the faithfulness of its indicators. The given measures are recommended to strengthen responsibility for the quality of accounting and reporting in commercial organizations. The article also defines the main subjects who bear financial losses by using data of unfaithful financial reporting of commercial organizations and the basic problems in assessing responsibility for the faithfulness of the statements.

Keywords: *veiling, faithfulness, misrepresentation, fraud, responsibility, accountability*

1. Introduction

The faithfulness of the financial (accounting) statements has always been an obligatory condition of its preparation and presentation [1]. No matter how successful or unsatisfactory the results of the company, its financial statements must be faithful, and the truth, as it is known, should not depend on those whom it seeks to serve [3]. However, in real life the principle of faithfulness often is not observed due to various reasons, including the cases when the management of the organization and sometimes its owners are interested in the distortion of the balance sheet and other forms of reporting [11]. Usually it happens when a general manager of an unprofitable company with a difficult financial position does not want to admit the mistakes made by an inappropriate economic management, especially if competitors have been more successful. It is tempted to retouch balance sheet and other forms of reporting, using some well-known accountant techniques ("to shade", as the accountant Platon Zibkin said in "The truth is good but happiness is better" A.N. Ostrovsky's play). Immediately the head is not worse than others, and the company is ready to be given a credit and it is ready to be provided with everything it needs without an advance payment. The wish to embellish the accounting statements is large enough, the point is to implement it skillfully. Sometimes it happens that very good results of the company are consciously underestimated to pay less taxes and dividends to the owners. And in that and in other case, the financial statements do not reveal the truth. The desire to counteract the deliberate and unintentional veiling of accounting and reporting led to the birth of the audit profession [2].

2. Theory

Particularly acute problem of faithfulness of accounting and quality of the audit reporting occur in conditions of instability of the financial system of the state and its economic subjects. Being in the inevitable financial difficulties, enterprises are looking for a way out of this situation, including attracting Bank loans and other borrowed funds, external investment, Bank guarantees etc [10]. Financial market Institutions that make decisions about participation in such operations based on the uncertain faithfulness of financial reporting of clients, threatened to lose its own liquidity and take additional financial losses.

There are a number of related issues to solve the problems of responsibility for the quality of accounting and reporting of the enterprises:

- what the faithfulness of financial reporting is, how it is characterized, what amount of errors could be allowed to consider it trust worthy;
- who is responsible for the faithfulness of the indicators and other information contained in the financial statements: the accountant, the auditor or if both, in what degree each of them;

- what measures should be taken to individuals and entities in cases of intentional distortion of the financial statements, resulting in investor or creditor's losses and who and how should be punished for it [9].

The answer to the first question is not as simple as it seems to be as the criteria for accounting assessment and the objectivity of the audit report on the financial statements of the company are fairly conventional and are of a general, largely abstract, nature [12]. According to international standards (IFRS) reporting is considered to be faithful, if the presentation and disclosure of information allows the user of the reporting data to draw conclusions about the company's financial position, financial results of its operations and changes in financial position and to take economic decisions based on these finding [14]. In audit report on the financial statements the auditor expresses the opinion on the statements compliance in all material respects according to the adopted rules of accounting and financial reporting. Accounting of Russian enterprises is believed to be faithful not on the reality reflection, the actual condition of the assets, liabilities, expenses and results of operations, but on the compliance of the rules by the accountant: applicable legislation, primarily the Federal law "On accounting", the Chart of Accounts, instructions for its use, the latest edition of the accounting standards in the Russian Federation and other regulations and rules. Many of them admit the possibility of ambiguous interpretation and application in the accounting policies of the organization, which will undoubtedly affect the financial statements. Additionally, the financial statements may be examined for compliance not only with national requirements but international standards (IFRS) or US GAAP with other criteria for the assessing of the data objectivity [8].

In the audit the distortion between the faithfulness and bias of indicators of the financial statements is called as the materiality, which the auditor determines by himself [7]. At the same time it is said that the auditor's report cannot and should not be interpreted by the client and the user of the financial statements as an assurance that other circumstances which affect or are likely to affect the financial statements do not exist [2]. As the accountant for the company, Russian auditor believes the financial statements are trust worthy if they are, in all material respects comply with the accepted rules of accounting and financial reporting at the time of inspection.

Faithfulness, in our opinion, should be taken literally as truth, loyalty and dignity of those who prepared and checked financial statements, their professional judgment, for which they must take the moral, professional, and, if necessary other responsibility [5].

Responsibility for the quality of the client's financial statement audit is clearly imposed on the head of the audit firm, even though the Auditor's Report is signed by the Director of the auditing firm. A professional accountant working for the enterprise is placed in a more complicated situation. Responsibility for violation of accounting rules, and the unfaithfulness of reporting is established by the current legislation in article 156.11 of the code of administrative offences, article 120 of the Tax code and article 159.1 of the Criminal code of the Russian Federation. In them the main responsibility lies on the perpetrator of distortion, mostly on the heads of the organizations whose initiative was veiling of reporting information, but at the same time on the head of account services - the chief accountant, who made it technically or methodologically. When Law # 402-FZ "On accounting" was approved almost nothing has changed in respect of the responsibility of the chief accountant: he is still responsible for the formation and implementation of accounting policies and methodologically correct accounting, timely submission of complete and faithful financial statements [1]. The head of the organization is solely responsible for the data reflected in the accounting registers and associated faithfulness of reporting only in cases of a dispute regarding the accounting between the head of the economic entity and the chief accountant, when he is acting on the written instructions of organization's head. The head of the company is a person, who gives orders which the chief accountant of the company obeys even his opinion is different and this is invariably written in the Law # 402-FZ. It means that the chief accountant should obey only the head of the organization, and not its Finance Director and other deputies, as it sometimes occurs in practice.

Concerning the responsibility of the Director of the company for the faithfulness of financial reporting in the Federal law # 402-FZ "On accounting" (c.8, Article 7) reads: "In the event of a dispute in respect to accounting between the head of the economic entity and the chief accountant or other officer charged with the maintenance of accounting records, or a person with whom the contract on rendering services on accounting is concluded:

1) the data contained in the primary accounting document, accepted (not accepted) by chief accountant or other officer charged with the maintenance of accounting records, or a person with whom the contract on rendering services in accounting is concluded, to register and accumulate in the accounting documents by written order of the head of the economic entity, which is solely responsible for the resulting information;
2) the object of accounting is reflected (not reflected) by the chief accountant or other officer charged with the maintenance of accounting records, or a person with whom the contract on rendering services in accounting is concluded, in the accounting (financial) statements on the basis of a written order of the head of the economic entity, which is solely responsible for the faithfulness of presentation of the financial position of an economic

entity at the reporting date, the financial results of its activity and cash flow for the reporting period" [1].

As practice shows, the written orders to the chief accountant that are contrary to applicable law, the head of the economic entity, as a rule, does not give, but asks with varying degree of explicitness to find a way how to do this or that desirable, but not quite legitimate operation, or report required information for company, without violating the rules of accounting. This is the most difficult part of the relationship between the head of the organization and chief accountant [13]. Usually in such cases, it proceeds as follows:

a) orders and proposals of the same kind are considered seriously if they come directly from the General Director of the company. Other leaders must agree upon their recommendations with the Director and get his support;
b) evaluate questionable from the standpoint of the laws and accounting rules, recommendations and directives from the point of view of possible consequences of their execution. If direct or indirect material interest of specific individuals or groups is viewed such proposals should be rejected;
c) if the proposals are aimed at the general interests of the collective workers and owners of the organization, the improving the enterprise's financial position:
   - it is necessary to exclude the possibility of tax evasion or illegal reduce of them, but to offer other legal methods of tax optimization, recommend the Director what must be done in advance;
   - instructions on changing the order and form of execution of the previously executed or prolonged economic agreements, sanctions, changes of the priority of payments, on the promotion and punishment of individual workers and groups of units, etc. should be supported, but be warned about the possibility of negative consequences of such decisions, especially if they are likely to be.

Disagreements between the head of the organization and the chief accountant shall be generally resolved within the enterprise through mutual understanding and compromise of opinions. According to the international standards the compromise cannot be, if the head of the organization:

- violates the requirements of current legislation;
- forces a professional accountant to disturbance, staying away;
- lies or misleads in cases where he must tell the truth;
- officially reports information, distorting the facts.

The question of the punishment forms of physical and legal persons who are guilty of financial reporting unfaithfulness, and caused with these additional costs and losses to qualified users, including the banking system and financial markets, until recently is not definitely solved. It is considered that in an extreme distortion and obfuscation of these financial statements of economic subjects is one of the forms and methods of fraud, that is, a crime in the sphere of economy, which is the theft of another's property or the acquisition of another's property by deception or abuse of trust. Proven fraud using false financial statements is prosecuted on the basis of a judicial decision [6].

3. Conclusions

In general, the position of the financial statements faithfulness of some Russian companies that are clients of financial markets cannot be considered satisfactory. The first suffer is a banking system, where the amount of arrears and defaulted loans by the clients, including due to the complete trust in these financial statements, annually increase. Credit organizations, investment funds and financial institutions, rather than relying only on data of a balance sheet and other reporting forms, are forced to resort to special studies of credit status and reliability of the companies with whom they are dealing, or intend to deal with, attracting additional sources of information, including their owns. Meanwhile, the possibilities of using the data of financial statements of the organizations-clients, auditors who validate them, legislative and executive bodies are not exhausted in the fight against fraud [4]. At the same time it is necessary to improve the reporting, the method of forming its performance and to do the best to make it reflect the reality [15].

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Classification of the Innovation Clusters in the Regional Economy

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Abstract

The article describes the different ways of organizing innovation clusters and innovation at the regional level. This article also considers various strategies of innovation management, described the types of innovative clusters. It also describes the international experience of development of innovative clusters.

Keywords: *innovation cluster, innovation management, classification of clusters.*

The regional innovation cluster is not a single phenomenon, but a multileveled and complex notion. The innovation cluster formation and development depend on the corporate (punctual), elemental and process (structural) spatiotemporal aspects. In the modern economic literature the interest towards the innovation activity has passed several stages. Initially it was treated as the activity of individual innovators – it resulted in the commercial success of the inventions and inventors (like the invention of the tires by Goodyear, or a compressed-air brake by Bendix, or a transistor radio by Bell). All these innovations mostly were used by one company on their own or by small groups, thus they were punctual in their character. The key element of the analysis in this case was the inventor himself or innovator working in the company.

Globalization caused the differentiation and integration of the economies of various countries, the innovation process became complex and comprised a wider range of activities, therefore поэтому анализ инновационной деятельности вступил в новую фазу. At present time the process of formation and development of innovation is usually considered more as the continuous process of collective activity than individual one. Such kind of collective collaboration in the field of innovation is performed by the groups of specialists or the groups of companies – the sectorial or intersectorial clusters. Such collaboration results in the origination of the international innovative enterprises of the small and medium-sized businesses at the regional level, and the transnational corporations at world level.

Nowadays both in the foreign and the Russian economic literature there is a prevalent viewpoint that the main criteria in rating the innovativeness of the activity is the presence of the cluster consisting of the interrelated companies of various sectorial specialization that are located considerably close to each other within a certain region, are the parts of one production and technological chain and unite their labour resources, communication channels, forming the single infrastructure. But for the latest twenty years the innovative clusters were formed in different countries. The companies constituting these clusters belong to highly diverse range of economic sectors from the high-tech (pharmaceutics, computer technologies, instrument-making, mobile phone manufacturing) to more traditional ones like clothing and car production. Almost in all of these cases these forms interact with each other by means of labour recourses exchange, access to information, provision of ties between manufactures and suppliers, venture capital obtaining and combination of all these factors[1].

Globalization of the world economic relations over the last 25 years led to origination of the principally new type of the innovation clusters, not regionally located, not compact, dispersed about all over the world. Thus, for example, the sphere of research and development can exist in the form of virtual research institute and be situated in Europe with experimental base and pilot-scale production in China and Southeastern Asia, and with dealer-sales network in the USA.

However, not all the innovation companies work likewise. There are essential differences in the intern structure of the innovation clusters: some of them are focused on the production, others have the joint marketing. Upon closer examination it proves that the similar clusters show considerable heterogeneousness in terms of their organizational

[1] *Scott, A. (1990)* New Industrial Districts*, Pion, London; Sternberg, R. (1996) Reasons for the Genesis of High-Tech Regions – Theoretical Explanation and Empirical Evidence,* Geoforum*, 27, 205-233; Keeble, D., and Wilkinson, F. (1999) Collective Learning and Knowledge Development in the Evolution of Regional Clusters of High Technology Industry in Europe,* Regional Studies*, 33, 295-305.*

structure[2].

In 2005 it was suggested that there were different types of innovation clusters and that at least some of them embody the firms that had nothing in common with other innovation enterprises of the area in spite of their close location. Hence, they are simply located on the territory of the region, but are not involved in the regional innovation activity. Moreover, some of theses firms are too small. And within such type of micro-firms the significance of the individual innovator or in-company innovator increases[3].

Let us dwell on some different types of innovation clusters. The idea of innovation (as it was accepted by EU) is a commercially effective use of new technologies, concepts and methods by means of implementation of new products and technologies or refinement of the former ones. Innovation is the result of the dynamic process of learning, in which several inner and outer subjects of activity are involved[4].

Among the factors influencing the formation process of innovation are the interpretation aspects of the notion of innovation. In the first place it is the innovation cluster in the aspect of commercial concept, not merely a technological or even a concept of intellectual property. No matter how original the innovation might be it will never be of a business entity interest if a company cannot benefit by its implementation. In the second place, irrespective of all the three levels of innovation (modernization, renovation, radical renewal), its underlying cause consists in that the people working together in a team could learn from each other how to create a new brand product or service or refine the existing ones and make profit. In the third place, the fundamental unit of the innovation activity is not usually a person or even not a single unaffected firm. More often it is a group of people or companies collaborating on a certain innovation project.

And finally, the assumed criterion of the definition accepted by EU consists in the fact that if the definition is used for scientific purposes it (or more precisely – innovation activity) lacks the substantiation of the way of its territorial organization. In the assertion that innovation is the result of the dynamic process of learning, in which several inner and outer subjects of activity are involved nothing is mentioned about the location of those subjects – so that they could locate next door, literally and figuratively, or at the outer end of the world, granting the modern global mechanisms of production and outsourcing. These mechanisms vary from the local systems (such as, JIT (Just In Time) delivery or Flex Spec) to synchronic global production TNC on dozens of sites, or it may be the combination of diverse local and global mechanisms[5].

The location is an important factor, because some areas are more richly innovative that the others, but nevertheless it does not mean that the innovation clusters in such regions are more integrative and more dynamically developing. Similar to the fact there are different rates of innovation activity from gradual to radical one, it is reasonable to assume that undoubtedly there are different types of territorial location of innovative activity. In our opinion, there is a number of different types of innovation clusters requiring careful examination, and the territorial factor is of great importance in this context.

The aim of our research is the study of the theory and practical material on the matter and developing an exemplary classification of various innovation clusters that can be useful for determination of their common and unique features. The problem of the clusters is multipart and become more complicated with origination of new samples. Frequently in the economic literature one and the same term may be applied to different notions, and vice versa: there can be found several terms referring to the same notion. As we mentioned earlier the innovation is important of itself, but it is bound up with other actual economic problem – with competitiveness. Most of the developed countries search for the means to increase the competitiveness of their economies, and the governments and scientists concur that the encouragement of the innovation activity would contribute to it[6].

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[2] *Rabellotti, R. and Schmitz, H. (1999) The Internal Heterogeneity of Industrial Districts in Italy, Brazil and Mexico, Regional Studies,* ***33****, 97-108.*

[3] *Hart, D. and Simmie, J. (1997) Innovation, Competition and the Structure of Local Production Networks, Local Economy, November, 235-246.*

[4] *EC DG XIII 1996, p. 54*

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However, the attempt to facilitate the increase of competitiveness by prompting the innovative activity is paradoxical in its nature. Innovation activity by definition is attended with high risk and uncertainties, and it is obvious that companies try to circumvent such difficulties. According to J. Schumpeter innovation would hit not only the benefits and productivity of the existing companies, but also – their existence itself[7].

For profiting and further planning the companies need certainty in their activity[8]. Therefore the problem of competitiveness directly influences the innovation process as it is. On the one hand, as long as the companies compete with each other, their competition tends to involve the implementation of new technologies, i.e. new products and services, but the uncertainty in the market grows too. Innovation is principally a disturbing factor, and the more radical, the more destabilizing it is. On the other hand, the companies always respond to innovation – both their own and other's – but they are to keep the certain level of stability in order to have the opportunity to gain profit and set short- and long-termed production goals. In our study we try to prove that location as well as the organizational structure play important role in the balance of these contradicting elements.

The existing antinomy evidently influences the territorial distribution of innovations. Territorial distribution of innovations is not a new topic, but we insist that the organizational structure of territorial distribution of innovations has been changed with time and nowadays there are diverse forms of it, originating partly due to that antinomy. However, the crucial issue regarding the significance of the innovation for economic development still remains open. Sixty years ago J.Schumpeter called innovation "the creative destruction"[9]. C.Freeman also expressed himself on exclusive importance of support of innovation. He claimed that lack of changes signifies loss[10]. Innovation is the key condition for increase of competitiveness, and new products and services are to modify the whole production chain, the methods of work and the consumer's lifestyle in an unpredictable way. As an illustrative example may serve the increasing entertaining and commercial activity in the global network.

Theoretically there are various strategies of innovation activity management, and most of them include the territorial aspect. One of the approaches suggests to prompt appearance of innovations inside the company, but for all that to await the consequences of the innovation activity from other companies and firms, which through forward planning influence the single firm, and its location in particular. Apparently, the threshold question for the companies is not only the mode of innovation implementation, but also the way of organizing the innovation process.

Usually these strategies include the territorial criterion and in this regard a number of different configurations of territorial distribution of innovations can be marked out. For example, there is a strategy that can be named "macro-globalization". It means that large companies in such countries like the USA or Japan expand their activity all over the world. Such companies became greater and created transnational corporations in the late 19th c. and throughout the 20th c. These transnational corporations attracted more market share by force of amalgamation and globalization of their activity, as well as through promotion of their innovations all over the world[11].

Globalization helped these companies to make use of the world market within the framework of their own production system, and thereby to reduce the risk of uncertainty. In some cases these companies carried out a policy of vertical integration within that economic sector to which they belonged, so that they were enabled to get control of raw material market and finally – of their consumers by force of control over suppliers and distributors, that meant the control over the production process on the whole, from beginning to end.

But during the last decade it has become clear that there are other approaches to the territorial distribution of innovations that are also used by transnational corporations all over the world. Many large companies are involved in the process of staff reduction and concentration on the basis activity owing to the cutdown of their peripheral functions. This approach can be called "vertical disintegration". It was applied by the large corporations in the 1980s-1990s and allowed to cut down expenses and make the sales of the manufactured products more efficient[12].

Thus, in the modern economics there are various methods of organization of innovation clusters and

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implementation of innovations at the regional level that are in the focus of the scientific economic literature in the last years. The can be defined as the localized compact and the dispersed horizontal integration of innovation clusters. The horizontal integration is widely used by regional clusters of companies that work side by side in the economic, social spheres and in the sector of research and development.

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Practical Application the Theory of Constraints: Experience and Challenges of Russian companies

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Abstract

The article describes the results of the research the Theory of Constraints (TOC), Throughput Accounting, 3Q Accounting, the experience of International Companies which successfully implemented the Theory of Constraints and the Practical Application of this Theory and Methods in Russian companies. The research was conducted on the basis of the public corporate data, the disclosed project implementation results of the consulting companies, the comments and the clarifications of Business seminars' participants.

Keywords: *Theory of Constraints, Throughput Accounting, 3Q Accounting, Management Accounting.*

1. Introduction

The success of several international companies, which implement the Theory of Constraints, has not gone unnoticed during the global financial crisis. The distinctive characteristic of the companies that implemented TOC is the way they survived the economic crisis during 2008-2009 and have developed in 2010-2013 [1, 2]. While other companies in the same industries were experiencing serious decline in sales and profits, many companies that used the theory of constraints, could keep their performance on the pre-crisis level and, moreover, could ensure the significant growth. The particular interest for Russia is presented by the experience of its BRICS partner – India, including that of following companies, which were focused on TOC: «Fleetguard Filters Pvt Ltd» - manufacturer of automotive industry, «Tata Steel» - steel producer, «Dr. Reddy's» - manufacturer of pharmaceuticals [8]. In his reports, the international director of «Goldratt Schools» Oded Cohen mention the representative of Russian business, which implements and actively uses the theory of constraints in its management accounting - the LLC LPK Continental Management, vertically integrated holding company and one of the largest timber companies in Russia. However any other information about the application of TOC in theory and practice of Russian accounting is missing in these reports [3, 4]. That's the reason why we have conducted the research on implementation of the TOC methods in accounting by Russian businesses. This research studies the Russian firms in different industries which implemented or are currently implementing TOC, the terms of the implementation, the consulting partners for the implementation, the reasons for the introduction of TOC and its results as a set of performance benchmarks [5, 6].

2. The Objects of Research

The sample of Russian companies which have claimed in 2010-2013 their orientation on TOC and its practical application in accounting amounted to 25 units. Information was obtained from the open sources (from the official websites of the participants of research, the results of projects implementation on the websites of consulting firms serving the implementation of TOC at the company - participant, educational portals), that can testify about the reliability of the information, declared by companies. 32% of the 25 objects of research are located in Central Federal District, 28% - on the territory of Volga Federal District, 16% - on the territory of Ural Federal District and Siberian Federal District, 4% - on the territory of Northwestern Federal District and Southern Federal District (see Panel A Table 1). We would like to note the concordance of the concentration of such companies with the availability of the science centers and the resource base in respective areas.

By the form of ownership limited liability companies prevail - 48%. This fact is associated primarily with the wide adaptation of accounting on the TOC basis in the sphere of trade and services (64% of the limited liability companies operate in this sphere), the launch of E. Goldratt's book «Isn't It Obvious?» (Theory of Constraints for retailers), the

availability of resources for implementation at consulting firms and opportunities to teach managers in business schools. 36 % and 16% are consisted, respectively, by the closed joint stock companies and joint stock companies - the largest mining and processing enterprises with sophisticated production technology [9]. Their appeal to TOC caused as a rule by the problems of slowdown of production growth, deteriorating of financial performance, low turnover of inventories along with long production cycle, customer dissatisfaction with the shipment terms [10].

By industries the largest share of TOC - oriented companies belongs to machinery (from aerospace to manufacturing of electronic goods and medical equipment), trade industry, construction, services and timber processing (see Panel B Table 1).

Table 1. Geography and industries of the research of companies, focusing on TOC and its practical application to accounting

Panel A. Region		Panel B. Industry	
Central Federal District	32% (8 units)	Machinery	36% (9 units)
Volga Federal District	28% (7 units)	Trade	20% (5 units)
Ural Federal District	16% (4 units)	Construction	12% (3 units)
Siberian Federal District	16% (4 units)	Services	12% (3 units)
Northwestern Federal District	4% (1 unit)	Timber processing	8% (2 units)
Southern Federal District	4% (1 unit)	Mining and metallurgy	8% (2 units)
Far Eastern Federal District	0% (0 units)	Food processing	4% (1 unit)
Total	100% (25 units)	Total	100% (25 units)

3. Methods: Data Analysis of the Research

By to the degree of usage of the TOC tools we obtained the following data:

- 40% (10 units) of objects of research actively use the tools of TOC, while 4 units of them are presented by machinery manufactures (LLC Uniscan, CJSC Sovitalprodmash, CJSC Nikolsk Lighting Glass Factory, JSC Eletech Factory), 2 units - by timber processing (LLC LPK Continental Management, STKK JSC), 2 units by trade industry (ERGIS Group LLC, Tehnobum LLC), 1 unit - by the construction (Pokroff JSC) and 1 unit - by mining (Souzmetallresource CJSC);
- 24% (6 units) of the companies are at the stage of implementation of TOC projects, among them: 4 units are the companies in manufacturing, 1 unit in trade industry and construction.;
- 36% (9 units) of the remaining held seminars and trainings related to this instruments. Managers of these companies are considering the usage of the TOC instruments in the future.

In general, the state of the TOC introduction by the objects of research by branches of the economy is represented by Figure 1.

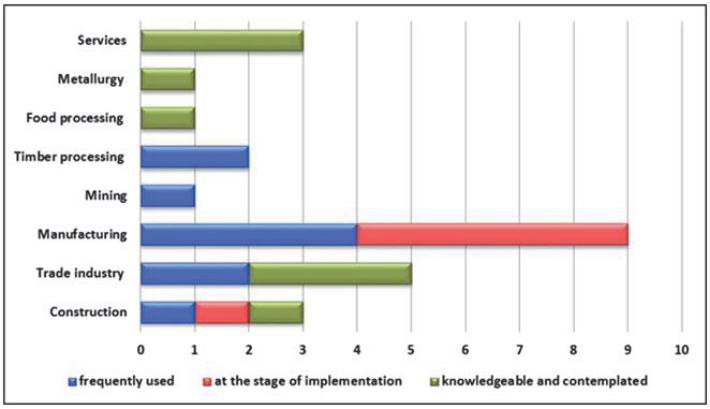

Figure 1. The extent of usage of the TOC instruments by branches of the economy

4. IT-Service Providers and Consulting Firms

The structure of the IT-service providers and consulting firms, contributing to the process of implementing or having implemented TOC in research objects is as follows:

- 40% (10 units) of the market is taken by the Russian Office of the Goldratt Schools, which consults businesses, that have not yet embarked on a course of the TOC, through seminars and business training;
- 24% (6 units) of the market is taken by the Lithuanian company UAB Inherent Simplicity Baltic, which had implemented the TOC in the following companies: STKK JSC, LPK Continental Management LLC, Nikolsk Lighting Glass Factory CJSC, Eletech Factory JSC, Souzmetallresource CJSC;
- 16% (4 units) of the market is taken by ARB Consulting LCC, that incorporated TOC in trade companies Tehnobum LCC и ERGIS Group LCC;
- 12% (3 units) of the market is taken by SAI ARIS, which incorporated TOC for medical device manufacturer Uniscan LCC, and which started the implementation projects at NEVZ-Soyuz JSC и Novosibirsk Plant Electrosignal JSC;
- Continuous improvement of TOC, which had been initiated by the Director of Sovitalprodmash CJSC in 2005, was supported by the consulting firm Rightstep LCC, that also run a project of TOC implementation at the Kazan Helicopters JSC - 8% (2 units) of the market.

5. The Practical Results of the Implementation

Sovitalprodmash CJSC (implementation of TOC in 2005/2007).

While considering the evolution of the TOC instruments in the Russian business, the first effective and practical experience is associated with the 2005 year at the factory Sovitalprodmash CJSC. Due to the TOC, previously unprofitable enterprise producing refrigeration equipment became a leader in the industry in just two years. The project of the TOC implementation and its practical application to the accounting began in September 2005. Back in 2005 the total capacity was loaded only by 5%, the company suffered millions of losses and debts, an excessive amount of inventories and finished goods (2 monthly turnover) was stocked in warehouses and production, along with the frequent lack of cash on the operating account. As a result of the two-years' implementation the production of refrigerated cabinets increased in 4 times (up to 60 thousand units per year), revenues grew from $20 million in 2005 to $70 million in 2007, with an average annual rate of growth of the Russian refrigeration market during this period, consisting 25%, while reducing inventories in five times and reduction of the delivery term from two months to one week, the plant productivity boosted by 70% at the expense of developing production range, taking into account the value generated to load the bottleneck, the company entered new markets while working on the market bottlenecks (see Panel A of the Table 2).

Table 2. The results of the implementation of TOC in some Russian companies

Key indicator	Before implementation of TOC	After implementation of TOC
Panel A. Sovitalprodmash CJSC (machinery)		
Sales	20 million dollars	70 million dollars
Inventory turnover	60 days	12 days
Term deliveries	60 days	7 days
Capasity utilization	5 %	70 %
Panel B. LPK Continental Management LLC (timber processing)		
Cycle times	long	reducing cycle times up to 75%
Level of availability of products in warehouse	lack of a number of need positions and excess of other positions	increasing in the availability of products in warehouse - up to 95%
Panel C. ERGIS Group LCC (wholesale)		
Shipping	was delayed for 14-21 days	trouble-free
Volume of filled orders	60 %	99 %
Sales vs. market level	lower than market level	increased by 10 % with an overall market falls by 35 %

LPK Continental Management LLC (implementation of TOC in 2008/2009).

LPK is operating in complex industry of timber processing had been implemented TOC at its companies for six months in 2008. The company identified a number of the following problems: the company holds stocks of finished goods and is forced to start production in conditions of lacking orders, only relying on the forecast, the lack of several items at the warehouse leads to missed sales, the excess of other items leads to the obsolescence and write-off of the production and low turnover of goods. The results of resource enabled to increase the availability of products at the warehouse - up to 95% in six months after implementation; to reduce production cycle up to 75%, to avoide the employees' redundancy during the crisis (see Panel B of the Table 2).

ERGIS Group LCC (implementation of TOC in 2010/2011).

In late 2010, operating in wholesale of door fittings, had faced a number of serious problems, hindering its further development: several old customers quit, the orders of existing customers were not fully fulfilled (50 - 75%), several clients stopped making new orders, order shipment was delayed for 2-3 weeks until complete procurement, company's customers preferred to buy most goods from one place on hand while the company was not able to support the sufficient level of products in stock. Top management decided to introduce TOC tools, the results of which were the following: sales increased by 10% with an overall market fall by 35%; the shipment started to take place on time, company began to work with the large retail chains, the clients' applications were performed by 99%. The implementation is currently continuing in the number of other companies, which are ERGIS Group LCC customers (see Panel C of the Table 2).

6. Conclusions

Conducted research has shown the following result: management accounting on the base of TOC in Russian enterprises in 61% cases is implemented by attracting foreign consulting firms and IT-service providers, and only 39% with the assistance of the Russian consulting firms and IT-service providers. However, with the wide penetration of the "world of constraints" in the mentality of the Russian businessman this ratio will have to change soon in favor of the local companies. So, 40% of the researched companies in Russia are actively using TOC and its practical application to the management accounting today, another 24% of the companies are on the stage of introduction of the TOC tools. As for the branches of the industry, TOC is widely used in machinery (36 % of the researched companies) and trade industry (20% of the companies). The evolution of TOC in Russia can be represented by three key periods and respective companies, Russia's leaders in business organization on the base of the TOC tools: CJSC Sovitalprodmash, which operates in the production of refrigeration equipment; LLC LPK Continental Management, which operates in the complex industry of timber; LLC ERGIS Group, which operates in wholesale.

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Methodological Issues of Economic Analysis at Various Stages of Reorganisation of Legal Entities

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Abstract

The article comprises a definition of methodological features of economic analysis at various stages of reorganisation of legal entities. The paper used the abstract-logical method. The basic stages of reorganisation of legal entities: preliminary, preparatory, registration, final. The main directions of economic analysis for each stage of reorganisation, its goals, objectives, information base and methodological issues were identified and justified. The basic stages of reorganisation of legal entities related to certain management decisions, control and analytical work. The main features of analytical work at various stages of reorganisation were defined. There will be a choice of optimum management decisions based on results of analytical work when deciding on reorganisation, optimum forms of its implementation and process of its implementation.

Keywords: *restructuring, reorganisation stages, economic analysis, financial model of the effects of the reorganisation*

1. Introduction

Russian legislation stipulates five basic forms of reorganisation of legal entities: consolidation, merger, separation, division and transformation [1]. A feature of the process of reorganisation of organisations is that the transfer of rights and obligations of the legal entity is made in full, without any exemptions and exceptions under the act of transfer or separation balance sheet. Reorganisation is an economic process that causes a termination of the legal entity, with the transfer of all its rights and obligations to one or more new legal entities, or the emergence of a new legal entity with a direct link to it and the rights and obligations of the legal entity continue to exist [2, 3].

In our opinion, it is appropriate to present a process of reorganisation in the form of successive stages (Figure 1), each of which includes relevant activities.

In scientific literature, there are various approaches to the separation of the process of reorganisation into separate stages [4, 5, 6]. So, from the point of view of personnel management during reorganisation, it is appropriate to highlight the following stages: creating the image of a "desired future", planning the reorganisation process, the start of changes, support for reorganisation, mobilisation, and update [7].

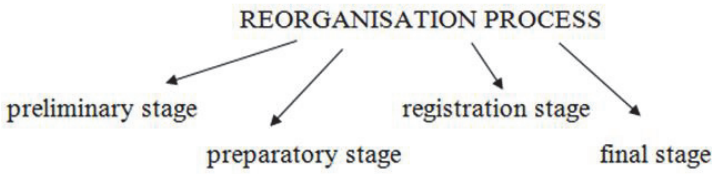

Fig.1. Sequence of stages in the process of reorganisation.

The legal procedure for reorganisation consists of the following stages: decision on the reorganisation, notice to the registering authority to initiate the procedure of reorganisation, sending Unified State Register of Legal Entities incorporation records starting the reorganisation procedure, the publication of the notice of the procedure to the media, written notice to creditors, the composition of the separation balance sheet or the act of transfer, cancellation of

registration with the tax office and the old legal entities and registration of new and closing the old settlement accounts and registration with the registering body regarding the newly created legal entities and deregistration of that which ceases to exist, and other necessary actions [8].

However, from the point of view of targeting the economic challenges facing the organisation at any given point in time, there is a need for various management decisions, and the stages we have proposed are optimal [9, 10].

2. Theory

The preliminary stage includes activities to prepare for the adoption of decisions on reorganisation and a meeting of members (shareholders) of the company. The preliminary stage ends with holding a general meeting of members (shareholders) of the company about the reorganisation of the company and decision to reorganise.

At the preparatory stage, participants (shareholders) are redeemed of shares in relation to their exit as the owners of the company, the tax authority is notified, work with creditors takes place, and there is an inventory of assets and liabilities of the reorganised company, along with preparation of the separation balance sheet. The preparatory phase ends with the compilation of the separation balance sheet date or transfer act. The registration stage consists of the state registration procedure of the reorganisation. At the final stage of reorganisation, the final preparation is made of financial statements, preparation of transfer certificates of assets and liabilities, and the preparation of introductory accounting. The final stage of ends with the approval date of the introductory accounting.

Each of the selected stages is associated with certain management decisions, control and analytical work [11, 12, 19]. Thus, the reorganisation of enterprises is a complex process in which there is a need for analysis. The company's activities, both before the reorganisation and after, are aimed at obtaining a specific result, depending on the resources available to the organisation, the extent of risk management, and the state of the external and internal environment of the firm. As a result of the influence of many factors of various characters, the results are often different from those projected. In this connection, a number of issues appear that without analysis are quite difficult to resolve: reasons for this situation, the development of solutions to address shortcomings, and selecting the optimum option.

In our view, analysis of economic activity is an important stage in the decision of any administrative decision, and it acquires special importance in the preparation and implementation of reorganisation [13, 18]. The essence of the economic analysis is integrated study of the organisation in accordance with its objectives, but at the same time, as a result of the analysis, new information appears, which is later used in the management of the company.

In general terms, any method of analysis is methodological advice on analytical studies and includes the following stages:

- formulation of the main goals and objectives of the analysis, and the definition of objects and users of the analysis;
- compilation of indicators that will be analysed;
- identification of sources of data for analysis;
- selection of methods and techniques to be used for analytical processing of information.

It should be noted that the choice whichever methods of analysis will depend on the purpose, depth of analysis, object of research and technical possibilities.

As already noted, the reorganisation process should be presented in the form of successive stages, including individual measures, namely: preliminary, preparatory, registration, final.

At the preliminary stage, in our opinion, it is necessary to conduct a study and analysis of the desirability and feasibility of the reorganisation, and select the optimum form of reorganisation. The success of the reorganisation proceedings depends on the state of the company's equipment, the availability of modern production technologies, competitive products, the reality of covering debt, and the possibility of reorganisation of the production process and business management system. In our opinion, at this stage, you should use methods and techniques of management analysis designed to provide administrative staff organizing the information needed to manage and monitor the activities of the organisation. Management analysis is mainly associated with the study of primary information about production and costs.

The main objectives of the analysis at this stage include:

- definition of the organisational and technical capacities of the reorganised company, product competitiveness, and the state of the market;
- analysis of the possibilities of increasing the volume of production and sales, and accelerating sales of

products through reorganisation;

- assessment of the possible results of the reorganised production enterprises, forecasting indicators such as costs, sales and profits;
- decision on the reorganisation and determination of the optimum form of reorganisation;
- development of a strategy of cost management to reorganise businesses by deviations, cost centres and responsibility.

At this stage, it is obligatory to pay attention to the analysis of the input during the reorganisation of changes and assess their effectiveness in terms of taxation. The main objective here is to determine how best to implement the planned changes, which can be solved with the use of elements of strategic tax planning.

In our opinion, at the preliminary stage of reorganisation, development of a unified methodology for assessing the capabilities and effectiveness of the reorganisation is not expedient. The main reasons for the reorganisation may be:

- forced reorganisation;
- improvement of the management structure of the enterprise;
- allocation of structural units and individual process units in the independent legal entities;
- optimisation of tax payments;
- disagreements between the founders and others.

Depending on the reasons for the reorganisation, the methodological approaches to internal analysis will vary.

In the preparatory phase of reorganisation, depending on the chosen form, compilation of the transfer certificate or separation balance sheet is carried out. This stage ends with the presentation of necessary documents to the registration authorities.

This stage is characterized by active work of the reorganised company with debtors, creditors, debt reconciliation with suppliers and customers, and negotiation of debt payments to the budget and extrabudgetary funds. During this period, disputed debts may be experienced, for example, non-recognition of debt by debtors or creditors presenting increased requirements, as well as the detection of errors in accounting as unpresented invoices, or other operations not carried out.

In our opinion, at this stage, analysis of the financial condition is particularly important, which is characterized by providing a company the financial resources necessary for normal functioning of the enterprise, the feasibility and effectiveness of deployment and use, and solvency and financial stability of the organisation.

As a rule, two types of financial analysis are distinguished: internal and external.

Internal financial analysis is performed by services of a company, and its main purpose is to ensure the normal operation of the business, a profit, and the exclusion of bankruptcy. The information base of such analysis is quite wide and includes any information circulating within the enterprise and needed to make management decisions. In the context of the reorganisation, such analysis is required in the preparation of the transfer certificate or separation balance sheet to assess the current and future financial condition of the reorganised organisation.

External analysis is carried out by investors, creditors, and regulatory authorities on the basis of published reports. Its purpose is the opportunity for profitable investment with maximum profits and minimal risk. In our opinion, in the process of reorganisation, the main users of the information obtained in the course of the financial analysis are not only the owners, but also the creditors of the reorganised enterprise.

In accordance with the Civil Code of the Russian Federation, it is necessary to notify all creditors of the reorganised company about the upcoming reorganisation. Creditors of the organisation have the right to require early termination or performance of the obligations of the Company, not later than thirty days from the date of such notice or publication of the notice of the reorganisation. When deciding on early claims on repayment of obligations of the reorganised companies, lenders require information on the financial status of the reorganised enterprise.

Economic literature identifies two main approaches to the analysis of the financial condition of the organisation [14]. Depending on the goals set, as well as informational, temporary, technical and other factors released, rapid analysis of financial conditions and detailed analysis of financial conditions are separated. The main purpose of rapid analysis based on financial statements is clear and simple evaluation of the financial prosperity and development dynamics of the economic entity. Rapid analysis can end with withdrawal of the need for more in-depth and detailed analysis of the financial position and results.

In general, the programme of in-depth analysis of financial and economic activity of the enterprise, in addition to prior review of the economic and financial situation of the organisation, includes the following sections: assessment of property, liquidity, financial stability, business activity, and profitability of the commercial organisation in the securities market [15, 16, 17].

In our view, for initial assessment of the financial situation of the reorganised enterprise, relative liquidity and financial stability should be used. At the same time, comparison with normative values used for the particular industry and benchmarks of the reorganised company should be used. Such information will enable creditors of reorganised entities to decide on the expediency of early requirements for return of debt.

3. Results

In this way, the ratio of the stages of the process of reorganisation with the tools of economic analysis used in each of them is represented in Table 1.

Table 1. Features of economic analysis at each stage of the reorganisation process

Reorganisation process stage	Characterisation of the reorganisation process stage	Methods and economic analysis used in each stage
Preliminary stage	Preparations for the adoption of decisions on reorganisation, and of meeting participants (shareholders) staging the general meeting and the decision on reorganisation.	Study and analysis of the desirability and feasibility of reorganisation, the choice of optimum form of reorganisation, the use of methods and techniques of management analysis necessary for the management organisation of information needed to manage and monitoring activities of the organisation. Analysis of the input during the reorganisation of changes and evaluation of their effectiveness in terms of taxation, and definition of the most efficient ways of implementing the planned changes, which can be solved with the use of elements of strategic tax planning.
Preparatory	Redemption of the participants (shareholders) of shares in connection with their exit of the proprietors of the company, notification to the tax authorities, work with creditors on inventory of property and liabilities of the reorganised company and preparation of the separation balance sheet.	Analysis of the financial condition, which is characterized by providing a company the financial resources necessary for normal functioning of the enterprise, the feasibility and effectiveness of deployment and use, and solvency and financial stability of the organisation. Comparison with normative values used for the particular industry and benchmarks of the reorganised company.
Registration	Procedure of state registration of reorganisation.	Compliance with state deadlines and additional analytical procedures are not stipulated.
Final	Preparation of financial statements, compilation of the transfer certificate of assets and liabilities, preparation of the initial accounts.	Analysis of current economic effects of the reorganisation, provision of comparability of financial statements, which act as a source of information for analysis.

4. Conclusions

The effectiveness and expediency of the reorganisation can only be assessed after a certain period when comparative financial analysis of the reorganised companies, before and after the reorganisation has been done. However, ideally before reorganisation, it is necessary to draw up a financial model of the effects of the reorganisation, which can help resolve several problems: form a forecast of financial and economic indicators as a result of the organisation of the various options for reorganisation, to simulate the reporting of organisation in these cases, assess the possible legal, economic and other risks to budget expenditures for the reorganisation procedure, and establish a system of benchmarks to assess the achievements of the objectives and requirements of the owners of the results of the process reorganisation. Work on the compilation of the financial model of consequences of reorganisation will without doubt provide economic benefit, as will reduce the uncertainty of the economic situation of the company in the new organisational conditions.

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Purpose and Application Peculiarities of Management Accounting in Insurance Companies

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Abstract

Organization of a management accounting in insurance companies allows to perform operational and strategic management of insurance business based on elaboration of alternative approaches in ultimate goals achievement. Management accounting is directed at satisfaction of information needs of management in all insurance business areas, including actuarial and investment activity. Centralization of the management accounting system along with the development of single information standards at the level of a parent company leads to significant reduction of the business operations of subsidiaries in favor of sales and client service. Management accounting system of the insurance business may serve as a source of information in terms of financial risks, sales and value management only provided it is developed on multi-criterion principle and is based on modern information technologies.

Keywords: *Insurance, management accounting, administrative monitoring, budgeting, costs control.*

1. Introductions

Insurance activity belongs to one of the most fast growing areas of financial infrastructure of economics, aimed at protection of property interests of enterprises, companies and individuals. The main functions of insurance include the following: supporting of social reproduction continuity, stimulation of scientific and technological progress and concentration of investment resources. All afore named functions correspond with the needs of modern economics and determine the role of insurance as an important factor for development of economics. Under current functioning conditions, the guarantee of insurance companies' success is provided by the management accounting and efficient administrative monitoring, which constitute unified and coherent system and comply with requirements for insurance management [8].

Strategic development of insurance activity in the Russian Federation implies improvement of managerial system in insurance companies. Insurance is the most dynamic business allowing to fulfill nonstandard ideas and to achieve significant results within the short time. Under the influence of macroeconomic trends every insurance company holds to strategies aimed at equilibrium, robustness and long-term profitability of business and gaining of market share in regional segments [7]. Complex approach to high quality client servicing aimed at maximal embracing of client audience providing diversified package of insurance services becomes of higher priority. In this regard regional insurance companies have to develop new products, diversify insurance portfolio, establish a personnel pool, and build up efficiently relationship with clients and partners, as well as with regional authorities.

2. Method

Current conditions of insurance market development cause necessity of management accounting introduction for the purposes of managerial decisions making. Management accounting is an integrated information system, the base of which is presented by integration of accounting methods elements and principles of management in order to form management information used for managerial decisions making at all stages of management. Management accounting system is aimed at information support required for managerial decisions mostly connected with assessment of anticipated expenses and incomes [5, 6].

Key problems of insurance companies include development of efficient business model of regions management and management expenses reduction (fig.1).

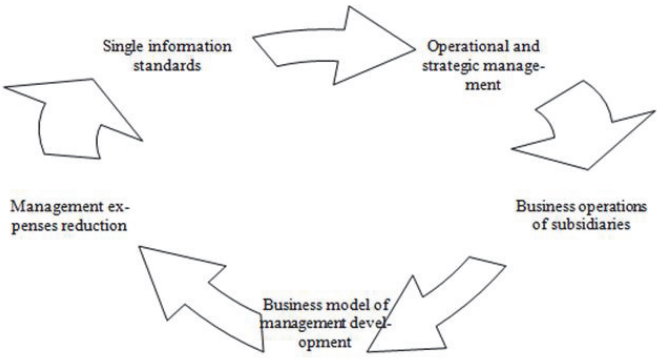

Fig. 1. Key problems of insurance companies

Currently developed model, when the regional subsidiaries of insurance companies perform all management functions, from sales to insurance certificates management and losses settlement, is outdated and fails to express strategic orientation both to upgrading of clients servicing, and introduction of more efficient spending patterns in insurance transactions.

Organization of a management accounting system in the insurance companies allows to exercise operational and strategic management of insurance business based on elaboration of alternative approaches in ultimate goals achieving. Centralization of the management accounting system along with the development of single information standards at the level of a parent company leads to significant reduction of the business operations of subsidiaries in favor of sales and client service. Management accounting is directed to satisfaction of information needs of management in all insurance business areas, including actuarial and investment activity [10].

Management accounting shall not substitute financial accounting, and at the same time management accounting shall not solve the entire problems of the company management. However, informational and analytic base formed in the scope of management accounting forms the basis for management functions realization in the company.

The initial aspects of management accounting development are clear definition of the following system-forming aspects:

- Operative informational and analytic base formation for managerial decisions making;
- A number of methods and tools employment allowing to update information, to provide it in the form suitable for analysis and for calculation of financial and economic indices, required for managerial decisions making;
- Coordination and control of company management and its structural subdivisions, internal document management.

Structure of management accounting organization of insurance companies depends on many factors including type and volume of insurance transactions, organizational structure, system and style of management, advanced system of insurance products sales, insurance activity variety and volume. The diversity of activity types in the insurance company, the related types of expenditures, place of expenditures origin requires application of different approaches to research, detailing, measurement and assessment. Besides, it becomes necessary to collect and consolidate information of different destination for the purposes of planning, forecasting, controlling and one of the alternative decisions making. Insurance company activity represents complex interrelation of business processes resulting in certain insurance type [2].

Insurance products sales and settlement of losses – are bidirectional financial flows. Separation of functional structure and powers of these two essential constituents of the insurer activity – is a generally recognized principle requiring viable motivation mechanism, mutual deterrence and continuous cooperation of managing personnel of insurance company. Administrative monitoring is based on corporate standards system including internal regulation of companies, managing personnel powers and responsibilities system by the relevant management levels.

Control in management accounting differs fundamentally from control functions of accountancy. Business accounting and internal audit in insurance companies are traditionally directed at registration of economic life events aimed at determination of financial results in the insurance company [9]. The management accounting performs control of rationality of insurance activity targets and results selection, monitoring of external and internal limitations in goals achievement, budgetary control of pro forma balance sheets making and execution.

The management accounting system of insurance business establishes strong interrelations between transaction expenses, indirect costs and insurance services types, and applies current cost accounting methods of certain types of insurance, which facilitate improvement of insurance company costs management efficiency. Costs calculation based on types of insurance activity in the system of balanced indices allows to analyze and improve existing costs structure of the company by the main business processes [11].

3. Result

Each type of insurance has its own cost characteristics, and the structure of insurance portfolio determines opportunities of the company in costs reduction in two key directions: cutting of constant general and administrative costs and optimization of variable costs considering behavior of insurance activity volumes. The costs related to payment of claims, settlement of losses under the insurance contract are of special importance in classification of costs by the time of origin [3]. Data on payments of claims in terms of insurance types for previous periods comprise a statistical base for calculation of insurance service price with regard to net premium, value calculation of insurance reserves. Another pricing element of insurance service – a workload – is determined on the basis of management accounting data on transaction costs. At the same time, payments of claims, costs for settlement of losses are the main items of assignable expenses. Calculation of cover amounts allows to conduct a factor analysis of company's final financial results formation in terms of insurance contracts, sales and clients nomenclature, as well as types of insurance.

Under current conditions of insurance companies' operation a special focus should be made on data formation of the insurance services range expanding, provision of competitive abilities on certain types of insurance, certain sectors of insurance market, development and mastering of new insurance services, development of company's branch networks.

It is necessary to develop principal directions of management accounting for the purposes of management data formation.

Such directions of management accounting include the following:

- management accounting of incomes of insurance company in terms of certain types thereof and market sectors;
- management accounting of expenditures of the company by certain types of insurance;
- budgeting of incomes and expenditures of the company, budget administration.

Budgeting is one of the subsystems of management accounting forming the source data, which serves as a basis for managerial decisions on efficient functioning of companies, costs reduction, increase of incomes and finally the intended income gain [1].

4. Conclusion

Management accounting system of the insurance business may serve as a source of information in terms of financial risks, sales and value management only provided it is developed on multi-criterion principle and is based on modern information technologies [4]. Application of the outdated IT-solutions failing to cover informational requirements of insurance business management refers to key problems of insurance industry development in modern conditions. Efficiency of managerial decisions making and their fulfillment feasibility serve as basis for insurance activity success.

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Features of the Internal Control of Foreign Trade Transactions

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Abstract

The article describes the requirements of the legislation in the field of implementation of internal control system on the enterprises, a necessity and an importance of control, explores the possibilities and features of the organization of the internal control of the foreign trade transactions, analyzes all possible risks (financial, legal, market, credit, geographic) arising in foreign trade activity. The author reveals the possible methods, techniques and procedures to exercise the internal control. Besides there is documentation's aspect under the internal control of foreign trade operations in the article.

Keywords: *internal control system, foreign trade transactions, financial risk, legal risk, market risk, loan and credit risk, foreign currency, foreign economic activity.*

1. Introduction

Recently there were quite a lot of changes in the legislation of the Russian Federation in the field of accounting and reporting. So, the requirement to organize the internal control system in the companies for their activities is one of the innovations adopted by the State Duma of the Russian law dated 06.12.2011, # 402-FZ "On Accounting". The internal control should be organized in the context of the activity lines, which are presented in image 1.

There are some clarifications of the image's data below:

a. commercial organizations listed in Article 5 of the Federal Law dated 30.12.2008 # 307-FZ "On Auditing" and some non-profit organizations carrying out their activities in accordance to other laws, are the subjects of mandatory audit;
b. directors of small and medium-sized businesses and non-profit organizations, which apply simplified accounting methods, have the right to take accounting to himself personally in accordance to the paragraph 3 of Article 7 of the Federal Law dated 06.12.2011 # 402-FZ "On Accounting".

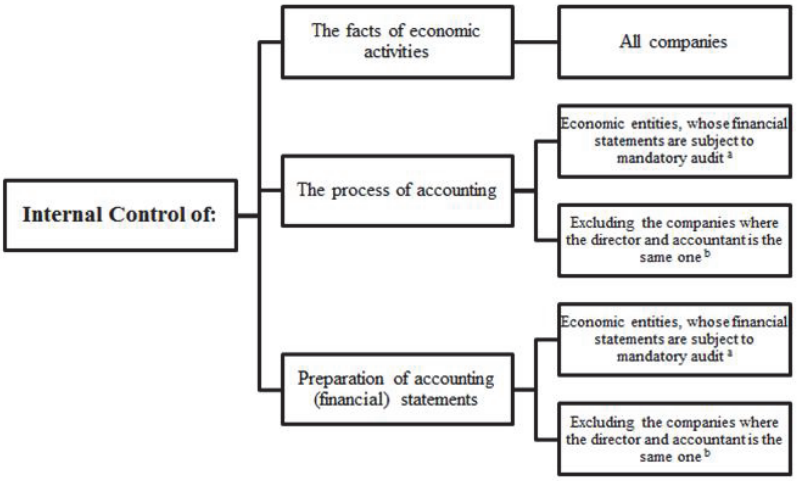

Image 1. Areas of Internal Control

Thus, the object of internal control are not just accounting and reporting, but the facts of economic activities, they are: any activity's operations, transactions and events, affecting the financial condition of the company, its financial performance and (or) cash flows.

2. Progress to Date: The Russian Experience

It should be noted that the legislation of the Russian Federation did not set any restrictions on the rules, methods and procedures for this internal control. However, in accordance to the Order of the RF Ministry of Finance dated 30.11.2011 # 440 the "Plan of the Ministry of Finance of Russia in 2012 - 2015 on the development of accounting and reporting in the Russian Federation on the basis of International Financial Reporting Standards" was approved. So, in 2014 to be developed recommendations for companies on the organization and implementation of the internal control of accounting and preparation of financial statements in accordance with paragraph 16 of this Plan in order to improve the quality and accessibility of information formed in the accounting and reporting.

Internal control should be considered as an important component of management in the company [1]. In the same time the very system of internal control can and should include several important elements, which are shown in image 2.

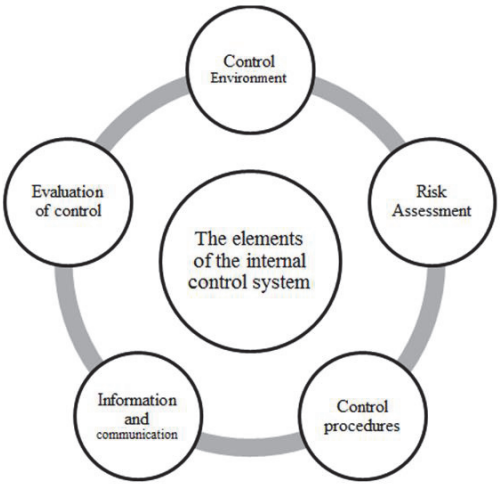

Image 2. The main elements of the internal control system

As the image shows the internal control system can consist of five main elements that have an intrinsic link between. For example, it is impossible to compile a complete list of procedures for monitoring more fully without the search and evaluation of all possible risks. Or, for another example, it is impossible to calculate, to estimate the parameters under control and make reasoned conclusions on the results of monitoring without the presence of a sufficiently complete and comprehensive information base [2].

Currently, in our country there are big changes in the economy [3]. Russia's membership in the World Trade Organization has the greatest influence on this fact. Now many Russian companies involved in foreign trade interact with non-residents of the country very closely [4]. A circle of users of financial statements of Russian companies is much wider [5]. Consequently, one of the priorities of heads of these companies is to ensure the preparation of reliable reporting and disclosure of information useful to users in it [6].

We believe that in this context, risk assessment and their identification and management have to become the one of the key elements of internal control. Information about the risks of business is need to fully understand the financial position, results of its activity and changes in its financial position [7]. Company is exposed to various internal and external factors: industrial, legal and other significant conditions, events, circumstances and actions during its foreign trade activities. So, there are a lot of different business risks on the practice, some of which are presented in the image 3.

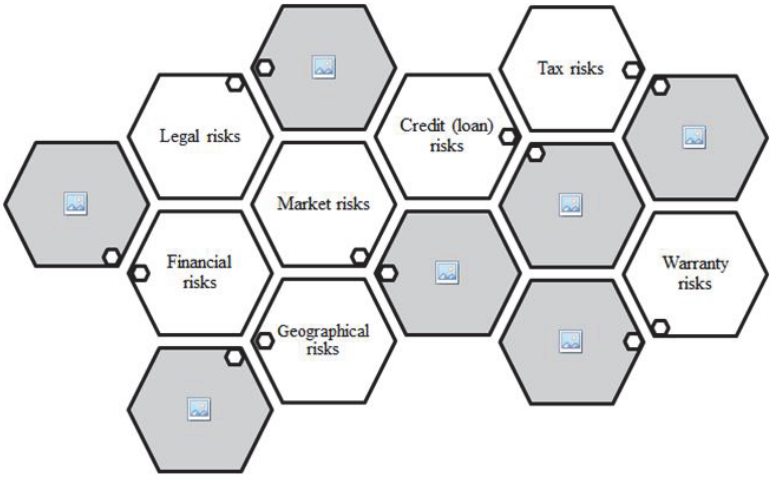

Image 3. Possible risks of economic activity of company

If the company is engaged in foreign trade, the assessment of market risks is very important. Market risks arise from adverse effects of a sharp change in market parameters [8], in particular, is not so much the prices of goods as foreign exchange rates. Moreover, changes in foreign currency exchange rates are not dependent on the company, and an external factor. Evaluation of credit (loan) risks is also important in the event that the company has the dubious contractors and questionable partners. Even despite the fact that in accordance with the legislation of foreign economic activity the director of company must be sure that the principle of repatriation will be executed. So, the payment for export goods will be received in time or imported goods go to Russia in time if the prepayment was made earlier.

Director of company should pay attention to the legal risks at the organization of control of foreign trade transactions. They may be associated with changes in foreign economic activity rules, handling currency, customs and tax laws. All of these affect to value of financial result of operations, resulting in the implementation of foreign trade transactions. Geographical risks are also very important: the interstate and regional risks. Their level largely depends on the political and economic situation of the country in which the Russian company conducts its foreign trade activity.

In our opinion information about key business risks should be disclosed in the financial statements.

The process of the organization and implementation of internal control involves a lot of different procedures. These procedures are aimed at minimizing the risks and thus allow achieving the purpose of the foreign trade activity [9]. If we consider the procedure "documenting" in relation to the internal control of export and import operations in more detail, we can suggest the following. For example, residents of the country are required to prepare the documents: an official message about foreign currency transactions and passport of foreign trade transaction. These documents are documents of foreign trade transactions control and have to be represented to authorized bank of company. Why not use them for the control of foreign trade transactions? It is quite possible, and we recommend you do so. At the same time these two control documents could be viewed as working documents for the implementation of the procedure "documenting". According to the requirements of legislation in the sphere of foreign trade activity the document «passport of foreign trade transaction» has to be formed only on contracts whose value exceeds the equivalent of USD 50,000. However, company's manager may decide that the transaction passport must be formed on any foreign trade agreement, regardless of its value. This decision will allow the company's management for internal control regularly and continuous method.

It should be noted that one of the important tasks of accounting is quality information. It is necessary to submit high quality information in time in order to achieve effective functioning of the company's internal control system. Regular monitoring of the performance of the company, including the analysis of individual trade transactions, is a type of assessment of internal control. It allows management to develop the most effective methods and means for the function of internal controls.

Manager can create a separate service deliberately or seek the assistance of external consultants, including audit firms, for the implementation and organization of the internal control's system. In any case, it must be remembered about

the observing the principle of rationality [10], that is: all the costs of establishing and implementing a system of internal control in the company should be justified and economically feasible [11]. For example, the director of a small business may impose obligations on the controller himself personally in the event that the number of personnel cannot delimit the powers, or reduce the use of the full range of internal control procedures and to pay more attention to those areas of the company, which has the highest risk [12].

3. Unsolved Problems

The process of introducing the company's internal control system must be documented. Unfortunately or fortunately, this question is not quite regulated by the state. In this regard, the head of the economic entity is free to choose and has the ability to set their own rules of documenting [13]. In our opinion, the head of the company has two ways to solve this problem. First way is a following: the special Regulation on the Internal Control System may be formed in the company. The second (alternative) method is: the control functions of personnel may be registered in other working papers, for example in the Policy of accounting, the Regulation on the accounting service or other departments, the List of job descriptions, Collective agreement, Company strategy, the Code of corporate and professional Ethics and other documents.

In this matter, the use of professional judgment of various experts manifested more fully. This again allows you to confirm the fact that reform of accounting and reporting in the Russian Federation is aimed at convergence with International Accounting Standards primarily. And such reform involves not only the harmonization, but also the convergence of accounting systems, which undoubtedly affects the higher quality of information collected in accounting [14, 15]. For example, if harmonization is only the approximation of different accounting systems, that is, involves the application along with the local regulations and international standards, the convergence has a penetrating character. Convergence implies full implementation of new (international) accounting rules in our reality and the complete replacement of local federal standards.

4. Results and Conclusions

Given all of the above, without any doubt, we can say that at the moment the question of development and introduction of system of internal control is one of the most urgent for many companies. We interviewed several experts in the field of accounting and auditing, which have a job for different Russian companies, about the operation of the internal control system on their companies. So based on their responses, we came to the conclusion that many companies are now concerned how to implement internal control. If they are quite clear and understandable to control objects (recall that the objects of control are the facts of economic activity of company and the every type of reporting), control technique and procedures are not clear fully (here is not so simple). In particular, the following questions arise for practicing accountants most often: who among professionals should monitor and control, what are steps and procedures of control, what methods of control may be used, where to find additional funds for the operation of the control system in the company and others.

It is important to note that over the years our country moves to the course of improving accounting. In this regard one of the main objectives of the Government is to create conditions for improving the performance of companies by forming optimal rules and regulations of accounting. For example, currently the draft of new document with recommendations on organization of the internal control system at the enterprise has on the official page of website of the Finance Ministry of Russia. This undoubtedly is a positive thing in the way of further reform and improvement of accounting system and also serves as a kind of means of practicing accountants and managers of Russian companies.

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Problems of Implementation of Management Accounting Automation in Russia

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Abstract

The paper considers practical issues of management accounting recording by domestic enterprise. Possibilities and reasonable steps for major implementation of management accounting on the basis of its automation are investigated. Actual theoretical and practical works on management accounting consider necessity of management accounting recording by domestic enterprise, highlighting fundamentals of accounting information building. Efficient economic entity management is impossible without management accounting, automation of which enables facilitation of output and making reasonable policy decisions even with minimal functions set.

Keywords: *management accounting, management accounting automation, efficiency of financial and operational activities*

1. Introduction

Despite antiquity of management accounting occurrence in Russia, it has still not gained widespread currency. Such authors as V. B. Iveshkevitch, V. F. Paliy, A. D. Sheremet were the first developers of domestic management accounting.

As opposed to foreign practices where management accounting has the major role [1], domestic practice focuses on maintenance of financial and fiscal accounting[5].

How to increase the number of users of management accounting?

In this article we will try to gain insight into conditions interfering with such a positive type of accounting in the context of efficient financial and operational activities recording as management accounting.

2. Theory

As a result of modern works analysis[9], we can conclude that implementation of management accounting is possible and necessary for all businesses and organizations[8]. But currently the main users are large and extra large businesses [6], but at the same time, no one denies need for management accounting in small organizations. This way, for example, economic entities can, by using proper formed management accounting, validate reasonability of order placing [9] and profit margin determination of different segments (type of products, activities, customers) and making decisions on price determination[10], assortment policy (manufacturing and sales organizations), or key directions of development formation (including service entities comprising tertiary institutions) [3, 11].

It is some authors' opinion (V. B. Ivashkevitch, A. U. Sokolov) that the main problem of setting management accounting is high cost associated with necessity of engagement of top-ranked subject-matter experts, that requires considerable financial expenses and is obviously the main limiting factor of widespread development of this type of accounting in our country[4].

The only one cure for such a situation may be development of automated consistent software, considering peculiar properties of different industries, but being inexpensive for developers and users, that makes it possible to expand application and areas of use of management accounting methods as part of formation and evaluation of management information system indexes.

At the present day there is a number of software products ("Management Accounting" by "7Soft", "Management Accounting" by "First BIT" etc.), the use of which requires enrichment experiences that often accountants are lack for. In addition to this, introduction and using of this software cost may be hundreds of thousands rubles, that is enormous for the majority of small and micro-enterprises.

Certainly, reduction to practice of management accounting will cause reaction of accountants (training, retraining etc.) and administration (salary increase, hiring new employees), but ultimately will help improving economic skills of all

participants. That will be useful for all market participants, including government [2], by increasing efficiency of financial and operational activities and thus enhancing of fiscal payments, capital turnover and therefore decline in inflation, as opposed to current plans and sometimes real bills on burden of taxation for businesses and organizations [7].

The use of 1:C-based software as one of the most widely replicated software on the domestic market by way of simplification of management accounting implementation is possible, with its user-defined additional features set.

It is possible to integrate an additional tab for generating management accounting data and statutory accounting-based reports, with accounting being the basis of software product in most cases. This procedure will require some adjustments in accounting policy, generated for accounting purposes.

Using accounting programs that are "usual" for accountants enables reducing financial expenses of organizations and time expenditure of accountants for management accounting implementation and recording through a usual interface.

3. Results

At the present day, state fiscal policy, deficiency of government programs on development of the management accounting (unlike financial accounting, management accounting is not regulated, thus necessity of its maintenance is at management discretion) forbids acceleration of economic entities' management consciousness of demand in practical integration of management accounting.

Besides, modern educational programs for accountants are focused on formation of accounting program operator profession by means of increase in number of hours for accounting automation, together with decrease in number of hours allowed for classes on accounting (financial accounting) and management accounting. As the result, it may lead to easy substitution of experts (accountants and executives) by operators coming inexpensive significantly for businesses for payment, but at the same time, incapable of program error checking and control.

4. Conclusions

As can be seen from the above, we emphasize that it is essential to get state support for management accounting as profession and software engineers in a part of creating programs on management accounting automation and market promotion, and with an entities' management proper treatment of management accounting recording and automation.

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The System of Social Support and Social Services in the Republic of Tatarstan

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Abstract

This article analyzes the social services provided to certain categories of citizens of the Republic of Tatarstan aimed to improve the level and quality of their life, to increase their income through the system of social support.

Keywords: *system of social services; recipients of services; social support; social services; accessible environment.*

Social support to citizens is one of the sources to increase the income of the population. The Republic of Tatarstan implements social support of citizens in accordance to the federal laws about veterans, social protection of disabled people in the Russian Federation, targeted social support of the population in the Republic of Tatarstan and other normative legal acts of the Russian Federation and the Republic of Tatarstan.

Social support is provided by categorical principle (war and labor veterans, victims of political repression, rehabilitated and awarded citizens of the Republic of Tatarstan; soldiers and their families, disabled people, orphans, retired people) and address principle (families with children whose average per capita income is below the subsistence minimum established in the Republic of Tatarstan; citizens whose expenses for housing and communal services exceed an amount corresponding to the maximum allowable fraction of the cost of citizens to pay for utility services in total family income, according to the regional standards) principles.

Recipients of social support in the Republic of Tatarstan are veterans of labor; rear workers; rehabilitated citizens who suffered from political repression; retired people; children from large families; orphans, children left without parental care; recipients of subsidies for housing and utility services; awarded citizens; child support for families with incomes below the poverty level; federal benefit recipients; certain categories of citizens who work and live in rural areas; conscripts who receive a lump sum benefit for a birth of a child; conscripts who receive monthly benefit for the birth of a child; recipients of the compensation on parental preschools fee; citizens who receive care allowance of up to 1.5 years child; citizens who receive targeted subsidies "Tatteplosbyt."

The total amount of benefits is more than $11 billion rubles per year.

The total number of recipients of state social support provided through the social security authorities in August 1st, 2014 was 1.58 million people, 350 thousand of them assigned to the federal level of responsibility.

The population gets social support for housing and communal services. The government spent 937.2 million rubles on subsidies for housing services for 7 months in 2014. 309,040 people from 140,301 families received this subsidy. Databases for payments for address housing and utility subsidies were formed In 2003, they include 1,218,176 households; 768.6 thousand beneficiaries; 425, 7 thousand recipients of grants et al.

The subsidies for the purchase of property are still being provided. 18 092 of 18 529 veterans assigned as in need of better housing conditions received this subsidy, including 233 veterans who received it in 2014.

Social support system established in the republic is constantly being improved by introducing additional ways of social support of certain categories of citizens.

Well-timed and reliable information plays huge role in proper organization of adequate social support of the population. The number of objective factors emerged in the industry of social protection of the Republic of Tatarstan urgently requires changes in the information processing technology, namely:

– the need to reduce the time spent on information processing while it was increasing;

- high intensity of the updating regulatory information;

- improvement of accounting systems of most vulnerable segments of the population (targeted protection);
- the need for diverse, differentiated information and analytical base;
- monitoring, targeting of money spent on social support;
- analysis of socio-economic status and dynamics;
- development of the State Target Programs;
- efficient execution of new complex functions by the social protection of the population;
- ever-increasing requirements for employees of social protection in their professionalism, productivity, quality of work;
- the need to reduce staff turnover;
- the need to raise the prestige of the profession.

The databank of the targeted social protection in the Republic of Tatarstan includes the following information: pensions; disability; the amount of monthly payments; the presence of the federal categories; the amount of charges for public utility services; tariffs, regulations.

Functioning system allows you to interact with a number of ministries and agencies, service providers through the application of modern information technology. The number of participants of the interaction increases every year. Today more than 700 organizations are involved in the information exchange, including territorial social welfare agencies, suppliers of housing and communal services (TTG, Tatenergo, HOA, HBC, Vodokanal), the Department of Pension Fund of the Russian Federation in the Republic of Tatarstan, Department of Social Insurance Fund of the Russian Federation in the Republic of Tatarstan, Mandatory Health Insurance Fund Ministry of Health of Tatarstan, Ministry of Healthcare of the Republic of Tatarstan, the Civil Registry Office, branches of the Rosreestr, employment centers, preschools, and other lending institutions.

The suppliers of Rehabilitation equipment, guardianship authorities, Office of Education in municipalities of the Republic of Tatarstan, educational institutions of primary and secondary vocational education, service delivery of social benefits to citizens at home became the new participants in the information process during the last year.

The involvement of an increasing number of organizations and agencies in information technology enabled to organize optimally the process of providing social support, to eliminate the need for immediate treatment of the citizens in the organization, to reduce the number of multiple circulations of citizens to the social welfare agencies, to determine timely and reasonably the size of welfare payments[1].

The mechanism of interaction of territorial agencies of social protection with the banks in terms of population receiving applications for the appointment of the individual social support (monthly travel payments for retired people, subsidies, benefits for retired people to pay for utility service) was introduced.

Now, if citizen opens a bank account, he has the ability to simultaneously file an application for the appointment of social support. Embedded interaction mechanism reduces the number of complaints of citizens, thus saving their time and reducing the order.

Therefore, social protection institutions, firstly, should actively cooperate with banks, thereby reducing the number of potential visitors to institutions of social protection; secondly, they need to intensify advocacy and outreach work with the population.

The needs of people, life changes require the introduction of additional ways of social support to certain categories of citizens[2].

Additional benefit to families with children attending pre-school educational institutions was introduced on the 1st of January, 2014. Additional compensation of the parental fees for supervision and care for the child in preschool educational institutions was set at the municipal level. Only parents whose average income is less than 20 000 rubles per month can receive this benefit. As of 01.08.2014 this compensation was paid to 62,959 children.

In the framework of the national program for children in difficult situations 4,840 vouchers in health camps and 4,550 vouchers to spa facilities were purchased in 2014.

For effective and quality services to disabled people the interagency agreement on information exchange between social ministries was signed. The mechanism for automated distribution of vouchers for spa treatment for recipients with

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health problems was introduced in 2014 to eliminate corruption. Development of the program for automated distribution of vouchers to retired people and employees of public institutions of the Republic of Tatarstan is scheduled for 2015.

Current condition of social services system in the Republic of Tatarstan is characterized by positive changes in the management of the quality of public social services. The quality standards for the provision of public services were adopted in the Republic of Tatarstan. These standards establish uniform requirements for the procedure, the conditions and the quality of provision of social services in the Republic of Tatarstan. It determined the possibility of attracting non-profit and commercial organizations to the public provision of social services. Currently, the state order for the provision of social services to the citizens of the Republic of Tatarstan by NGOs is located in three cities: Nizhnekamsk, Naberezhnye Chelny, Kazan.

Since 2013, the Ministry of Labor, Employment and Social Protection of the Republic of Tatarstan has introduced the electronic-queue in the customer service department of social protection of the city of Kazan and the major cities of the country. Pre-registration for the current day and the next seven days in the terminal electronic-queue was implemented.

The introduction of the registered coupons in terminals in electronic-queue is planned. It is possible to make an appointment by phone.

Another one innovation is an organization of citizens alert by SMS, or by other means, such as by e-mail. Today, such a mechanism is already being used to inform people with disabilities about the terms of their technical rehabilitation equipment.

133 public institutions function in the system of social services for the population of the Republic of Tatarstan. The level of social guarantees of security of the population of the Republic of Tatarstan in nursing home for elderly and disabled people, in orphanages, in boarding schools for mentally retarded children, institutions for minors, social service centers, centers of social assistance to families and children is 100%, in neuropsychiatric boarding it is 88%, in social adaptation center for homeless it is 81%, in rehabilitation centers for disabled people it is 40%, in rehabilitation centers for children and youth with disabilities it is 88%.

In the first half of 2014, about 150 thousand people received the services in the social service institutions. The veterans of The Great Patriotic War (GPW) get special treatment. In the first half of 2014 the department of domestic social service served 4143 GPW veterans. 236 GPW veterans live in the institutions of social service.

The conditions for the effective functioning of the interagency system working with families at social risk, for the prevention of child and family trouble, for the prevention of child abandonment, neglect and juvenile delinquency were created in the Tatarstan Republic. The state system of prevention of child neglect and juvenile delinquency, which is based on close interagency cooperation between enforcement agencies and public healthcare, education agencies, commissions for minors and protection of their rights, the guardianship authorities, other governmental and non-governmental organizations was created and is still functioning.

The key objectives and activities in the field of protection of children's rights are defined in the Republican strategy of Action for Children for 2013-2017. The strategy involves the organization of work for the early detection of family troubles and support to families in difficult situations, prevention of child abandonment, access to quality education, cultural development, and information security of the younger generation, promotion of healthy lifestyles, creating a system of protecting and promoting the rights and interests of children.

As a result of work carried out in the Republic of Tatarstan, we can see a decrease in the proportion of street children in the child population of the Republic of Tatarstan: 2010 — 0.78%, 2011 — 0.66%, 2012 — 0.59%, 2013 — 0.41%, the 1st half of 2014 — 0.39%.

In recent years, the number of families who are on the interagency patronage is reducing.

Currently the system of informing citizens about the purpose, the justified suspension of welfare payments by sending them text messages or other selected way is being tested now. Thus, timely information to the public would eliminate the additional treatment of citizens in social welfare agencies.

Currently, the Ministry of Information and Communications, the Ministry of Labor, Employment and Social Protection and the Ministry of Healthcare implemented in full integration of automated information system called "targeted social assistance" using the automated information system called "Republican Clinical Oncology Center." It allows people to assign compensation for travel expenses for transport to the place of treatment to citizens suffering from cancer, during the period of the application without presenting their certificates on passage of the treatment at the National Clinical Oncology Center.

At the same time it did not happen with the population suffering from chronic renal failure. The reasons for this are not only technical, but also organizational: the most medical organizations engaged in outpatient treatment by hemodialysis are commercial. They refused to participate in the exchange. Perhaps it would be appropriate to

recommend colleagues from the Ministry of Health to mandate suppliers to provide information in electronic form before signing contracts.

Authorities are still working on the level and quality of life of disabled people.

Over the past twenty years the number of children with disabilities in the Russian Federation significantly increased and passed for half a million. In Russia, in 1995 the number of disabled children was 453.7 thousand people, in 2006 it increased to 557 thousand people, in 2013 it was 568,000 people. It is predicted that this number will exceed one million in the next ten years. According to WHO the number of children with disabilities from childhood is 2-3% of the total population in developed countries[3]. In our country, this percentage is slightly lower, but this does not mean that there are less children with disabilities. According to various subjective and objective reasons, they are not all on the account. In Tatarstan the category of "child with a disability" is set in 2013 for 13,987 people.

320,800 people classified as disabled live in the Republic of Tatarstan, 14.500 of them are children, 67000 of them are employed. From year to year the number of people with disabilities is not significantly reduced.

Within the framework of the state program called "Promotion of Employment of the Republic of Tatarstan for 2014-2020" the subroutine called “Implementation of measures to promote employment and the regulation of labor migration for 2014-2020” was developed, one of its tasks is to promote employment of parents raising children with disabilities and parents of many children.

Employment assistance to parents raising children with disabilities, and parents of many children was formed in previous years. So, due to co-financing from the federal budget, the conditions for employment of 292 parents raising children with disabilities were created.

Basically, jobs were created in the garment industry, security systems, advertising industry, in the system of housing and communal services, in the provision of public services (hair salons, photocopying equipment repair, sewing and mending, etc.).

Within the framework of the state program "Promotion of Employment of the Republic of Tatarstan for 2014-2020" it is planned to stimulate the employment of women with young children and children with disabilities, through the establishment (or providing equipment) of special jobs. The program is designed for 7 years, and for each year of the program it is planned to promote the employment of parents with children with disabilities and parents of many children in the amount of 29 people in Tatarstan.

The amount of funds to promote the employment of parents with disabled children, and parents of many children for 2014-2020, will be 10 150.0 thousand rubles at the rate of 1 450.0 thousand rubles per year. Thus, the reimbursement of costs to the employer to create a workplace for parents with disabled children and parents of many children will be 50.0 thousand rubles.

The system of providing social support to disabled people, of creating a barrier-free environment conditions for disabled people and other people with limited mobility is clearly built and worked out. In order to implement the state policy towards disabled people the Concept of development of disability prevention and rehabilitation of disabled people was adopted in the Republic of Tatarstan.

In 2011, the Republic of Tatarstan became a participant of the two-year pilot project to create the conditions of availability. The work was carried out in all 45 municipalities and urban districts of the Republic, in which 178 objects were adapted. The municipal program "Accessible Environment" was developed in every region of the Republic. This program designed: the working groups to conduct certification of the objects according to their accessibility; the expert groups of the representatives of public organizations of disabled people who received certificates; councils for the disabled people under the heads of municipalities.

In the framework of the "Accessible Environment" program the software for creating and developing a data bank and card availability of social, transport and engineering infrastructure for people with limited mobility was developed and launched into production. Also The Accessibility Map with all the social, administrative, cultural and other objects on it was created for disabled people of different groups. The certification of the social infrastructure in all municipalities of the republic is being done now. On the state of 08/28/2014 there is information on the 3,983 objects availability on the map. Since 06/25/2014 the ability to track usage statistics of the Republican interactive map availability of facilities for people with limited mobility is installed (293 users during the period from 25/06/2014 to 08/29/2014).

Web pages "Accessible Environment" are opened on the official websites of ministries the Republic of Tatarstan where users can find regulatory framework, guidelines on the formation of the available infrastructure, developed by the Ministry of Labor, Employment and Social Protection of the Republic of Tatarstan, the information about the availability of subordinate objects, etc.

[3] *Children with disabilities - children with disabilities in 2014. World Health Organization: [electronic resource] URL: http://www.who.int/ru.*

In 2014, the adaptation is performed on 131 objects, including 33 health care facilities; 46 objects of social protection and employment; 21 cultural objects; 18 objects of physical culture and sports; in the building of the Ministry of Construction, Architecture and Housing and Communal Services of the Republic of Tatarstan; 12 institutions of vocational education; pedestrian crossings in 16 municipalities.

Under an agreement between the Government of the Republic of Tatarstan and the Ministry of Education and Science of the Russian Federation the adaptation of 104 educational institutions (including 15 correctional schools) will be held in 2014.

Within the framework of the project "Open Tatarstan" on the Website of state and municipal services, the project "People's control" is being implemented. The "Accessible Environment" section is created there allowing the user to leave a notice on availability of an object and to evaluate the quality of decision making by state or municipal authorities.

Thus, the system of social support and social services in the Republic of Tatarstan is constantly updated with new services with improved quality, and continued stability in service provision. To the satisfaction of the population it may be noted that every year brings new social benefits. This in turn leads to a stable an average increase of 3.6%. of the number of recipients: The Republic Bank for Social Security contains information about 3.5 million people and almost all households in the Republic (1,325,616). 1.6 million people receive more than 70 kinds of public services provided by the social security monthly.

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Contemporary Issues of Russian Population's Health Economics

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Abstract

Theory and practice of public health promotion in today's Russia are considered in the article which is based on substitution of healthcare service economics for public health economics. Herewith various approaches to health economics are analyzed: human capital theory, human development theory, public health care concept and models of public health. Special attention is paid to determining risk factors of public health in the Russian Federation and policy of a healthy lifestyle. In particular, it is defined in a new Government program of the Russian Federation "Public health services development" for 2013-2020. Students' physical education and development and expansion of the Russian Federation cities' participation in the "Healthy cities" project carried out by the European regional bureau of the World Health Organization (WHO) are matters of great importance.

Keywords: *health economics, health capital, human development, health protection, public health, risk factors, healthy lifestyle, physical activity, healthy cities.*

The aim of the paper is the comparative analysis of modern health economics concepts for development of an effective policy of public health promotion. It is conducted on the basis of limited resources distribution among priority areas to reduce damage from significant life and health risk factors for the Russian population.

The outline of the paper includes the analysis of health capital concepts, human development, public health care, models of public health, internal and external risk factors to life and health of the Russian Federation population, definition of the contribution of major risk factors to the general death rate in the country, short analysis of the Russian Federation Government program on "Public health services development" for 2013-2020, in particular its sub-programs aimed at diseases prevention and formation of a healthy lifestyle. The analysis of similar programs development and implementation in the Russian Federation regions, in particular, in the Vologda region is given here. In the final part of the article the author's recommendations on the ways of healthy lifestyle formation in educational institutions of all levels are given. It is done on the basis of promoting physical education and development system, facilitating decrease in disease level and young generation health promotion. Besides, active participation of Russian cities in the project "Healthy cities" of the European regional bureau of the WHO is recommended.

The research methodology involves comparative analysis of various health economics concepts from the point of view of their applicability for development of effective strategy to promote health of the Russian population under limited resources and constant increase in demand for medical aid among the population; revealing the most effective strategy supported by comprehensive preventive approach aimed at reducing life and health risk factors for the population of Russia in the conditions of disability and death rate prevalence, chronic non-contagious diseases and external controllable reasons in its structure.

The obtained data and conclusions**:** the analysis has shown the necessity to change the policy of population health protection and promotion in the Russian Federation – from healthcare service economics (medical aid) to public health economics based on modern models of public health and on revealing major internal and external risk factors influencing life and health of the country's population. As a result a complex strategy is to be developed; and on its basis – the state and municipal programs of public health services development and public health promotion at various levels of management. The programs should include set of measures generating formation of a healthy lifestyle, in particular, in educational institutions of all levels with facilitation of students' physical education and development. Taken that urban population prevails in the Russian Federation, active participation of the Russian cities in the effective WHO project "Healthy cities" is of significant importance.

Practical and social application: the public health economics concept may become the basic one, taking into account social and economic damage from the major risk factors. The concept could be considered as a basis for prioritizing strategies and distributing resources for public health care areas and integrated programs of healthy lifestyle formation in the country at regional and local levels. Recommendations on formation of students' healthy lifestyle can be implemented by the Ministry of Education and Science of the Russian Federation and educational bodies of consistent entities of the Russian Federation.

In the article the author's approach is presented to interpretation of public health economics concept in view of implementing both – traditional and comparatively new risk factors for Russia (crisis of spirituality of the nation, external risk factors), which should be considered when developing strategies and policies for public health protection and promotion. The author's suggestion on introduction of courses on a healthy lifestyle in educational institutions of the Russian Federation — a basic one – in the comprehensive schools, an advanced one – at the universities, is of great value for promoting operational programs on formation of young generation's healthy lifestyle, in particular, with regard to sports, tourism, and cultural life.

At the heart of the effective strategy formation for health promotion of the population of Russia is a transition from healthcare economics (health services) to public health economics reflecting an integrated approach to issues of optimum allocation of limited economic resources on priority orientations of health promotion of the country's population.

The performed analysis of contemporary health economics concepts and models of public health shows that there exist various representations.

The theory of the human capital which includes the health capital concept reflects an approach to health economics from the point of view of human capital quality improvement as the major factor of modern knowledge economics and innovations development. It plays a key role in the structure of modern capital and social wealth, especially in the developed countries. For modern economics of Russia the health capital concept has a special value taking into account high contagious and death rate of the country's population, especially of men at active working age. It reduces scales, quality and efficiency of the human capital, interferes with steady economic growth, national economy modernization and reduces its competitiveness in the world market. About 40 percent of all death ratio of the population of Russia is accounted for the persons who have not reached age of 60. The given fact calls for acceptance of a set of measures at all levels of management on the basis of intersectoral interaction for maintenance and increase of the operating and potential manpower health capital of Russian national economy.

The concept of human development reflects another approach to public health as it is aimed at development of human potential of all citizens as an ultimate objective of economic development. It includes necessity of health preservation and promotion for both - abled and disabled citizens irrespective of their contribution to national economy development. Increase in expected life expectancy including a healthy life of all age groups of the population is the major criterion for development of the country' human potential and for expansion of freedom in choosing various forms of participation of all the citizens in public, political, spiritual and economic development of the society. The Russian Federation comes 66th in the rating – 2011 on a free index of human development among 187 countries of the world. Therewith, it occupied the 120th place (68,8 years) on expected life expectancy (ELE), according to the rating. It testifies the non-efficient use of economic resources of the country aimed at promotion of the population health[1]. By the end of 2011 average life expectancy in the country has raised, according to Ministry of Health of Russia, to 70,3 years.

Modern concepts of health protection and public health models are to be given particular emphasis in formation of an effective strategy. The first ones are based on the system approach to public health care of the country taking into account all major medical and non-medical factors influencing the population's health positively or negatively, with a support on social and medical prevention of disease, physical disability and death rate. Herewith, the major feature of modern epidemiological transition is prevalence of chronic non-contagious diseases (cardiovascular, oncologic ones), and also external reasons for mortality (murder, suicide, poisoning and traumas) among the essential reasons for physical disability and death rate in the post-socialist countries, including Russia. Population ageing aggravates an issue of attaching particular importance to chronic non-contagious diseases in the country.

The public health models developed by Russian and foreign scientists experts of the WHO allow to reveal the major factors defining public health potential and to estimate the contribution of each of them in public health. Level and way of life of the population, environment conditions, heredity, and also medical aid level are key factors of public health. Therewith, the first factor influences public health at 50 % and more on the average, heredity and ecology make 15-20 %, and medical aid share is 10-15 %. The given indicators allow to have approximate reference points for more rational

[1] *The report on human development 2011. The Sustainable development and equality of possibilities: the best future for all / the Lane with English; ПРООН. М: All World, 2011.*

distribution of the limited economic resources allocated for public health care on priority areas of public health promotion. Thus, the ratio of their contribution to public health should take into account social and economic, demographic and ecological features of a particular country and its regions. For example, in mono-industrial cities of the Russian Federation value of the ecological factor (emissions from industrial city-forming enterprises) is considerably higher, that defines a priority role of resources allocation on implementation of effective ecological programs in combination with other areas of health protection of their population.

Each of the above-mentioned factors, on the one hand, can have positive influence on public health conditions (high level and healthy way of life, ecologically clean environment, favorable heredity, accessible and qualitative health services) that is the factors promoting public health. On the other hand, each of them can be a risk factor – the raised probability of disease, temporary disability, physical disability and death rate (bad habits, drugs consumption, improper food, sedentary lifestyle, environmental pollution, harmful working conditions, low incomes, unfavorable heredity, low availability and quality of health services). High risks cause a considerable damage to public health (conduct to death rate growth, reduce life expectancy, including shortening of healthy life period), reduce labour potential of economy, lead to decrease in volume of manufacture of gross national product and growth of expenses on treatment and rehabilitation of patients, on payment of grants and pensions, to considerable economic losses for the country. By estimations of the experts from the Ministry of Health of the Russian Federation, the cumulative economic damage makes about 1 trn. rubles a year only from circulatory diseases.

In the research of scientists conducted in the years of market reforms in the post-socialist countries, including Russia, (Doctor of Medicine, prof. I.A.Gundarov) such a risk factor was revealed, which determined a public health condition, as crisis of spirituality of the nation[2], caused by loss of traditional spiritually-moral values and reference points. It happens under the conditions of system transformational social and economic crisis and in the absence of new spiritually-moral reference points in the society with liberal market values. Spirituality crisis manifests itself in growth of death rate of the population from murders and suicides that demands consideration of the given risk factor in modern public health models in Russia and also in the state policy concerning education, culture and public health care.

At formation of effective strategy of public health care of the Russian Federation and other countries, it is necessary to consider *external risk factors* also which are of great importance in the age of globalization and competition aggravation in the world markets, accompanied by international terrorism growth and political-military conflicts. External risks for life and health of the population of Russia increase in these conditions, in particular, under openness of the national economy and its dependence on import of food, alcoholic and tobacco production. Besides, drugs deliveries (heroin, etc.) increase to the Russian Federation from the territories of the adjacent states, non-conventional moral and cultural values are spread through the Internet, as well as health destructive stereotypes of behavior. In general external risk factors destructively influence mind, culture and health of the country's population, promote growth of disease, criminality and death rate of its citizens. External public health risk factors should be objects of special attention for the state authorities and be considered in the strategy and policy of public health care in each country.

The integrated approach to determining major risk factors and policy of decrease in the level of corresponding risks for life and health of the population of the Russian Federation is reflected in the approved by the Government of the Russian Federation on December 24th, 2012 Government program of the Russian Federation "Public health services development" for 2013-2020. It is done with the use of methods of social and medical prevention. The state program includes 11 subprograms, in particular "Disease prevention and formation of a healthy lifestyle. Development of primary medical care". It is planned, that ultimate results of the state program implementation will be the increase in average life expectancy of the population of the Russian Federation to 74,3 years, the decrease in the major risk factors and death rate (Table 1).

Table 1. Prevalence of risk factors among the adult population of Russia, 2011-2020 (%)

Prevalence of risk factors	2011	2015	2020
Smoking, %	39,1	35,2	25,4
Consumption of the salt, %	50	47	40
Small consumption of vegetables and fruit, %	40	38	36
Arterial hypertension, %	38	35,7	30
High blood cholesterol, %	51,0	47,1	40,5

Source: Government program of the Russian Federation "Public health services development" for 2013-2020. The Collegium of the Ministry of health of Russia on September 28th, 2012. % - the percentage of the adult population.

[2] *I.A.Gundarov Demographic accident in Russia: the reasons and overcoming ways. – in symposium 'Why Russian die out'. Moscow, 2004.*

Herewith it is stated in the program that subprograms on non-contagious diseases prevention and formation of a healthy lifestyle basics (complex ones and by certain directions) are financed in 60 subjects of the Russian Federation. Therefrom, 15 consistent entities of the Russian Federation have complex programs and 10 of them are financed independently. Thus, an essential issue for implementation of the present subprogram is active participation of all regions of the country in developing of corresponding programs. Taking into account that a number of regional budgets are subsidized the subprogram's implementation demands development of state-private partnership. When adjusting the program it is also expedient to draw on experience in development and implementation of the Long-term target program "Formation of population healthy lifestyle in the Vologda region for 2009-2010".

Work intensification in this direction is to become a significant area for formation of a healthy lifestyle among children and young people in educational institutions of all levels. It seems reasonable to introduce new courses: "Basic concepts of healthy lifestyle" for pupils of comprehensive schools and secondary vocational educational institutions and "Healthy lifestyle – a basis for growth of welfare and family well-being" - for students of higher educational institutions. 3Besides, an important tool for formation and development of a healthy lifestyle of students is the organization of system work on physical education, training and sports in educational institutions of comprehensive, professional and additional education. According to the Ministry of Sports of the Russian Federation, less than 50 % of pupils and students are regularly engaged in physical training and sports (in 2010 – 45 %). Herewith the growth of diseases among children and teenagers has been observed in recent years, in particular, of respiratory apparatus, locomotor and excitatory system. According to profound prophylactic medical examination of teenagers in 83 regions of the Russian Federations in 2011, the 1st health group makes 16,4 % and the 2nd group – 54,3 % of them. In accordance with findings of prof. N.D.Graevsky, sick-rate of students-sportsmen in comparison to those who attend only physical training course according to the curriculum is 1,5 times lower; cardiovascular diseases rate – 3,8 times, liver diseases – 2,75, flu – 2,1, and an average number of disability days – 1,8 times lower[3]. The research findings are supported by the WHO experts investigating influence of physical activity on health (decrease in risk of overweight, development of ischemic heart disease, a stroke, diabetes of II type, colorectal and breast cancer, depression, improvement in locomotor system and psychological status)[4]. It is necessary to develop, apart from physical education lessons, out-of-school and other additional activities on physical training and sports: sports clubs at schools, higher education institutions and at place of residence, sports leagues, subsidy membership at sports facilities, sports competitions for students of various levels, children's and youth sports schools. In 2011, according to the Federal State Statistics Service data, the total number of sports clubs in the Russian Federation made 20 thousand with 2,6 million people engaged there. Therewith, it is necessary to upgrade existing sports facilities and build the new ones, provide them with up-to-date sports equipment and outfit, using private-public partnership tools. Physically active way of life is an important component of formation a healthy lifestyle of young generations of the Russian citizens.

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Effect of Environmental-Economic Imbalances at Sustainable Development of the Russian Federation

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Abstract

The article ecological-economic system is viewed through the prism of the equilibrium and non-equilibrium situation, we study the main factors determining the position of the non-equilibrium of the world economy and the national economy, the results of Russia's economic growth is adjusted with the use of the index of net savings. In addition, the article proves that one of the reasons for the negative phenomena in ecological-economic sphere is the imperfection used macroeconomic indicators such as GDP and GNP.

Keywords: *ecological-economic system, environmental-economic imbalances, ecological and economic crisis, factors of disequilibrium, natural environment, genuine savings, nature of economic growth.*

1. Introduction

Socio-economic development of the Russian Federation in the last decade was characterized by a number of positive changes: in a short time managed to recover from the consequences of default, to move from recession to growth of production, improve the living standards of the population, as well as begin to address a number of pressing social problems. At the same time, economic growth was largely due to external economic conditions, high world prices for hydrocarbons, influx of foreign loans at relatively low interest rates. Markedly exacerbated problems in the interaction between society and the natural environment. The threat of serious environmental disasters has become one of the key problems of socio-economic development. Unity of economic, social and environmental issues necessitates radical modernization and sustained, deep institutional reforms of the economic system of the country, aimed at creating a diversified, competitive and socially-oriented post-industrial economy, capable of sustainable economic and social development.

2. Method

In the process of writing articles used scientific methods of knowledge: scientific abstraction, induction and deduction, historical and logical methods, analysis and synthesis, as well as the methods of the system, the structural-functional and economic and statistical analysis.

3. Results

The ecological-economic system, which is made of a complex and contradictory set of elements, connections, and relationships, is in dynamic interaction, alternately taking an equilibrium and non-equilibrium state. Under the ecological and economic equilibrium we understand the position of strength and stability inherent in the system of relationships, a balance between economic, social, and environmental spheres. There is a certain optimum balance between economic potential and quality of life of the society, compliance with environmental practices, and rational criteria for the development and rehabilitation of the environment with adequate support of production of natural resources. The ecological-economic system is influenced by different factors in the external and internal environment, so the equilibrium state is relative, temporary, and transitory. The main factor that disturbs the equilibrium is human intervention in the

natural environment and their production activities. Resist the tendency to this influence; it tends to return the ecological-economic system to the equilibrium state in the new and changed conditions. This - the factors that ensure the optimum position of the environmental protection regime of human activity. The equilibrium state seems ideal and so difficult to attain; more frequent is the non-equilibrium position. As a result, quantitative accumulation of negative ecological and economic changes leads to a transition to a qualitatively new state, defined as non-equilibrium. If the measure of human intervention in the environment passes a critical threshold and contradictions reach their extreme severity, instability develops into a crisis. Consider the main reasons related to environmental and economic disequilibrium; among them - population growth, increased consumption of natural resources, and increased production. The world population has passed at the beginning of the XXI century 7 billion and continues to grow [2]. However, the distribution of the population and changes in its population differ by region. The most difficult situation is in developing countries, where growth is larger than in developed countries, where, in the second half of the twentieth century, growth stopped, and then began to decline. Population growth, on the one hand, aggravates social problems, and on the other is pushing to further enhance economic growth with increasing environmental burden. According to experts, population growth of 1% must comply with GDP growth of 2% in order to maintain the current standard of living. Development of the world economy, despite the achievements of scientific and technological progress, is accompanied by an ever-increasing consumption of natural resources. More than 185 billion tons of coal and 45-50 billion tons of iron ore were extracted over the last hundred years, with 1960-2000 accounting for more than half [5]. The consumption of other minerals, especially non-ferrous and alloy metals, increased by 3-5 times for the same period, and the raw materials for fertilizer production by 3.5 times. It is expected that in the next 50 years, the world consumption of oil will increase by approximately a factor of 2, natural gas - 3, iron ore - 1.5, primary aluminum - 2, copper - 1.5, Ni – 2.7, zinc - 1.3, and other minerals - 2.2-3.5 times [4].

Over the past half century as a result of economic activity about 2 million hectares of land or 23% of all arable and pasture land, forest, and wetlands - were under Verger degradation. The forests of the planet are also rapidly reducing, with 20% of the rainforest destroyed, which was accompanied by the disappearance of many species. One of the critical factors that determine the level of air pollution and the general level of environmental threats is growing production and consumption. Developed countries are making the greatest contribution here. If the average world consumption of energy per capita today was 2701 kWh, the OECD countries would contribute- 8795 kWh, while in developing countries - only 1221 kWh would be used [8].

Russia remains in environmental-economic imbalance, despite the decline in the population of the country and reduction in the volume of social production in its 90 years. The fact is that domestic industry is concentrated mainly in areas where the environment does not meet environmental requirements and is dangerous to human health. Apparently, in these areas production will continue to be concentrated, and the labor force will increase. Therefore, reducing the economic burden on the environment is important for us. Environmental troubles in our country is evidenced by many facts. In the ranking of environmentally friendly countries, Russia in 2012 took only 106th place, with 50 to 70% of its residents living in ecologically unfavorable conditions, breathing polluted air, and drinking low-quality drinking water, only 1% of which corresponds to world standards [1]. The country has accumulated nearly one billion tons of waste in hazard class 1 and 2, including radioactive waste, and about 10 billion tons of 3rd to 4th grades. The costs of remediation in terms of financing is comparable to the cost of modernizing the army until 2020 - 20 trillion rubles [9].

Russian oil companies officially declare production losses (leakage) of oil production, transport, and processing of 1% of their total. Given that the annual oil production in the country exceeds 500 million tons, they lost 5 million tons annually, and the volume of combusted gas was comparable with the volume of natural gas exported from Russia to Europe**.** The metallurgical, chemical, energy, pulp and paper industries, etc., also have an extremely negative impact on the environment. Another acute problem is the high level of anthropogenic emissions of greenhouse gases in the environment. According to the national inventory report, anthropogenic emissions of total greenhouse gas emissions in Russia amounted to 66% of the 1990 level [3]. This decrease is due to a deep decline in production in the country. However, the tendency to reduce pollution of the environment increased in the 2000s after the resumption of economic growth. Air pollution from stationary sources and vehicles increased, and the volume of industrial waste after 2005 increased by 2 times. First place in the release of greenhouse gases belongs to carbon dioxide (CO2) with 72% of total emissions, the source of which is mainly the energy sector - the burning of fossil fuels. In second place was methane (CH4) with 21.6%, which is the main source of which was oil, gas, and coal, as well as livestock. According to expert estimates, the share of Russia, which produces about 3% of world GDP, accounts for about 8% of the total greenhouse gas emissions in the world. This is fourth place after China, the U.S., and India. In per capita terms, our country ranks second in the world after the United States. Now the cost of natural resources and pollution per unit of GDP in Russia is 2-4 times higher than in developed countries [6].

A serious problem of the Russian economy, viewed through the prism of sustainable development, is its ever-

increasing focus on exports of raw materials and extractive industries, which causes great damage to the environment. The supply of commodities abroad today accounts for over 90% of all Russian exports. An environmentally dangerous factor has long been a depreciation of fixed assets, which amounted to 48.6%, in 2012 for the whole country against 39.3% in 2000 and almost doubling from 1970. This leaders in this are: fisheries and fish farming 64.9%, transport and communications 58.6%, health and social services 55.3%, education 54.9%, mining 53.7%, manufacturing and distribution of electricity and gas, and water 51.2% [7].

Simultaneously, there was a 2.5-fold decrease in the rate of renewal of fixed assets and their disposal was reduced from 1.8% to 0.7%. The average age, in contrast, increased from 8.4 to 26.8 years [4]. All this may not cover the time of not only moral but also physical deterioration, and does not provide technological reliability and safety.

One of the reasons for the negative phenomena in the ecological-economic sphere is the imperfection of macroeconomic indicators used. This issue is becoming increasingly important. Many reputable researchers suggest [9] that traditional macroeconomic indicators such as GDP and GNP) have a number of drawbacks and limitations, and may not be a reliable indicator of economic development. Therefore, the development of new indicators that can reflect the richness of the content of sustainable development is necessary. It should be noted that due to methodological and statistical difficulties of calculation, there is no single universally accepted indicator. This results in the dilemma of choosing the most appropriate indicator for national economies. International organizations have developed a range of versatile features, with which they must comply: easily interpreted; reflect temporal trends; set thresholds against which to be measured; equally respond to scientific and technical approaches; act as numerical values, a reasonable cost of data collection; recorded in documents; updated on a regular basis; and an integrated display of a wide range of particular indicators. The indicator of adjusted net (true) savings, developed by the World Bank, can be used as such [11]. The main content of this indicator is based on the calculation of economic assets which are generated by the country, adjusted for depletion of mineral, environmental, energy, and damage to the natural environment, and an amount of assets or net savings which can be used for future generations.

Correction of gross domestic savings occurs in two stages. At the first stage the value of net domestic savings (NDS) is calculated as the difference between gross domestic savings (GDS) and the value of the depreciation of productive assets (CFC). In the second stage, net domestic savings is increased by the amount of expenditure on education (EDE), and reduced by the amount of natural resource depletion (DPNR) and damage from environmental pollution (DME):

GS = (GDS - CFC) + EDE - DPNR - DMGE.

The above formula yields net savings used to calculate the data by country, and all data used in it are taken as a percentage of GDP. We propose to optimize this formula and calculate the index value (absolute) terms [11]:

GS = GDP - (LSF + HP) - ITS - CPD - VA + RO + RH + RSPFK,

where GS - genuine savings; GDP - Gross Domestic Product; ACH - actual consumption of households; PG - public consumption; DFA- the depletion of fixed assets; CNR - consumption of natural resources; EHSA- emissions of harmful substances into the atmosphere; SE - spending on education; EH - expenditure on health; SPEPC- social policy expenditures and physical culture. To solve this problem, as with the initial data, we use the materials of the Federal State Statistics Service. The results of our calculations of the true savings of the Russian Federation is presented in Table 1.

Table 1. Results of calculation of genuine savings of the Russian Federation

	2005	2006	2007	2008	2009	2010	2011
GDP	21 509,76	26 917,20	33 247,51	41 276,84	38 807,22	45 172,74	54 585,23
ACH& PG	12 391,10	15 160,80	18 742,40	23 446,00	29 351,00	32 070,00	37 254,00
DFA	4 209,80	4 209,80	5 276,20	6 332,60	7 618,00	8 196,00	9 123,30
Oil	5 847,95	5 870,07	8 811,55	4 132,01	9 158,37	10 847,76	12 081,10
Gas	1 513,12	1 907,16	1 999,98	2 799,77	2 476	2 907,83	3 602,27
Coal	334,58	471,2	474,77	558,64	487,62	670,41	746,38
EHSA	17,33	16,8	15,84	15	18,2	17,4	16,93
EH	85,6	141,9	192,9	330,8	431,4	426,9	466,4
SE	163	227,1	319,3	384,4	448,10	456,8	531,2
SPEPC	248,6	369	512,2	715,2	879,5	883,7	997,6
GS (billions of rubles)	**-2 306,92**	**19,37**	**-1 048,83**	**5 423,22**	**-8 543,44**	**-7 769,26**	**-6 243,55**

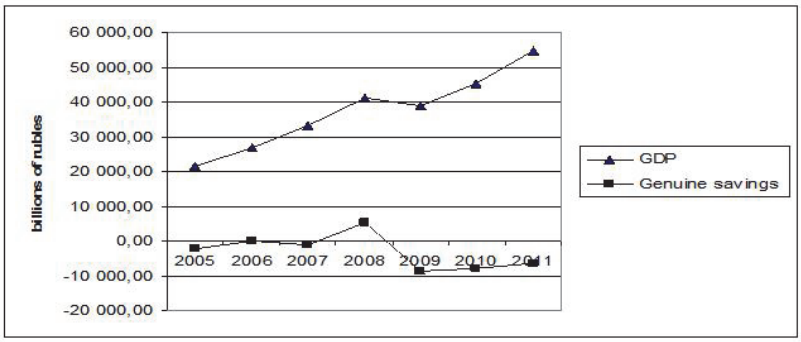

Figure 1. Graphical display of genuine savings calculations of the Russian Federation

As can be seen from Table 1, there was a positive GDP growth rate in the Russian Federation in 2005 - 2011 simultaneously accompanied by negative genuine saving rates. This testifies to the poor quality of economic growth, which results in depletion of natural capital and environmental degradation. Corresponding correction leads to a significant reduction in traditional economic development indicators (GDP and GNP), pushing them into negative territory. It should be noted that our calculations are generally in line with the results of studies conducted by the World Bank [11]. They show that all the countries in the analysis showed positive values, and only Russia was in the negative zone, which certainly significantly devalues the official estimates of the positive growth of the country in the 2000s. Having a significant impact on the country's real savings, as international experience shows, are the costs of providing education, health, social policy, and physical culture [10]. However, according to our calculations, this impact was insignificant, which means, on the one hand, the high value of the factors of natural resource depletion, depreciation of fixed assets, emissions of harmful substances into the atmosphere in the structure of the test indicator, and on the other, - a low level of social financing. The results of our comparisons are reflected in Figure 2

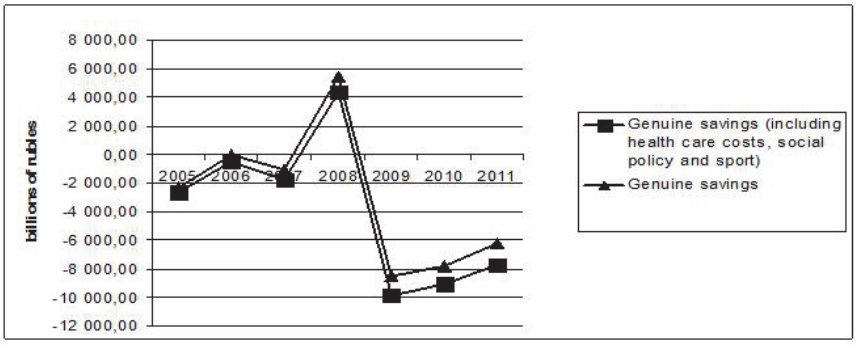

Figure 2. Impact of health care costs, social policy and physical culture to change the dynamics of genuine savings Russia

Certainly, the index of adjusted net savings is not an ideal indicator and has a number of drawbacks. However, its use provides a constructive result, since it allows us to determine the aggregate assessment of economic development, as well as measure the depletion of natural and human capital. The analysis leads to the conclusion that Russia faces serious environmental problems and limitations caused by both internal and external reasons. The results of operations of the State in the field of sustainable development cannot match the scale of the country or its potential and provide ecological and economic equilibrium. No tangible progress in attracting public and private companies to meet the challenges of sustainable development on the basis of innovation has been made. The modern model of economic growth creates a huge burden on the environment.

4. Conclusions

Russia cannot afford to slow economic growth, but at the same time it is unable to continue to ignore aggravated ecological and economic contradictions, and their negative impact on the nature of economic development. There is an urgent need to find new technological solutions aimed at energy saving and the use of new eco-efficient fuels. The state and the private sector for environmental protection need reorientation of financial flows. The transition to sustainable development based on environmentally oriented production and consumption patterns, has become the main imperative of modernity, for the survival of the human species and natural conservation.

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Investment Property Measurement at Fair Value in the Financial Statements

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Abstract

The paper investigates the problems of the applicability of the investment property measurement at fair value for financial reporting purposes by Russian companies. Based on the analysis of the annual consolidated financial statements of bank institutions in Russian Federation, compiled by international standards, we find that most of the companies applied valuation of investment property at fair value. Our findings also indicate that most of the companies address to independent appraisal for investment property measurement at fair value using market approach. In our research we examined different techniques to investment property measurement based on the income capitalization approach and discounted future cash flows. This allows to accumulate the information about the fair value of investment property for the purposes of financial statements compilation.

Keywords: *investment property, fair value, historical cost, income approach, market approach*

1. Introduction

The issues of accounting for investment property considering country-specific factors were addressed by many researchers: Bûmane, I. and Kasale, M. [1], Babawale, G.K. [2], Dong, Z. and Li, N. [3], So, S. and Smith, M. [4].

In the accounting literature the fair value measurement applicability is one of the most widely debated issues especially in the conditions of world economic crisis. The issue was addressed by Beaudoin, C.A. and Hughes, S.B. [5], Macve, R.H. [6], Kulikova L.I. and Goshunova A.V. [7], Cairns, D., Massoudi, D., Taplin, R. and Tarca, A. [8], Costa, M. and Guzzo, G. [9] and others. The complexities of fair value applicability to nonfinancial assets were examined by Christensen, H.B. and Nikolaev, V.V. [10], Linsmeier, T.J. [11], Diehl, K.A. [12], Hlaing, K.P. and Pourjalali, H. [13], and applicability to investment property in particularly by Haaker, A. and Schiffer, T. [14], Quagli, A. and Avallone, F. D. [15], Kulikova L.I. [16, 17].

The objective of the study is to investigate the practical application of fair value methods for investment property measurement in Russian Federation and to develop practical recommendations for preparing financial statements.

2. Method

There is a cautious attitude towards the use of fair value approach as a measurement method of nonfinancial assets not only among researchers but among practitioners as well. As evidence supporting this point of view the data from a number of studies can be provided.

According to a study conducted by Diehl, K.A. [12] in 2009 among the companies whose shares comprise FTSE 100 (UK), only 11% respondents use fair value measurement of property, plant and equipment. Of this amount 64% is of the financial sector and 36% is of non-financial sector.

Hlaing, K.P. and Pourjaalli, H. [13] based on the analysis of financial statements of the foreign-listed firms in the US Stock Exchanges points out that only 38 of 232 firms chose to report their fixed assets at fair value (16% of the sample). The researchers suggest the existence of direct correlation between the intent to use fair value methods and the size of the company, ratio of the total amount of property, plant and equipment to total assets.

However, as noted by Fargher, N. and Zhang, J.Z. [18], there is a tendency to greater use of fair value by the management of companies as an opportunity to achieve maximum reliability of the information recorded in the financial statements.

The similar approach in IAS 40 «Investment property» can be found. Despite the fact that the standard allows two

models of investment property accounting subsequent to initial recognition: a fair value model and a cost model, preference is given to the first model, as it will contribute most to the best presentation of information in the financial statements. It is unlikely that the transition from a fair value model to a cost model to provide better representation of information.

The fair value definition, fair value measurement methods and disclosure to measurement approaches are in IFRS 13 «Fair value measurement» considered.

3. Results

We have conducted analysis of the annual consolidated financial statements for the 50 Russian banks with the highest value of net assets for the year ended 31 December 2013 in order to identify interest in buying investment property, to study methods for determining fair value and to disclose the information in financial statements in compliance with IAS 40 and IFRS 13.

In our sample the investment property is present in 30 financial reports (60% of the sample). The information about the model applied in the accounting for investment property is presented in Table 1.

Table 1. Investment property existence in financial statements

Chosen model of accounting	Number of companies	Percentage to total
Fair value model	21	70
Cost model	9	30
Total	30	100

Regardless of the chosen model of accounting for investment property, IAS 40 requires from all the companies to determine the fair value of investment property either for measurement purposes (if company chooses fair value model) or for disclosure of information (if the company chooses cost model).

The definition of the fair value applied to investment property is disclosed in accounting policies of virtually all the companies from the sample. Some companies have used the terminology from IAS 40 as of 2008 which stated that fair value is the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction. Currently according to IFRS 13 fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

We believe that the latter definition of fair value is a more complete one. The existence in the first definition of the terms "knowledgeable, willing and independent parties", in our opinion, does not contradict IFRS 13. Appendix A of IFRS 13 provides the characteristics of the market participants such as independence, knowledge, existence and desire to participate in the transaction.

In addition, some companies note in their reporting that the introduction of IFRS 13 has not led to any changes in the approach to the measurement of fair value, and resulted only in additional disclosures required by this standard.

In view of the foregoing, we consider consistent the application of terminology from IAS 40 (as of 2008) with the provisions of IAS 13 in the accounting policies of separate entities.

IAS 40 encourages but doesn't require from the company to determine fair value on a basis of an evaluation prepared by a duly qualified, independent evaluation expert who has a recent experience of appraisal for similar property in the same location. The chosen methods for evaluation by the practitioners are presented on the figure 1.

Fig. 1. Chosen methods of evaluation

The figure indicates the preference for fair value measurement by an independent appraiser. Mostly this is due to the complexity of the procedure of the evaluation itself.

According to IFRS 13 one of the three valuation techniques in fair value measurement: market approach, cost approach, income approach or a combination of approaches can be used.

Most of the companies from our sample rely on the set of valuation methods but market approach is the most heavily used. The corresponding data is presented on figure 2.

Applying income approach fair value was determined on the basis of both capitalization of income and discounting of future income. Both approaches are approximately equally distributed among the companies.

Fig. 2. Valuation techniques applied for investment property measurement at fair value

In applying of capitalization of income the fair value of investment property is determined by conversion of yearly net operating income into the current cost according to a formula:

$C = NOI / R_k$,

C – property cost;

NOI – yearly net operating income;

R_k – capitalization coefficient.

In application of capitalization of income method the companies used following key assumptions:

1) net income in the base year was calculated using information on actual rental rates, potential losses from vacancy rates of the investment property, costs for maintenance of the investment property;
2) the losses from vacancy rates of the investment property calculated as a share of potential gross income from the lease ranged from 2% to 10% and in some cases to 30%;
3) for the purpose of capitalization of net income for the base year a capitalization rate ranged from 9% to 14% was used;
4) the share of general and administrative expenses on the maintenance of the buildings was estimated between 10% to 15% of gross income from the lease;
5) for the purpose of capitalization of net income for the base year for land higher rates of capitalization up to 20% were applied.

Determining the value of the investment property based on discounting can be addressed in a simplified form by the formula:

$$C = \sum_{j=1}^{n} \frac{NOIj}{(1+i)^j}$$

C – investment property cost;

NOI_j – net operating income for the j-year;

i – discounting rate;

n – anticipated holding period.

At the same time used the following key assumptions are not observable in the market:

1) discounting rate in order to correct the discrepancies in the location, floor space, class and conditions of compared objects ranged from 0% to 15%;
2) average discounting rate - 14%.

IFRS 13 establishes fair value hierarchy which divides the inputs used in valuation techniques into three levels. The hierarchy gives the highest priority to (unadjusted) quoted prices in active markets for identical assets or liabilities

(level 1 inputs) and the lowest priority to unobservable inputs (level 3 inputs).

According to our sample the hierarchy is presented by level 2 inputs (4 companies – 13,3%) and by level 3 inputs (15 companies – 43,3%), 11 companies preferred not to disclose the information in financial statements. The attribution of the inputs predominantly to the level 3 is determined by the specifics of investment property and indicates underdevelopment of Russia's real estate market.

An additional point is that in measuring investment property at fair value the specific characters of this kind of assets must be taken into the account. In determining the fair value of investment property one need to keep in mind that separate assets are included in this value. For instance, equipment is included in fair value of the building as an investment property and it is not shown separately as fixed asset, the cost of furniture is included in fair value of an office as an investment property because the rental charges are taken for furnished office.

In the fair value of investment property is not included prepayment or accrued income under an operating lease as companies disclose these items separately as liabilities or assets.

The fair value of the leased investment property shows expected cash flows, including contingent rent which is expected to receive.

Accordingly if the assessment of the property is made as net of any expected payments, in order to account for the fair value of investment property the value of any recognized lease liability should be added to this amount.

In the situation when the present value of the payments made by the company for the investment property exceeds the present value of the related cash flows it is need to determine whether the liability arises in the company and to estimate the liability in accordance with IAS 37 "Provisions, Contingent Liabilities and Contingent Assets".

4. Conclusion

Our analysis of the consolidated financial statements revealed deficiencies in the disclosure of information in accordance with IAS 40 and IFRS 13 in respect of investment property held by individual companies in the Russian Federation. Not all the companies disclose the information in respect of those conducting the appraisal of real estate, the information about valuation techniques and key assumptions, levels of the hierarchy of information.

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Lowest Value Principle Implementation in Inventory Measurement of Financial Statements of the Enterprises

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Abstract

The article explores an issue of implementing of material and production inventories measurement at lowest value in accounting practices for the purpose of drawing up financial statements. A comparison is made in terms of approach to the lowest value principle implementation in accordance with American, Russian and international accounting standards. For the first time, a methodology for calculating of allowance for impairment of inventory based on specific features of enterprise's activities is being considered. Given in detail is a description of development stages of allowance for impairment of inventory based on specific procedures carried out.

Keywords: *inventories, measurement, allowance, impairment, US GAAP, IAS 2*

1. Introduction

Many accounting standards, regulating the procedure of inventory measurement, take the lowest value principle as the most well-grounded method of inventory measurement when drawing up financial statements. The main merit of the given principle is that financial statements should not state obsolete inventories and those that lost their original quality at actual cost of acquisition. The above-noted inventories are stated at the market value. Allowance for impairment of inventory is formed for the given purposes. However, there are no particular techniques for establishing of allowance for impairment of inventory in current legislation and accounting regulations in present-day Russia. In our research, we have developed approaches to establishing of allowance for impairment of inventory by means of particular procedures introduced in stages. This helps to compile information on inventory cost for financial statements.

2. Method

Application of the lowest value principle for inventory measurement has a long history. As noted by American economists Hendriksen, Eldon S. and M.F. Breda, the given principle was in use in the XIX century and even earlier, when the significance of balance sheet as a report to creditors was determined. In the absence of reported data for making forecasts on investment of funds, creditors paid special attention to the minimum probable value of assets in circulation [1].

The issue of inventory measurement for the purpose of reporting it in financial statements is addressed in the studies of Milbradt, K. [2], Liapis, K.J. and E.P. Christodoulopoulou [3], Easton, P. and J. Pae [4], Liapis, K.J. and C.L. Galanos [5].

In practice, it may be possibe that the cost of inventories is not recoverable. The reasons for that are as follows: damage, total or partial obsolescence, reduction of inventory selling price, increase in eventual costs for completion of inventory production, increase in eventual costs to sell. In such circumstances, the carrying amount of inventories should be adjusted downwards in financial statements preparation. That is the essence of the lowest value principle [6].

In the present time, the above-mentioned principle applied for inventory measurements is widely used for financial statements drawing up in accordance with international standards. As per IAS 2 "Inventories" inventories should be

measured at the lower of cost and net realizable value. Net realizable value is the estimated selling price in the ordinary course of business less the estimated costs of completion and the estimated costs necessary to make the sale. This value is determined in each particular enetrprise. If inventories are meant for sale, then net realizable value is determined based on current market prices. Net realizable value of inventories intended for sale as per sale contracts is based on the contract price [7].

The specifics of inventories measurement in accordance with American accounting standards are reflected in the works of Needles, B.E., Anderson H.R. and J.C. Caldwell [8], Larson, K.D. and P. Miller [9], Meigs, R.F., Meigs W.B. and M.A. Meigs [10]. US GAAP uses market value, which is current replacement cost, for inventory valuation. That is the cost that can be paid by the enterprise for similar inventories in active market conditions and sufficient awareness of a seller and a customer under no coercion. If the reduction of replacement cost does not reflect the decrease in inventories utility then two additional cost limits are used: upper limit (net realizable value) and lower limit (net realizable value less normal profit margin). Setting of upper limit when determining replacement cost prevents from overvaluing obsolete, damaged or slow-moving inventories. Setting of the lower limit restrains inventory cost reduction and loss increase in the current period [11]. Unlike US GAAP, international standards do not use upper and lower limits to determine market value.

Allowance for impairment of inventories is somehow similar to lower value principle for inventory measurement in Russian accounting. In accordance with Balance sheet principles approved in USSR in 1928, it was obligatory to set up impairment allowance. Known Russian balance issues researcher N.A. Blatov described the procedure of allowance development in the following way: "Impairment allowance is set up for the difference between the book value of products and finished goods and their value at lower market or regulating authorities' prices. Bringing products and finished goods to measurement at a lower price, recognized by the legislation as real, the given allowance imposes onto the current year the loss that appears possible for the future year at the moment accounts are balanced" [12].

Based on the currently enforced Russian Accounting Regulation "Inventories accounting" (RAR 5/01), as of the end of the reporting year, enterprises form the mentioned allowance for the amount of prevalence of the actual cost of inventories over their current market value. Thus, "the lowest price" principle is also declared in the Russian accounting in regard to inventories.

It should be noted that impairment allowance raises many questions in the course of practical activities of Russian enterprises and, in the first place, that is due to the difficulty in determining the real amounts.

Allowance should be formed for each inventory unit recognized in accounting, or for separate types (groups) of similar or adjacent inventories. As per RAR 5/01 inventories include: materials, products and finished goods.

At the time, N.A. Blatov thought that "the lowest price" principle should be used only for the products and finished goods but not for materials and semi-finished products, since only "sales of products and finished goods could give that losses for covering of which allowance is formed" [12].

We believe that the lowest price principle could not be applied to all inventories but only to finished goods and products with established selling prices. Forming of impairment allowance for raw materials, materials, semi-finished products, etc. without conducting of thorough analysis of the influence of impairment on the possible market value of finished goods allows entities to manipulate balance sheet indicators.

The application of the lowest price principle to the inventories leads to the problem of confirming of current market value of the inventories. Consideration should be given to the price fluctuations related to the events taking place after the reporting date and confirming conditions existing at the end of the reporting period, as well as the purpose of inventories.

In 1926, I.R. Nikolaev spoke about the problem of market value setting for inventories and their disclosure in the balance sheet. He believed that the difficulty in the application of market (exchange) value is in the fact that not all the products are traded at exchange, for example, handicraft ware. Market values cannot be applied to many semi-finished products, as well as to the goods that were exposed to spoilage and lost the significant part of their value. All such products can't be quoted and their "actual" value cannot be determined [13].

Existing rules of allowance forming for impairment, specified in Russian regulatory documents, give rise to a series of questions. How to determine the obsolescence of inventories and the loss of their initial qualities? How to confirm the calculation of current market value of inventories? Due to the uncertainties in regulations, many Russian companies do not form the mentioned allowance, thus overrating inventories, recognized in the balance sheet, as well as the profit in the reporting period.

3. Result

Allowance for impairment of inventories is the imputation of inventory impairment roughly determined or calculated based on accounting assumption in the absence of precise way of its determination [14, 15].

Forming of allowance for impairment of materials has some peculiarities compared to forming of allowance for impairment of finished goods and products. That is shown in figures 1 and 2.

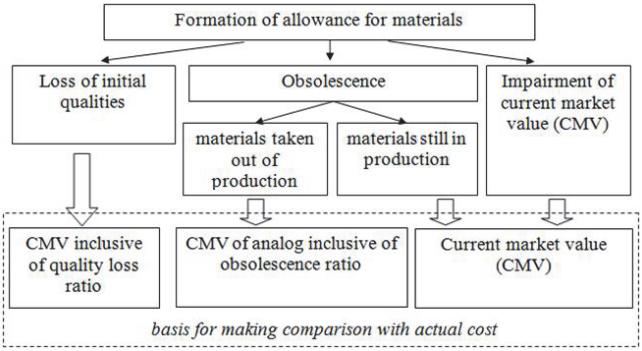

Fig. 1. Peculiarities of formation of allowance for materials

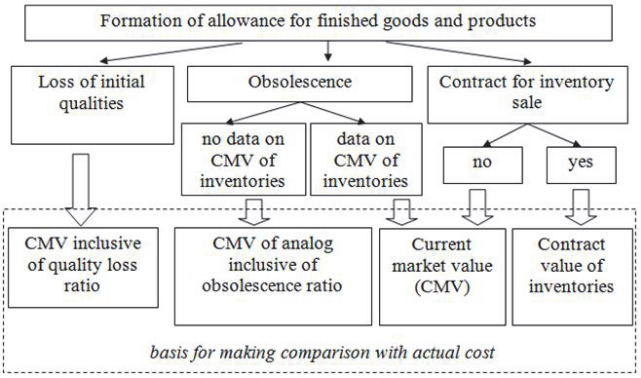

Fig. 2. Peculiarities of formation of allowance for finished goods and products

We believe that formation of allowance technique suggests carrying out particular procedures comprising a number of stages.

Stage 1. Setting inventory accounting unit for the purpose of allowance formation based on specific activities of the enterprise. That unit could be represented by a homogeneous group of inventories (for example, plug fittings, bobbins, polypropylene, ethylene, etc.)

Stage 2. Taking annual inventory before the preparation of financial statements and identification of inventories, purchased not less than 1 year before stocktaking.

Stage 3. Selection of essential groups of inventories. Groups of inventories the value of which at the date of stocktaking is more than 1% of the total inventory value are recognized essential. Inessential groups of inventories are not analyzed any further.

Stage 4. Documentary evidence of the current market value for inventories, having initial quality characteristics and not being obsolete, based on the information available before the date of signing financial statements [16]. The following information can be used: quotations, online trading, vendors' catalogues, dealers' catalogues, etc. In the absence of information on the current values for similar products on the market, the actual cost of inventories is recognized equal to the market value in accordance with accounting data if the following conditions are fulfilled simultaneously: inventory is unique, it has initial qualitative characteristics and is suitable for production activity [17].

Stage 5. Calculation of current market value (CMV) for inventories that lost their initial qualitative characteristics and are obsolete, taking into account matching ratio of the inventories and their initial quality and obsolescence using the

formula:

$CMV = CMV_a \times K_1 \times K_2$,

where CMV_a – current market value of similar inventories, having initial qualitative characteristics and not obsolete;

K_1 – matching coefficient for inventories and their initial quality;

K_2 – inventories obsolescence coefficient.

The scale presented in table 1 is used to determine coefficients K_1 and K_2.

Table 1. The scale of coefficients K_1 and K_2

Inventories characteristics	Value
Matching coefficient for inventories and their initial quality (K_1)	
Inventories are not suitable for use as intended, no possibility to bring them to usable condition, but they can be used for the purposes not connected with their immediate purpose	0.3-0.4
Inventories are not suitable for use as intended, but it is possible to bring them to usable condition without significant costs	0.41-0.60
Inventories partially lost their initial qualitative characteristics but are suitable for use as intended	0.61-0.80
Inventories are suitable for use as intended but there could be slight changes in their appearance, not influencing use effectiveness	0.81-1
Inventories obsolescence coefficient (K_2)	
Specified type of inventories is taken out of production but can be used in production activity	0.1-0.6
Specified type of inventories is still in production but with slight functional improvements	0.61-0.90
Non-obsolete inventories, as well as inventories, output volume of which is significantly reduced due to more improved inventories on the market	0.91-1

Stage 6. Comparing of current market value of inventories to actual cost and deviations determining (D):

$D = C - CMV$,

where C – actual cost of inventory.

Stage 7. Setting of materiality level for deviations of current market value of inventories to their cost. Materiality level could be set at 10% of the cost of inventories.

Stage 8. Making a decision on allowance formation. Allowance for impairment is not formed for inventories, if on the reporting date their current market value equals to cost or increases it, e.i. $D \leq 0$. Only those deviation sums that are considered essential are included in allowance calculations.

Materials are additionally scrutinized: allowance is not formed for materials if they are included in finished products that are planned to be sold at a price not lower of the cost.

Stage 9. Determining of the sum of allowance for impairment. The example of calculating the sum of allowance for impairment of separate type of materials is shown in table 2.

Table 2. Calculation of allowance for impairment of materials

Indicators	Value
1. Cost of inventory, rub. (C)	5000
2. Current market value of similar inventories, having initial qualitative characteristics and not obsolete, rub. (CMV_a)	4000
3. Matching coefficient for inventories and their initial quality (K_1)	0.61
4. Inventories obsolescence coefficient (K_2)	0.5
5. Current market value of inventories, rub. ($CMV= CMV_a \times K_1 \times K_2$)	1220
6. Deviation of inventory cost from current market value, rub. ($D = C - CMV$)	3780
7. Materiality level of deviation, rub. ($ML=C \times 10\%$)	500
8. Deviation, accepted for calculation of allowance for impairment of inventories, rub. ($Dr=D$, if $D>0$ and $D>ML$, otherwise $Dr=0$)	3780

4. Conclusion

Calculation methodology for allowance impairment of inventories offered by us allows implementing of the principle of the

lower value. That is necessary for both internal monitoring of inventories that are obsolete and lost their initial quality, and for revealing of information on enterprise's inventories in financial statements. Formation of allowance for impairment of inventories should be done based on the assessment of the current state of business and expected future gains from utilization of inventories.

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Approaches to Operations Accounting Regarding Mortgage of the Enterprise as a Property Complex

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Abstract

The present paper offers two options for organization of separate accounting transactions related to property complex referred to a mortgage. The first option involves separation of "Mortgaged enterprise" analytical accounts additional to the accounts of the property assets and liabilities of the mortgaged property complex. The second option provides for separation of all transactions with the mortgaged property complex to a special balance. Each of these offered approaches has its own scope of application and ensures the formation of operational information on the balance value of the mortgaged property complex, which is necessary for the purposes of monitoring of compliance with the terms of the mortgage agreement and disclosures in the financial statements.

Keywords: *mortgage, accounting, property complex, IFRS 8, separate balance sheet*

1. Introduction

The organization can possess more than one enterprises included into a property complex. It all depends on how many independent activities the organization in question carries out. For example, it can simultaneously hold several hotels, restaurants or shops. Each of these objects individually may be the subject of the mortgage agreement as well as other contracts. Upon the sale of the enterprise as a property complex its owner is changed, thus the seller may continue carrying out his business activity as he possesses a monetary amount received for the sale.

Currently the property complexes mortgaging in Russia is not as widespread as a of individual property objects. This is largely explained by a more complex evaluation and registration procedures of such collateral. However, according to the information from public sources, a variety of property complexes may serve as mortgaged subjects: enterprise for packing and storage of fertilizers, soft drinks plant, canning plant, paper and cardboard plant, bakery plant, poultry processing plant, glass manufacturing plant, dairy factory, fish processing complex, enterprise for the ropes production, gas filling stations, etc. The development of the attitude to the enterprise as to a property complex in the conditions of the mortgage loan requires the research of the problems concerning the transactions reflecting in the accounting and reporting.

The aim of this study is to develop the approaches to the accounting of the mortgage operations of the enterprise as a property complex, allowing the information arrangement in the accounting of the mortgaged property complex value.

2. Method

Under the Russian legislation, the mortgage of the enterprise as a property complex includes all tangible and intangible assets related to this enterprise, including buildings, structures, equipment, inventory, raw materials, finished products, exclusive rights, as well as financial assets. In this case the right to pledge applies to all the property, which is a part of the pledged enterprise, including the one acquired within the period of the mortgage, unless otherwise has been provided by the law or the contract. The contract may also stipulate the mortgage spread to the products and revenues resulting from the use of the mortgaged property.

The property of the enterprise is defined as the difference between its assets and debts [1]. Therefore, under the mortgage of the enterprise conditions there appears such quite an extraordinary phenomenon as the mortgage of the debt. The debt issue solution is very important. The mortgagee is not interested in the inclusion of all debts in the pledged enterprise, as it may entail a significant reduction of its purchase price in the event of its possible sale. At the same time, separation of all debts from the enterprise is not in the interest of the mortgagor, as he may be not able to start a new activity [2]. In our opinion, the mortgagor can afford not to include the debts into the mortgaged enterprise only in case there are some additional sources allowing to cover the said debts, other than the revenues received from the activities of the pledged subject. If there are no other means to cover a debt, then the liabilities associated with the activities of the property complex shall be included into the mortgaged enterprise. Of course, this will reduce the net asset value of the property complex and consequently lead to the lower cost of the enterprise. But under these conditions, the mortgagor will actually be able to maintain the value of the mortgaged enterprise at the appropriate level, which is one of the basic conditions in the enterprise mortgage as a property complex.

In view that the mortgaged property complex has such a complicated structure, it is important to evaluate it properly and organize a proper accounting.

The mortgagee and the mortgagor reflect the amount of the received and issued collateral in the assessment off-balance indicated in the mortgage contract of the enterprise and disclose in the notes to the financial statements [3]. As with any other mortgage assets, it is appropriate to account separately the collateralized financial assets and liabilities [4].

In terms of completeness and reliability of accounting information, we deem it necessary to organize a separate accounting of assets and liabilities included in the mortgaged enterprise, as well as gains and losses resulting from its activities.

Separate accounting of all transactions carried out in the framework of the activities of the mortgage subject (the enterprise) is especially necessary if the mortgagor fulfills its activity in several directions. One of the conditions relating to the mortgage of the enterprise is to prevent the mortgagor from reduction of the enterprise cost. Competently organized separate accounting of operations related to the mortgaged enterprise will allow getting of operating data regarding the carrying value of the enterprise and control the mortgage agreement execution.

3. Result

Problems of mortgage operations reflecting in the accounting are revealed in the works of Masood, O. and M. Bellalah [5], Huizinga, H. and L. Laeven [6], Weiss, N.E. [7], Freeman, W., Wells, P. and A. Wyatt [8].

Herewith, the research works on accounting do not pay much attention to the peculiarities of accounting operations arrangement at the mortgage of the enterprise as a property complex. We offer two options of separate accounting for the mortgaged enterprise and operations with it:

1) opening of the subaccounts "Mortgaged enterprise" to all accounts of property, liabilities, income, expenditures and capital, which reflect operations within the scope of the mortgaged enterprise operations;
2) separation of the mortgaged enterprise on a separate balance sheet (Fig. 1).

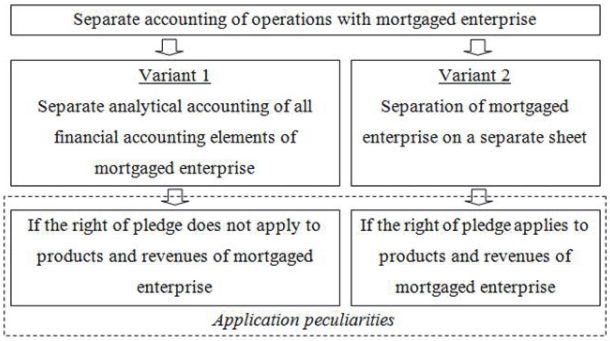

Fig. 1. Variants of separate accounting of operations with the mortgaged property complex

Each option has its advantages and disadvantages. In case the mortgage contract clearly defines the property included in the mortgaged enterprise (for example, shop building, production line, supply of materials and finished products of the

definite manufacturing process), and the right of pledge does not apply to products and revenues of the enterprise activity, it will be more reasonable to open special sub-accounts to the ones accounting the relevant property. Automation of the accounting process makes it possible to quickly generate an analytical report "Mortgaged enterprise" for monitoring of the conservation value of the mortgaged enterprise.

However, if the right of pledge applies to products and revenues brought by the enterprise, this option of separate accounting organization becomes practically unacceptable because of its complexity. In this case, it is advisable to separate assets and liabilities related to the mortgaged enterprise on a separate sheet, although there will be no legal separation of the enterprise unit in this situation. We recommend to fulfill the transfer of the property and liabilities of the mortgaged enterprise to a separate balance sheet via the account "Internal organizational settlements"; this should be made by a separate subaccount 1 "Settlements on the property and liabilities of the mortgaged enterprise".

All operations directly related to the activities of the mortgaged enterprise within the period of the mortgage contract validity must be reported on a separate sheet with the identification of the financial result of the enterprise's activities. Upon termination of the mortgage, the assets, liabilities and financial results of the enterprise should be transferred into the principal balance of the legal entity.

In our opinion, when reflecting operations of the mortgaged property complex on a separate balance sheet and identifying the cost of products and revenues of the enterprise (financial result), part of the total expenses of the legal entity should be transferred to a separate balance sheet, otherwise the financial result of the property complex identified on the isolated sheet will be unreliable. For these purposes, a Subaccount 2"Settlements of common expenses compensation" should be opened to the "Internal organizational settlements" account.

If a mortgage agreement of the enterprise as a property complex stipulates, that the mortgagee has the right to a pledge on the products and revenues brought by the enterprise, there may occur an ambiguous situation: perhaps, the debtor-mortgagor has expected to repay the liabilities by the mortgage loan in full or in part due to the profit brought by this property complex; however he will not be able to administer the profit for these purposes, as it is not directly related to production activities of the mortgaged enterprise. Therefore, in our opinion, there should be a condition stipulated by the contract of mortgage determining the part of the profits from the activities of the mortgaged property complex, which the debtor-mortgagor shall have the right to transfer on repayment of the mortgage loan and the interest thereon. The debt on mortgage liabilities shall be recorded on the main balance sheet. We offer to reflect the transfer of part of the mortgaged enterprise profits for repayment of mortgage liabilities using Subaccount 3 "Settlements of the mortgage loan repayment" to the Account "Internal organizational settlements".

The general scheme of operations on a separate balance sheet using the account "Internal Settlements" is represented in Figure 2. Accounting records on the primary balance will be reversed.

The debt formed on the account "Internal Settlements" by the sub-accounts 2 "Settlement of common expenses compensation" and 3 "Settlements of the mortgage loan repayment" shall be treated as the current debt and subject to repayment in cash.

Arrears on the account "Internal Settlements" by the subaccount "Settlements by the property and liabilities of the mortgaged enterprise" shall be treated as a capital of the mortgaged enterprise.

For separation of the cash flows by the enterprise activity of the mortgaged enterprise and other activities of the mortgagor we recommend opening a separate settlement account for the operations of the mortgaged enterprise.

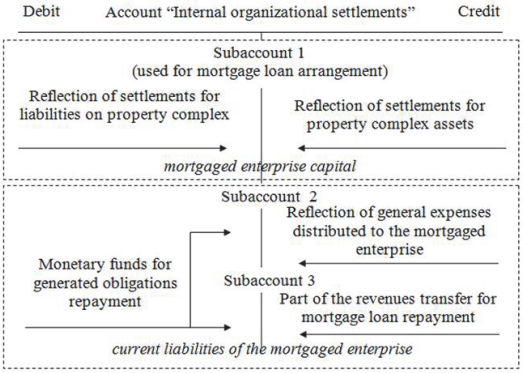

Fig. 2. Recommended flow process chart for a separate balance sheet using the account "Internal Settlements"

The following items will help to ensure the reliability of balance sheet valuation of mortgaged property complex:

- accounting of fixed assets under the revaluation model;
- inventory verification for impairment;
- inventory of receivables and payables and timely formation of reserves for doubtful debts [9, 10].

Whereas the last two paragraphs should be carried out by the organization in any case, the revaluation of fixed assets is not required under the International Financial Reporting Standards [11]. If the accounting policy of the organization does not provide for the revaluation of fixed assets, then, in our view, the revaluation surplus or devaluation of fixed assets can be reflected only in the statement of the pledged enterprise value.

The current value report of the pledged enterprise can be made basing on the analytical accounting data (under the Approach I) or on a separate balance of the mortgaged enterprise (the Approach II). We recommend the following form of such report presented in Table 1.

Table 1. Report on the mortgaged enterprise value

Indexes	Amount, thous.rub.
1. Total assets of the enterprise	12 948
including	
Fixed assets	11 200
Reserves	1 100
Trade receivables	400
Other receivables	1
Monetary funds	247
2. Total liabilities of the enterprise	718
including	
Current internal settlements	70
Trade payables	400
Arrears of wages	170
Debt to the budget and extra budgetary funds	78
3. Balance sheet value of the enterprise	12 230
4. The amount of revaluation surplus(+) (markdown(-)) of fixed assets	1 300
5. Total actual cost of the enterprise	13 530

According to the data in the Table 1, the balance (BVE) and the real (RVE) value of the mortgaged enterprise are determined by the formulas:

BVE = A - L,

RVE = BVE +/- R,

where A – is the total assets of the mortgaged enterprise,

L – is the total liabilities of the mortgaged enterprise,

R - revaluation surplus (+) or write-downs (-) of the fixed assets of the mortgaged enterprise.

It should be noted that, under the conditions of continuity of the mortgaged enterprise activity, all the assets and liabilities recorded on a separate sheet are accounted to determine its balance sheet value, as they are inextricably linked to the fulfillment of the main activity at the enterprise [12, 13]. In case of failure on the part of the debtor to pay off the mortgage liabilities and foreclosure on the mortgaged property, valuation of the enterprise should be carried out somewhat differently according to the data on the individual balance: such items of the assets and liabilities, which relate solely to the activity of the legal person – mortgager, should not be accounted, and cannot be transferred to the new owner of the property complex by sale.

4. Conclusion

Our proposed options for separate accounting of operations with the pledged property complex will allow quick generating of information about the value of the mortgaged enterprise. This is necessary both for the fulfillment of the mortgage contract conditions monitoring, and for disclosing of information about the mortgaged enterprise in the financial statements.

Mortgaged enterprise can be represented in the financial statements as a reportable segment of the mortgaging organization, as the risks associated with its activities differ significantly from the risks from other activities of the mortgagor. In this respect, in addition to the compliance with the disclosure requirements of the reportable segments as provided by IFRS 8 “Operating segments”, it is advisable to disclose the following information in the notes to the financial statements regarding the segment "Mortgaged enterprise":

- the term of the mortgage agreement of the enterprise;
- the amount of mortgage liabilities;
- a report on the mortgaged enterprise value at the beginning and in the end of the reporting period in the form shown in Table 1;
- forecasts for the execution of the mortgage obligation.

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Approaches to Tariffs Formation for Ethylene by Pipelines Transportation

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Abstract

The paper suggests two approaches to formation of tariffs for ethylene by pipeline transportation. These approaches consider technological features of ethylene pipeline application and ensure differentiation of tariffs for different users depending on the type of the commodity transport work fulfilled for ethylene pumping. Application of double rate tariffs for services of ethylene transportation via ethylene pipeline is recommended. Double rate tariff includes both tariff rate for ethylene pipeline use, which is uniform for all consumers, and tariff rate for the work fulfilled for ethylene pumping, which depends on the planned volume of commodity transport work for ethylene transfer under the contract with the services consumer.

Keywords: *tariff, costs, ethylene transportation, rate for use, rate for pumping*

1. Introduction

Pumping via ethylene-pipeline is the most optimal alternative of ethylene transportation from the standpoint of costs minimizing. In the most general terms, the process of ethylene pumping can be compared with transportation of gas via pipeline: in both cases there occurs pumping of gaseous substance via pipeline transport.

The process of price formation for gas transportation services in Russia is strictly under the government control: tariffs calculating methodology for gas transportation service is protected by law.

Tariffs for ethylene pumping service in Russia are not regulated by the state. Technological features of ethylene pumping process do not allow direct application of methodology for calculating tariffs for gas transportation services. Therefore, the organizations involved in transportation of ethylene via ethylene pipeline system face the acute problem of developing methods of pricing for services of ethylene pumping, with consideration of consumers' interests in these services. This fact determines the relevance of this study, theoretical and practical value of its results.

The research works of Borenstein, S. and R. Kellogg [1], Ulvestad, M. and J. Overland [2], Secomandi, N. [3], Pienaar, W.J. [4], Lawrey, R. [5], Smith, D. and S.W. Moses [6] were dedicated to pricing issues of pipeline transport services. However, the scientific publications do not consider the peculiar features of tariffs formation for ethylene pumping.

The aim of the research is to develop approaches to formation of economically justified tariffs for transportation of ethylene by pipeline.

2. Method

In developing the procedure of tariffs formation for ethylene pumping services it is necessary to base on the following peculiar features of ethylene-line operation:

- ethylene pipeline connects ethylene producers with ethylene consuming enterprises, and therefore it includes several shops located in the cities of the mentioned enterprises location;
- transportation of ethylene occurs in the supercritical mode, which prevents ethylene from formation of liquid phase in the pipeline and from the hydraulic shock, which may lead to large release of ethylene in the atmosphere. This mode is ensured by maintaining the required level of pressure throughout the entire system of ethylene pipeline; so the process of ethylene pumping via the particular section is provided not only by the

work of shops servicing the given site directly, but also by the other shops.

Thus, in connection with the above mentioned technological features of ethylene pumping, the whole ethylene pipeline should be regarded as a single technological complex. The operation of this complex as a whole is needed for the ethylene pumping opportunity regardless of its direction and distance. This fact principally distinguishes the system of ethylene pipeline from gas pipeline system and, of course, must be taken into account, when developing methods of tariffs formation for ethylene pumping services.

Since Ethylene pipeline is a unified technological complex, we believe it reasonable to account the costs of ethylene transportation in a single calculation and determine the tariff for ethylene pumping services per 1 ton basing on the entire amount of costs incurred by the transporter distributed for this service.

Transportation of ethylene to consumers is a service having no material real-valued form. This is the reason of using the following physical units for calculation at the enterprises of the given industry:

- volume of ethylene pumping in tons;
- volume of commodity transportation work in ton-kilometers.

The averaged tariff for service of a ton of ethylene pumping (AT) is calculated by the formula:

$AT = (C + P) / V,$

where C - is economically justified planned costs for ethylene pumping service;

P - planned amount of profit on ethylene pumping service;

V - volume of planned pumping of ethylene for all consumers in tons.

The amount of planned costs and planned profit for ethylene pumping service is the necessary revenue of ethylene organization – transporter. Using the necessary revenue for the purposes of pricing is reflected in the works of Pikk, P. and M. Viiding [7], Briest, P., Chawla, S., Kleinberg, R., and S.M. Weinberg [8], Kulikova, L.I. and A.V. Goshunova [9], Li, Y., Miao, Q. and B.X. Wang [10].

If the route of ethylene pumping is the same for all consumers, i.e. the system of ethylene pipeline is serviced only by two workshops: the consigner and the consignee of ethylene, then the average tariff for ethylene pumping service will be the unified for all consumers and calculated per 1 ton of ethylene pumping.

If the difference by the contracts with customers on pumping ethylene service is not only in planned volumes of ethylene transportation, but in pumping distances as well, then in order to achieve economic justice it is advisable to distribute part of the costs in calculation of tariff in each direction of transport of ethylene proportionally to the fulfilled commodity transportation work. In this case, the use of double rate tariff for services on transportation of ethylene is justified. It consists of tariff rate for the use of ethylene (R_u) (fixed for all consumers) and tariff rate for ethylene pumping (R_p) (taking into account commodity transportation work of ethylene pumping). The idea of the multi-component tariffs for transportation service establishing urgency is supported by Street, A., Barroso, L.A., Chabar, R., Mendes, A.T.S. and M.V. Pereira [11], De Vany, A.S., and W.D. Walls [12].

The tariff rate for ethylene pipeline use is a basic one; it does not depend on the distance of ethylene transportation and is calculated on the basis of the planned volume of ethylene pumping for all consumers. The tariff rate for the work done on ethylene pumping is calculated per ton-kilometer of the pumped ethylene. This tariff rate depends on the volume of commodity transportation work influenced by the combination of two factors: the amount of ethylene pumping and transportation distance.

The tariff for ethylene pumping service for the particular consumer (T_i) will be calculated by the formula:

$T_i = R_u + R_p \times L_i,$

where L_i – is the distance of ethylene transportation for the i-th user.

The following formulas are applied to calculate rates for the use of ethylene (R_u), and for movement of ethylene (R_p):

$R_u = RR_V / V,$

$R_p = RR_{CTW} / CTW,$

where RR_V – is the part of necessary revenue distributed among consumers of services in proportion to the volume of ethylene pumping;

RR_{CTW} – is the part of necessary revenue distributed between service consumers proportionally to commodity transport work;

CTW – is the planned value of commodity transportation work under contracts with all service users on ethylene pumping (in ton-kilometers).

The main problem lies in the reasonable division of the necessary revenue of ethylene transporter into two components: RR_V and RR_{CTW}, used to calculate the components of dual rate tariff. We solve this problem by using the method of expert assessment of the averaged rate components to determine their relationship with the volume of fulfilled

commodity transportation work and with the technology of ethylene pumping.

3. Result

The enlarged structure of the averaged tariff for ethylene pumping is presented by the following items:

- direct expenses of ethylene pumping;
- production expenses;
- general expenses;
- business expenses;
- profit.

The research led us to the development of two approaches to formation of double rate tariff for ethylene pumping services.

Approach I. Key grouping of costs in determining the basis of their distribution among consumers: dependent and independent on the volume of commodity transportation work.

The tariff rate for ethylene pipeline use is determined on the basis of expenses, the value of which does not depend on the volume of commodity transportation work. These expenses include:

- part of direct expenses not depending on the volume of commodity transportation work;
- production expenses;
- general expenses;
- business expenses.

Production, general and business expenses, as a rule, are of conditional permanent nature in relation to the volume of commodity transportation work. They are associated with ethylene pipeline use as a single technological complex. Inherently, these are production and non-production costs to maintain the system in the state of readiness to accept ethylene by the buyers.

Tariff rate for the fulfilled work on ethylene pumping is determined on the basis of:

- planned expenses, depending on the volume of commodity transportation work (i.e. volume of ethylene pumping and distance of transportation);
- amount of planned profit, which depends on the volume of commodity transportation work.
- The costs depending on the volume of commodity transportation work include:
- material costs in terms of ethylene loss during pumping;
- the cost of electricity required for the process of ethylene pumping.

Planned profit is calculated on the basis of the principle of equal rate of profit per ton-kilometer. This is stipulated by the fact that the profit is effected by change in volume of commodity transportation. The greater the volume of pumping and transport distance, the more profit the ethylene transporting organization will receive, so the profit is distributed among consumers of ethylene pumping service proportionally to commodity transportation work done.

The scheme of formation of double rate tariff for ethylene pumping service basing on this approach is shown in Figure 1.

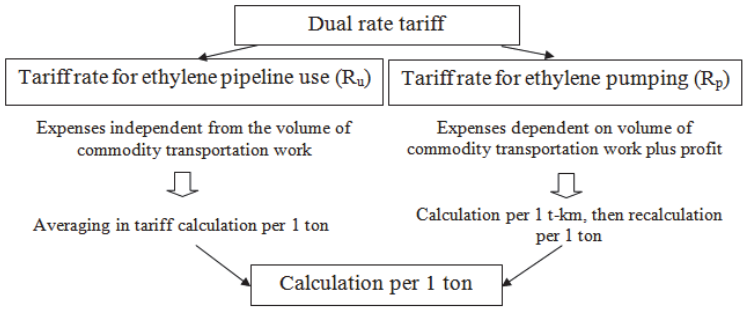

Fig. 1. The double rate tariff for ethylene pumping service (approach I)

Approach II. The volume of the of ethylene transporting organization's activity are expressed in commodity transportation

work done on ethylene pumping; thus, reasonable is the distribution of components of necessary revenue from the provision of ethylene pumping services between consumers proportionally to the planned commodity transportation work.

However, the transporter of ethylene incurs some of the expenses for providing technical possibility of pumping process fulfillment regardless of pumping distance, so these expenses should be borne by all consumers of services in transportation of ethylene depending on the volume of its pumping, and they cannot be distributed on commodity transportation work.

Therefore, it is necessary to distinguish two components in the structure of the averaged tariff:

- related to the process of ethylene pumping (production expenses);
- not related to the process of ethylene pumping (general expenses, business expenses, profit).

In its turn, the costs associated with process of ethylene pumping include the one that are dependent and independent on commodity transportation work done.

Costs depending on commodity transportation work done should be distributed among consumers of ethylene pumping proportionally to commodity transportation work as they are conditioned by the quantity of ton-kilometers of ethylene pumped.

Costs associated with the process of ethylene pumping, but independent of commodity transportation work represent the sum of charges for ethylene pipeline servicing as a single technological complex and the variable costs, which depend only on the amount of ethylene pumping. These costs should be distributed between consumers of ethylene pumping services in proportion to the volume of the pumped ethylene.

Components of the averaged tariff not related to the technology of ethylene pumping, are distributed among consumers of ethylene pumping service proportionally to the commodity transportation work done (Fig. 2).

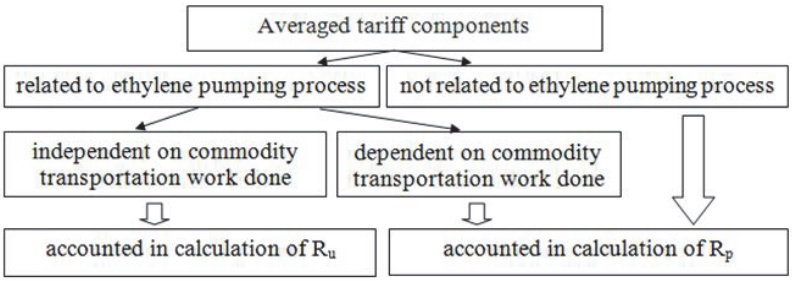

Fig. 2. Components of the averaged tariff and the procedure of their distribution among consumers of ethylene pumping service (approach 2)

Table 1 presents the structure of the averaged tariff and the procedure of its components distribution between the consumers of ethylene transportation services within the scope of our proposed approach application to formation of tariffs for ethylene pumping services.

Table 1. Structure of the averaged tariff for ethylene pumping service and the basis of its components distribution between the consumers

Items	Basis of distribution between the consumers	
	Approach I	Approach II
Direct expenses, including: *Dependent of CTW* *Independent of CTW*	CTW Volume	CTW Volume
Production costs	Volume	Volume
General costs	Volume	CTW
Business costs	Volume	CTW
Profit	CTW	CTW
Total averaged tariff	x	x

4. Conclusion

Our proposed approaches to formation of tariffs for ethylene pipeline transportation service consider the interests of these services' consumers, since they provide for redistribution of the averaged tariff depending on the commodity transportation work done. Thus, as it is shown in the data of the Table 1, the latter approach provides the greater degree of differentiation of tariffs for different users depending on the distance of ethylene transportation. As disadvantage of both approaches it should be noted that in practice it is quite difficult to determine the exact amount of costs which depend on commodity transport work done.

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The Revision of Approaches to Innovative Analysis

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Abstract

This article discovers main approaches and instruments of Russian innovative analysis and policy focusing on Volga region. Main theoretical and methodological opinions will be discussed. The national economy development within postindustrial times placed a priority on the maintenance and implementation of the industrial enterprises potential. The latter act as "growth points" of the region's economic area, transform its structure and provide progressive dynamics of mezoeconomic indicators. Innovative development is modern key to economic growth.

Keywords: *Innovations, Tatarstan, development, cluster, IT.*

1. Introduction

Volga region high dynamic region of Russia, one of two centers of chemical, petrochemical, motor building. It's also third centers of science with heart in Kazan (Volga region) Federal University.

Investment interest in the region has also been driven by the Tatarstan government's emphasis on fostering innovation and nanotechnology. The republic is home to a network of technoparks featuring state-of-the-art infrastructure, including the Khimgrad Technopolis, the Idea Technopark, IT Park and modern business incubators located throughout Tatarstan. A further milestone in the region's development is the expected construction of an IT Village, which will offer high-tech facilities and a modern social infrastructure to facilitate the work of professionals in such fields as biomedicine, energy, information technology, nuclear power and other technologies.

The Republic of Tatarstan faces challenge of innovative development. So that this study is topical.

Aim of this article is to observe main theoretical approaches to innovative development of Volga region.

2. Methodology

All scientific views on innovation development might be divided in two groups – macroeconomic and microeconomic.

Brilliant representatives of macroeconomic view school such as N.G. Bagautdinova, L.N. Safiullin, A.V. Sarkin basically study contemporary conditions of innovative activities in Volga region – interest rate, protection of intellectual rights, number of researches [3].

Scholars of second school analyze economic value added of venture activity, methods of selection and acceleration of startups and others. To this school belong A.N. Bulatov, G.S. Klychova and others.

Macroeconomic school:

Scholars of this school argues three theses:

- In the economic should be settled paternalistic strategy with the account to the principles of behavioral economy;
- Clustering and link of economic and science enhance effectiveness of innovation development;
- Progressive evolution of technologies requires involve three parties – Government, Enterprises and Universities.

Microeconomic school argues more quantities data of each projects.

3. Results

Paternalistic strategy

Innovations require large cash flows therefore two models of innovations funding appeared. According to the first model companies like Apple and Google invest in technologies themselves. By the second model Government provides guarantees of funding.

For example, Japanese “dzajto” model means that Government issues bonds and loans to provide credits in preferable sectors such Energy, Communications, Pharmaceutical. Low interest rate settled by the government give a specific “signal” that launches a boom of private investment. This approach is well known as Paternalistic strategy.

In the conditions of turbulence of market economy the need of economic agents for the institutional design providing decrease in the level of information asymmetry is formed. However, strong institutes as the result of their planning and design can have self-supporting inefficient character which hinders the progressive development of economic and social indicators (“effect of blocking”) [10]. The technical-technological factors causing change of technological mode act as a necessary source of inefficient institutes, namely: post-industrial society characterized by the realization of product, administrative and technological innovations which defines high uncertainty and stochasticity of economy, and also risk increase as a quantitative index of this uncertainty. Along with technical-technological factors the existence of plurality of cognitive and behavioral anomalies acts as a necessary condition of nascence of QWERTY-effects [2].

The analysis of the state regulation measures of Russian economy in general, the industrial complex in particular, and the assessment of results of their implementation applying the methodological approach offered. In this work showed that there stay unresolved tasks connected with the transition from resource-oriented to innovation-focused type of development characterized by overcoming the inherent economic structure and by the formation of effective institutes. Thus cognitive and behavioral anomalies initiating the formation of institutional traps serve as the reason of low efficiency of state regulatory control measures towards the economic processes. In this respect it seems necessary to implement the methodical approach based on the principles of new paternalism according to which the state has to implant the normative standard into the structure of subjective preferences of economic agents. The content of this standard is defined by the vector of post-industrial economy development and based on refusal from methodological individualism in favor of the principle of complementarity of individual and social benefits. The basic parameters of the forecasting scaling factor formed for the assessment

The basic parameters of the forecasting scaling factor formed for the assessment of the current state and development prospects of an industrial enterprise [7] in the conditions of new paternalistic economy, which are treated as the initial parameters for three-level perception, are the integral criteria characterizing financial activity of an industrial economic entity, productivity and quality of client relations, efficiency of internal business processes, dynamics of training and organization development with the account of the importance of specific factors defining the trend of the industrial enterprise development in the conditions of the type of economy under research [12] (fig. 1).

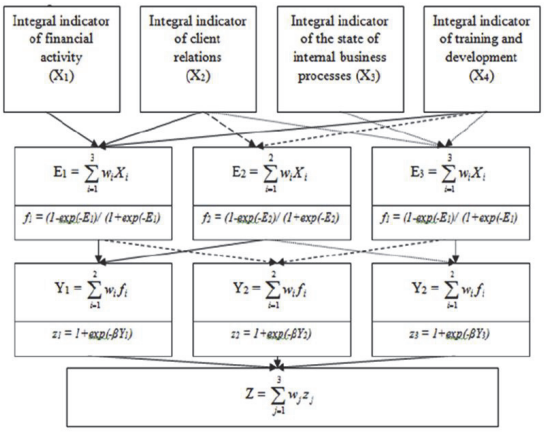

Fig.1. Three-level perception of forming the scaling factor of forecasting the results of industrial enterprise activity in the conditions of new paternalistic economy

Thus, the necessity of the development and implementation of paternalistic strategy of the industrial development according to methodology of behavioristic economy is determined by cognitive and behavioral anomalies adjusted as a result of state implantation of normative standards into the structure of subjective preferences of economic agents which causes application of measures of the direct influence limiting the opportunities for an individual choice at a high risk level of irrational behavior, and the measures of indirect influence adjusting the individual choice of short-term benefit, interfaced with high expenses in the long-term period. It proves that the inefficiency of applied measures of state regulation is determined by the lack of adaptable mechanisms in the national economic system the formation of which presupposes the necessity of formation of paternalistic strategies with the account to the principles of behavioral economy.

Clustering and link of economic and science enhance effectiveness of innovation development

Economic development is closely connected with development of science and technology. Long process of accumulation of scientific knowledge with definite time range – in the form of scientific discoveries – is implemented in technical and technological innovations, which, in its turn, leads to changes in methods of business activities management on enterprises and in macroeconomic mechanisms of regulation used by the state [4, 1].

Level of information support is the most important indicator of competitiveness of countries in modern economics. A lot of authoritative international organizations, such as World Bank, Economic Forum in Davos, United Nations Conference on Trade and Development of United Nations, UNESCO, Paris Institute of administration (INSEAD), International Telecommunication Union (ITU) and others take part in making of rating of readiness of countries for information society (network economics). Building of indexes of participation in network economics is one of the way to compare countries concerning the level of information support. In five most common ratings (DOI – Digital Opportunity Index, NRI – Networked Readiness Index, Information Society Index - ISI, Digital Access Index - DAI, Monitoring Index of Digital Divide) reciprocal rating of countries is approximately the same. Comparative analysis of range of 10 countries in different indexes of readiness for network economics is presented in table 1.

Table 1. Comparative analysis of 10 countries in different indexes of readiness for network economics [8]

Country	DOI	NRI	ISI	DAI	DIVIDE	TOTAL
India	10	7	10	10	10	47
China	9	8	9	9	9	44
Russia	8	9	8	8	8	41
Poland	7	10	7	7	7	38
USA	6	2	4	6	4	22
Hong Kong	2	4	6	5	5	22
South Korea	1	6	5	3	6	21
Netherlands	5	5	3	4	3	20
Sweden	4	3	1	1	1	10
Denmark	3	1	2	2	2	10

It is evident that possibilities of the countries concerning formation of information economics with GDP per capita of more than $20000 and less than $2000 are incomparable. In this connection for estimate of effort of governments for creation of necessary conditions of transition to information economics it is important to know how much wish and support of the country in preparing for network economics are in advance of its GDP. The results were the following: South Korea, Taiwan, Hong Kong, Singapore, Canada, China, Russia, Poland. Rich countries – the USA, Switzerland, , France, Belgium, Germany, Great Britain, Italy, Austria – as well as some comparatively poor countries – South Africa, Mexico, Venezuela – pay less attention to network economics infrastructure development than GDP allows them.

In the research process the following correspondence of ration of DOI index and GDP per capita is defined [9]:

DOI = 0,1227 ln(GDP) – 0,6298, with R2 = 0,8573.

Real large-scale informational support of society is necessary so the volume of information will be effectively used for solution of real problems. Its implementation requires special information policy on all levels (national, industrial, regional).

Progressive evolution of technologies requires involve three parties – Government, Enterprises and Universities

L.N. Safiullin, A.M. Fatkhiev, K.A. Grigorian rightly argue the advantages of triple-helix model of innovative cooperation [12].

The Triple Helix symbolizes a union between government, business and university, which are the key elements of innovative system in any country. (Fig.2)

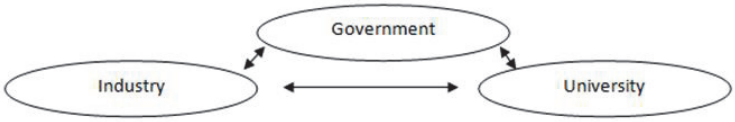

Fig.2. Tripple Helix model

A government-pulled the triple-helix model of innovation has the following characteristics:

- Government initiates and controls significant projects for social innovations;
- Most research universities and large-scale enterprises are affiliated to government;
- The top leaders' ideas and thoughts give direction and government policy and resolution are the batons to carry out the leaders will;
- Government organizes primary innovation agents, such as high-tech development zones (including incubators, science parks), technology and intellectual property markets.

Also such government that undertakes measures on triple helix model implementation has some advantages and disadvantages [6].

The advantages:

- Much more easier to achieve large-scale innovation projects;
- Protecting university interest in entrepreneurship through policies;
- Consensus forming in regional innovation;
- Artificially fostering university-industry links by government authority;

The disadvantages:

- University-industry joint innovations tending to be "shows", rather than real ventures – after all personnel, equipment and funds in the two parties are both from the state;
- University and industry possibly losing the flexibility to deal with problems in the innovation process;
- The government's needing to "pull" university and industry forward [11].

Therefore, that Kazan macroeconomic school of innovative development provide comprehensively approach to the innovation development. The mail idea is to cluster the economics of region and then settle "grow points" under Triple Helix model.

This concept applied in KFU via settling joint venture with "Nizhnekamskneftekhim".

4. Microeconomics

Great example of microeconomics approach represented by A.N. Bulatov [5] and others. He argue the effectiveness of "Enterprise factory" – Volga region startups accelerator.

It is quite difficult to estimate quantitatively the efficiency of the proposed project "Enterprise factory", because the constituent parts of the foreseen measures are targeted at the generating of the long-term effect. Nevertheless, for the new investment projects it is effective to use the following formula of the efficiency estimation:

K=NPV+S+B+C

Where K – complex efficiency of the innovative projects, realized under the educative and communicative initiatives of "Enterprise factory";

S – social efficiency of the project. For example in the form of the summary discount salary fund

B – discounted budget efficiency of the project;

C – indirect economic efficiency of the project for the associated connected branches of regional economy.

We estimated the effective of this project as 100 thousand dollars.

5. Conclusion

This article examined general approaches to the innovation development. All scientific views might be divided in two groups – macroeconomic and microeconomic.

Scholars of Macroeconomic school argues three theses:

- In the economic should be settled paternalistic strategy with the account to the principles of behavioral economy;

- Clustering and link of economic and science enhance effectiveness of innovation development;
- Progressive evolution of technologies requires involve three parties – Government, Enterprises and Universities.

Researches of Microeconomic school focus on value added of projects.

Further development of innovation analysis provide growth of competitiveness.

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National Innovation System and Its Structure

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Abstract

The article dwells on the subject of national innovation system, discloses its essence and structure. The given analysis reveals the complexity of the innovation system of the state, defines its integral constituents and outlines the indispensable conditions for the effective development of the national economy by means of creation of favourable innovative environment

Keywords: *national innovation system, regional economy, innovation economy, innovation cluster*

1. Introduction

The economic reforms undertaken in the Russian Federation for the last decades caused the serious structural transformations both in the state economy in general and in its single sectors in particular. The government set the strategic goal of transition of the national economy of Russia to an innovative phase of development. Accordingly, at present time in the economic studies there is a necessity for theoretic justification and methodological substantiation of this transition at all the levels: macro, meso and at the level of municipalities under conditions of preservation of all the contradictory approaches and theoretic views on evaluation of the innovation system of the state.

In this regard there is a need for specification of methodological approaches and for disclosure of the economic essence of the concept named "innovation system" that receives the ambiguous interpretation in the modern economic literature both in Russia and abroad.

2. Theory

In the economic literature the term "national innovation system" is often referenced to denote a unity of enterprises of various patterns of ownership that individually or through interaction with each other provide the formation and dispersion of innovation technologies within a definite state. National innovation system encourages the implementation of the derived technologies into production and development of new products saleable in the world market. Among such organizations there are scientific institutions (R&D institutes, institutes of higher education, private laboratories, scientific departments of corporations – all of them can be summarized under the term "creators of innovation"); then, "infrastructural" enterprises – technoparks, innovative technology centers, venture funds; agencies conditioning the innovation climate and governmental bodies: ministries and specialized departments; the small, medium and big businesses as the first and the final consumer and as one of the primary initiators of innovation.

The concept of national innovation system was introduced in the economic literature by C. Freeman, developed by B.-A.Lundvall and R. Nelson. National innovation system, according to C.Freeman, is a complex system of economic subjects and public institutions that take part in production, storage, distribution and transformation of knowledge into new technologies, goods and services consumed by society [1].

According to the classical definitions given by B.-A.Lundvall and R. Nelson, innovation is a complex process of introduction of new technologies and knowledge that unite various elements – firms, creators of innovations, technological and analytical centers deeply intertwined with each other – all this together compose the innovation system [4].

In N.I.Ivanova's opinion, national innovation system stands for the entity of interrelated organizations (structures), engaged in production and sales of the scientific knowledge and technologies within the national boundaries. At the same time, the national innovation system is the complex of institutions of legislative, financial and social character, that in

aggregate support the innovation processes and have strong national roots, traditions, political and cultural peculiarities [3].

The theoretical interpretation of national innovation system was embodied in the working state acts. This term occurs in The Foundations of the policy of the Russian Federation in the field of science and technology for the period up to 2010 and further perspective (ratified in March 30, 2002, № Pr-576), where the necessity of formation of national innovation system was claimed as one of the crucial directions of the state policy in the sphere of science and technology.

In the international practice the following definition is in usage: "the national innovation system is a whole of institutions belonging to the private and the public sectors, that individually or in interaction with each other condition the development and spread of new technologies within the boundaries of a certain state" [5].

Thus, in accordance with its constituents the national innovation system corresponds to a complex of institutions of economic, legislative, financial and social character that support the innovation processes. It is a whole of institutions, i.e. a whole of rules and conditions, in accordance with the organizations function. Its goal is development and spread of the new technologies, innovations and organizations of management within a certain state in the form of the object of intellectual property.

3. Results

As an open system NIS reveals itself in the interaction of organizations (structures), of various forms of property engaged in creation of scientific knowledge, objects of intellectual property and their pre-market grounding within the national boundaries. The results of the activity of the national innovation system are as follows: new technologies, new knowledge, know-how, new generation products and finally – a new technological structure that revolutionizes the sectorial structure of the economy, the quality of the gross domestic product and the gross national product.

The substitution of the technological structures as a rule requires certain changes in the social and institutional systems. These changes facilitate the mass introduction of the technologies of new structure and spread of the appropriate types of consumption and modes of life. And what comes next is the phase of fast expansion of this new technological structure. It turns into a basis for the economic growth and takes the leading position in the structure of economy. The phase of growth entails the readjustment of the existing technological chains in compliance with new needs. Simultaneously this leads to the emergence of the upcoming, the newest, technological structure which exists in embryo until the dominating technological structure reaches its limits to growth, and then the next technological revolution starts. This process is accompanied by the formation of a new infrastructure, which overcomes the limits of the previous one and leads to the transition to new types of utilities that serve the foundation for origination of the following technological structure [2].

Among the organizations that may be involved as the subjects of national innovation system there are departments of the large companies engaged in creation and refinement of the innovation processes and the products within the company, laboratories and university departments, academic units, technoparks, innovative small businesses engaged in commercialization of the objects of the intellectual property, and the bulk of institutions of legislative, financial and social character that serve to support the innovation processes.

The results of the activity of the national innovation system are integral to the national wealth. In the course of this activity the scientific knowledge is reproduced and accumulated, that hereafter shape into intangible assets which in their turn contribute to the national property and affect the gross domestic product.

Hence, the national innovation system is a set of institutions, the rules and terms of their interrelations, that within the national boundaries provide for the origination of such intangible assets that as a part of the national patrimony can be called the innovation in the form of intellectual property ready for commercialization.

Upon consideration of the key elements constituting the "innovation system" it is necessary to examine their interrelationship which ultimately determines the structure of the innovation system. Below Figure 1 represents the structure of the national innovation system, and thereupon a question arises: what is the core of this system, its "motive power" and which elements are ancillary.

Taking into account the common definition of term "innovation" given by J. Schumpeter, we can suggest that as well as in innovation itself the core element of the innovation system, its driving force is the innovator. In our opinion this point of view is correct. But the matter is who can perform the functions of the innovator: the state in the person of officials of different ranks (Peter the First, F.Stolypin, L.Beriya) or the scientist-inventor (S.Korolyov), or the entrepreneur (G.Ford). But the precise definition of the main driving force of the system can be given with due regard for all the mentioned subjects. Depending on the stage of industrial cycle (crisis, depression, recovery and growth) various subjects may

represent themselves as the innovator. The phase of crisis and depression, when the entrepreneur struggles for survival, is characterized by the innovation pause. At this time temporarily the state becomes the innovator. Within the phase of recovery and growth the part of innovator is performed by the entrepreneur together with the innovator.

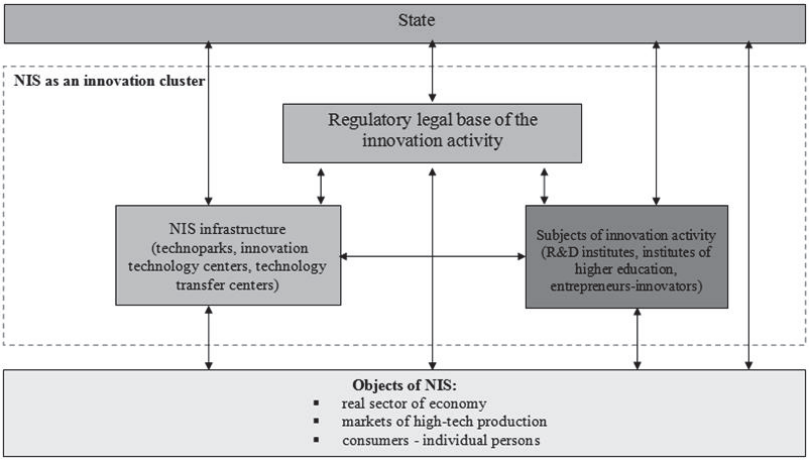

Fig. 1. Structure of the national innovation system (NIS)

4. Conclusions

Regardless of the current economic situation the state is to create and coordinate the work of various subjects of the system, create the necessary prerequisites for the development of the innovation: by means of support of the R&D institutions, by means of financing of the venture funds, by stimulating (in the first place - financially) the activity of the higher education establishments (that provide the personnel potential for innovation activities), and by legal regulation in the sphere of tax, patent and customs policy. The degree of this participation may vary on the territory of the state. Moreover, by means of creation of the national federal and regional purpose-oriented programs (such as the development of space, of the military-industrial complex, the energy-saving policy etc.) the state as an external state customer must set the vector for the national innovation system development that would facilitate the sci-tech development of the national economy. But without the production by the scientist-innovator (i.e. properly R&D) there will be nothing to implement, while without the entrepreneur there will be no motive power and private interest for sales. The commodity-money turnover is usually initiated by the motivation for profit, but the state is an inefficient entrepreneur, because it is represented by the officials who rotate more often than the businessmen become bankrupt. The official in any state is the ersatz owner and takes neither financial responsibility, no liability for the consequences of the decision-making. Therefore the mission of the state is to create the effective conditions for the economic development and for the national innovation system development in particular.

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Management Accounting and Costs Controlling in Oil Producing Companies: Historical Perspectives

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Abstract

The article is dedicated to retrospective study of the first development stages of the management accounting system and costs controlling in oil producing companies. The paper proposes costs classification, management reports types, on the basis of which the decisions in oil business are made. We have considered enterprise peculiarities influencing the development of management accounting model, costs and results controlling in oil producing companies. Depreciation methods used in the middle of the past century in the oil producing companies of the USA are considered.

Keywords: *costs, management accounting, conception, analysis, controlling, oil*

1. Introduction

In the process of development of management accounting model, costs and results controlling in oil producing companies the following peculiarities of financial data formation in the industry enterprises should be determined:

1. Territorial remoteness and specificity of management accounting and controlling objects (oilfields, boreholes, their system dependent developments). It promotes the organization of costs and results management accounting system in the context of their place of origin.
2. The absence of the incomplete production influences the calculation methods of actual and target costs for oil and gas production.
3. Oil producing process is continuous as opposed to the process of outputs production in processing industry. At the same time, life cycle of oil fields and boreholes functioning are estimated. The change of operational life cycle of boreholes performance causes the change in the volume of oil extraction and the value of extracted products cost accordingly. At the final stages the volume of extraction is reducing, the cost is increasing.
4. Identifying of two interrelated processes: underground and aboveground specifies the recording of costs for equipment repair.
5. Availability of the principal (oil) and associated (gas) products requires the application of the respective methods of cost accounting.
6. Extensive resources are used for maintenance of auxiliary units (boreholes underground and aboveground maintenance shop, transportation department, drilling operations shop, complete equipment procurement shop, power supply shop, etc). Return services of auxiliary units promote implementation of rearrangement methods of both target and actual costs, which influences the results of operations in terms of oil lands or oil production workshops.
7. Significant capital intensity of works. This results in increasing influence on depreciation – the costs element of oil production profitability.
8. Preliminary oil fields geological exploration works (costs of the first stage of boreholes life cycle) is embodied in life cycle costs calculation (LCC).
9. Negligible raw products costs (exclusive use of base materials in the form of chemical agents etc.)

Both German controlling and Anglo-Saxon management accounting system influence the Russian accounting system. Consequently, a point of view stating that the management accounting as a mechanism of costs transformation to the results presents component element of controlling. As a result, management accounting in Russia is comparable with three key elements of controlling, jointly used in the USA, Germany and France: budgeting, internal audit and actual costs and results accounting (fig.1). Depending on the country, controlling includes elements of strategic planning, internal audit, and insurance.

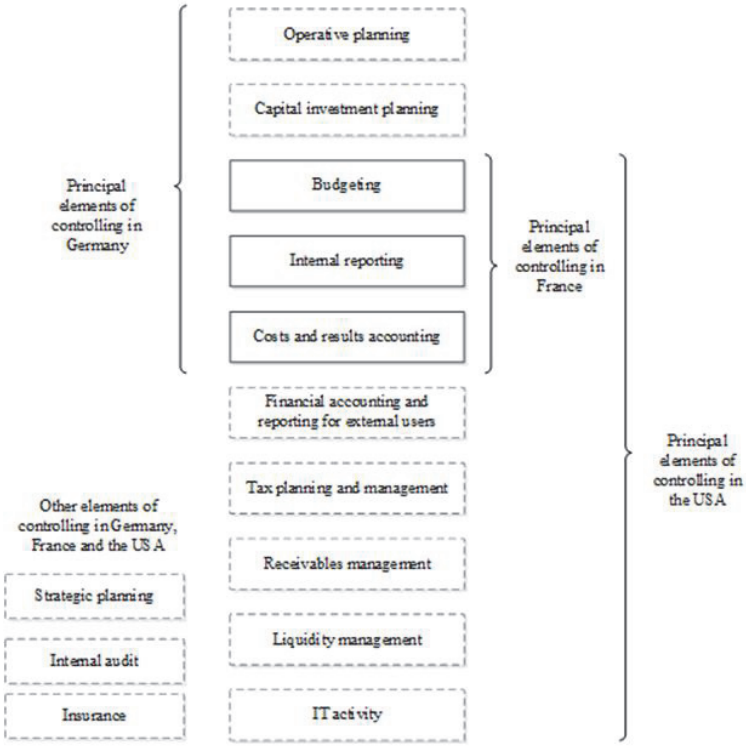

Fig. 1. Elements of controlling

Thus in German controlling the focus is shifted toward data formation for company strategic management, while management accounting in the USA – presents mainly a system for enterprise operative management. Management accounting occurs in all oil producing company's management subsystems (fig.2). Each subsystem has management subject, for example, costs. Herewith each subsystem is autonomous. Horizontal links between the functions allow to form data for the purposes of management.

2. Method

The goal of our research is a study of dynamics of costs accounting system development in oil producing companies. The works of Zhou, Q. and Wang, L.[1], Holmes, P. [2]. Bryant, L. [3], Tatikonda, L. and Tatikonda, R. [4], Collins, D. and Dent, W. [5], Bouachera, T., Kishk, M. and Power, L. [6], Kulikova, L.I. [10] are devoted to the issues of costs accounting in oil producing companies.

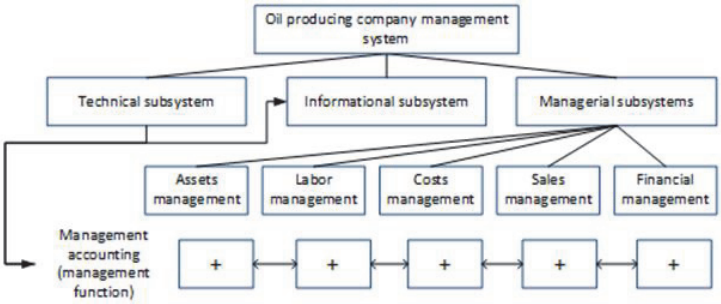

Fig. 2. Management accounting – integrated function of oil producing companies management system

System approach to creation of costs management accounting was used in oil producing companies of the USA. The works of Smith, C. and Brock, H. [9], Irving, R.,[8] Haynes, L.[11], Finnell, J. [12] were dedicated to the issues of costs accounting. In the beginning of the past century oil companies carried out analysis of productive and operating costs implying the preparation of a special form report with separating and monthly reporting of oil producing direct and indirect production costs. Direct costs included production costs on oil injection, boreholes cleaning and repair. Indirect ones included depreciation of land recourses designated for boreholes construction and depreciation of the boreholes as well. Apart from production costs there were defined operating costs: costs for maintenance of buildings, facilities, fire guard, office equipment and furniture, water supply system etc. In the process of the cost calculation for one barrel the indices of unit direct production, indirect production and operating costs are calculated separately. In 1930-40s these indices were already considered essential in the system of management accounting and controlling in oil producing company. Main designation principles of costs to direct or indirect ones were defined at that period. So the costs became direct in case they correspond to the following criteria: direct connection with production activity; production activity serves as basis of business (oil producing and realization); availability of personnel control, responsible for production activity. Availability of connection with production activity, herewith the lack of control on the part of personnel and some disintegration of activity indicated that the resources expressed in monetary terms and expendable for this activity were included to the indirect costs structure. Direct and indirect costs comprised the group of operating costs. In such a case a register of direct and indirect operating costs was kept. Considering that oil lands themselves served as key objects of management accounting and controlling, labor costs for oil regions (areas) directors were subject to distribution among them. Insurance costs were also considered as indirect operating costs, since they were not controlled by the production subdivisions of oil company. Structure of immediate direct costs of oil land consisted of the following: labor costs for farm bosses, bull gangs; roustabouts, operators, boreholes cleaning from sand, etc.

3. Result

Generally we can distinguish four stages of costs formation: acquisition and lease of property (lands), oil prospecting, development and exploitation of oil lands and oil producing. That is why companies bore significant spending on acquisition and lease of oil lands and geologic exploration. Costs for acquisition (lease) of oil lands were capitalized. Depreciation reserves were established; herewith depreciation was recorded not as production costs but as other costs (separate item of costs in the profit and loss report). Upon expiration of undeveloped lands lease (possession) term provided that the lease term is not prolonged, then both the depreciation reserve and capitalized costs (capital assets) were reduced to the total value of the undeveloped lands.

Costs for geological exploration works in 30-40s of the XX century were defined as costs for determination and preliminary volume and depth of oil occurrence except for drilling activities. In case the works performed were inefficient (oil was not explored), then the occurred costs were deducted as expenditures (losses), in case of oil detection they were capitalized. Costs for oil land acquisition and geological exploration works were distributed between the oil lands pro rata with their areas.

However according to the researches of Haynes, L. [11] oil companies in 40s used contradictory approaches to costs and results calculation: costs for lands acquisition (capitalized by 90 % of companies); lease of lands (capitalized by 12 % of companies); costs for exploitation works (capitalized by slightly more than 1 % of companies); costs for levies and charges related to property acquisition (capitalized by more than 50 % of companies); partial payment to the vendor of the oil land (according to the oil land acquisition contract) by the amount of income from oil realization (capitalized immediately by 40 % of companies, capitalized in proportion to out-payments approximately by 8 % of companies, were not fixed at all – by more than 50 % of companies).

There is an interesting fact that about only 50 % of companies capitalizing costs and then applying methods of depreciation, i.e included capitalized costs by parts to the operating costs structure during the term of objects operation. Other companies recorded capitalized amounts in account books, and then deducted the whole cost: either at the moment of oil land commissioning, either upon depletion of oil reserves, or at the moment of making decision on refusal of further land exploitation. By the end of 50s of the XX century Smith, C. and Brock, H. [9] specified that the three variants of costs distribution to research and exploration works had already been used: writing-off expenditures (period expenses), capitalization in case of positive result and capitalization regardless of positive result were used in enterprises. The third variant was used on rare occasions. Such tendency of costs recording was in use in 60s of the past century as well. As a result, the application of three methods of financial result determination gained widespread: without capitalization of costs for research works, with capitalization in case of positive result of research works and with complete capitalization of costs for research works. It was recognized that the third method of costs accounting for oil and

gas exploitation, when the costs were capitalized regardless of the boreholes productivity, was of most interest for managers, since it was more informative from the point of view of information presentation on oil company activity results. It is impossible to explore new oil fields without effective geological research works. That is why these costs were considered as depreciation amounts in the process of financial results definition for all afteryears of oil producing on the land till the moment of its operation term expiration.

In 1970s of the XX century the methods of costs calculation in oil producing companies caused hot discussions in professional environment. The second method was named "successful efforts method" (method of costs accounting based on oil and gas exploitation, when only the cost of successfully operating oil boreholes are considered as capital, whereas the cost of non-productive boreholes or lands is specified as expenditure) or SEA method (successful efforts accounting). Gradually method selection was reduced to two methods: SEA and FCA. Thus the methods of costs calculation became the tool of predictive assessment of the company value, i.e. the method of strategic management accounting and controlling.

Costs detalization was performed in relation to certain groups thereof. For example in 50-60s a number of companies in the USA used the following materials grouping [Irving, R., 8]: class A – 100 % of the market value (i.e new materials), class B – 75 % (used materials, complying with all specified requirements and suitable for reuse), class C – 50 % (remanufactured and repaired materials), class D – 25 % (materials which can be used for other purposes) and class E – residue value (scrap value). Materials were often returned from lands to the warehouses, repaired and used again in production or for other purposes. As an example of such material may serve the casing pipes or casing columns for boreholes lining, materials for pipeline laying, for pumping production, etc. They were often transferred from one group to another, for example, after remanufacturing – from group C to group B and there appeared the valuation variance. Costs were reported in materials reports.

Data on depreciation costs was important for decisions making. In 1930-40s depreciation costs amount calculation depending on the volume of produced oil was considered as advanced depreciation method (the most widely used variant for that period was straight line method and method of decreasing rates: rate 40 % - the first year; rate 30 % - in the second year; rate 20 % - in the third year; rate 10 % in the fourth year). However strong interrelation of the received amount of depreciation allowances with financial results were important for cost controlling. The standard formula for depreciation costs value calculation may be presented as follows:

$$D = \frac{I-S}{\sum Q} \times Q \quad (1)$$

where

D – value of depreciation costs for the period, MU;

I – initial cost of equipment, MU.;

S – disposal value – 10 % of the initial cost, MU

Q – volume of oil producing per month, in barrels;

$\sum Q$ – total calculated volume of recovering from boreholes, in barrels.

For the purposes of company management, forecast value of cost, required for complete exploitation of oil lands, might be added to the numerator:

$$D = \frac{I-S+E}{\sum Q} \times Q \quad (2)$$

where

E - pre-estimated cost value, required for complete exploitation of oil land, in MU.

While using this method named "Californian system", the amount of depreciation and consequently the value of financial results in management and tax accounting were different. In 50s the following formula for calculation of depreciation amount by Californian method gained widespread in the USA [Irving R., 8]

$$D = \frac{I-S+E}{\sum Q+\sum P} \times Q \quad (3)$$

where

$\sum P$ – forecast value of oil producing in lands, in barrels

By the end of 50s of XX century, as was noted by Smith, C. and Brock, H [9], discussions on necessity of depreciation of undeveloped oil lands became topical. Followers of accrual of depreciation for undeveloped oil lands put forward the following argument in favor of this approach: according to the experts research from 75 to 90 % of the undeveloped land area will not be further used, that results in correlation of costs and results – only the insignificant part of costs for acquisition of undeveloped oil lands thereafter will generate profit. Opponents of this approach produced their arguments: depreciation of undeveloped lands is not prescribed by the tax legislation; there is no reasons for considering that the term of beneficial use or land cost are reducing, if the owner has the same rights to the land for the last year of exploitation as in the first year.

4. Conclusion

Costs and results, being the key objects of management accounting and controlling, form the basis for establishment of controlling model and management accounting model. It is important to define separately controlled corporate costs of oil producing company and controlling units, costs by objects: shops and boreholes, teams, cost objects, activity types, stages of boreholes life cycle. This approach allows to improve the oil production company management system.

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Organizational Factors Affecting Employee Innovative Behavior

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Abstract

The research analyzed employers innovative behavior of the organization and importance of influencing factors on it. As research methods were chosen method of structured interrogation, the method of pairwise comparisons, expert evaluation and correlation and regression analysis. The research results were gender difference in innovative employer behavior: more favorable innovation perception in woman - 57%, in men - 43%, the majority of an active reformers (willing, able to work and active), found among female workers - 65%, 50% among male. The research results confirm necessities of the system formation of material and moral stimulation of the staff to take part in creation and realization of the innovation. For the company's management innovative oriented enterprise is recommended on the selection stage and hiring identify staff with appropriate type «active reformer» and «passive reformer».

Keywords: *innovations, innovative behavior, innovative readiness, factors of innovative behavior, model, staff, organization*

1. Introduction

Currently, the task of searching mechanisms and tools of employee potential activation in generating new ideas and practical realization of innovations is becoming more relevant. The employees' readiness to implement innovations is dictated by their perception of the innovation process and the innovation situation. It defines their innovation susceptibility.

In order to understand innovative behavior of employees it is important to understand difficulties and obstacles which innovating employees meet, the causes of psychological barriers, etc. In the process of innovation, some psychological barriers can be overcome, while others, on the contrary, increase, which in the long term leads to the emergence and spread of conflicts in the work environment.

The relevance of this topic raises great interest among representatives of the scientific world who explore various sides and relationships of the innovative behavior of employees with other aspects of their social and work life.

Thus, a group of authors, such as De Jong J.P.J., Den Hartog D.N., studied the impact of the leadership behavior of managers who are responsible for the innovation strategies in organizations on the innovative behavior of employees. The results indicate the importance of the analyzed relationships. Leaders influence employees' innovative behavior both through their deliberate actions aiming to stimulate idea generation and application as well as by their more general, daily behavior. [1]

A similar study of the complex and contradictory relations of the leadership and innovation receptivity of employees was undertaken by Rosing K., Frese M., Bausch A. In order to achieve this aim they suggested the ambidexterity theory of leadership for innovation that specifies two complementary sets of leadership behavior that foster exploration and exploitation in individuals and teams - opening and closing leader behaviors, respectively. The ambidexterity theory relationships the authors termed as mirror symmetry leadership, because it utilizes opening and closing leader behaviors and switches between them to deal with the ever-changing requirements of the innovation process. [2]

In the study, the authors convincingly argue that the transfer of innovative knowledge in the organization is significantly affected by the combination of formal and informal interactions of employees. The result of that joint action is the formation of complex networks of interaction between employees of all levels, which enhance the diffusion of innovations in the organization. «The exact overlap between formal as well as informal contacts between individuals, forming multiplex or what we call rich ties because of their contribution, especially drives the transfer of new, innovative

knowledge in a firm. Studying two cases in very different settings suggests these rich ties have a particularly strong effect on knowledge transfer in an organization, even when controlling for the strength of ties». [3]

The impact on the innovative behavior of employees (30 high-tech companies) of different types was studied by a group of scientists, such as H.-T. Chang, H.-M. Hsu, J.-W. Liou, C.-T. Tsai. They came to the following conclusions: firstly, work engagement fully mediated the negative relationship between transactional contracts and innovative behavior; in addition, it also fully mediated the positive relationship between relational contracts and innovative behavior; secondly, job resources attenuated the former and strengthened the latter mediating effects. [4]

The research of D. De Clercq, D. Dimov, I. Belausteguigoitia was dedicated to analyzing the relationship of innovative susceptibility of employees and unfavorable working conditions. In their study, they prove that the adverse working conditions, namely, work overload significantly impede the receptivity of employees to innovations. At the same time organizations which seek to adopt innovative ideas in the presence of adverse work conditions thus should create relational conduits that can mitigate the associated stress. [5]

Similar results in the study of innovative behavior in top managers in the field of public health also showed that the effect of burnout and anxiety in the workplace is significantly connected with low distributive and procedural fairness. [6]

A significant number of studies in the field of innovation receptivity of employees is based on the fact that producing creative ideas does not necessarily lead to their practical implementation. Hence, researchers try to identify the conditions, opportunities and characteristics conducive to the implementation of innovations. In the work of M. Baer, the relationship between the creation and realization of innovative ideas is regulated, first of all, by the system of employee motivation and their capability for network interactions within the organization. The study showed that the employees were able to improve the realization of their ideas when they expected positive results from the efforts they had taken to implement them. And also when they were skilled networkers or had developed a set of strong "buy-in" relationships. [7]

In the context of our research, economists have a great interest as it relates to their work. K. Birdi, D. Leach and W. Magadley revealed the close connection of employee innovative behavior (the generation of new knowledge, creativity, operational skills and examination of employees' activities, the patent, motivation, etc.) and practical implementation of innovations. Looking at design engineers in a multinational engineering company, they obtained interesting results. Such components of employee innovative behavior as operational skills, motivation of innovations and the examination of activities demonstrated the most significant relationship to the practical implementation of innovative ideas. However, creativity and relevant skills of employees, as well as institutional innovation support, were positively associated with the indicators of generating innovative ideas, but not with the practical implementation of innovations. [8]

A similar study was undertaken by R. M. Stock who analyzed the ability of employees to generate innovative solutions and practically implement them in their organizations. Highlighting the interconnection of the innovative behavior of employees with their passion at work, the author focuses on the negative psychological states that occur in three main forms: crisis of meaning in relation to work, monotony and the crisis of opportunities for professional and career growth. The research results confirm the impact of these characteristics, although to a different extent, on the innovative behavior of employees. So, the crisis of meaning at work and the crisis of professional and career growth are serious obstacles to innovation receptivity of employees, but monotony and boredom in the workplace do not affect it. [9]

Another group of scientists have analyzed the tendency of employees to innovate by focusing their attention on specific professional requirements, and the respective competencies, such as alertness to new opportunities, ability to present products, ideas or reports, ability to mobilize the capacities of others, ability to come up with new ideas and solutions, and ability to use computers and the Internet, and others. The results show a significant effect of the relationship between the process of developing the competencies of employees and their innovative behavior in the work environment. [10]

Concerning the socio-psychological attitudes to innovation, the ratio of at least three components - readiness for innovation which is the motivational component; readiness for the new conditions of life (knowledge, skills, experience) which is the cognitive component; and real activity (actions, behavior) which is the behavioral component - should be taken into consideration. A. Zhuravlev classifies socio-economic personality types into the following categories depending on one's attitude to innovation: «active reformers» (those willing and capable to work and active); «the passive reformers» (willing and capable to work, but not active); «the passive opponents» (not willing, nor capable to work and not active; «the active opponents» (not willing and not capable to work and actively against any changes). [11] The aim of our study is to assess the determinants of innovative behavior of employees operating in the field of road construction.

As methods of research, the following were selected: the method of structured survey, the method of paired comparisons, observation (structured and unstructured), a structured interview, the method of expert evaluation. Statistical analysis of the empirical research data was conducted with the help of factor analysis and correlation and regression analysis, using the program package GRETL.

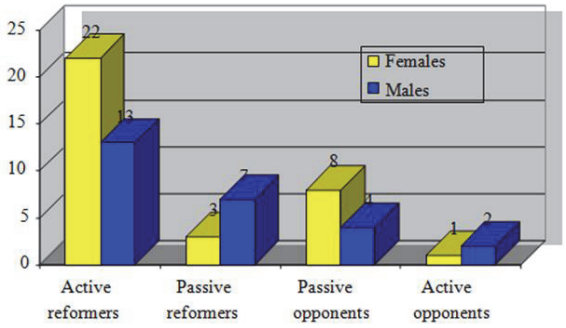
Our study of employees' attitude to innovations was based on the following question: "Are you ready to participate in introduction of innovations in your organization?" Two possible answers were offered to choose: "yes" and "no".

Based on the processing and analysis of the questionnaires one can note some more favorable perception of innovation by women - 57%, rather than by men - 43%.

Also the employees were suggested to answer questions in order to determine their socio-economic personality type (according to the method proposed by A. Zhuravlev). In the end, we obtained the following results, shown in Pic 1. Active reformers were detected more among female employees (active, willing and able to work) - 65%, while among men there were 50% respondents who met such characteristics.

However, it turned out that among men there were significantly more passive reformers (those willing and able to work, but not active), over 27%, while only 9% among women. Males potentially have more opportunities for innovations, but they are passive in using them. By contrast, women, with less resource opportunities, demonstrate more innovative activity.

With regard to the proportion of passive innovation opponents (those not willing, not able to work and not active) and active innovation opponents (those not willing, not able to work, and opposing changes), they were distributed as follows: 15% and 8% of men, and 23% and 3% of women.



Pic 1. The analysis of employees in the context of socio-economic personality type

Analysis of the age structure of employees showed overwhelming positive perception of innovation by men, aged 41-50 years (35%), and women, aged 31-40 years (42%).

The majority of workers, employees, and executives of the analyzed organization have significant experience of practical introduction of innovations. At the same time their readiness to start implementation of innovative projects and technologies is estimated very high: 73% of women (25 out of 34 people) and 65% of men (17 out of 26 people).

The most active in the innovation process are the employees with higher education, among which the distribution between men and women was 61% and 67%, respectively. This can give a start to changes of work organization in the company.

The regression analysis made it possible to build the following model of paired regression. As the dependent variable Y were used responses to the question "Are you ready to take part in the introduction of innovations (innovation) in your organization?" A socio-economic personality type, participation in seminars (conferences), participation in advanced training programs and internships, suggesting for improvement of organization's work, experience of practical implementation of those suggestions in professional activity, a system of motivation of innovative activity in the company were consistently considered as determinants of innovation propensity. It was found out that among the most significant determining factors were the motivation system of innovations in the company (x_1) and a socio-economic personality type (x_2). As a result, the following model was obtained (Table 1).

Table 1. Model parameters

	Coefficient	Standard error	t-statistics	P-value	
const	0.927538	0.143362	1.4196	0.16116	
x_1	0.260919	0.125138	2.0851	0.04155	***
x_2	0.31426	0.154501	2.0340	0.04661	***

Table 2. Qualitative characteristics of the model

Indicators	Value
R-squared	0.926916
F (1.3)	38.04856
Standard dispersion of dependant variable	0.242758
Standard model error	0.07678
Corrected R-squared	0.902554
P-value (F)	0.008577

The constructed model is qualitative, since the coefficient of determination is equal to 0.926916. This suggests that the factors considered in the model explain to 92,69% the dependence of the propensity to innovation formation on a socio-economic personality type and the existing system of motivation of innovative activities in the organization. Less than 7% are the unrecorded factors in the model.

According to Fisher's a model is significant if Fobt > Fcrit.

The p-value in the model equals to 0.008577 which indicates its quality.

The degree of reliability is determined by comparing the standard errors and the regression coefficient. The standard error of the regression model is 0.07678, which is less than the regression coefficient (R-squared = 0.926916). If the standard error value is larger than the regression coefficient, than this coefficient is not significant. Thus, by this criterion, the model is qualitative.

Based on what was said above, the regression equation will look as follows:

$$Y = 0.9275 + 0.2609 \cdot x_1 + 0.3143 \cdot x_2 \quad (1)$$

The system of motivation of innovative activities, as well as a socio-economic personality type has the greatest influence on the level of innovative activity of employees in the organization.

Thus, the results of the study confirmed the necessity of formation of the system of material and moral incentives for employees to participate in the implementation of innovative projects. To the management of an enterprise of innovative orientation it is recommended in the stage of recruitment and employment to reveal employees corresponding to the types "active reformer" and “passive reformer".

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Economic Efficiency Estimation of Intangible Assets Use

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Abstract

The article comprises a set of theoretical and methodological statements and practical suggestions about the specific ways of estimation of intangible assets. The problems of the intangible assets development process management and their further application effectiveness deserve the most serious attention However, the problem of the intangible assets development process management and their further application effectiveness is not illustrated enough.

Keywords: *intangible assets, estimation, economic efficiency.*

1. Introduction

There is no doubt that modern production cannot function effectively without sophisticated technological developments, the results of innovative activity and scientific-applied researches. The lag in the latest developments, high-efficiency technologies, and application of knowledge-intensive production leads to stagnation of the productive forces of society. However, even possessing the significant scientific developments or progressive ideas, the company does not always introduce them into production or mastering of the advanced technologies. The main reason – is in the wrong setting of priorities, inefficient methods of use and management of the research work results carried out in the companies, underestimation of the motivational mechanism influence on engineering manpower professional activity. Therefore, the problems of the intangible assets development process management and their further application effectiveness deserve the most serious attention. In addition there is the problem of fair disclosure in the financial statements of companies. Aletkin P.A. notes, that in case with Russia companies it is not clear if the disclosure of information under IFRS will help investors in getting high quality data about financial position and financial results of the companies (Aletkin P.A., 2014).

Note that the knowledge-intensive production can reach success at the market only under the certain conditions:

1) a clear understanding of the demand scope for innovation among potential consumers, its economic expression of advantages over existing analogues;
2) competent distribution of roles and functions of human resource personnel meeting the requirements of high professionalism, working efficiency, final result orientation, etc.
3) formalized approach exclusion in the formation of the management structure, a singular focus on speed and flexibility in management decision-making;
4) monitoring system establishment for the effectiveness of R&D results implementation into industrial production;
5) creation of an analytical indicators system allowing to assess the profitability of generated intangible assets, their contribution into the final results of financial and economic activity of the organization.

2. Theory

The task of the technical and economic importance of inventions determining has been formulated back in the middle of the last century due to the necessity of the complex "science-production" management (Anne Marie Knott, 2003). Questions of evaluation of intangible assets are presented in the most interesting works of the following scholars: Anne Wyatt (2005), Erik Brynjolfsson (2002), Gema Pastor-Agustín (2011), Lie Dharma (2009), Richard N. Cooper (2010). However, currently there is not a single methodological approach to the significance of inventions and approved methodologies evaluation. It is determined by several reasons:

1) objects of intangible assets are specific accounting objects; they are heterogeneous in their composition, the

nature of the use, the degree of impact on the financial and economic results of the company;

2) the share of intangible assets in the aggregate of all assets of the company may be insignificant (but it should be noted that this fact is often a consequence of the non-rational organization of accounting, when intangible assets are ignored, and the costs of their creation (acquisition) are charged to the income statement simultaneously, without capitalization as an asset);
3) underestimation of the intangible objects role by the heads of the companies traditionally oriented to the improvement of material-mass base;
4) the absence until the present time of a unified system of economic indicators able to comprehensively characterize the commercial use of intangible assets.

Nevertheless, one cannot deny the fact of high yields of individual intangible assets. Thus, if the average annual growth rate of world industrial production comprises about 2.5-3%, then the global trade of licenses for use of industrial property and technology is growing at a rate as high as 12% per year. At the same time, it must be emphasized that investments in intellectual property objects are the most risky sector of economy (Valeria Gattai, 2010).

Most companies are interested in the efficiency of investments into the creation of certain intangible assets, that is - income per unit of investment (Kulikova L.I., Ivanovskaya A.V., 2014). Note that the income from the use of intangible assets is the difference over a certain period of time between cash receipts and cash payments received by the rights holder for the right to use objects. Benefit from the use of intangible assets is determined on the basis of direct comparison of the value, risk, and time of receipt of the cash flow from the use of intangible assets with the value, risk and time of receipt of the cash flow which the right holder would have received not using these facilities. This approach can be implemented by discounting or capitalization of cash flows from the use of intellectual property. If the cash flows from the use of intangible assets objects in equal intervals of time are not the same, then the amount of value is determined by discounting of the future cash flows. For us, this approach is interesting for some options, which are possible here. Thus, this method lies in the basis for determining the benefits in the profit, which has the owner of intangible assets. Sufficient degree of accuracy is the prerequisite of the advantage in profits analysis fulfillment which means the amount of additional revenue obtained due to the possession of the rights to the property and its use in the exercise of economic activity (detected when compared to analogue). Under the advantage of profit the additional net profit (after tax) is construed, which is obtained with each item of product using the intangible assets. This advantage can be achieved by improving the quality of products, or in addition to this factor, by increasing the popularity of the company (for example, increasing the knowledge of the trademark). The advantage of profit appears:

1) as compared to the company, which manufactures products similar to the products of the company under consideration;
2) in relation to the present company, manufacturing these products before and after the use of intangible assets.

Annual profit advantage expressed in monetary terms is reduced to the present value taking into account the expected period of its receipt:

$$C = \sum V_t * \Delta P_t * K$$

where

C – profit advantage;

Vt - volume of products manufactured using the intangible asset in the t-year;

ΔPt - the advantage of profits expected to gain from the use of an intangible asset in the t-year;

K - the discount factor in the t-year.

In our opinion, this method is of particular interest because it is often this approach is used to estimate the value of inventions. This annual advantage in profit is discounted based on the expected period of its receipt. However, when using this method it is necessary to take into account that the additional revenue can be obtained just in case of an increase in demand for the company's products due to other factors.

As a rule, in the practice of companies there are situations where it is difficult to assess the potential net income attributable to the object of intangible assets. Companies produce a large range of products, and it is a complex task to determine income, which is brought by a particular type of product and what's more - the object of intellectual property used to it. In this regard, it is proposed to use the method of the profit separating attributable to the object of intangible assets.

Wherein the following steps are performed:

1) the expected remaining useful life of the asset is determined;
2) the income derived by an enterprise from the products using the intangible asset is forecasted;
3) the cash flow as the income generated by the intangible assets is forecasted (by allocating of an appropriate share);

4) the discount rate is determined;
5) the total present value of future income is calculated;

Note that the share of profits attributable to an object of intellectual property depends on many factors, among which are the following: the degree of legal protection, the presence of existing similar ones already used in production, including competing companies, the profitability of the industry as a whole, etc. The share of profit is determined, usually by experts and by some estimates, and may comprise 10-35% of the total profit from the use of the material object of technology (products), in which (or in part thereof) the intangible assets object is embodied. The disadvantage of the above method is that the data for the calculations is determined mainly by experts, that brings subjectivity in the analysis.

The need to record the risks in the analysis of the intangible assets effectiveness causes no doubt, since the implementation of the results of intellectual activity is associated with a list of external risks (associated with market conditions) and internal ones (peculiar only to this project). Significantly higher is the project risk with incomplete implementation phase or even with the unfinished stage of research and development activities focused on the promotion of new products and technologies. In developing of such projects many decisions are made on an intuition level, since in most cases the required information is missing. Note that in terms of political and economic instability, the analysis of such risks is of particular importance.

3. Results

The world practice of financial management uses different methods of own risks analysis. The most common ones are: the method of the discount rate adjusting (for approximate calculations), the method of certainty equivalents (certainty coefficient), analysis of performance criteria sensitivity, the method of scenarios, the analysis of probability distributions of cash flows and other methods. In general, the following should be noted that one of the tasks of analytical work in the field of the intangible assets effectiveness assessment is to determine the most effective option of the object use. At the same time, the most efficient use is construed as the use of the object by the actually existing user, who is physically possible, reasonably justified, legitimate and feasible from a financial point of view, the positive effect of which is estimated as the maximum.

One of the distinguishing features of intangible assets is the ability to both in-process application of intangible assets as a resource potential of the company, and their commercial use. It is therefore proposed to divide the entire set of analytical indicators into two groups. The first group characterizes the efficiency of intra-industrial use of intangible assets, the second is the effectiveness of their commercial application.

Table 1 represents the parameters included in the first group.

Table 1. Indexes of intra-productive use of intangible assets effectiveness

№	Indicators	Comments
1	Depreciation coefficient	Suitability of this coefficient application for the purposes of analysis is questionable, as the physical depreciation is not characteristic for intangible assets. Though, note that this type of assets is exposed to a considerable moral depreciation, and it is impossible to determine its period with the sufficient degree of reliability.
2	Coefficient of qualification, renewal, acquisitions and disposals	Economic purpose is characterization of the movement process and the renewal degree of thee company's innovative component, the level of its compliance with the modern conditions
3	The level of intra-productive returns from intangible assets	Is determines judging from the gross income of the company gained from the sales of its products (works, services) basing on or with application of the intangible assets, per the unit of the average price of the indicated assets for the calculated period of time. The comparison base must be added with the data of the level of returns from intangible assets of the competitor companies, the best achievements from the data of the knowledge-intensive companies (reference value)
4	Coefficient of extensive use of intangible assets	Is calculated as the product of two indicators: the coefficient of extensiveness of intangible assets use in the area (calculated as the ration between the intangible assets value used in the company and the total value of produced R&D costs for this period) and the coefficient of intangible assets use by the time of the company operation (calculated as the ratio between the working and calendar time fund in the company).
5	Revenue share from the use of intangible assets in manufacturing of products (works, services)	This indicator is difficult for calculation. As a rule, expert-statistical method is used for its calculation (we have dealt on this earlier).
6	Pay-back period of investments into intangible assets	In modern conditions of industrial enterprises economic management this indicator on the average may be twice as low as compared to the similar one by the permanent assets. This is explained by: firstly, by the high intensity of innovation activity, and thus, quick renovation of intangible assets; secondly, by the permanent costs for support and development of scientific-innovational potential; thirdly, by the high risk of investing into the intangible assets due to not sufficiently efficient intra-production use or commercial (market) failure.

The second group of indicators characterizing the efficiency of commercial use of intangible assets consists of the following factors:

1) The level of commercial returns from the intangible assets, which is defined as the ratio of income from the commercial use of the intangible asset and their average value for the period.
2) The return on intangible assets, calculated as the ratio of the balance sheet profit of the adopted version of the intangible asset to the total amount of the costs required for the creation and use of the intangible asset.
3) Readiness of intangible assets of internal manufacturing for use as commercial application. Studies show that more than half of all of intangible assets used in the production are created directly by the companies. Corresponding coefficient of intangible asset availability for commercial use (K_r) is calculated by the formula:

$$K_r = \frac{\sum_{i=1}^{n} C_n}{\sum_{i=1}^{n} C_n + \sum_{j=1}^{m} C_m}$$

where

C_n - the relevant elements of the costs of the i-th object of intangible assets;

n - is the number of intangible assets prepared for commercial sale in the reporting period;

C_m - relevant elements of the costs of the j-th object of intangible assets;

m - the number of intangible assets not ready for commercial sale created by the company in the reporting period.

Exemplary allowable K_r values lie within the range of 0.7 to 0.9. By increasing the upper value of the specified index the backlogs of intangible assets are reduced to a dangerously small value (less than 10%), which is usually insufficient for the effective implementation of innovation activity in the current reporting period. If the lower value is less than 0.7 – then the indicator of the backlogs for intangible assets is comparable with the index of objects prepared for the commercial use, indicating the "freezing" of working capital in innovation activity.

4. Conclusions

Thus, we see that majority of the indicators used for assessment of innovation organization effectiveness is determined by a statistical expertize, which introduces an element of subjectivity in the analysis conducted in this way. The greatest effect is achieved by continuous monitoring of the dynamics of the above factors and their values as compared with the similar indicators of the competitor companies.

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Internal Enterprise Development Strategy

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Abstract

The subject of this study is organizational and economic process that provides an improved mechanism for managing today's corporations. The practical significance of this study is that it allows us to develop the program and to prepare measures to optimize corporate performance through improvement of the management and business processes that will strengthen the position of corporations in a competitive environment, improve the quality of management, reduce administrative costs and improve bottom-line results of financial and economic activity.

Keywords: *production system, efficiency, performance management, industry, restructuring, localization; strategy.*

1. Introduction

This is inherent for market economy to get various mechanisms of organizations management. Firstly that could be buying and selling of companies. Such contracts are a mechanism of corporate organizational development means including (or release) of “new” (or “old”) organizations which supports attainment and keeping of corporate overall competitive advantage. There are many methods to achieve competitive advantage which were established during historical development of corporate as a business mode.

Majority of corporates initially develop in one chosen branch. The main features of such organizations development strategy are [6]:

- concentration of resources in a “narrow” segment of production;
- specialization on a non-differential product;
- orientation on a maximal profit by production scale and also by including of distribution and sales functions in organizational structure;
- usage of “price” policy in competitive activity – directed to full suppression of competitors.

2. Theory

There is another aspect of corporate organizational development – concept of transition to “integral” enterprise. Such concept became an attempt of a few big automotive concerns to respond new challenges of competitive activity recognized in automotive industry in recent years. An integral enterprise represented a new qualitative leap in organization, management and control of the whole production system. Key points of new logic of organizational architecture became such words as “mobilization of all human resources to achieve common target” and “abolition of traditional personnel division to those who make decisions and those who execute”. As known, that always led to irrational dispersion of intellectual efforts which were neither united nor stimulated at the previous organizational structure [5].

Another key concept of organizational model is a new logic of decision making. If in the Taylor hierarchy-functional model responsibility for all operating issues went to the top of organization and decisions went down – now in the new model the process is almost opposite. All raised questions and problems should be solved in the places where they appeared and by those people who recognized them and who have professional competency to fix them. At traditional

organization all privileges were given to functional departments but not to the logic of production process. As by traditional vision each functional department strives for maximal achievement of own targets. It was assumed that by such philosophy a functional department is also striving for the whole organization targets. But the practice proved that such situation is possible is only to implement a very complicated and laborious system of negotiations and interest conflicts solving between different departments [1].

At an integral enterprise the organizational center is the main production process and supporting processes closely related with the main one. Decisions are made there where they appear and where responsible people present who are capable to solve problems at professional level. The role of functional department changes: now it should submit it's resources to the production process for fixing of raised issue and operating process controlling [8].

Decision making responsibility now is delegated to a working group (team). Such working group has a leader in a head who is not only a hierarchical supervisor for the team but also a stimulator for his daughter for a creative work [10].

If to delegate decision making responsibility to production locations – it is possible to reduce number of hierarchical management levels. Those levels will be necessary which are demanded for production process regulations. As a result responsibility of the left managers and ordinary employers will increase and it's professional content also becomes wider [2].

The core of an integral enterprise is "elementary technological unit" (ETU) which is defined as a basic organizational production unit which controls technologically indivisible production equipment with measurable parameters and which operates at dedicated production cell with autonomous actions: preventing of problems, anti-crisis management, continues improvement, self-control.

All these actions should be directed for achievement of targets for quality, capacity and services. Elementary technological unit is a basic unit of a plant which is capable to get own targets for capacity, services and costs in applicable technological department [3].

One of the main management tasks is support of permanent development of material production efficiency, achievement of consuming product which maximally meets customers' expectations with minimal costs. Economic situation of open market seriously increases requirements to a producer [7]. As practice of leading machine building firms shows: neither technical upgrade of the production; nor implementation of new technics and technology not supported by continues improvement of incorporation government and psychology change of corporate philosophy – don't bring acceptable effect. On the other hand change of management approaches, growing up of the personnel in understanding of new approaches and targets allows to raise production effectiveness quite quickly and without big capital costs, which of itself may quite often help a company out of critical financial situation. Thus, there are well known actions of Japanese automotive corporation "Toyota" management to develop "Lean manufacturing" system. Similar methods were used by "Chrysler" management. "Group GAZ" also doing in the same way [9].

Common approaches are understandable and well known. The task is to define specific methods to solve the problem of increase of effectiveness of the basic (elementary) unit of – for example – foundry department. Let's take a foundry shop for consideration a foundry shop – and investigate different stages of solving of the above mentioned problem, changes in production organization and achieved results.

General points which give input for current status analysis and develop method for further process improvement are [4]:

- transfer of production product (also in technological process) goes by shortest way;
- equipment which is busy in production process should be optimized from point of view of synchronization of working cycles and capacity;
- product promotion control is based on a principle – each next step of production chain is a full-value customer of the previous step with all consumer rights in terms of quality, timing, delivery performance, etc.
- all operations and processes are described, there are cards of their actual status, there is a plan to standardize operations.

To execute activity for actual status analysis there are special groups created which include various specialists of production organization, technologists, managers, supervisors. Complexity of the process should be reviewed at the first stage to provide optimization. It has sense to select the most problematic area which determines shop functionality – and then expend the results to the whole shop. If we talk about foundry shop the most problematic area is recognized to be chipping area – where castings are handled with special trimming tools before shipment to customers. This chipping area is characterized with very heavy physical labor, not comfortable hygiene and sanitary conditions, significant number of employees [11].

3. Results

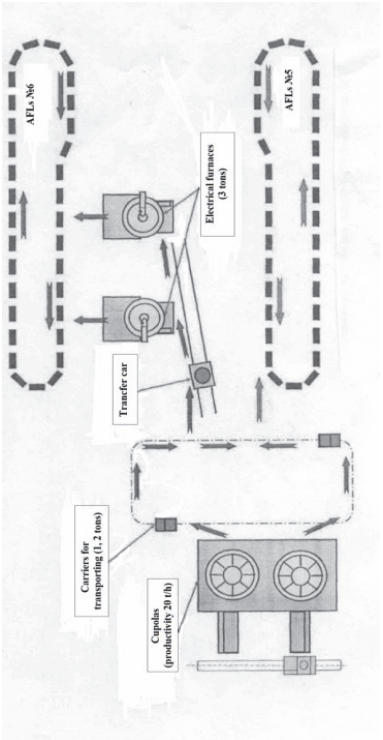
Development of modern economics proved that creation of effectively acting industry is not possible without implementation of strategies linked to new production technologies.

Let's take an example to implement mixing technology of melted metal based on a special metallurgical furnace with main technical features: direct current, electrical arc, DMPTU-12 type. Practical experience showed that mentioned type of furnaces significantly exceeds operational characteristics of other types of melting aggregates.

Have a look at technological process before effective action implementation. Raw materials come into the foundry shop by railway. Then raw materials are transferred by crane to daily bunkers from where may go to melting areas (e.g. cupolas). Cupolas do melting of raw materials to get liquid metal (alloy). Liquid metal goes from cupolas to electrical furnaces (EDP-12 type) by special carrier. EDP-12 furnaces make calibration of the liquid metal by chemical composition and temperature. Chemical composition is checked each 30 minutes by express analysis. After correct chemical composition is achieved – liquid metal goes to next special carriers for transporting to automatic forming lines (AFLs) where metal fills molded forms by special manual ladles (Fig.1).

As a result of process improvement electrical arc furnaces were replaced by new generation mixing furnaces on direct current. That was a complex of a few new technical solutions which allowed to extend technological options of electrical arc melting and avoid main specific problems of such type aggregates (Fig.2).

Mixer capacity exceeds the same parameter of electrical arc furnace by 4 times. Except of main function of DMPTU-12 – holding and heating of liquid alloy – it's usage gives a technical possibility to optimize many other technological processes. For example, if we need to establish production of heavy weight castings – it is more reasonable to use a mixer of DMPTU-12 type since electrical power of the last (and related cost) is a few times less than of electrical arc furnaces of the same capacity.



4. Conclusions

It gives a technical possibility, for example, at general production of steel castings at average weight 5 tons to produce

castings average weight 30 and more tones with the same electrical power of enterprise.

Advantages of the chosen technological solutions are:

- prevention of danger to drop liquid metal out of furnace
- quick speed of metal melting
- reduction of number of technological operations
- increase of melting area capacity
- automatic control behind melting operations
- more comfortable working conditions
- reduction of melting operation time
- exclusion of 3 electrical arc furnaces
- optimization of 4 staff positions (furnace operators)
- increase of production capacity by 2 times

Results of new production strategy implementation are summarized in Table 1 and demonstrate directions of technological process improvement.

Table 1. Results of technological process improvement

Indicators	Before implementation	After implementation
Equipment	12	9
Personnel	10	6
Scrap because of hardness	4%	1%
Number of good forms	88000 forms/month	105300 forms/month
Reduction of raw materials		10 967 thousand rubles per a year

Thus analysis of metallurgical production indicators before and after internal enterprise development strategy shows proves effectiveness of realized actions.

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Doubtful Debts Allowance Develoment: Stages and Methods of Calculation

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Abstract

The paper investigates the problem of doubtful debts allowance development for the purposes of receivables reflection in the accounting (financial) statements. Comparison of approaches to forming the allowance in compliance with the US, Russian and international accounting standards is fulfilled. It is proved that the allowance of doubtful debts formation should be based on the principle of accounting conservatism. In this case, it is advisable to use the method of accounts receivable aging based on the probability of payment coefficient. This coefficient represents the best assessment by the managers of the possible amount of the accounts left without repayment by the buyers judging from the past experience of relations with the debtors. The steps of forming an allowance are described in detail, basing on the certain procedures fulfillment.

Keywords: *the debtor, the debt, allowance, doubtful, accountancy, US GAAP, IAS*

1. Introduction

Historically, the emergence of receivables is associated with the development of commercial lending caused by a lack of available cash assets. To increase the company's revenues the enterprises were forced to ship the products on the transfer conditions of payment at a later date "on the pledge of the word" of the buyer. However, this situation can lead to the occurrence of the so-called "bad" debtors causing doubt about the repayment of their debts [1, 2]. For these purposes the allowances of doubtful debts is established for reducing of the amount of receivables reflected in the financial statements [3]. However, at present there are no specific methods of the said allowance formation in the existing Russian laws and regulations on accounting. In our research, we have developed approaches to the allowance of the doubtful debts formation by implementing certain procedures carried out in stages.

2. Method

The idea of an allowance for doubtful debts formation came first to the bankers. Thus, part of the Bank Medici policy, which was one of the oldest Florentine banks operating in the XII-XIV centuries, was the establishing of such allowance as the act preceding distribution of profits. The idea of the allowance creating was implemented in other countries. Thus, J.Peel in the book "Paths to Perfection" published in England in 1569 suggested separating the doubtful debts of the debtors in the accounting, so that the owner could know about it [4].

At present, in accordance with international financial reporting standards receivables are treated as a financial asset [5, 6]. Under the IAS 39, each financial asset is subject to impairment test, which is related to the excess of the carrying value of the asset over its estimated recoverable amount. As of the reporting date the company should assess the evidence of the objective data for possible impairment of the financial asset [7]. The identified probable failure to obtain the principal debt and the interest by the receivable necessitates the calculation of allowances for the impairment. The allowance volume reduces the carrying amount of the financial asset to its estimated recoverable amount [8].

Thus, international standards oblige organizations to form an allowance for doubtful debts in the event of any impairment indications [9]. In this case, the allowance is formed basing on operational data of debts payment, as well as on the basis of: the probability of the debt recovery; repayment of the past debts depending on the term of the debt; possibility of repayment judging from the data of the client [10].

US accounting standards (US GAAP) stipulate basically two methods of determining doubtful debts during the reporting period for calculation of the cost value for bad debts: percentage of net sales method and accounts receivable

aging method. According to the second method the accountancy department fulfills ranking of accounts by terms of their repayment, each group of accounts is determined by the forecasted percentage of doubtful debts. This approach helps the management of the company to determine the policies of the loan provision and all settlement operations [11].

L.I.Gomberg - corresponding member of the Academic Society of Accountants in Paris, member of the International Association of Accountants was the first in Russia who wrote in 1903 in the journal "Accounting" of the doubtful receivables allowance creation and of the receivables reflection with consideration of allowance. He offered his method of the allowances determining for “bad” debtors.

In accordance with the Rules of the balance sheet drawing approved by the Resolution of the Council of Labor and Defense of 26 April, 1928, the creation of doubtful debts allowance was announced obligatory. Famous Russian balance issues researcher N.A.Blatov described the procedure of an allowance forming in the following way: “Doubtful debts allowance is created for the part of the debts, which seems doubtful. Alongside with bringing an active cost of debts calculated by the nominal value to the real value seeming fairly reliable for receiving, the allowance at the same time seeks to clarify the calculations by the results of the neighboring years, laying on a fiscal year the losses on debts that have become doubtful in the course of the year” [12].

It should be noted that only from 1 January, 1992 the idea of doubtful debts allowance obtained its practical implementation in the post-Soviet Russia. By the Regulation on accounting and reporting in the Russian Federation approved by the Order No 34n of the Ministry of Finance of the Russian Federation of 29 July, 1998, which is still effective at present, it has been established that the allowance for doubtful debts is created on the basis of the accounts receivable inventory in the organization. Thus, the receivables of the organization are considered doubtful if they are not repaid or with high level of probability will not be repaid within the period specified by the contract, and are not provided with appropriate guarantees. The allowance value is determined separately for each bad debt, depending on the financial position (solvency) of the debtor and the estimation of the probability of debt repayment in full or in part. The allowance sums recognized in the financial results of the organization.

The allowance size is not shown separately in the balance sheet, but the receivables in the assets are recognized in the net assessment, that is less the formed allowance. Let us imagine a situation, where all receivables will be doubtful, that is outstanding at the stipulated time and not provided by any guarantees. Then, according to the applicable accounting rules the allowance of doubtful debts will be formed for the entire amount of the receivables.

Back in 1927 N.R. Weizmann in his book "The course of the accounting study" supposed that a significant amount of reserves for expected defaults in payment may hit creditors and investors upon the idea of the unreliable enterprise clientele. According to N.R. Weizmann, a limit should be set for an allowance formation. An allowance in the amount of 5-8% of receivables - this could be a fairly considerable value [13].

N.R. Weizmann believed that verification of receivables requires a thorough study of the entire trading activity of the enterprise as well as the nature of its clientele. Here the definition of usefulness or doubtfulness of certain requirements to the third parties almost always depends on the free discretion of the enterprise. According to N.R. Weizmann, the study of receivables reliability requires the accountancy department to submit the documents confirming the accuracy of balances on transactions with the major debtors (such documents are the debtors letters received in response to an open account statements sent to them).

In 1926 I.R. Nikolaev in his book "The problem of balance feasibility" cited the standards of Swiss and Italian firms dividing the receivables into three classes:

- the first class - definitely reliable debts, for which a reserve fund is formed in the amount of 5% of their value for discounts, interest, exchange losses, costs of obtaining, etc.;
- the second class - average debts, leaving hesitant about their total value; they should be shown 80% of their amount;
- the third class - doubtful debts, which must be shown 50% of their amount [14].

Professor Ya.V. Sokolov in 2000 believed, that the accounting policy should stipulate a unified rate for all receivables. In his opinion, "The establishment of allowance by experimental way as a probability of each individual debt repayment – would be a deeply wrong approach, since the meaning of provisioning is reduced to the determination of the average expectation of possible changes of the allowance forming value" [15].

It should be noted, that the allowance of doubtful debts formation raises many questions in the present practice of the Russian organizations. What is the way to confirm the calculation of the allowance? Which method shall be used for determining of the allowance amount? In the uncertain situation many Russian organizations often do not regularly evaluate the recoverability of specific receivables. Consequently, the receivables are recognized in the accounting reports in full, which causes reflection of unrealistic amounts of debt.

3. Results

Doubtful debts allowance represents the estimated value of the receivables' impairment, roughly determined or calculated basing on professional accounting judgments in the absence of a precise method for its determining. In our opinion, by the reserve formation it is necessary to base on the precautionary principle. For preventing of hidden allowances, the allowance for doubtful accounts must include only the excess amount of receivables over payables to the same counterparty [16, 17].

We believe that the method of the reserve formation implies fulfillment of certain calculations (procedures), consisting of several stages (Fig. 1).

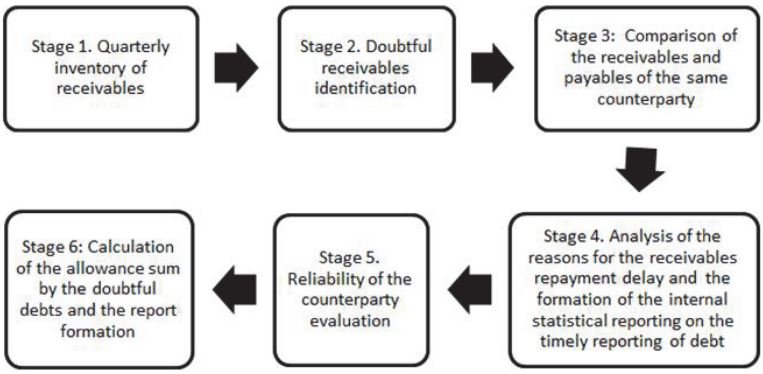

Fig. 1. Stages of allowance for doubtful debts formation procedure

Stage 1. Quarterly inventory of receivables fulfillment at the end of each reporting period of interim reporting.

Stage 2. Identification of overdue receivables not supported by the appropriate guarantees, as well as accounts receivable from the counterparties under the bankruptcy procedure or litigation procedure for the recovery of receivables [18, 19, 20].

Stage 3. Comparison of receivables and payables of the same counterparty. The overdue accounts receivable not guaranteed by the counterparties with accounts payable are excluded from the list of the debtors identified in step 2:

Dc = Pdc – Rdc, (1)

where Dc – debt of the counterparty

Pdc - overdue receivables by the counterparty,

Rdc - payables by the counterparty.

If Dc <0, then the debt is not regarded as doubtful.

If Dc> 0, then the difference is considered as doubtful debts in case the delay in repayment period exceeds the time limits established by the contract by 45 calendar days.

Stage 4. Analysis of the reasons for the receivables repayment delay and the formation of the internal statistical reporting on the timely repayment of debt. It is advisable to submit the results of the analysis in the register of the following form (Table 1).

Table 1. Accounting register of untimely debt repayment

No	Counterpart	Cases of untimely debt repayment in three years preceding the reporting period	Term of delay
1	"LTD" LLC		No cases of untimely debt repayment
2	"Stilus" LLC	3 quarter, 2011	The debt is repaid 6 days after the deadline specified in the contract
3	"Trust-cold" OJSC	1 quarter, 2014	The debt is repaid 10 days after the deadline specified in the contract

Subsequently, the internal statistics of the timely repayment of the debt in three years preceding the reporting is used

when assessing the reliability of the counterparty fulfilled in Phase 5.

Stage 5. Reliability of the counterparty evaluation. All counterparties can be combined into 4 groups of reliability level. The assignment of the counterparty to one or another group is done on condition of its compliance with one or more reliability criteria set out in column 3 of the Table 2.

Table 2. Grouping of counterparties

N	Group of counterparties name	Criteria for classification of counterparties to the appropriate group	Coefficient interval of payment probability	Determination of the of payment probability coefficient (within the interval specified in the column 4)
1	2	3	4	5
1	I group of risk Reliable counterparties	- Counterparty is included into a group of companies by formation of the consolidated reporting (parent, subsidiary, affiliate, joint venture company); - the overdue debt has been settled by the date of the allowance calculation for the doubtful debts, as it has been repaid both upon the reported date, which is specified as the date for the reserve calculation, and before the date of the reserve formation. These counterparties are assigned to the II or to the III group of risk in case of the failure to settle the debt within 1 year from the moment of the debt occurrence.	-	The debt sums of these counterparties are not considered in the allowance for the doubtful debts calculation
2	II Group of risk Average counterparties	There are no delays in the debt settlement of these counterparties (basing on the internal statistical data studied for three years preceding the reported period)	from 0.4 to 0.6	The entire sum of the debt by this counterparty adjusted for the coefficient of expert estimation is taken for calculation of allowance for the doubtful debts.
3	III group of risk Unreliable counterparties	There are delays in the debt settlement of these counterparties (basing on the internal statistical data studied for three years preceding the reported period); There are no statistical data of timely debt settlement, as there has been no previous business relationship with this counterparty.	from 0.6 to 0.9	
4	IV group of risk: Critical counterparties	There are: - applications of the bankruptcy procedure commencement; - pending lawsuits with the counterparty of the debt recovery; - documents confirming that the leadership of the organization has made a decision of the overdue debt recovery from the counterparty by way of the lawsuit (internal memorandum, orders, regulations etc.) Counterparty is a natural person (individual entrepreneur)	1.0	

Stage 6: Calculation of the allowance for doubtful accounts and report formation.

Calculation of the allowance sum for doubtful accounts is carried out by the Commission in charge of dealing with accounts receivable for each debt and each debtor separately by multiplying the doubtful debt amount by the corresponding coefficient of payment probability (CPP).

The results of the analysis in the previous phases are recorded in the report "Calculation of the allowance sum for doubtful debts" (Table 3).

Table 3. The calculation of the allowance sum for doubtful debts

No	Name and address of the debtor	Is in arrears		Difference between the outstanding receivables and payables, rub.	Coefficient of payment probability	The allowance value, rub.
		Basis of the receivables occurrence (for anything)	Commencement date			
1	2	3	4	5	6	7=5*6
1	"Gamma" LLC	For the shipped products	05 November, 2014	590000	0.7	413000

4. Conclusion

Our proposed method of calculating the allowance for doubtful debts will allow to realize the principle of prudence (accounting conservatism). This is necessary both for the implementation of internal control over the debtors, and for disclosing of information about the accounts receivable of the organization in the financial statements. Allowance for doubtful debts must be formed basing on the evaluation of the state of affairs in the organization and on the expected future economic benefits in settlement of accounts receivable.

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Public and Private Partnership as a Mechanism of Government and Business Cooperation

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Abstract

The state represented by bodies of regional and local authorities with the help of public-private partnership projects will be able to move from direct budgetary financing of projects to a promising model for attracting private funds, thereby increasing the efficiency of their operations. There is a need to strengthen the system of interaction between government and the private sector, as it will lead to the creation of conditions for increasing the competitiveness of the public sector through more effective use of state property, investment in the economy, modernization of industrial and social infrastructure, improving the quality of goods, works and services.

Keywords: *public-private partnership, power, money, competitiveness, investment, improving the quality, the transport industry*

1. Introduction

Public and private partnership is a specific instrument allowing government bodies and entrepreneurship to enter entirely a new state of relationship.

In recent times, our country consolidates its position on the world market and increases its capabilities, government officials modernize legislation, overarching priorities for national development are established, and attention is meanwhile directed to private sector, without which it is hard to imagine development of any government. In current economical and political development conditions of Russia, that are PPP projects that may come the substantial instrument assisting in escaping challenging situation. Government, in the name of regional and municipal authorities, can pass from direct budgetary financing to advanced model of private fund raising due to PPP, projects, whereby improving the efficiency of its activity.

2. Method

PPP [5] is cooperation between government authorities and private sector, focused on supplying the needs of sociality, implementation of important public projects, which has institutional composition and implicates balance of convenience for private and state parties.

Present definition of PPP alludes various forms of public and private parties' cooperation, such as [5]:

- contract system, gained ground in public procurement implementation;
- concession, alluding transfer of government property management to the private sector upon terms of upgrading, reconstruction with reserved property rights;
- cooperation between private and public parties through building joint ventures.

Close links between government and entrepreneurship, in one way or other, promote appearing different antilogies, private and public interests come into conflict. These antilogies can be narrowed down the following [5]:

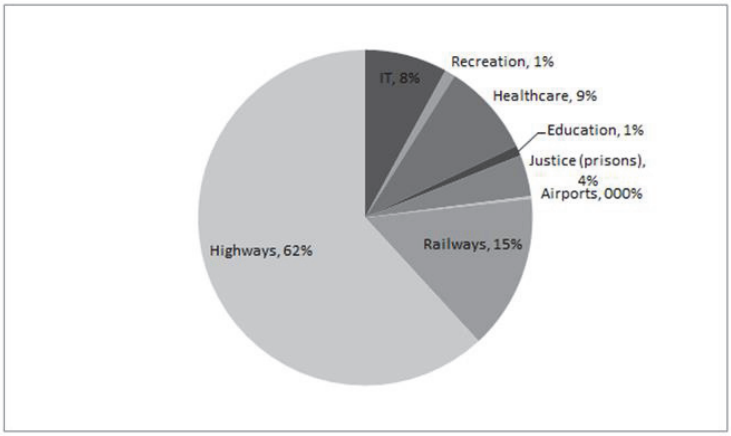
1) First variant is that interests of business community supersede public interests. This is represented as ambitions of private sector members to get highest possible unilateral economic effect from PPP projects implementation;

2) The second variant of imbalance in relations between government and entrepreneurship is, in contrast, associated with suppression of private sector interests, which is involved in or express a desire of taking part in implementation of important public projects.

3. Result

Analyzing PPP projects of some foreign countries, comprising governments of different development levels, one may conclude that, for the moment, PPP is extensively used in transport industry (this concerns engineering and upgrading of roads, railways, airports, waterway ports), social infrastructure (solution of healthcare, medicine, secondary and higher education, travel industry), municipal housing economy (water supply services, electric supply services, water purification and filtration) and others (prisons, national defense etc.). Most projects are presented in transport and social industries.

Analysis of using PPP mechanism abroad has shown that each country has any industry, where the use of PPP is widespread and priority-oriented [4]. In economically developed countries with sufficiently high living standards and active social policy performed by the government, PPP projects are generally implemented in healthcare, education, social security sectors. Such sectors in emerging countries with transition economy, except for transport industry, will never be strategically important for the government.



Source: Federal Highway Administration

Fig. 1 Use of PPP mechanisms in European transport projects

• Market risk (restraint of demand etc.) • Reduction in yield risk • Payment risks • Engineering overrating • Exploitation risks • Long-range investments underestimation • Credit exposure (dormant commitments of credits, delinquency of sum required) • Terms of compensation and exit scenario	• Legal developments • Economical change • Exchange risks • Tax risks • Loss of assets management • Policy risks (instability, protectionism, nonacceptance of project by society) • Ecological risks • Transaction costs • Management/contract risks

Fig. 2. Basic kinds of project risks related to the use of Public and private partnership

Federal Law № 115 "Concerning Concession Agreements" enacted on July 21, 2005 established legal framework for appliance of concessions as one of the efficient methods of Russian public property appliance [2]. Its purpose is fund-raising for Russian economy. However, legislative framework for active cooperation between business and government is

not developed at all; this determines imperfection of this institute in this country. That is why projects are not implemented in such amounts as in foreign countries.

One of the current trends of concessional practice is economic growth of regions. Among approved at the moment PPP projects, it is necessary to accentuate several largest automotive and infrastructural programs in Moscow, St. Petersburg, Eastern Siberia, and also two largest projects in modern Russian history on industrial zones development in Lower Angara region (Krasnodar Territory) and Nizhnekamsk (RT) [6]. Majority of projects are in progress at the moment.

PPP mechanism produces lively exchange between researchers and government officials and private sector.

Analysis of PPP mechanism realization has shown major obstacles in the way of its development. For instance, development of this mechanism is retarded by default in details and uncertainty of regulatory framework, exposure of private sector interests, high administrative burdens associated with bureaucratic red-tape and massive officials' corruptness.

4. Conclusion

Actually, there is a need for consolidation of interaction system of government and private sector, as this may lead to setting the stage for competitive growth of public sector by more efficient use of public property, fund-raising for economy, industrial and social infrastructures, goods, work and services refinement.

Growth of confidence to each of the parties is a lengthy process, mutual consideration for appeals, development of necessary regulatory framework, honesty and integrity will promote the development of PPP mechanism.

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Industrial Introduction of High Technologies to Engineering Industry Plants of Republic of Tatarstan

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Abstract

In the current economic and political conditions of Russia's development projects is a public-private partnership can be a real tool for Quitting the difficult situation. The state represented by bodies of regional and local authorities with the help of public-private partnership will be able to move from direct budgetary financing of projects to a promising model for attracting private funds, thereby increasing the efficiency of their operations. There is a need to strengthen the system of interaction between government and the private sector, as it will lead to the creation of conditions for increasing the competitiveness of the public sector through more effective use of state property, investment in the economy, modernization of industrial and social infrastructure, improving the quality of goods, works and services.

Keywords: *public-private partnerships, project finance, money, efficiency, interaction mechanism, government, business*

1. Introduction

As of the date of Russian economic growth, engineering industry plants are in a position to produce high-technology competitive products only for narrow world market segments. Actual status of engineering industry does not allow Russian high-technology products to entry into the world market and occupy stable market niches, to a greater extent, by virtue of default in tasks and objectives of economical competitive growth in the long run.

Machine-building complex must inherently dominate in state economic sectors and impact enhancing innovational orientation of almost all fields that is why innovative development of Russian engineering is the major task for economic development. In addition, it should be appreciated that in consequence of inadequate state-of-the-art and current local trends, it is a great challenge to implement simultaneous technological re-equipping of all strategic manufactures in Russian machine-building complex.

However, there is a chance of innovation progress speed-up on engineering plants of Republic of Tatarstan mostly in consequence of high rates of its economic growth that, in turn, was achieved by developing of innovative science-based high-technology production, industrial and technology parks, deepening of trans-regional and inter-republican cooperation.

2. Method

Present state and prospects for the development of high technologies are considered through the example of manufacturing plants of Republic of Tatarstan. In this respect, first of all, it is logical to analyze state of manufacturing sector, and after that to investigate prospects of science-based machine-building enterprises, being manufacturing complex subsystem.

Industrial structure of manufacturing production making up 60% of overall total manufacturing sector in RT is illustrated in Figure 1.

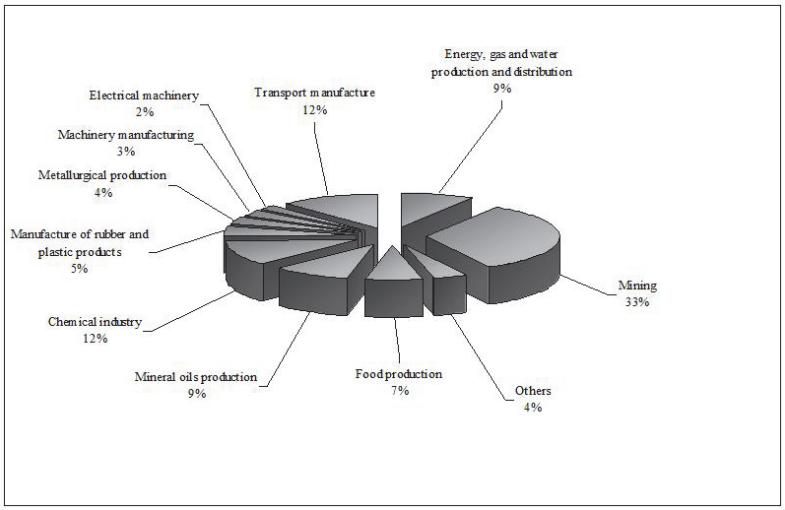

Fig.1. Structure of processing manufacturing sector in RT.

As is seen from the figure, major production fields are mining, chemical industry and transport manufacture, the share of which is 57% of overall production of manufacture in RT, and in these production fields introduction of science-based manufacturing technologies takes place.

Among key factors of innovative engineering industry development is active national policy. According to importance of supporting national priorities in science and technology development, it is necessary to specify the major task for state as assistance in development of machine-building complex.

The next key factor of innovative development of machinery production is dictated by reasonable choice of innovation strategy. Innovation strategy is one way of achieving enterprise's goals, which differs from others by its novelty, ultimately for the enterprise itself and for segment, market and consumers as probability. Innovation strategy complies with general business strategy. It defines objectives of innovation activity, choosing expedient and means of engaging sources.

There are following deterrents obtained while executing innovation strategies on manufacturing enterprises:

1. Increase in level of results uncertainty.
2. Increase in investment design risks.
3. Changes flow on the enterprise increases significantly as a result of introduction of high technologies.

One may specify long-term engineering industry development goals for Republic of Tatarstan.

- Maintaining market power in respect of current facility, technologies, gradual increase in share of self-consumption.
- Venturing and developing of going joint enterprises;
- Creation of emerging markets, new equipment, step-by-step revolution in import tendency;
- Human resources development in engineering sector;
- Holding important positions in the world market in capacity of exporter on a range of innovative technologies.

Machine-building complex includes more than twenty sectors of precision, medium and heavy engineering. Key industries are tool engineering, power-plant engineering, shipbuilding, oil-and-gas machine building, air industry etc.

One of the main problems in engineering industry are:

1) Excess amount of old-fashion production capacities and unreasonable maintenance costs;
2) Production capacity infrastructure is out-of-date;
3) Equipment and technologies accumulated extreme wear and tear;
4) For the purpose of implementation of programs on strategic reformation there is giant lack of financial resources. Low investment and credit attractiveness of enterprises;
5) Production cooperation of industrial enterprises is carried out extremely ineffectively;
6) Skilled labour force deficiency.

3. Result

Tatarstan is fully engaged in federal target programs, its enterprises implement most of investment programs with the use of own resources. In compliance with basic strategic orientation of republic economic growth set out in Program of Economic and Social Development of Republic of Tatarstan as of 2005-2010, it is essential to reinforce scope of measures concerning refocusing investment flows into science-based high-technology industries, coordination activity on innovative projects implementation in oil-and-gas, machine-building, telecommunication industries.

Prognostics of manufacturing enterprises performance implementing science-based technologies was realized inside of research based on the following cases:

- formal, assuming partial implementation of suggested methods of strategic competitiveness management, so that it achieves 30% of all effect by the end of five-year period;
- advanced, assuming almost full and consistent implementation of suggested methods of strategic competitiveness management, so that it achieves 50% of all effect by the end of five-year period;
- medium-optimistic, assuming full phase-in of suggested methods of strategic competitiveness management, so that it, as a result of deviation from a plan at implementation and realization, achieves 70% of all effect by the end of five-year period;

4. Conclusion

Under current conditions, it is necessary to use structural approach for manufacturing enterprise growth strategy buildup in terms of competitiveness definition; however, structuring must consider supposed strategic cut-out of manufacturing enterprise that is relevant to science-based industrial sector to the fullest extent. As can be seen from the above, it is essential to choose firmly frame of competitiveness definition for effective strategy formation of science-based manufacturing enterprise, reflecting current state, development prospects and strategic potential of economic entity, this points to the fact that it is rational to use balanced scorecard in the quality of specified frame. In addition to the above, there is a need to set particular factors batch per category, meeting needs of strategy generation for science-based manufacturing enterprise.

From all has been said follows that roadmap for innovative development of machinery production in Republic of Tatarstan is currently determined and percolates incompletely. All tools focused on effective solution of assigned tasks require significant financial investments not only in research and technology, but also into personnel training - active state participation at universities, education and enterprises cooperation are required.

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Biodiversity Assessment AND Quality of a Vital State of Trees, Shrubs and Herbaceous Vegetation in Vicinity of Sport Objects of the Universiade (Kazan CITY, Russia)

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Abstract

The article contains the information about the results of research of biological diversity and assessment of the quality of a vital state of trees, shrubs and herbaceous vegetation in vicinity of sport objects of the Universiade (Kazan city, Republic of Tatarstan). The vegetation of the city has been transformed in the construction of the Universiade objects. To improve the situation carried out extensive work on gardening. Provides the information about species compositions of trees, shrubs and herbs of sports facilities, about the most common species in planting of greenery. Identified the age and classes of vital state of trees. Among of herbaceous vegetation are marked prevailing families, ecological and coenotic groups and life forms, as well as rare and endangered species. The significance of compensatory measures identified to improve the environmental situation in the construction of sports facilities on the example of their greening.

Keywords: *vegetation, biodiversity, vital state estimation, greening, sports objects, compensatory measures, Kazan city, Universiade*

1. Introduction

Conservation of biodiversity is one of the key problems of sustainable development. The most important component of biodiversity is as a set of flora species of plants growing in a certain territory. In urban conditions, the biodiversity of plants focused on the territory of green spaces - parks, gardens, embankments, boulevards and squares, green protected zones. Urban Green areas play an important role in creating of suitable environment for people performing functions related to the release of oxygen and phytoncids, ionization of the air, deposition of dust, forming peculiar microclimate.

Major sporting events carry in themselves a huge transformational potential for places where they are go. Universiade is the second largest sporting event after the Olympic Games around the world. For the hosting of the Universiade in Kazan (Tatarstan, Russia) were involved 49 sports objects, and 36 of them were built specifically for this event. Active construction and transformation of the urban environment has had a significant negative impact on all main components of the urban ecosystem, including on the species richness of plants and the degree of greening of the city. The degree of greening the city was in 2002-2004 about 24%, in 2007-2008 about 17% according to the inventory of green spaces of common use (excluding greening residential areas). The degree of greening has decreased significantly (about 2 %) in 2009-2011 as a result of the construction of sports facilities for Universiade. At the same time to optimize the environmental situation in the cities is necessary that the degree of greening the urban area was 40-50% [4,9,10].

Greening is the cheapest and most effective way to improve the environmental situation in the city. For the elimination of negative consequences of constructions the municipal authorities have been implemented special programs "100 squares" (2011) and "Green record" (from 2012) for a sharp increasing of the degree of urban greening, beautification of green areas and creating a favorable environment in the future.

The main goal of the carried-out work was studying of biological diversity and vital conditions of trees and shrubs and grass vegetation near sports objects of the Universiade in Kazan in 2013. It were held the definition the taxonomic

diversity of plants, including the identification of rare and endangered species, the definition of eco-cenotic groups, life forms of herbaceous plants and vital conditions of trees and shrubs in the area of green space of sports objects of the Universiade.

2. Materials and Methods

Studies of green spaces of sports objects of the Universiade carried out in June-July of 2013 in the six administrative districts of Kazan - Aviastroitelny, Vakhitovsky, Kirovsky, Novo-Savinovsky, Privolzhsky and the Sovietsky in 14 sports objects. There are seven stadiums - "Kazan - Arena", "Olympus", "Ruby", "Labor reserves", "Rocket", "Tennis Academy", "Central Stadium"; three sports palaces: "Sports Palace", "Palace of single combats Ak Bars", "Palace of water sports"; and two sports complexes - "Olympian", "Bustan", and territories of the Universiade Village and the Center for rowing sports.

Methods of a gerbarization of plants, making of the trial areas, route supervision used. For definition of species of plants were used a special key books [1,5,6,13]. Special eco-coenotic groups were determined on a scale of Cyganov, life forms - on classification Raunkier [2,7,11,12]. For assessing of vital state of green spaces determined the class of resilience of trees and shrubs, and evaluation of the quality of lawns and flowerbeds [8].

3. Results

The Tatarstan Republic is located in the European part of the Russian Federation, at the confluence of the Volga and Kama rivers. The length of its territory from west to east is 460 km, from north to south - 290 km. Tatarstan Republic is one of highly urbanized regions: the proportion of urban population is 73.6% (there are 20 towns and 21 townships). Kazan is the capital of the Republic of Tatarstan, and a place of the hosting of the XXVII World Summer Games of the Universiade.

Choice of Kazan as a place of major sporting event is associated, in particular, with geographical features of the city. Kazan climate is moderately continental with warm summer and moderately cold winter. The duration of sunshine per year on average 1916 hours. The sunniest is the period from April to August. The cloudiest month is November. Rainfall area belongs to the zone of moderate humidity. During the negative average daily temperatures precipitation falls as snow, forming a blanket of snow. The number of days with snow cover around 150. The height of the snow cover reaches its highest values in March [4].

According to the inventory of green spaces of Kazan in 2007-2009 the are 697 green objects: the streets (508), parks (16), gardens (5), squares (109), green areas (58), and Forest Park "Lebyazhye" in the status of protected area of local importance [4,9,12]. The largest number of squares, gardens, parks concentered in Vakhitovsky district, and the largest number of green areas located in Privolzhsky and Sovietsky districts of Kazan. Of the 71 species of trees and shrubs commonly used in planting of greenery Tilia cordata Mill., Betula pendula Roth, Acer negundo L. To these species in different districts of the city were added Populus of section Tacamahaca ore balsamic poplars and Pinus sylvestris L. According to research of 2007-2009, the most depleted in the plan of green spaces was Aviastroitelny district. Low amount of green spaces in the vicinity explained by dense buildings and a large number of industrial zones. The greatest number of gardens and parks noted in Vakhitovsky district. This district is central and has a great recreational load and a historical value. Lot of old green spaces preserved due to building of low intensity and saving the architecture of the historic center [4,9,12].

Due to of construction in recent years, including the preparation of the Universiade, the proportion of green spaces and greening percentage decreased, suffered about 30 green spaces. In addition, many green spaces streets have suffered as a result of the construction of transport routes and passages. To address the impact of municipal programs began to be carried out on gardening [9].

Since 2012 because of the implementation of programs greening of the city planted trees, number has increased by 47800. In 2013 were planted more than 50000 trees [9].

The largest greening took place of the newly built sports objects - Football stadium "Kazan Arena", "Palace of single combats", "Palace of water sports" (Novo-Savinovsky district), Center for rowing sports (Privolzhsky district). In general, 17 species of tree and 9 species of shrub vegetation (total 3567 things) grows at the territories of investigated sports objects (tables 1, 2).

The most often used in greenery from trees Picea abies (L.) Karst. (about 44% from all recorded trees), Tilia cordata (12%) and Sorbus aucuparia L. (9%). The predominant age of the trees growing in the sports objects is up to 15 years, the proportion of this age group accounts for almost 92% of the total examined trees. Vital state of the trees

assessed mainly by first and second classes of quality - highly decorative healthy and slightly weakened trees.

Greening by means of shrub vegetation applied only on a half of the studied sports facilities. From nine are the most common species identified - Berberis vulgaris L., Syringa vulgaris L., Rubus idaeus L. (Table 2).

In the composition of species of herbaceous vegetation from the 14 sportive objects of the Universiade revealed 180 species from 56 families. The greatest number of species have families Astraceace - 25 and Fabaceae - 18, up from 14 and 10% of the total number of species. Families Poaceae - 14 and Rosaceae - 11 are 8 and 6% of the total number of species, respectively. The rest of the families contribute to the total species composition from 4 to 0, 6% - Polygonaceae - 8; Cyperaceae - and Lamiaceae – every by 7 species; Brassicaceae – 6 species. The following three families contain from five species for every: Apiaceae, Ranunculaceae and Salicaceae; Potamogetonaceae, Pinaceae and Saryophyllaceae - four species; Lemnaceae, Typhaceae, Chenopodiaceae, Boraginaceae and Solanaceae - 3 species; Alismataceae, Plantaginaceae, Primulaceae, Onagraceae, Rubiaceae, Aceraceae, Betulaceae, Equisetaceae and Oleaceae - 2 species.

Table 1. The list of species of trees and occurrence in the territory of sporting venues of Universiade

Species	Stadiums							Sports palaces			Others			
	"Ruby"	"Rocket"	"Tennis Academy"	"Olympus"	"Kazan - Arena"	"Central Stadium"	"Labor reserves"	"Palace of water sports"	"Palace of single combats Ak Bars"	"Sports Palace"	"Olympian"	"Center for rowing sports"	"Bustan"	Universiade Village
Acer negundo L.	+	+			+	+	+		+		+		+	+
A. tatarcum L.											+			
Betula pendula Roth	+	+	+			+	+				+		+	+
Fraxinus excelsior L.	+	+									+			
Larix decidua Mill.				+		+								+
Picea abies (L.) Karst.	+	+	+		+		+	+	+	+		+		
Picea ×fennica (Regel) Kom.													+	
Pinus sylvestris L.	+	+				+	+				+	+		+
Populus alba L.	+												+	
P. italica (Du Roi) Moench													+	+
P. nigra L.		+							+		+	+		+
Salix alba L.								+						
Sorbus aucuparia L.	+	+		+		+					+	+	+	+
Tilia cordata Mill.	+		+	+		+	+		+	+	+		+	+
Thuja occidentalis L. [													+	+
Ulmus glabra Huds.	+											+		
Quercus robur L.,														+

Most rare families (represented only by one species of plant) were Amarabthaceae, Asparagaceae, Berberidaceae, Butomaceae, Campanulaceae, Cannabaceae, Ceratophyllaceae, Convolvulaceae, Crassulaceae, Cucurbitaceae, Dipsacaceae, Euphorbiaceae, Haloragaceae, Juncaceae, Lentbulariaceae, Lythraceae, Papavaraceae, Salviniaceae, Scrophulariaceae, Sparganiaceae, Tiliaceae, Ulmaceae and Vitaceae.

In the territory of the investigated objects of the Universiade (floodplain of the river Kazanka) found two rare species of plant (listed in the Red Book of the Republic of Tatarstan) - *Salvinia natans* (L.) All and *Urticularia vuigaris* L. Earlier this territory mentioned 9 rare species, the construction has reduced the number of rare species. Decreasing biodiversity increases the amount of environmental damage caused during the construction of the Universiade objects [3].

Table 2. List of species of shrubs and occurrence in the territory of sporting venues of Universiade

Species	Stadium"Ruby"	Stadium "Rocket"	"Palace of single combats Ak Bars"	"Olympian"	"Bustan"
Berberis vulgaris L.	+				
Crataegus sanguinea Pall.		+			
Corylus avellana L.	+				
Parthenocissus inserta (Kern.) K. Fritsch			+		
Rosa majalis Herrm.			+	+	
Rubus fruticosus L.			+		
Rubus idaeus L.			+		
Salix caprea L.	+		+		+
Syringa vulgaris L.	+				+

From 180 species of plants, belonging to the eco-cenotic groups found for 86 species with a predominance of species of meadows and forest edges (from 25 to 100% of the number of identified species). Were widely distributed species of wetlands (40 to 100%), of which "nitrophilous" and "tall" are from 5 to 10%. Nemoral species comprise from 5 to 20%, boreal species - from 3 to 5% are least presented. Dominant life forms of herbaceous vegetation were cryptophytes - perennial grasses (113 species), terophytes - annual grasses (38 species) and fanerophytes (26 species). The lowest number of species observed among hamephytes - only 3 species.

Areas occupied by lawns amounted around 26 hectares and quality of lawns was assessed mainly 2-3 categories (as satisfactory - unsatisfactory condition). Areas occupied by flowerbeds were small - about 1200 m^2, with first or second categories of quality (good - satisfactory condition).

4. Conclusions

Because of researches in territory of 14 sportive objects of the Universiade found 17 species of trees. The most often used in greenery Picea abies, Tilia cordata and Sorbus aucuparia. The predominant age of the trees growing in the sports objects is up to 15 years, vital state of the trees assessed mainly like a highly decorative healthy and slightly weakened trees. Greening by means of shrub vegetation applied only on a half of the studied sports facilities. From nine species of shrub vegetation are the most common species Berberis vulgaris, Syringa vulgaris, Rubus idaeus. At research of herbaceous vegetation were identified 180 species of 56 families with a predominance of Asteraceae, Fabaceae and Poaceae.

Species of meadows and forest grow at all sites around the Universiade objects, widespread are species of wetlands, less common are nemoral species; the rarest are boreal species. Predominant life form of herbaceous vegetation were cryptophytes the rarest were hamephytes. Have also highlighted two rare, listed in the Red Book of species of the Republic of Tatarstan - *Salvinia natans* and *Urticularia vuigaris*. Earlier in the territory of the floodplain Kazanka noted 9 rare species, the construction in the floodplain has disrupted habitat of rare species.

Carrying out of countervailing greenery measures, including, the territory of sports facilities, helped to increase the degree of greening, renewal and rejuvenation of the tree and shrub vegetation. These activities helped to partially compensate for damage to the environment from the effects of the construction of the Universiade objects.

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Condition of Water Bodies in the Kazan City Due to the Organization of the Summer World Universiade 2013

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Abstract

Assessed the impact of the World Summer Universiade 2013 in Kazan on water bodies. The studies produced material showing a significant effect of a major international competition for the water objects. The greatest impact occurs during the construction of sports facilities. For residents and guests of Kazan were conducted sociological polls. Much of the respondents believe prosperous the situation with natural water objects of the city, although the analysis of the actual situation is not confirmed. The data obtained make it possible to optimize the work associated with the preparation and conduct of major sporting events.

Keywords: *international competitions, XXVII World Summer Universiade, environmental impact assessment, water quality, water objects, river Kazanka, Lake Middle Kaban.*

1. Introduction

Water resources are the most important natural resources of Russia. The most important source meet diverse needs of the person in the water resources are annually renewable surface freshwaters.

Kazan - one of the largest economic, industrial, scientific and cultural centers of Russia. XXVII Summer World University Games in Kazan city was carried out in 2013. It is the second in importance sporting event in the world. The significance of this event is extremely important for the development of Kazan, as well as the Russian Federation [8,11].

Some objects Universiade located in the floodplain of the river Kazanka and Lake Middle Kaban. Rowing competitions were conducted at Lake Middle Kaban. Therefore, the condition of water objects is an important component in characterizing the readiness of the city to hold this major sporting event.

Special Programme for Environmental Protection was implemented in Kazan to improve the environmental situation in the preparation of the Universiade 2013 [10]. This program includes landscaping and purification Lake Middle Kaban (at the location of the Center for Rowing sports); improvement the right bank of the river Kazanka, which were built football stadium "Kazan Arena" and the Center for Water sports.

The holding of major international competitions often has negative trends related to environmental degradation due to the construction of sports facilities for valuable natural areas [1, 2]. The purpose of this work was to study the influence of the Universiade on the condition of the largest water objects of the Kazan city.

2. Method

We have developed a methodical approach to assessing the impact of the Universiade 2013 on water quality water objects, as well as methodology for the evaluation this indicator. Indicator status in 2009 was taken as the initial (before the games), taken equal to 1. Then the indicator to assess changes over certain time periods (Table 1). Evaluation of changes carried out in the following time intervals: 2009 - 2012 years; June 2013 (30 days before the start of the Universiade); Jule 2013 (during the Universiade); August 2013 (30 days after the end of the Universiade); 2014 - 1st

quarter. These periods allow to evaluate the dynamics of change of the indicator.

To detect changes in water quality of water objects in 2013 were carried out field research, physical and chemical analyzes of water, as well as conducted hydrological measurements (water level). To assess the quality of water was used Ecological and sanitary classification (ESC), based on 4 hydrophysical and 8 hydrochemical indices. In accordance with this water studied object belongs to a certain class and category of water quality with the corresponding rank performance (RP) of ESC [9]. Water pollution index (WPI) was calculated, recommended for formalized integrated assessment of water quality in 6 hydrochemical parameters by formula:

$$WPI = 1/n^* \sum_{i=1}^{n} C_i/PDK_i$$

where C_i - concentration of the component; n - the number of indicators used to calculate the index, n = 6; MPC_i - set value standard for the type of water body; MPC - maximum permissible concentration [3].

In order to assess changes in the indicator were used fund materials of Laboratories water ecosystems optimization KFU [4, 5].

As part of the work carried out by specialized sociological polls. The main purpose of the survey was to assess the environmental culture through the evaluation results of a poll of citizens and Kazan Universiade guests about the impact on the city environment. The results of the poll were the basis for assessing the status indicator, allowed us to estimate the public reaction to the changes that have taken place in Kazan for the period of preparation and holding of the Universiade. A total of 1,671 respondents were interviewed (residents and guests).

3. Result

Organization and holding of the Universiade 2013 in Kazan were adjoint to the impact on water bodies, due to the construction and operation of sports facilities, as well as the construction of infrastructure objects.

The impact on the water objects in the preparation and carrying out of the Universiade was an ambiguous in terms of the assessment of the status of water objects. During the construction of sports facilities (2010-2012 years) the impact was mostly negative, especially on the river Kazanka. During the construction of sports facilities in the floodplain of the river in its lower reaches were backfilled and destroyed with large areas of wetlands (about 60 hectares). In the shallow waters of the river Kazanka previously grew higher aquatic vegetation. This complex submerged macrophytes, algae and bacteria perform a very important function of natural bio filter. Shoals is a place of natural self-cleansing of the river, was the site of spawning phytophilic fish species, rare species of plants. In addition, during the construction of sports facilities in water objects has received a large amount of suspended solids and oil from working construction vehicles. All this led to the deterioration of the ecological status of water objects for some indicators (Table. 1).

Lake Middle Kaban has a significant impact conditionally clean industrial wastewater and untreated sewage storm water drain [5]. Coastal protection, clearing of debris, landscaping were made when creating the rowing canal. At the same time were covered with shallow areas involved in self-purification of the lake water. Wastewater treatment plants, which were planned to be constructed for stormwater issues, were not built.

Direct impact on the Kuibyshev reservoir and the river Kama in the construction of the Universiade is not revealed [6, 7].

Table 1. Integral assessment of changes in water quality over the study period

Indicator	2009	2010	2011	2012	June 2013	July 2013	August2013	2014
Water quality	1	0,7	0,8	0,7	0,90	0,8	0,8	0,8
Water Pollution Index								
Kuibyshev reservoir	1,4	1,7	1,5	2,7	X	1,8	X	X
Kama river	X	1,9	1,1	1,3	X	1,4	X	X
Kazanka river	1,7	2,4	1,7	1,8	1,0	0,9	2,7	2,7
Lake Middle Kaban	0,7	1,9	1,1	1,1	1,0	1,1	0,6	0,6
Lake Lower Kaban	2,1	X	X	X	1,3	1,0	0,9	0,9
Lake Upper Kaban	0,6	X	X	X	0,8	0,8	0,9	0,9
Water level, m BS								
Kuibyshev reservoir	52,88	52,7	52,8	53,00	X	X	X	X
Kama river	62	62	62	62	X	X	X	X
Kazanka river	52,88	X	X	53,00	53,08	52,63	52,65	52,65
Lake Middle Kaban	51	X	X	50,8	50,9	51	51	51

Note: X - no data available.

During the field research, we analyzed the water quality of the river Kazanka and lakes Upper, Middle and Lower Kaban on a number of indicators. Analysis of the data shows that the water of the surface layer of the Kaban lakes characterized as "very pure" - "pure enough" for ESC and as a "pure" - "moderately polluted" by the WPI. At the same time the water quality of the bottom layer is significantly lower due to water stratification, lack of aeration and mixing in the water column. The highest values of WPI associated with deficiency of oxygen in the bottom layer. It should be noted the high RP ESC and WPI in the water of the bottom layer of the Lake Lower Kaban equal to 6.7 ("strongly polluted" water) and 26.7 ("extremely dirty" water). This is due to strong organic pollution of water objects (high values of Chemical Oxygen Demand (COD), Biochemical Oxygen Demand (BOD_5), a high content of ammonium and phosphates) and oxygen deficiency. Water is the bottom layer of the Lake Upper Kaban characterized as "weakly polluted" by RP ESC and as "polluted" by WPI. It also reduced the oxygen content increased values of COD and BOD_5, ammonium content exceeds the norm. Water is the bottom layer of the Lake Middle Kaban during the study period contained a large amount of organic matter, characterized by "pollution" (08/07/2013) to "extremely dirty" (06/27/2013).

In the period from June to August 2013 not observed trends of deteriorating water quality indicators, which could be interpreted as a result of the impact of the Universiade. Fluctuations in water quality of the lake associated with the accumulation of organic matter in the bottom layer during the growing season, the shortage of oxygen and a constant flow of pollutants (particularly oil). There was no negative impact of directly competitions of water during the Universiade.

As for the water quality of the river Kazanka, during June and July 2013 the water was characterized by "very pure" to "slightly contaminated" by RP ESC and from the "clean" to "moderately polluted" by WPI. In August, there was a significant deterioration in water quality, which was characterized by "weak" to "highly contaminated" by RP ESC and by "pollution" to "dirty" WPI.

When comparing the water quality of the river Kazanka for 5 years of research obviously a gradual increase in the average RP. The greatest value of this indicator is marked in 2013 and corresponds to the category of "slightly contaminated" water (Fig. 1). Water pollution index varies from year to year and in 2013, describes the water of the river as "moderately polluted".

The dynamics of water quality of the surface layer of the Lake Middle Kaban is calmer. Average ranking indicators are within the category of "sufficiently pure" water throughout the study period (Fig. 2). WPI characterized the water of the lake from the "pure" to "moderately polluted", and in 2013 the average WPI comply with class "pure" water.

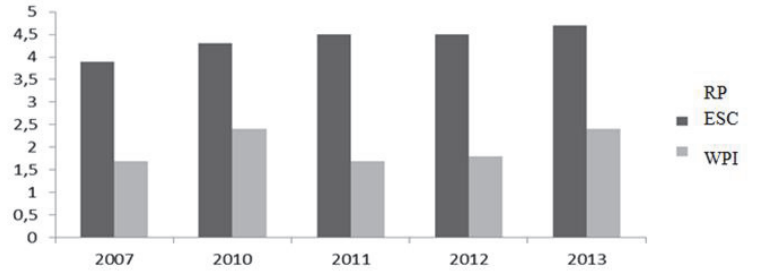

Fig. 1. Dynamics of water quality change in the river Kazanka.

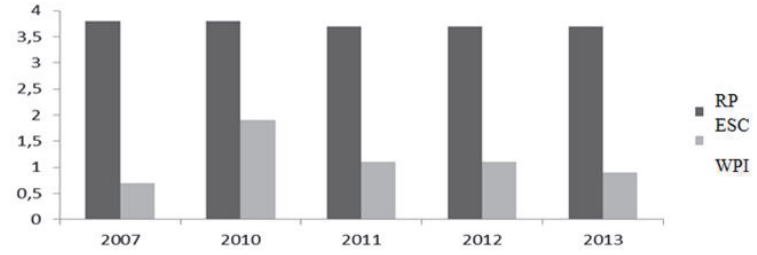

Fig. 2. Dynamics of water quality changes of the Lake Middle Kaban surface layer.

Field studies were accompanied by an opinion poll. Respondents were asked questions about the condition of water objects and water quality changes in them. According to the poll, 28.4% of respondents believe that the work on preparation and carrying out of the Universiade a positive impact on the ecological condition of the river Kazanka. 26.9% of respondents tend to believe that the work had a neutral impact on the river state. A certain part of the respondents say negative (17.5%) and bad effects (5.6%) on the ecological state of the Kazanka river works on preparation and holding of the Universiade. It should be noted that 20.0% of respondents could not answer this question.

Equal number of respondents believe that the ecological state of the Kazanka river correspond (38.2%) or did not correspond (34.0%) with the requirements of the Universiade 2013 in Kazan. On this question difficult to answer 28.4% of respondents.

Otherwise the results of the survey were distributed on the same questions in respect of Middle Kaban Lake. So, on the question of the impact of work on preparation and carrying out of the Universiade on the ecological state of Middle Kaban Lake 38.18% of respondents believe that a positive, 22.14% - neutral, 12.51% - negative and 2.39% - adversily. This question is a significant number of respondents were undecided - 23%.

The question of compliance with the ecological state of the Lake Middle Kaban requirements Universiade revealed the following picture. Much of the respondents (44.4%) believe that the correspondence. Significantly smaller amount (23.9%) thinks that does not match. A significant number of respondents (29.98%) were undecided.

The results of the sociological polls showed that a large part of the population of Kazan and guests believe the favorable state of natural reservoirs of the city. This opinion does not coincide with the actual results of field research. This can be partially explained by the fact that the residents and guests of Kazan Universiade much less aware of the situation with Lake Middle Kaban. The situation for the river Kazanka is familiar to many citizens, including those on public opposition to the destruction of valuable wetland floodplains in the place where a Universiade key objects are built. Also, to a certain extent triggers patriotic mood when activation sports victory [11] obscures environmental problems and they become less significant. This example can be seen in a certain degree of transformation of environmental awareness.

4. Conclusion

On the basis of the material revealed a negative impact on natural water objects during the construction of the Universiade. In preparation for the Universiade was covered with sand of the river Kazanka floodplain. This led to a decrease in the ability of the river to purification, to the deterioration of water quality in many respects, to the destruction of habitats of aquatic organisms and fish spawning areas. Influence of preparation and holding of the Universiade on the Kuibyshev reservoir and the river Kama not revealed. Much of the population of Kazan Universiade and guests believes prosperous the situation with natural water objects of the city that does not fully coincide with the results of field studies.

Our data provide an opportunity to optimize the work associated with the preparation and conduct of major sporting events.

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The Impact of XXVII Summer Universiade on the Environment in Kazan

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Abstract

This article introduces general research results of impact of XXVII Summer Universiade on the environment in Kazan. There are major results of ecological consequences of staging of Universiade for development of Kazan city and the Tatarstan Republic. The scientific assessment is given in the integrated form by indicators.

Keywords: *International competitions, XXVII Summer Universiade, environmental impact assessment, Kazan city, Tatarstan Republic.*

1. Introduction

The significancy of international sports competitions should be contemplated in different details. The sports competitions introduce a great contribution to the international collaboration, strengthening peace and mutual understanding between people. The large sports competitions are powerful stimulus for development of social and economic systems of cities and regions (which are venue of competitions), modernization of all aspects of population`s life [2,10]. Competition organizers trying to calculate consequences of staging of them at all spheres of life, with economics, social and cultural sphere and environment previously.

At the present time assessment of the significance of sports events of international scope is also need to view from the position of the conception of sustainable development. According to this conception, today`s satisfaction of wants is possible without risk of future generation`s ability to meet their own needs. The main aspect of the conception of sustainable development is state of environment.

The aim of research is assessment of impact of XXVII Summer Universiade on the environment to development of city and republic in ecological sphere by the conception of sustainable development. Universiade was attending from 6 to 17 July 2013 in Kazan.

2. Materials and Methods

The present work was carried out under the program contract between Kazan (Volga region) Federal University and the Executive directorate of the XXVII World Summer Universiade 2013 in Kazan.

Research made in 2012-2014 year on a number of indicators: 1) water quality and assessment of the ecological

status of water objects; 2) air quality, and the emission of gases which cause the greenhouse effect; 3) sewage treatment; 4) the new treatment plant and waste water treatment plants; 5) taking into account the area of green space, the extent of landscaping and assessment of green spaces of the city; 6) assessment of Protected Areas; 7) biodiversity and valuable natural areas. Research of environmental impact assessment included study of the effect on the state of the city and the region.

The methods were developed for assessing the dynamics of each indicator [6,7]. The initial state of the component of the environment, relating to 2009, estimates the value of 1 (100%) for each indicator. Dynamics of changes was evaluated in accordance with the proportions change indicator values in fractions of 1[6].

The materials for research are own results of investigations and measurements in 2009-2014 year, fund materials organizations, statistical materials, the results of the poll.

3. Results and Discussion

1. **Water quality and assessment of the ecological state of water objects.** The organization of the Universiade 2013 in Kazan had an impact on water objects due to the construction of sports facilities in the coastal areas, as well as the construction of infrastructure.

For the Kuibyshev reservoir and river Kama direct impact on the construction of the Universiade is not observed characteristic recreational impact, there is recreational impact.

Preparation and staging of the Universiade had some influence on the ecological state of water objects of Kazan city. Rowing Sports Center was built on Lake Middle Kaban, and water area of the lake was used for rowing. Some values of Universiade were built on artificial bulk ground of Kazanka river (football stadium Kazan-Arena, Palace of water sports, Center of beach volleyball [10].

Impacts on water objects in the process of preparation and staging of the Universiade was ambiguous from view of the assessment of the state of water objects. During the building of values (2010-2012 year) effects were mostly negative, especially on the river Kazanka. During the construction of sports facilities were covered with sand about 60 hectares (near 150 acres) of floodplain meadows and shallow areas, which previously were occupied by aquatic vegetation. This complex of macrophytes, bacteria and algae performs an important function of the natural bio filter contribute to the natural self-purification of the river. These were phytophilic spawning fish species, as well as rare species of plants. Water objects received a lot of suspended solids and oil from construction equipment and transport. By the results of the analysis and measurement, consequences of the construction caused the deterioration of water quality and ecological state of water objects [3].

The negative impact of the construction of Universiade objects on the banks of two water bodies (Kazanka river downstream and Lake Middle Kaban) led to a decrease in the indicator data (2009-2014) from 1 to 0.8 (table 1).

Table 1. The integral assessment of dynamics of environment indicators

Indicator	Year				
	2009	2010	2011	2012	2013
Water quality and assessment of the ecological state of water bodies	1	0,7	0,8	0,7	0,8
Air quality, and the emission of gases which cause the greenhouse effect	1	1,1	1,1	1,16	1
Sewage treatment	1	0,99	0,99	0,99	0,73
The new treatment plant and waste water treatment plants	1	1	1	1	1
The area of green space, the extent of landscaping and assessment of green spaces of the city	1	0,8	0,8	1,3	1,1
Assessment of Protected Areas	1	0,9	0,9	0,7	0,9
Biodiversity and valuable natural areas	1	0,93	0,9	0,87	0,81

2. **Air quality, and the emission of gases which cause the greenhouse effect.** During last 10 years, the number of vehicles of individual car owners in Tatarstan is growing steadily. Consequently negative impact on the atmosphere of cities and towns is growing.

Emissions increases and the share of emissions from motor vehicles exceed 50% of total emissions, and continue to grow each year. The observed reduction in emissions from 2009 to 2010 explained by the transition to more environmentally friendly fuels.

During the Universiade staging vehicles and emissions near the venues have been calculated. The results of measurements of greenhouse gas emissions from motor vehicles, which were made after staging of the Universiade,

showed that there are no exceedances of the maximum single MPC suspended solids, formaldehyde.

If we compare midlle concentrations of most greenhouse gases in 2013 to 2009, we can see, that it`s increased by rising the concentration of sulfur dioxide. In the main, the content of sulfur oxides and particulate matter is increased. However, in general, their concentration remained at the same level due to lower concentrations of sulfur dioxide.

3. **Sewage treatment.** According to the municipal organization «Water canal», the number of subscribers served by the system-wide sanitation in connection with the Universiade 2013 increased. The volume of wastewater, which is cleaned by sewerage system, decreased, in compare to 2009. Maybe, the reduction of consumption of wastewater discharge occurred as a result of accounting for the expenditure of water and wastewater systems, the organization of work on the installation of water meters.
4. **The new treatment plant and waste water treatment plants.** According to the available materials, during the preparation for the Universiade there weren`t built new plants to clean waste water and sewage. Number of installations during the Universiade and after it remained unchanged. So, activities in preparation for the Universiade and its staging are didn`t not result in the construction of new facilities for cleaning waste water and sewage. At the same time we know, that construction of new wastewater treatment facilities to issue storm water, runoff flowing into the lake, was planned during the building of Rowing Centre on the Kaban lake. Saving numbers from the cleaning of waste and wastewater at the same level increases the load on the existing facilities. Also probability of accidents on existing installations is increasing.
5. **The area of green space, the extent of landscaping and assessment of green spaces of the city.** Active development and transformation of the urban environment in preparation for the Universiade are entailed a significant impact on all the main components of aquatic and terrestrial ecosystems. It has a negative impact on state of the air and water quality, reduced the greening of the city. Landscaping is the cheapest and most effective way to improve the ecological situation in the city. The number, location and quality of green space affects the quality and aesthetics of the urban environment, offer recreational opportunities, contribute to the conservation of biological diversity. The municipal authorities implemented the special programs "100 squares" (2011) and "Green record" (2012-2014) with the purpose to alleviate the negative effects of the construction. In the course of them there was making of landscaping of green areas and the increase of degree of greening the city, creating a favorable environment for the future.

According to the inventory of green belt of Kazan 2007-2009, plantations to general use are allocated 697 green objects: the streets (508), parks (16), gardens (5), squares (109), green areas (58) and a forest park «Lebyazhie» in the status of protected areas (PAs), local values [4].

The share of green belt and percentage of landscaping decreased due to the construction of recent years, including the Universiade venues, there are suffered about 30 green zones. As a result of implementation of the «Green record», number of planted trees has increased by 100 thousand trees from 2012.

Preparation for the Universiade contributed to the rapid greening of the city and venues. Young spruce trees, lindens and rowns are dominated in in the species composition of tree species, which are used for landscaping. Shrub and flower forms distributed slightly.

According to the results of direct fieldwork 2013, which is held in the location of the Universiade and the greening surrounding areas, mostly the living condition of the trees estimated to 1 and 2 quality class – highly decorative healthy and slightly weakened trees. Unfortunately, due to the late planting (June-July), drying trees were observed, many trees were replanted later.

Flower beds and lawns are very important in the decoration of the city. They complement the activities and landscaping together with green spaces and they are an integral part of landscape decoration. According to the results of direct fieldwork 2013, which is held in the location of the Universiade, areas occupied by lawns amounted 26.24 hectares. Areas occupied by flower beds were small - about 1200 m^2. The bulk of the flower beds and lawns in Kazan was established in 2013 before the Universiade. Mostly lawn quality estimated by 2-3 categories (satisfactory - unsatisfactory condition). Flower garden appropriated 1-2 category of quality (good - satisfactory condition).

So, we marked increase in the values of most of the indicators in 2013 (table 1).

6. **Assessment of Protected Areas.** At the present time, officially there are 6 regional PAs and 3 PA in the status of local natural monument in the city of Kazan [8]. During the Universiade 2013, neither of them fell under any direct impact, except Kazanka river in downstream in connection with the construction of venues in the floodplain.

This indicator shows assessment of changes in the state of protected areas in Kazan during the Universiade 2013 on the basis of the following criteria: 1) number; 2) the area of protected areas; 3) assessment of anthropogenic stress on natural systems of protected areas; 4) analysis of the species composition of PAs; 5) the presence of monitoring

compliance with special protection.

Compare with the values of previous years, the number of existing protected areas in the city of Kazan and the area occupied by them during the Universiade unchanged. The calculation of the level of anthropogenic pressure on natural protected area complexes produced by using expert scores (1 point corresponds to a very low degree of human impact, 5 points - the highest). On the basis of adherence protection, size of the area of PAs, their location and factors of negative anthropogenic impacts in urban environments (recreation, debris, fishing), degree of anthropogenic stress for all PAs estimated in conditional values. Level of anthropogenic load in these conditions can be considered constant from year to year, because of lack of direct influence on the PAs during the Universiade.

The total number of protected areas has not changed under the influence of the Universiade. During the preparation of the XXVII World Summer Universiade 2013 we marked impact on the downstream of Kazanka river in connection with the construction of venues in the floodplain. Kazanka river is a monument of national importance in the upper and middle reaches. In this regard, the overall deteriorated. We marked disturbance of the natural habitat of plants and animals in the district of construction of the Universiade. Also valuable territories came under the impact, which earlier were planned as a protected area «Islands of Kazanka» (floodplain of Kazanka river).

The development of the environmental framework of the city is based on the protected areas, which are connected by a system of «green corridors». The existing ecological framework of the city was broken in the process of organizing and staging of the Universiade 2013, which requires the implementation of new methods of realization [9].

7. **Biodiversity and valuable natural areas.** The changing of biodiversity affected nearly all geographic clusters. The main trend is a general decline of species of plants and animals, including rare and endangered as a result of the destruction of natural habitats.

We revealed, that last period of time there was some reduction of biological diversity in all areas adjacent to the objects of the Universiade. The exception is the geographic cluster Kazan Volga region, where conservation and noted some increase biodiversity. This fact is due to the possibility of entering new data for the territories of plant species.

The value of natural areas, which estimated by the number of rare and endangered species [11], also has a negative trend. Everywhere is a tendency to reduce the number of rare species, up to complete disappearance.

The main reason for reducing the number of rare species is the transformation of natural habitat conditions as a result of the construction of the venues of Universiade. The restoration of these habitats are almost always not possible [12].

So, the preparation for the Universiade and its staging led to the destruction of natural habitats of plants and animals, including rare and endangered. As a result, a number of species fall out of the flora and fauna of the territory in question. During the period we marked the general trend of biodiversity loss and the reduction of the value of natural areas.

In general we marked deterioration of individual indicators and values of peer review on indicators (table 1). This kind of trend is due to a significant negative impact, exerted on the natural ecosystems of the city and valuable natural areas in the course of construction of the venues of the Universiade. In that period, there is irreversible destruction of historically established natural ecosystems, which affected most of the indicators.

The assessment of environmental damage is significant [1]. But the population of city is not aware of environmental degradation in the process of preparation and staging of the Universiade. We revealed by social analysis, that the main thing in staging of international competition like Universiade is a motivation to win, because of that people pay less attention on the questions of ecology [13].

4. Conclusion

The staging of large sports competitions is often have negative trends, which are associated with environmental degradation due to the construction of venues on valuable natural areas. Experience in organizing and staging of the Universiade 2013 in Kazan showed that almost all the main components of the environment were exposed.

The positive dynamic was marked due to changes in the area of green spaces and their condition. However, because of pre-existing indicators of landscaping Kazan (before 2004-2007), the state of green belt can also be considered deteriorate [5].

The population weakly recognize the trend of negative changes to the environment. It`s will be possible only after tangible economic implications in the management of urban area, for example, the payment of economic damages and implementation of compensatory measures.

Credits

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Implementation of the Strategy: Problems and Solutions

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Abstract

The paper deals with the implementation of the strategy as a key element of the strategic process. Developed organizational and management mechanism of the process of implementation of the strategy involves the exercise of choice of methods and resources management in accordance with the nature of the factors of internal processes (capacity) of the enterprise and the external environment in which it operates, and to exercise control on the basis of information on the implementation of the organization's processes and stakeholder satisfaction in accordance with the principles of quality management. To evaluate the effectiveness of the implementation of a procedure for strategic verification. Statistical processing of the data obtained by the method of rank correlation has identified strategic indicators, most affecting the level of strategic impact. Integrated use of expert and mathematical processing of information provides a more complete picture of the impact of the implementation of the strategy.

Keywords: *strategy, implementation strategy, the effectiveness of implementation*

1. Introduction

Process of strategic management, from beginning of working out of strategy till its successfully realization - long enough and laborious. Many organisations owing to a considerable quantity of the objective and subjective reasons find it difficult to pass it successfully. Under the different researches, only from 20 to 40 % of the organisations successfully and in full realise the planned strategy and receive desirable results. The reasons such «strategic rupture» (not conformity of actual results of realisation of strategy to strategic target indicators) increasingly become object of scientific researches [7, p.5].

To problems of successful realisation of strategy and revealing of factors of occurrence of «strategic rupture» in different years many domestic foreign scientists were engaged [1, 3-4, 10]. However such questions as process of implementation of strategy, control over its realisation, estimations of implementation are less clear and are understandable, than problems of the strategic analysis, the formulation and choose of a strategy: «all have well learnt to plan, but very few people is able to make» [1, p. 3].

2. Essence, Principles, the Mechanism of Implementation the Strategy

The variety of approaches to a problem of successful implementation the strategy has defined necessity of working out of the effective mechanism of implementation. Implementation of strategy can be structured on three interconnected stages: directly realisation of strategy, monitoring of results and strategy updating. The methodology successful implementation defines necessity of working out of principles, a choice of necessary means and methods of realisation of this process and working out of methodical recommendations about its realisation (tab. 1). Active integration in instrumental and methodical plan of strategic management and quality management will allow to achieve synergetic effect and steady success of the organisation in long-term prospect.

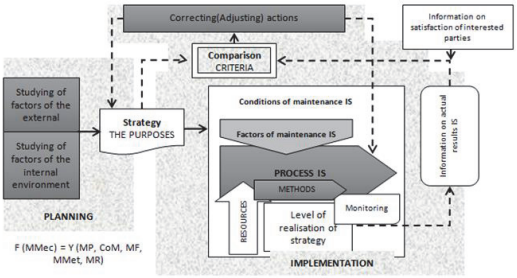
Table 1. Methodology of complex system of implementation the strategy

Implementation of the strategy - process of realisation of strategic plans, monitoring of their realisation and correcting (adjusting) actions for process optimisation of implementation		
The **purpose**	Achievement of strategic targets of the organisation	
Key steps	**Principles**	**Tools**
Realisation	Leadership of the head, personnel involving, the process approach, mutually advantageous relations with suppliers, constant perfection	Qualitative expansion of plans, structure of splitting of works, network schedules, the business plan, the process approach, 6 σ, kaizen, TPM, quality mugs, 5S, Kanban, the Gant's diagram, QFD, FMEA, procedure PPAP
Monitoring	Regularity, the system approach, decision-making factual	System of the balanced strategic indicators, strategic audit, internal audit, self-estimation, methods of the comparative analysis, statistical quality monitoring of quality, self-estimation, audit competitions on quality
Updating	Leadership of the head, efficiency, constant perfection	Analytical and expert methods of an estimation, the FMEA-analysis, FCA method, etc.

Considering a complex of problems which is necessary for solving in a course of implementation the strategy (scheduling, definition of economic levers and the stimulus used in practice of a management; formation of organizational structure, methods and style of work of directing bodies; realisation of various forms of participation of the personnel in production management), *under the implementation of strategy authors understand the integrated multilevel system of forms and methods of influence as the mechanism for achievement of the established purpose, on factors on which condition the result of activity of operated object, namely, result of implementation of strategy depends.*

At construction of differentiated (i.e. changing depending on initial and current factors and operating conditions) schemes of the organizational-administrative mechanism of implementation the strategy all uncountable set of factors influencing this process we will unite in two classification groupings: factors of internal processes (potential) of the enterprise and environmental conditions in which it functions (fig. 2). Similar division helps to organise more accurately process of realisation of strategy, but also to take measures on elimination of some negative influences.

To start action of the given mechanism, strategy of the company which realize, taking into account of available internal possibilities and external conditions, and is materialised in concrete results of activity – the fact sheet on realisation is initial developed on a stage of planning. At detection of deviations at an analysis stage of the data received as a result of monitoring action of forces in the block of comparison with target indicators begins and there is a decision-making concerning correcting influences.



MMec - the management mechanism; MP - the management purposes; CoM - criteria of management;
MF - management factors; MMet – management methods; MR – management resources

Fig. 2. The differential scheme of the organizational-administrative mechanism of implementation the strategy (IS)

One of problem places in effective implementation of strategy which have been designated in the beginning of discussion beginning - an effective translation of target strategic reference points from the higher hierarchical levels of strategic management on levels of business units and divisions of the enterprises. It is a problem zone of such functions of management, as the organisation and motivation. One of innovative approaches for the decision of problems «expansions of a policy and the purposes», known in world practice and borrowed from systems of quality management and economical manufacture is the methodology of Hosin Kanri, in which basis the multidimensional X-matrix in which four fields allow to establish correlation interrelation between various categories (strategic target reference points, tactical ways of realisation of strategy, concrete processes and concrete indicators, i.e. results of realisation of strategic plans). Expansion of the basic strategic targets established at the level of the state, the branch ministries, the corporate center and the enterprises entering into it is offered to carry out by means of the cascade of X-matrixes and method «catch a ball» which means process of the coordination of plans «from above – downwards» and «from below – upwards» [9, p. 117].

3. Technique and Results of an Estimation of Productivity Имплементации Strategy

The key element which is responsible for productivity of process of implementation the strategy is monitoring (supervision continuous process), and consequently and for necessity of its updating on the higher and the average levels of hierarchy of the oil and gas companies. The rating of strategic productivity can show the fullest and operative picture of results of monitoring. For rating construction are necessary quantitative and quality indicators which characterise the process of implementation of the strategy.

The category «productivity» characterises level of achievement of the purposes. We suggest to treat this category taking into account basic principles of quality management *as degree of achievement of the results, to the established strategic indicators which satisfy certain requirements of interested parties and conditions for constant perfection of activity of the organisation create.*

Recently appears more and more materials (article, performance, methods) according to productivity of quality management systems (QMS) which are similar to problems of an estimation of level of strategic productivity [8, p. 88], but many of them suffer one lack – they are a little difficult for execution and suppose a wide field for interpretation of an estimation of productivity of QMS.

The program of intracorporate strategic verification is developed for definitions of level of strategic productivity and drawing up of a corresponding rating by the author on the basis of a self-estimation, with application of the adapted criteria of an estimation on the basis of office product EXCEL, promoting reception of as much as possible objective results. Verification according to the standard of GOST R ISO 9000-2005 (items 3.8.4)**:** Confirmation on the basis of representation of objective certificates (3.8.1) that the established requirements (3.1.2) have to be executed [2].

The effective system of verification (within the limits of monitoring) processes of industrial divisions, is extremely actual, as creates atmosphere of competitions between separate economic units in corporation, makes active realisation of achievement of objects in view, helps to reveal «narrow» places in the functioning processes influencing development of the enterprise, helps to carry out a choice of priority directions of development for the purpose of increase of investment appeal and strengthening of trust of the interested.

System of an estimation of strategic productivity, it is offered to construct on the basis of four complex indicators, to corresponding four strategic prospects of development which are detailed by means of concrete indicators of strategic development for each of which the index of productivity (tab. 2) is defined. As *indicators of strategic productivity (SP)* we will understand the generalised strategic target indicator, representing set of the balanced strategic indicators on one strategic prospect.

Table 2. System of an estimation strategic productivity*

The indicator name	The plan for the accounting period (P_p)	Actual indicators for the accounting period (P_{ai})	Pij=P_{ai}/P_p Index SP	Normalised estimation of index SP (points)
The indicator - Consolidation and development gas distribution actives				
Extent of served gas pipelines, thousand in km.	2,87	2,89	1,01	3
Registration of gas pipelines in the property, thousand in km.	2,44	2,44	1,00	2
The size of participation in supervised organisations, million rbl.	0,01	0,01	1,00	2
Share of participation in controllable societies, %	100,00	100,00	1,00	2
Extent of gas pipelines, thousand in km.	2,73	2,73	1,00	2
Average percent of deterioration of actives GDS, % **	69,70	69,70	1,00	1
Total amount of investments in actives GDS under the investment program, million rbl.	15,07	19,27	1,28	3
Cost of actives GDS, million rbl.	542,22	540,19	1,00	1
Total value SP on indicator SP_{consol}				16
The indicator - Economic efficiency of activity				
Net wealth, million rbl.	682,00	752,93	1,10	3
Net profit, million rbl.	5,97	24,85	4,16	3
Incomes of other kinds of activity, million rbl.	609,16	616,95	1,01	3
The cost price of realised production (services) in other kinds of activity, million rbl. ***	400,39	413,62	1,03	0
Administrative and general business expenses by other kinds of activity, million rbl.	125,83	130,75	1,04	0
Profit by other kinds of activity, million rbl.	82,95	72,59	0,88	1
About Total value SP on indicator SP_{effect}				10

* - *In the table is brought the data of one economic unit which is a part of Open Society «Saratovoblgaz» on two strategic prospects.*

** *Italics notes indicators the estimation on which is made on return system*

*** *Fat italics notes dependent indicators the estimation on which is made under the relation Pij Indicator of incomes on return system*

Indexes of strategic productivity (Pij) Is the relative size showing, in how many time actual indicators of development differ from level of planned targets:

$$Pij = \frac{Pjf}{Pjp}, \quad (1)$$

Where P_{jf}, P_{jp} - the actual and planned data of the indicator characterising -j an index of productivity; -i – serial number of indicators; j – serial number of indexes of productivity of each indicator. The automatic system of rationing of the received values of indexes is developed for all groups of indicators.

By the offered technique of intracorporate strategic verification the estimation of activity of a part Open Societies «Saratovoblgaz» 16 SaA for 2012 has been carried out. In quality the visualisation tools, the received data such tool as the alarm map consisting of the total table, containing colour indication of results and the histogram reflecting a rating of strategic productivity (suggested to enter fig. 2). Drawing up of a rating of strategic productivity of each economic unit and corporation, as a whole, will give the chance to estimate its contribution to achievement of strategic indicators of corporation, will allow to reveal the most successful regional companies which can be attractive to investors, and also will concentrate attention of a management to updating of activity of the inefficient companies.

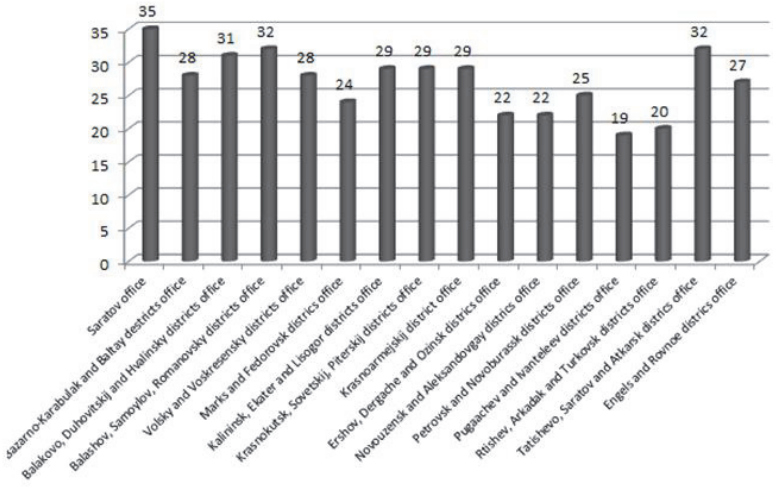


Fig. 2. A rating of strategic productivity of Open Society «Saratovoblgaz» for 2012

By means of a rating of strategic productivity it is possible to display only degree of approach of current activity to an ideal mode. However remains not analyzed what indicators (so what kinds of activity) and in what degree influence increase or decrease in level of productivity. Therefore a following evaluation stage of productivity implementation of the strategy is revealing of the indicators, making the greatest negative impact on result and demanding improvement. For this purpose we will carry out procedure of the statistical analysis of communications between factorial and productive signs of statistical set. Statistical data processing is spent on the basis of a method rank correlations. Were used selective factor of rank correlations of Spirmen (3): $p = 1 - 6\frac{\sum d_\kappa^2}{n^3 - n}$ (2)

In which – d_k^2 squares of differences of ranks of each pair compared values, *n* – sample volume;

And also selective factor of rank correlations of Kendall (3):

$$\tau = 2\frac{P - Q}{n^2 - n}, \quad (3)$$

In which *P*, *Q* – accordingly number of positive and negative inversions of ranks, *n* – sample volume. In a case when the statistical importance of correlation communication proved to be true both for factor (2), and for factor (3), specification of factor of Spirmen taking into account repeating ranks [6, p. 56].

Rank correlation between indexes of achievement of planned targets and a deviation of actual level of strategic productivity of division from the level corresponding to planned targets is investigated. Calculation of critical values is spent at a significance value 0,05. As the basic statistical hypothesis absence of significant correlation communication

was accepted. Thus, presence of significant correlation communication was shown in a case when value of selective factor exceeded corresponding critical value. In addition the narrowness of communication was estimated qualitatively on a scale of Cheddok.

Based on the presented initial data it is established that for a deviation of level of strategic productivity takes place significant rank of correlation communicate with indexes of achievement of planned targets on the following indicators presented in table 3.

Table 3. Results of rank correlation

Display-indicators	Indicator	Selective factor of rank correlations of Spirmen	Critical value of distribution of Spirmen	Selective factor of rank correlations of Kendall	Critical value of distribution of Kendall	Character of correlation
Consolidation and development Gas development actives	Extent of served gas pipelines	0,59	0,46	0,45	0,36	Is frugal, put-telnaja
	Registration of gas pipelines in the property	0,54	0,48	0,43		Is moderated(moderate) th, put-telnaja
	Total amount of investments in actives GDS under the investment program	0,91	0,23	0,83		High put-telnaja
Economilal effect of actions	Net profit	0,50	0,50	0,46		Is moderated(moderate) th, put-telnaja

Having kept as explaining factors only statistically significant indicators from tab.3, we receive compact model for an estimation of influence of separate indicators on level of strategic productivity. We will estimate further adequacy of offered model. As strategic productivity is estimated by quantity of points on a discrete scale it is necessary to refuse use of the criteria similar to criterion of Fisher, applicable for continuous random variables with the normal law of distribution. We will be limited to an estimation of a relative error.

Let's consider values of strategic productivity U_k in two cases: U_k – at the account of all known indicators, $\tilde{U}_k$ – at the account only statistically significant indicators. For an average relative error (4):

$$A = \frac{1}{n}\sum \left| \frac{\tilde{U}_k - U_k}{U_k} \right| \cdot 100\% \quad (4)$$

We receive value A=8,6%. Such accuracy is represented sufficient for the preliminary forecast of strategic productivity.

Thus, the combination of the expert strategic analysis spent in the form of strategic verification and use of simple mathematical models allows to lift scientifically-practical validity of strategic decisions. It underlines importance, methodology interdisciplinary synergetic approach and its theoretical bases for perfection of development of system of strategic management.

4. Conclusion

Introduction of system of an estimation of strategic productivity will allow to focus attention of a management of the organisations to the importance for economic efficiency of activity of such indicators as personnel development, increase of a technological level of manufacture, the size of technological losses of gas at its transportation. The publication of given results becomes good stimulus for investors, including foreign, and starting step to start the mechanism of the investment promoting the further development, both separate economic units, and corporation as a whole.

The methodological approach offered in work and the methodical toolkit directed on increase of efficiency of strategic management at the enterprises of the oil and gas industry can be used at formation of strategy of development in other industries, and quality management inclusion in structure of standard tools of management of the modern enterprises becomes effective way of reception of competitive parity or competitive advantages.

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Professionalism of Civil Servants as the Factor of Public Administration Efficiency Growth

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Abstract

The problems of efficiency growth of state run public authorities and governmental authorities are considered in the article. Professionalism of civil servants is the focus of the authors. Based on an analysis of the current practice of public administration they come to the conclusion that the human resource –knowledge and skills of management activity parties – is in the basis of its performance. The experience of using the competency approach in civil service in the Republic of Tatarstan is summarized in the article.

Keywords: *efficiency of public service, competency approach, model of competencies, improvement of professionalism of civil servants.*

1. Introduction

Improvement of efficiency of the civil service is one of the important conditions for overcoming the negative trends in the socio-economic development of the Russian Federation. In our opinion, the main problems in this sphere are the following: replenishment of senior executives by highly qualified competent specialists and radical increase of the professional level of the existing civil servants in performance of their duties.

Complexity of solving these problems is explained, firstly, by the fact that unfortunately the most important values of the democratic society – openness to new experience, commitment to social change, understanding and acceptance of diversity of opinions and attitudes of the other people, the desire to achieve a high level of social and professional standards, the ability to define and defend one's opinion, to be independent and responsible at the same time, to live in conditions of competition in all areas – have not become the prior values for public servants yet.

It is obvious that without assurance in priority of these values, a civil servant can not contribute to formation of the necessary conditions for the development of creativity and initiative of citizens, so the social duty of the state – to create opportunities for every citizen to perform and work freely – can not be enforced.

Secondly, we are convinced that the most important and valuable resource of public administration is a human one; it requires careful handling. However, very often it is necessary to say that be noted that a lot of public servants of all ranks and levels understand this axiom too simply, while the deficit of this resource is definitely the greatest national problem of the present and future of Russia.

At the time, the American researcher of the problems of organizational behavior and management Elton Mayo said that science and art of government are based not only on its socialization, but on psychologization as well, as far as it is important to have the ability to listen, communicate, to show sympathy and to have credibility. The Art of Communication is an essential component of the process of management process. Personal abilities can not substitute this art; no technical skills or the highest production efficiency will compensate its absence [1]. Mayo logically concludes that modern civilization is in great need of servants of the new type who are able to able "to understand social and human facts as they are having thrown away all their emotions and prejudices". But to achieve that, "it must be meticulous training…, including in the organization of cooperation." [1]

Mayo thought that the drawback of contemporary system of management education is that it was not able to teach

social skills – "the ability to establish communication with others, to inspire by feelings and ideas to others so to promote the innate feeling of participation in a common cause." [1]

A lot of findings of the scientist findings are still relevant today, and if the public service has set a goal to become really professional, it must become competitive in the labor market, to be attractive for highly qualified personnel. Unlike large commercial companies whose financial resources allow not only to select the best candidates from hundreds of applicants, but also to withhold them by weighty social package for the system of civil service, especially for employees of lower echelon and middle ranking, such methods are not applicable yet. However, in the sphere of public service there are other resources which, unfortunately, are involved not enough at present: the prestige of the profession, stability, opportunities for career and professional growth, social concern of the state of its "sovereign people".

Effective solution of the problem of improvement of professionalism of civil servants is restrained by absence of the integrated public authority that would be responsible for selection, choice and assessment of staff for public service.

Due to the fact that establishment of the system of formation and development of personnel reserve in public authorities is at the initial stage, it is almost impossible to give the objective characteristic of this reserve. In its turn, it is the strongest constraining factor for the use of modern methods of the selection of staff that is highly professional, ready to work in the system of public administration for a long time, that has valuable experience of teamwork, that focuses on personal career and service for public interests. But available experience and knowledge of the public and municipal servants do not always match with those that are required for the functioning of public authorities in new conditions.

"I fully agree with those people who think that we have the anachronistic system of public administration and the same system of recruitment," – said D.A. Medvedev at the meeting with the open government in Skolkovo. According to him, "it is obvious that there can not be a modern system of public administration with the old system of staff selection – career development, the system of motivation and so on". [2]

It is quite clear that the growth of professionalism of civil servants directly depends on the state of the contingent, on identification of persons who are able to "raise" their professional level. It is necessary to have certain selection criterial in order to make a qualitative selection and evaluation of staff. At this stage the question arises: what are the criteria of evaluation? The experts in the field of personnel assessment have the answer: it is necessary to create the model of competencies which should take into account peculiarities of public servants, describe differences in the requirements for workers of different groups of job positions, which should reflect continuity in development of competencies, which will also contain an integrated description of requirements for knowledge, abilities and skills of public servants required for successful execution of their duties and which should take into account the characteristics of their activities.

2. Method

The Republic of Tatarstan can be as a good example of creation of competency models and their application. In 2010 the comprehensive competence approach in the field of civil service in the formation of multi-level personnel prospects was tested and implemented in Tatarstan for the first time among the regions of the Russian Federation by the initiative of the President of the Republic of Tatarstan R.N. Minnikhanov.

Development of the model of competencies of effective public servant of the Republic of Tatarstan was held using modern methods – the focus-group research and the assessment center.

The focus-group research was held with participation of Ministers and Deputy Ministers of the Republic of Tatarstan, the heads of structural subdivisions of the Administration of President and the Cabinet of Ministers of the Republic of Tatarstan. The models obtained were combined into the united integrated model of competencies of managers in the sphere of public authorities and administration of the Republic of Tatarstan. [3]

According to the results of the focus-group research the following basic competencies were determined in order to improve the effectiveness of functions of the Head of the state run public authorities of the republic: strategic and analytical thinking, innovation, performance management, ability of teamwork, communication skills, initiative and managerial responsibility, adequate behavior in stressful situations, leadership.

Heads of public authorities who defined the parameters of success of employees were directly involved in the creation of the model of competencies. The highlighted parameters were put into the basis of the developed competencies of servants. [4]

The established unified model of competencies is currently being applied in the practice of assessment of managerial capacity of public servants by the method of the assessment-center.

Choosing this method, the developers took into account its ability to give comprehensive assessment of staff competencies, based on the use of complementary techniques, its orientation for estimation of real qualities of

employees, their psychological and professional features, compliance to the requirements of job positions, as well as for identification of potential abilities of managers and specialists.

3. Results

The data concerning personal, managerial and professional potential of civil servants obtained with the help of the assessment center became the basis of formation of workforce capacity on different levels of management in the sphere of civil service of the Republic of Tatarstan; it gives reason to the republic's leadership not only to make well-founded personnel decisions, but also to monitor professional development of individuals enrolled into the personnel reserve.

High cost is the factor that restrains to some extent the use of the method of the assessment center for evaluation of all existing public and municipal civil servants of the Republic. However, in the frames of the Program of development of public and municipal service in the Republic of Tatarstan, this method got the support.

For today about 2 million civil servants – deputy ministers, heads of departments and offices, heads of department of ministries and divisions, people from the personnel reserve of public authorities – assessed and passed as managerially competent in the Republic of Tatarstan. Work on assessment of management competencies of municipal servants of the republic also started – by now more than 450 people have already passed this assessment.

According to the assessment the individual plan on the assessed competencies with identification of various activities for development and self-improvement and one of types of additional professional education, to which the civil servant is sent (advanced training, professional retraining or apprenticeship) was formed for every participant.

It should be emphasized that these individual plans are the basis of the above-mentioned Development Program of Public Civil and Municipal Service in the Republic of Tatarstan for 2010-2013 and subsequent years. [5] Higher School of Public and Municipal Administration of the Kazan (Volga Region) Federal University (hereinafter – HSPMA) is a coordinating and methodological body of training the civil and municipal servants.

The results of the program are quite significant: 9225 public and municipal servants were trained during the period of its work.

As far as the spheres of public and municipal administration require specialists of different levels and directions of activities, a wide range of programs is developed and implemented in HSPMA (tab.1).

Table 1. Types of programs for specialists on general management issues in HSPMA

	Programs for specialists on general management issues	The public and municipal servants (persons/ share)
1	"Fundamentals of Civil and Municipal Service"	3000 /32.5%
2	"Legal, analytical and information support of public administration"	3125/33.9%
3	"Middle management in public and municipal administration: theory and practice"	3100/33.6%

Specialization of activities of servants in such spheres as health, education, culture, energy, housing and utilities, is also taken into account: the programs that take into account the specific character of this or that economic sector, also run.

HSPMA pays special attention to the levels (regional or local) and to management functions (strategic management, planning and forecasting, financial management, human resource management): the programs "Innovative methods of development of municipal entities", "National Competition Policy", "Modern technologies of personnel management in the public civil and municipal service", "Financial audit and performance audit in the system of the state financial control" and a number of other programs run here.

Of course, HSPMA does not stand apart from the processes of informational support – modern society is penetrated by information flows and technologies. Increased attention is paid to this very important sphere: the programs "Informational support and communication in the public sector", "Information technologies in public and municipal management", "Communicative management in public administration" are implemented.

4. Conclusions

In accordance with the national policy on the questions of anti-corruption, the programs on anti-corruption national policy in the system of public and municipal administration are rather relevant.

It is necessary to say that the content of the developed programs is not of prolonged nature –qualitative and

quantitative expansion and updating of programs is constantly going. Constant cooperation of HSPMA for development of joint programs with ministries and departments of the republic, the departments of the university, similar structures of other universities of the country plays great role in this. Among these programs there are the following ones: "Management of Special Economic Zones", "Problems of accession of Russia to the WTO," "Work with commercial organizations", "Technologies of development of standards of public and municipal services."

Classes with the use of innovative methods of education in the form of "round tables", workshops, debates, problem-innovative meetings are held in order to achieve maximum efficiency of learning the new material.

Trainings have a special place in the educational process. Practice shows that in most cases the training programs are more effective than traditional forms of education – lectures and seminars. Intensive work during trainings helps to achieve good results in a short time, and the subsequent system of post-training support provides good reinforcement of material. Moreover, repeated polling surveys of students confirm attractiveness and importance of this form.

Human Resourcing of the educational process is an important resource that determines quality of training of civil and municipal servants. To characterize the composition of persons involved by HSPMA for teaching, we will give the following data (tab.2):

Table 2. The composition of persons involved by HSPMA for teaching

	The composition of persons	Kind of persons	Share
1	Leading specialists of public and municipal administration	Experst, researchers	46%
2	Teaching staff of universities	Professors, Associat.prof, Senior teachers, Assistants,Tutors etc.	38%
3	Representatives of public organizations of the republic	Public Chamber, Committee of Veterans of War and military service, top managers of enterprises, organizations and institutions	16%

The feedback system – questionnaire survey and opinion polls – are the obligatory elements of assessment of quality of training and satisfaction of it by listeners in HSPMA. For example, a recent opinion poll of more than 900 public servants allowed to make changes to the curricula of students, taking into account their wishes and recommendations.

We think that concentration of efforts and means on training, retraining and advanced training in specialized training centers (schools, academies, institutes) at federal or national universities is one of the urgent problems of efficiency improvement of civil and municipal servants. We are convinced that exactly they are able to solve to these problems. They have the ability to apply an integrated interdisciplinary approach in so important, in the full sense, public affairs.

We believe that training of managers who correspond to modern requirements, own the latest tools and management techniques, who can apply the knowledge in practice, will greatly improve the efficiency of the civil service.

We would like to finish the article by the quote of Bismarck who said that with bad laws and good civil servants it is still possible to rule the state, but with bad civil servants it is impossible to rule the state even with good laws.

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Civil Public Service: Human Resources Aspect

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Abstract

The article describes the historical retrospective of development of the personnel reserve in the public service and presents the modern approach to the work on formation of the managerial personnel reserve. The study of the use of the competence-based approach to human resources policy of the Republic of Tatarstan and the Volga Federal District proves its objectivity, relevance of the present and the necessity for wider distribution in the state run public authorities and municipal administration of the Russian Federation.

Keywords: *personnel reserve, the civil public service, human resources policy, competence-based approach.*

1. Introduction

Formation of the new model of public administration, the reform of civil service of Russia and its administration are impossible without substantial upgrade of senior executives, without concentration of people who are able to ensure successful economic reforms public authorities, the formation of the new, truly democratic state.

The relevance of the problem is obvious. Administrative-command system, developed in the years of the Soviet power, retreated in conditions of the market economy, while training of personnel who is able to work effectively in new economic conditions, definitely does not meet the requirements of time. We are convinced that the process of Human Resourcing of public authorities by highly qualified specialists will go better if to assume all necessary measures in order not only to enhance the use of existing institution of personnel reserve, but also to introduce new methods and techniques of work on formation of personnel reserve. By no means, this does not contradict the requirements of the Federal Law № 79-FZ "On State Civil Service", of legal acts in its development that actually determine such personnel technologies, the use of which is necessary in the public service. They include:

- open personnel competition;
- formation and use of personnel reserve;
- certification;
- qualification examination;
- educational technologies;
- Motivation and encouragement on the basis of performance evaluation;
- Regulation of activities (use of official regulations).

2. Theory

We think that among these technologies the second one plays the main role: formation and use of personnel reserve. Special attention should be paid exactly to work with reserve. Here, our approach is based on the following: personnel reserve is the multi-level structure and each level requires the original, unique system of search, selection, examination, evaluation, assessment, development and rotation, as far as these functions are the basic units in formation of managerial personnel. The proper statement of work with personnel reserve greatly determines the staff that will govern a

state. Using the concept "reserve" (from the Latin *reservo* – I save), which means the stock of something in case of need or the source of speculation about the urgent need of such stock (source) to the system of regulatory and administrative authorities.

In relation to the administration of the State Service the personnel reserve is understood as a specially formed – on the basis of individual selection and complex evaluation – group of prospective workers with the high professional, business, personal and ethical qualities who positively proved themselves on their positions, who were properly trained and who meet all criteria necessary for holding certain civil service positions.

Questions of providing the regulatory and administrative authorities by staff are the key ones for any country, as far as they are connected with quality of the elite and the functioning of the state. All epochal changes, anyway, were accompanied by the formation of the new system of selection and staff placement, creation of the inner circle of like-minded people. And Russia in this respect is not an exception. To confirm this, we will make a retrospective journey into the history.

In the Middle Ages in the Ancient Russia (X-XII centuries) there was "Druzhina of princes"; it was the organization of the most dedicated and talented military leaders who implemented the vision of the prince for state governance.

At the later time (XVIII century) there were "Toy Armies" of Peter I – the system of formation of the reserve of the Russian army commanders.

In the XIX century "Private Committee" of Alexander I was created – the informal advisory body working in the beginning of the reign of the emperor and formed before reign; it was the committee of the young leaders – the attendants of the emperor; their purpose was to do the preliminary study of the situation of the empire, and its further transformation.

The Imperial Tsarskoselsky Lyceum – the institution of higher education for the best representatives of Russian noble families – was founded by the decree of Alexander I in 1810. The program of the Lyceum was aimed at education and training of public officials of higher ranks. The emperor personally watched the work of the institution and was observed the awarding of the most distinguished graduates.

In 1835 "Imperial College of Law" was founded by the decree of Nicholai I, for education of competent personnel for high administrative and judicial activities. The Emperor visited the school every month. Later on the graduates were in the suite of the Emperor.

All participants of these institutions held senior positions in public administration. The governor always personally watched the growth and advancement of every member.

Special attention was paid to personnel reserve in the Soviet period. The monopoly of the ruling party for all categories of managerial personnel; for their placement, promotion and change; for the formation, training and use of the human resources reserve for all patronage positions was the basis of the personnel policy of the CPSU, its basic principle of working with staff and reserve [2, p.157].

Formation of the reserve was considered as a multi-scale problem, a set of measures that include the study and selection of people for senior positions, different forms of work with them, training and retraining of staff. The Komsomol activists, Secretaries of Committees of Komsomol organizations were an important managerial personnel reserve. The authorities carefully studied them and put forward to the most responsible land management work.

In the Soviet Union various sources, including the elected Party, Soviet, trade union and Komsomol organizations, were used for formation of the reserve. Priority was given to people who had experience in production teams.

The Academy of Social Sciences under the CPSU Central Committee, the network of republican and regional top party schools, as well as retraining and qualification-based training courses at regional, city and national authorities were founded for professional education of the reserve. Graduates of these schools were in demand, they had individual distribution and guarantee of employment. By the way, many of them later became prominent statesman and political leaders.

In the course of perestroika the ruling party proclaimed the policy of democratization and wide publicity, work with personnel, in particular, of the radical restructuring of work with the reserve, the elimination of the accumulated negative phenomena, the development of qualitatively new approaches to work with staff.

Special attention was paid to inadmissibility of protectionism in the work with staff and reserve, of selection and promotion of employees on the basis of personal loyalty, community, kinship and clanship. When forming a reserve for higher management positions it was recommended to pay more attention to professionalism, competence, management experience, basic education of candidates, their moral qualities.

In general, the personnel policy in the Soviet period was a fairly well-structured system that prepared trained professionals to the public authorities.

Post-Soviet period had negative influence on the system of personnel reserve: the Communist Party lost its

"guiding role"; after the period of fierce battles around the Constitution the new system with strong presidential power and more extensive bureaucracy was formed and finally "stabilized".

The formation of CIS led to disposition of one part of the Union of managerial staff to the neighboring countries, and to the joining of their other part into the structures of the Russian state administration. Measures of dismantling of mechanisms of planning of the socialist economy and their replacement by new bodies with different tasks were undertaken. In the result in a very short time Russia underwent simultaneous transformation – economic, political and national one.

The implementation of the federal program "Reformation of the public service of the Russian Federation (2003-2005)" gave new impulse to work with personnel reserve. The separate article (Art. 17 - "Personnel reserve of replacement of civil service positions") is in the Federal Law "On the system of public service of the Russian Federation"; according to this article, the federal and the personnel reserve of public authorities of the Russian Federation are created. [3, p.140-143]

3. Results

The analysis of the historical background of formation of personnel reserve showed that every stage has fundamental differences due to the peculiarities of state personnel policy and specific socio-political and economic conditions.

In the Republic of Tatarstan in the frames of the system of innovative personnel management the project of formation of human resources reserves in the sphere of civil and municipal service is successfully implemented.

The basis of the formation and functioning of the human reserves laid competence approach, the necessity of implementation in which the civil service stated in the Decree of the President of the Russian Federation VV Putin. [5]

The system of multi-level personnel reserve in the Republic of Tatarstan is the following:

- federal administrative reserve;
- administrative reserve of the Volga Federal District;
- administrative reserve of the Republic of Tatarstan;
- personnel reserve of public authorities of the Republic of Tatarstan;
- personnel reserve of the Republic of Tatarstan;
- administrative reserve of local authorities, municipalities of the Republic of Tatarstan.[4]

The competence-based approach, the necessity of implementation into the public civil service of which is stated in the Decree of the President of the Russian Federation V.V. Putin, is in the basis of formation and functioning of the system of human resources reserves. [5]

In 2010 the comprehensive competence approach to assessment of efficiency of managerial activities in the field of public civil service was tested and implemented in Tatarstan for the first time among the regions of the Russian Federation by the initiative of the President of the Republic of Tatarstan R.N. Minnikhanov. It became the basis of the system for the formation of multi-level personnel reserve of the Repiblic of Tatarstan.

Comprehensive competence-based analysis is the technology aimed at assessing the level of development of management competencies and professionally important skills of senior executives (Managerial Human Resources) of institutions, enterprises, commercial and non-profit organizations. The technology integrates interdisciplinary approaches of organizational-activity game-practice, the elements of microeconomic, macroeconomic and meso-economic modeling. [6]

Federal Reserve of management personnel, the structure of which is presented below in Figure 1, has a special place in the structure of reserves of senior executives in the civil service.

At the beginning of 2014 92 representatives of the Republic of Tatarstan were in the Federal Reserve of senior executives, including:

- 38 people in “High level”;
- 25 people in “Basic level”;
- 29 people in “Advanced level”.

The reserve of senior executives under the patronage of the President of the Russian Federation ("Presidential hundred" and "Presidential thousand") is also the part of the Federal Reserve of Managerial Human Resources. At the end of 2013 11 representatives of the Republic of Tatarstan, 2 of which are in the "Presidential hundred", were in this reserve.

Fig. 1. Structure of federal managerial reserve

Today, public and municipal servants, deputies, activists of political parties and movements, graduates of educational institutions, specialists of different forms of ownership; persons with experience of research, teaching, information and analytical work; persons belonging to the banks staff of ministries, departments, etc. are the sources of formation of personnel reserve in structures of public service.

Employees of non-state, business structures are included into the reserve with their consent and are trained by the individual plan.

4. Conclusions

Here is the example of staff composition of the reserve of Managerial Human Resources of the Volga Federal District of the Republic of Tatarstan (table 1).

Table 1. Staff composition of the reserve of Managerial Human Resources of the Volga Federal District of the Republic of Tatarstan

1.	Chief medical officers of clinical hospitals of the Republic of Tatarstan	2
2.	Deputy ministers of the Republic of Tatarstan	4
3.	Chiefs and chief deputies of departments of public authorities of the Republic of Tatarstan and business organizations of the Republic of Tatarstan	11
4.	Heads of departments of administrations of central and local authorities of the Republic of Tatarstan and their deputies	8
5.	Head of the regional office of the Russian Federation	1
6.	Counselors and referents of public authorities of the Republic of Tatarstan	5
7.	Heads of executive committees of municipal entities of the Republic of Tatarstan and their deputies	8
8.	Chiefs and chief deputies of business entities of different forms of ownership of the Republic of Tatarstan	15
9.	Associate Member of the Academy of Sciences of the Republic of Tatarstan	1
10.	chief of administration of public authorities of the Republic of Tatarstan and their deputies	2
	Total	57

According to Table 1, the reserve composition consists of a large number of professionals in the field of public and municipal authorities - 39 persons, of reservists from the leaders of business entities of various forms of ownership - 15 persons, and the number of representatives of health and education is 2 and 1 accordingly. Analysis of the data shows that the reserves of Managerial Human Resources are recruited from a larger number of public and municipal officials.
Now let's have a look at the final table 2, where we provided information on the multi-level reserve of Managerial Human Resources in the Republic of Tatarstan.

Table 2. Multi-level reserve of the Republic of Tatarstan

	Type of reserve	Are in reserve (people)	Are appointed for higher posts (people)
1	Federal reserve of Managerial Human Resources	92	-
2	Reserve of Managerial Human Resources of the Volga Federal District	57	37
3	Reserve of Managerial Human Resources of the Republic of Tatarstan	73	47
4	Personnel reserve of public authorities of the Republic of Tatarstan	927	260
5	Personnel reserve of the Republic of Tatarstan	9	2
6	Reserve of Managerial Human Resources of local authorities, minicipal entities of the Republic of Tatarstan	3116	465
7	Total	4274	811

Analysis of the presented information allows to conclude that today the integrated system of personnel reserves with possibility of vertical and horizontal rotation of personnel is built in the Republic of Tatarstan.

This system is a "closed" cycle which includes multi-phase stages of assessment and stages of development of

competencies with subsequent possibility of vertical and horizontal rotation of personnel.

In our opinion, the existing system of multi-level personnel reserve of the Republic of Tatarstan promotes the efficiency of personnel decisions, forms the integral system of personnel potential of the region and the dynamics of its development, and also forms a multifunctional teams of high-potential senior executives.

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Efficiency Estimation for Activities for Multi-Industry Holdings as Forms of Business Associations

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Abstract

The article analyses the methods for the efficiency estimation for holding structures in general and multi-industry holdings in particular available in the research literature. The necessity to develop the methods enabling to perform the estimation of efficiency of activities for multi-industry holdings within the stakeholder theory has been proved. A range of indices describing the efficiency of activities of multi-industry holdings from a perspective of meeting interests of certain stakeholders has been proposed. The methods for the estimation of efficiency of activities of multi-industry holdings within the stakeholder theory has been developed.

Keywords: *Multi-industry holdings, business associations, management, stakeholder theory, estimation of efficiency.*

1. Introduction

Acceleration of globalization processes results in the increased competition in the domestic market and in the external market, and the competitiveness becomes a governing factor for the economy growth of a country. In order to implement the positive effect of the globalization, the relevant institutional structures are necessary, firstly, business associations that, as a rule, are the economy drivers for the economy of any country. At present, holdings are considered the most demanded forms of the business association in Russia, and inefficiency of their activities precludes the growth of the country's economy [8]. Within the framework of this article, special attention will be paid to activities of multi-industry holdings as the most complex form of corporate associations.

Due to the above, the matter of developing a management system for the activities of multi-industry holdings based on the estimation of their economic efficiency becomes essential [4].

2. Theory

In spite of the fact that a wide range of works of domestic and foreign scientists has been published during the recent years on the matter of estimation of efficiency of activities if holding structures, there is a range of unexplored theoretical and methodical issues. The majority of methods reduce themselves to the development of a system of qualitative indices describing various aspects of holdings' activities unrelated to the subjects of the estimation. In the course of its activities, the holding interacts with various subjects, and for each of them, the efficiency of their activities is described as meeting certain interests [1]. Therefore, the development of the methods for estimating the efficiency of activities of multi-industry holding where the extent of the meeting of interests of certain stakeholders is taken into account becomes an indispensable instrument for the strategic and operative management of the holdings [11].

3. Method

As a multi-industry holding is a form of a business association, the efficiency of its activities depends of the efficiency of separate business structures being its parts. Therefore, the methods we have developed enables to represent the position of each enterprise in the activities of the multi-industry holding in the perspective of satisfying the stakeholder by them [5]. Figure 1 represents the stages for the estimation of activities of the multi-industry holdings within the stakeholder theory.

Further, each stage will be described in more detail. The stakeholder theory came into being for the first time in 1984 due to the release of the book "Strategic Management: A Stakeholder Approach" by Edward Freeman where the

author suggests that a firm should be regarded in the perspective of its interaction with the inner and outer environment, and the interests and demands of the environment should be considered by the management in the course of making managerial decisions[7].

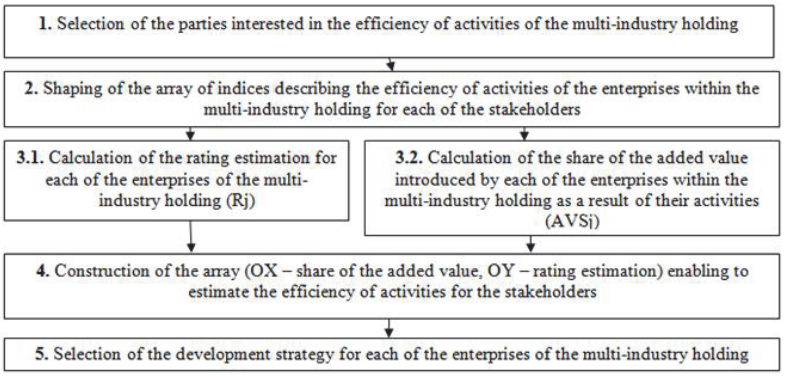

Fig. 1 Stages of efficiency estimation for the activities of multi-industry holdings within the stakeholder theory

Edward Freeman defines a "stakeholder" as all the corporate or private persons entering into contact with the organization in the process of its activities. Such treatment of the term is considered theoretical as in practice there is hardly an entity that can take the interests or demands of representatives of the internal and external environment into account [3]. Therefore, the most authors being the followers of the E. Freeman's theory suggest that only the interests and demands of the parties that are in position to actually affect the welfare of the entity should be taken into account. For each entity, depending on the area of its activities, its size, legal status etc., the list of the stakeholders is different. Thus, the activities of the multi-industry holdings depend, most of all, on the following stakeholders: shareholders, managers, employees of the enterprises, the state represented by bodies of legislative and executive power, creditors (investors), purchasers, suppliers and contractors [6].

As a result of investing funds into the initial capital of the holding, shareholders receive annual income aggregated as the alteration of the stock pricing and the accrued dividends. The level of the total return index does not evidence a satisfaction of the shareholders' interests, and in the framework of the original methods we will consider the growth rate of such index during a period (X_1).

Interacting with enterprises of the holding, representatives of the "employees" group are interested in obtaining both material and moral benefits. At present, the material benefits are predominant for Russian employees when selecting a job [10]. The level of profits itself does not evidence a satisfaction of their interests. As a part of the original methods, we will consider the growth rate of such index during a period (X_2).

When interacting with enterprises of a multi-industry holding, the state satisfies the following interests:

1. Replenishment of the income part of the budget by means of annual growth of the tax payments. The growth rate of this index will be considered (X_3).
2. Securing of the people's occupation by means of annual growth in numbers of the employees engaged by the enterprises of the multi-industry holding (X_4).
3. Increase of the production volume generated by the enterprises of the multi-industry holding (X_5).

Interacting with enterprises of the holding, representatives of the "consumers" group are committed to satisfy their interest in purchasing high-quality goods at affordable prices and with a proper service level. It is not possible to estimate the satisfaction of the consumers' interests by means of a survey because, as a rule, multi-industry holding comprise more than tens of enterprises engaged in various areas of the economy [9]. Therefore, in the framework of the proposed methods, we will use are more unified index, that is sales revenue in comparable prices. It is assumed that the satisfaction of the consumers' interests will result in the growth of the consumption volume (X_6).

The "suppliers and contractors" group, while interacting with enterprises of the holding, pursue certain interests whose range may vary depending on the area where the enterprise is engaged etc. However, such interests as provision by the enterprises of the holding of continuous orders for large volumes of supplied goods and timely payments for the supplies are important criteria for the satisfaction of interests of any supplier. As the continuity and volumes of supplies

depend of the sales volumes by the holding's enterprises themselves, in this case it is proper to consider the growth rate of the sales revenue in comparable prices (X_6). The continuity and timeliness of the payments are represented by the following indices: growth rate for the accounts payable ratio (X_7), and the growth rate for the absolute liquidity ratio (X_8).

The "creditor" group is interested, first of all, in the timely and complete return of loaned means. The enterprise is in position to satisfy such interests provided it is in a good financial standing. The following indices have been defined in the course of survey of credit departments of leading banks in the Republic of Tatarstan: total debt to equity (X_9), current assets coverage ratio (X_{10}), liquid ratio (X_{11}), assets turnover ratio (X_{12}), and return on equity (X_{13}). The increase of such indices evidences the solvency and financial health of the enterprise.

In order to calculate the ranking estimation, we adopted the method by N.E. Zimin as it is the method that, according to the author, can be applied in inter-industry comparisons [2]. The ranking estimation within such method is calculated independently for each of the enterprises:

$$Rj = \sqrt{(1 - X1j)^2 + (1 - X2j)^2 + \ldots + (1 - Xnj)^2} \quad (1)$$

where

Xij – is normalized indices for the j-th enterprise.

$$Xij = aij / \max aij \quad (2)$$

where

aij – is an array where the lines (i) are names of the indices, and columns (j) are the names of the enterprises of the holding.

An enterprise with the least R value will have the highest ranking.

After that, it is necessary to calculate the value of the AVS index:

$$AVSj = AVj / \Sigma AVj \quad (3)$$

where AVSj is the share of the added value generated by the j-th enterprise in the total added value generated by all the enterprises of the multi-industry holding, and AVj is the added value generated by the j-th enterprise.

Based on the indices calculated above, the array can be constructed where OX axis is the share of the added value generated by the j-the enterprise, and OY axis is the ranking estimation for the j-th enterprise describing the satisfaction of the interests of the stakeholders by such enterprise in the course of its activities (Fig.2).

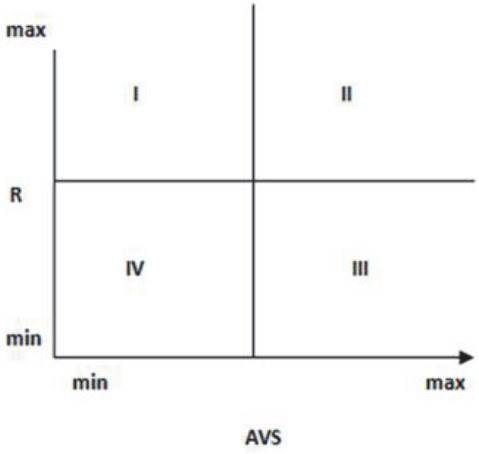

Fig. 2. Estimation array for the efficiency of activities of enterprises within the multi-industry holding as a part of the stakeholder theory

4. Results

The strategy for each of the enterprises of the multi-industry holding is defined depending on which square of the array (I, II, III or IV) it ends up in when constructing the array.

The enterprises in the square I are efficient for the holding but they contribute insignificantly in the generation of the total added value. The activities of such enterprises require minimum interference on the part of the management of the

parent company of the holding.

The activities of the enterprises ending up in the square II are the most efficient for the multi-industry holding as they satisfy the stakeholders to the maximum and contribute the most to the generation of the added value by the holding. The top managers of the holding's parent company should supervise the activities of such entities as any slackening of such enterprises may considerably weaken the position of the holding in general.

The enterprises ending up in the square III are the most "weak link" of the multi-industry holding. Although they contribute significantly in the added value generated by the multi-industry holding, they are of poor efficiency in the perspective of satisfaction of the stakeholders. Therefore, they require the maximum supervision and interference on the part of the management of the parent company.

The enterprises ending up in the square IV are of no interest to the management of the holding as they are inefficient in the prospective of satisfaction of stakeholders and are the least contribute to the generation of the added value by the multi-industry holding. As a rule, if such enterprises are not strategic for the holding in the long-term prospective, it is advisable to withdraw such enterprises from the holding's structure.

5. Conclusions

Thus, multi-industry holdings are the driver of the Russian economy, and the welfare of the country depend on the efficiency of their operations. Being a kind of a "public" structure, in the course of their activities multi-industry holders interact with great many stakeholders. Satisfaction of interests of six of them (shareholders, the state, purchasers, creditors, suppliers and contractors, employees) is crucial for a holding structure. Therefore, the method proposed by the author is an essential instrument to estimate the efficiency of activities of multi-industry holdings in the perspective of satisfaction of stakeholders' intersts.

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Development Trends of Entrepreneurial Activity in the Republic of Tatarstan

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Abstract

The article discusses the current state of small business. Authors identify small businesses' development trends within the framework of endogenous approach. The article discloses the key challenges and problems of current status of the business sector based on asymmetric structure.

Keywords: *small and medium entrepreneurship, small business, infrastructure, government support.*

1. Introduction

The transformation of the Russian economy's social and economic priorities has determined an interchange between the business activity's paradigms. Small entities have become a basic for economic development through establishing optimal structure for entrepreneurial activity's objects.

This, in turn, will lead to the revision of the evaluation tools for the entrepreneurial activity's effectiveness and, as a consequence, it will impact of the development and implementation of flexible strategy and management tactics, the development of a strong economic motivation and personal responsibility for the production results.

2. Theory

Analysis of the government support effectiveness in business development process, on our opinion, should be reviewed in the framework of endogenous approach. Because this approach is based on changes appeared as a result of establishment of government economic policy, through designation of the values and mechanisms of relationship between system's subjects, which is affected by this policy.

Effectiveness of the applied tools, which are aimed to support entrepreneurial activity, depends on the "parallelism" of economic policy reforms and internal (institutional) changes in business. Besides, the fact, that government economic regulating policy must be consistent with the economic expediency of business support programs, should be borne in mind.

The importance of small business development involves a comprehensive solution of the following problems:

- Coordination between the activities carried out by all organizations involved in a process of governmental support for small businesses at different governmental levels;
- Stage improvement of infrastructure for small business;
- Selective approach implementation in governmental policy, directed to support small business and complying with operational scope.

Small entrepreneurship is contributing in optimization of economic structure, and mostly to the regional one, due to its flexibility and ability to occupy the smallest market niches. It facilitates flexible reengineering of the production process, growth of employment, building a business culture and active innovation filed; initiates the capital accumulation and defuses social conflicts.

It should be noted that not only registered companies' number but also other indices describing the real financial and economic activity of small businesses – such as share of GDP, the average number of employees, turnover, fixed capital investment are reflecting entrepreneurial activity.

Industrial composition remains almost invariable over a range of years. Significant asymmetry persisting over the regional development is being observed both in Russian Federation's and Tatarstan's entrepreneurship structure, as we assume.

3. Results

In 2010, in the GRP's production structure small enterprises shared 21.6% in mining sector, manufacturing sector contributed in amount of 17% into the small business turnover, trade presented 14%, construction – 9%, transport and communication, and agriculture – 16.8% and 21.6% were other activities.

It can be seen from Fig.1 the GRP's production structure of 2013 has not changes much, which means that despite the measures taken by the government, Tatarstan entrepreneurship structures has not overcome the asymmetric development.

Enhancement of some entrepreneurship positions can be observed. However, scientists think that this strengthening is a result of attracting investment into mining and agricultural sectors, as well as holding international youth sports events le to stimulation of SME development in the fields of constructions and trade.

Table 1. GRP's production structure depending on the type of economic activity, %

Types of economic activity	Years	
	2010	2013
Mining	21,6	22,8
Manufacturing	17	18,3
Electricity, gas and water generation and distribution	3,3	2,7
Agricultural	5,1	6,3
Construction	9	10,2
Trade	14	16,2
Transport and communication	8,4	8,1
Other	21,6	15,4

The share of small and medium enterprises in the gross territorial product (GTP) of municipal areas and urban settlements of the Republic of Tatarstan in 2014, %

Based on the analyses of the share of small and medium enterprises in the gross territorial product of municipal areas and urban settlements of the Republic of Tatarstan in 2014 we can talk about trends that not all of municipal areas are actively involved in working with business structures, which negatively affects entrepreneurial activity. The difference between the Saba municipal area – the leader in the share of small and medium-sized businesses in the gross territorial product – and the list closer Sarman municipal area is 40.7%.

This difference suggests that the activities of municipal areas, aimed to stimulate and develop small business, are being handled with different effectiveness in various Tatarstan areas.

Developing property support infrastructure through all kinds of technological parks, special economic zone "Alabuga" and industrial hubs is one of the greatest examples of stimulation the small business in the Republic of Tatarstan

The results of operations of the abovementioned infrastructural facilities for small business support are presented in Table 2.

Table 2. Property support infrastructure for small business in the Republic of Tatarstan

	Special economic zone "Alabuga"	Technopolis "Khimgrad	Kama Industrial Park "Master"	IT-park
Number of residents	36	235	238	53
Jobs created	4210	6761	4460	2250
Revenue, billion rubles	34	14,6	30	4,9

As can be seen from Table 2, the most active platforms in terms of attracting residents are Technopolis "Khimgrad" and Kama Industrial Park "Master", which altogether have attracted more than 500 residents and created huge number of jobs.

However we shouldn't be misled by these indicators.

Many existing and potential residents note relatively high cost of using the infrastructural facilities and necessity of creating them throughout the Republic of Tatarstan.

Special economic zone "Alabuga" is a leader in terms of collecting revenue, its amount of revenue per each

resident is approximately 1 billion rubles, which shows high level development of entrepreneurial structures on this zone.

In turn, it should be emphasized, that high economic performance indicators of entrepreneurial structures for the whole municipality area cannot be guaranteed by active role of one such platform.

Analysis of the data for the period 2005-2014 YY allows us to highlight following key trends in small business development process:

- Business gradient for small enterprises based on unformed institutional environment;
- Asymmetric development on small entrepreneurship structure;
- (increasing the share of business in service industry and outflow from the scientific services and industry)
- Enhancing of disproportion in government small business incentives at regional and local level;
- Diversion of infrastructure facilities established for small business support purposes.

4. Conclusions

Conducted research shows that negative trends can be leveled by using infrastructure facilities, such as financial, informational and institutional infrastructure. The financial infrastructure's role is particularly noteworthy. In a time of unstable economic situation following support measures must be taken.

- Concessional loans for small businesses via partner banks and organizations on supporting small and medium enterprises (leasing, micro-finance, factoring companies, business incubators, business centers, etc.);
- Financing of business support programs through development of local level guarantee funds, which provide surety and bail for small businesses.

Taking into account small businesses' issues we resume that further development and improvement of the entire system of governmental business support is a key factor for development of Republic Tatarstan's small business.

The proposed solutions in dealing with complex tasks in the field of Tatarstan business development allows us generate the optimal entrepreneurship structure.

In our opinion the number of business organizations and their proportional output in share of regional GDP are criterions of optimality.

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Quality Management System as a Tool for Intensive Development of Trade Organizations

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Abstract

The article is devoted to topical issues of implementation of quality management system to intensify the development of trade enterprises. To achieve the questions put, the main stages of development of retail enterprise on the basis of project approach are proposed, a method of integrated assessment of trade enterprise management based on QMS was worked out, as well as appropriate management decisions were developed to improve the efficiency of the considered retail companies through implementation of quality management system.

Keywords: *quality management system, trade enterprise, principles, competitiveness.*

1. Relevance

In conditions of increasing global competition retailers are experiencing difficulties associated with the need of changing the management and organization methods of their activities.[4] The authors' researches lead to the conclusion that most of the problems of trade organizations are associated with poor quality management of their business. Therefore, it is necessary to introduce the quality management system (QMS) of services of retail company in order to increase its competitiveness. Currently, with respect to this area scientific and methodological approaches to implementation of QMS and evaluation of management effectiveness on its basis, which take into account the characteristics and specifics of business activities of retailers, are not well developed.

Study of the problems of retail companies is complex one and was reflected in the works of Russian and foreign scientists. Such scientists as T.A. Davenport, E. Deming, V.G. Eliferov, V.A. Zeytaml, V.A. Lapidus, A. Parasuraman, N.Vivek,[1] M. Hammer, J. Ciampi, V.E. Shvets were engaged in consideration of issues involved in the development of services.

The urgency of the problem, lack of elaboration of its individual parts and practical importance determined goal setting and objectives of the study.

The aim of the study is to develop scientific and methodological foundations, scientific and practical recommendations for management of retail companies through creating of effective management using principles and specific technologies of QMS.

2. Theory

In the process of study detailing the trade services was carried out, the components of services life cycle were identified structured in three groups: pre-sale services, sale services, after-sales service, this allowed better managing the quality of trade services and considering the interests of stakeholders (Figure 1).

The retail trade services, according to the authors' opinion, should be understood as a set of processes of business activities to provide public with possibility of acquiring the goods of required (established by documents) quality. The quality of retail services should be understood as the extent, to which services meet the requirements of customers and the organization's QMS. These requirements can be regulated in standards and other internal documents. The requirements and expectations of customers and stakeholders to the quality of services in the activities of trading companies are determined.

In this paper, the internal relationship in management system of service quality of retail company on the basis of selected processes has been determined:

subsystems - service quality management processes: planning, quality assurance and improvement. These are the processes, which result in increased productivity and efficiency of the other types of processes.

- managed subsystem: business processes (involve services life cycle processes); resourcing processes.

The management system of retail company on the basis of quality management system can be represented as follows (Figure 1).

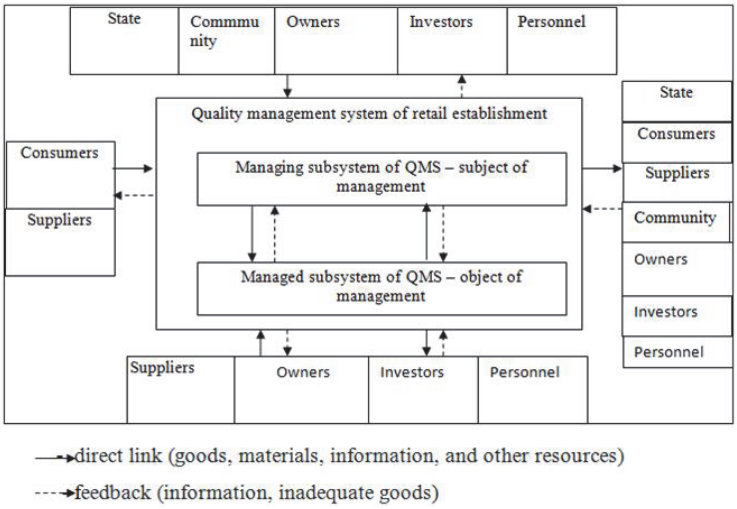

Figure 1 – Management system of retail company on the basis of quality management (developed by the authors)

In the context of the scheme shown in Figure 1, the requirements are partly input data of the system, and the expectations – this is the system output, i.e. obtained as result of the company's activities. On the other hand, when considering the system as a set of processes, the requirements may be related to both - process input data and regulatory influences.

The implementation of quality management system is more effectively to carry out using a project approach.[6] The researchers have proposed the main stages of development of retail company on the basis of project approach: pre-project activities, project activities, stage of project implementation and stage of project termination. In the pre-project stage the rationale for introduction of quality management system (positioning matrix of trade company in terms of maturity of management system and growth rate of turnover) and training of senior management are included, also the termination stage of the project is added, which includes assessment of effectiveness and efficiency of the project at regular time intervals.

The authors propose at the end of specified period, for which targets for improvement are set, to evaluate the effectiveness of activities carried out with the help of complex technique.

Estimation algorithm consists of the following steps:

Stage 1: study of the level of maturity of company management system;

Stage 2: calculation of resulting economic indicator;

Step 3: determining the position of company in the matrix "quality of business processes of trade company" - "dynamic development of trade company";

Stage 4: conclusion about the necessity of implementing QMS for development of trade company.

It is proposed to carry out the study of maturity level of management system with the help of self-evaluation technique shown in standard GOST R ISO 9004, but adapted to the requirements of GOST ISO 9001 and feature of functioning of retail establishments. The maturity level of the system is estimated on the basis of process approach with experts. For each process of trading company the criteria for the level of maturity are developed.

Unlike existing approaches the effectiveness is evaluated through distributed costs of implementing the quality management system, which are compared with the totals in the development of the company - profit. The area of achievement of efficient management of retail establishment on the basis of quality management system has been

economically proved. The results of comprehensive evaluation are proposed to depict graphically the trend of company development for monitoring.

Thus, the quality management system of retail services is a subsystem of united management system that operates according to the set rules and aimed at ensuring the achievement of corporate objectives of trading company and satisfaction of stakeholders and consumers.

Benefits of intensive development due to QMS: regulation of activity; clear distribution of responsibilities and powers; satisfaction of requirements of interested parties; raising the level of staff skills. The consequences of these advantages include: optimizing the use of resources; increasing the number of consumers; increasing the staff loyalty; improvement of economic performance.[5]

3. Results

Under current conditions in Russia, the level of organization and management of commercial establishments is very low. Retailers are often the main link between end users and manufacturers, they determine not only the result of their activities, but also the demand for goods, formation of consumers' opinion about the quality of goods.[2]

On the basis of the proposed methodology for assessing the development of retail company management based on QMS a comprehensive study of effectiveness of three companies of the Republic of Tatarstan was conducted: LLC "Bakhetle", JSC "Akbars holding", JSC "Edelweiss". The results of the study of processes for these three companies are presented in the table.

Table 1 - Results of process study for the three companies

Type of process	Process	Average point		
		Bakhetle	Edelwiss	Pyatyorochka
Processes of managimg subsystem	Quality planning	1	1	1,2
	Quality management	1,2	1,1	1,4
	Quality assurance	1,2	1	1,4
	Quality improvement	1	1	1,4
Processes of managed subsystem: business processes	Marketing	1,9	1,4	2,1
	Design and development of new services	1	1	1,2
	Purchases	1,25	1,1	2,1
	Transportation of goods	1,4	1,2	1,4
	Input inspection of purchased goods	1,8	1,6	2,1
	Warehousing, storage and delivery of goods from warehouse	1	1,4	1,8
	Display of goods at the trading hall	1,2	1,2	1,4
	Customer service (consulting, sales)	1,4	1,1	1,4
	Delivery of goods to the consumer	1,2	1	1,4
	Servicing	1	1	1,2
Processes of managed subsystem: resourcing processes	Financial management	1,4	1,2	1,6
	Infrastructure management	1,2	1,4	1,4
	Production environment management	1,2	1	1,2
	Personnel management	1,4	1	1,4
Average for all processes		1,2	1,15	1,51

Thus, it follows from the expert assessment that Bahetle and Edelweiss companies are at the first level of management system development, and Pyatyorochka company is at the second level.

As applied to the enterprises studied, when constructing the QMS, it is necessary carefully to examine the requirements of all interested parties and formulate the goal of improving the system that satisfies each of interested parties. According to the results of testing the proposed mechanisms for development of quality management system of retail services in three companies the significant results have been achieved:

1) As implementation of trade processes:

regulated inputs and outputs of processes of managing and managed subsystems based on the requirements and expectations of customers and stakeholders;

- process performance and efficiency indicators were developed in terms of quality indicators: cost indicators,

run-time indicators and those of quality of services;
- system of training was introduced based on achievement of development objectives;
- problematic processes were considered and regulated: "procurement" and "servicing";
- timing was conducted to identify the optimal time of performing certain operations and functions of the staff to determine the reserves of decreasing the customer service time;
- the standard "Evaluation of customer satisfaction" was developed and implemented.

2) in improving the technical and economic performance of companies:
- efficiency of QMS has grown by 11% in "Bakhetle" company, by 9.2% - in "Edelweiss" and by 5.3% - in "Pyatyorochka";
- effectiveness of QMS has increased 1.2 times in "Bahetle" company, 1.4 times - in "Edelweiss" and 1.3 times - in "Pyatyorochka";
- labor productivity increased by 35% in "Bakhetle " company, by 62% - in "Edelweiss" and by 40% - in "Pyatyorochka";
- customer satisfaction increased by 19% in "Bakhetle" company, by 21% - in "Edelweiss" and by 15% - in "Pyatyorochka";
- the number of regular customers has changed by 5% in "Bakhetle" company, by 3% - in "Edelweiss" and by 5% - in “Pyatyorochka";
- the average check was increased by 15% in "Bakhetle" company, by 12% in "Edelweiss", and by 18% - in "Pyatyorochka";
- number of purchases was increased by 19% in "Bakhetle" company, by 22% - in "Edelweiss" and by 16% - in "Pyatyorochka".

Systematic implementation of quality improvement of activities of the enterprise and coordination of these activities by senior management, demonstrating by personal example commitment to quality is the key to success of enterprises studied in the future.

Thus, the proposed theoretical developments and methodical guidelines for organization and management of retail establishment allow us in practice to improve the processes of managing and managed subsystems, increase profits by attracting new customers and meet the requirements of interested parties.

4. Findings

The effective management system implies that the trade company has established cross-functional communication, staff does its work qualitatively from the first, developed and implemented the quality assurance system of goods sold and services provided, and invested in the development of management system costs are paid off and bring additional revenue to the enterprise.

It is proposed to identify the following types of processes at retailer company. The processes of managing subsystem: quality planning; quality assurance; quality improvement. The processes of managed subsystem: business processes (involve the processes of life cycle of services); resourcing processes. The maturity level of all management system will be determined by the level, at which is the majority of the processes.

The author proposed main stages of improvement of retail company on the basis of project approach: pre-project activities, project activities, stage of project implementation and stage of project termination. The pre-project stage includes the rationale for introduction of quality management system (matrix of positioning the trade company in terms of maturity of management system and growth rate of turnover) and training of senior management, also it is added the stage of project termination, which includes assessment of effectiveness and efficiency of the project at regular time intervals.

The main approaches to evaluation of effectiveness and efficiency of improvement of activities of companies on the basis of quality management were considered and it was found that the best and objective method is the combined one. The author's algorithm of estimation is suggested, which includes methodology to assess the maturity level of management system, analysis of effectiveness using expert method and efficiency analysis on the basis of calculating the costs of implementing the quality management system. The comparison of the results is proposed to conduct by graphical way tracking the trend of management system development of retail company.

In this paper, the author conducted a comprehensive study of effectiveness of improving the three companies: "Bakhetle" LLC, "Edelweiss" JSC, and "Pyatyorochka" LLC on the basis of evaluating the effectiveness and efficiency of quality management system. In general, for all establishments it can be concluded that for 2 years of implementation and operation of QMS there are significant shifts in improvement of management system. Based on the level of maturity and

analyzing the causes of non-compliance of purposes, one can make further plans to improve the system.

For all companies the recommendations have been developed to improve the organization and management of activities on the basis of QMS.

Implementation of quality management system allows us to identify such problems in the operation of trade company, which can then affect customer satisfaction, getting profit, staff interaction of various divisions. Simple troubleshooting can lead to short-term performance improvements. To maintain a constant process of effectiveness and efficiency, it is necessary to identify the root causes of problems. The use of process approach allows us to optimize activity and analysis of effectiveness as to cost, time and quality allows us to comprehensively improve the process and keep track the achievement of the overall objectives of the company.

Systematic implementation of quality improvement activities of operation of company and coordination of these activities by senior management, demonstrating by personal example commitment to quality is the key to the success of studied establishments in the future.[3]

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Analysis of the Impact of Special Tax Regimes for Small Business Financial Results

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Abstract

This article is about taxation of the small business enterprises on simplified system of the taxation are considered. The comparative analysis of the financial results of the company on the general system and simplified system of the taxation under otherwise identical conditions are investigated. Proposed changes to obviate the disadvantages of the tax legislation. As an improvement it is possible to avoid the above-named problems in the simple way: to exclude item 5 from Art. 173 of the Tax Code of the Russian Federation with simultaneous reduction of the top threshold of work on the simplified tax system mode for example by 10 times, i.e. to 6 million rubles. This step would be real support of small business in the production sphere and would lead to that small enterprises in the production sphere would receive serious incentive to development, and the state would raise a collecting of taxes and would receive one more tool in fight against firms engaged encashment.

Keywords: *special tax regime, general tax regime, simplified system of the taxation, VAT, profit, profitability, small business.*

1. Introduction

It is known that the general tax regime (the general system of the taxation) is a system of the taxation at which the economic entity pays the taxes and fees established by the Tax code of the Russian Federation if it is not exempted from their payment.

The special tax modes represent the special, established to the Tax Code of the Russian Federation order of definition of elements of taxes, and also release from tax payment and collecting under certain conditions. These tax modes are directed on creation of more favorable economic and financial conditions of activity of the organizations, the individual entrepreneurs belonging to the sphere of small business, agricultural producers and participants of implementation of production sharing agreements.

Treat the special tax modes:

- system of the taxation for agricultural producers;
- simplified system of the taxation;
- system of the taxation in the form of the single tax on imputed income for separate kinds of activity;
- system of the taxation at implementation of production sharing agreements;
- patent system of the taxation.

Some authors, such as Abbas S.M.A. [1], Sidlyar V.V. [2], Gale W. [3] discuss special tax regimes. At first sight, the special tax treatments carry out completely the function and give real opportunity to the organizations to optimize the tax load, thereby stimulating development of small business. However, due to the lack of harmonization of the relations between the enterprises on general system of the taxation and special modes, this mission of special tax modes for small business often is not realized, and for the organizations of the production sphere and construction, where the subject of small business realizes the goods (works, services) to larger enterprises working at general system of the taxation, on the contrary, leads to considerable deterioration of financial results.

The taxation of small businesses discussed in the article by authors such as Adebisi J.F., Eragbhe E., Cavalcanti R.D.O. [4], [5], [6], Cho M. [7], Hurst E. [8], Hebert R.F. [9], Henrekson M. [10], Gartner W.B. [11], Hansford A. [12].

2. Theory

The analysis shows that if the enterprise on the simplified tax system realizes the production to the population or the enterprises on the simplified tax system, on the one hand, it simplifies conducting accounting, and with another, reduces the tax load. If the enterprise is on a special tax mode and realizes the production to the enterprises on general system of the taxation, there are problems with pricing: goods (works, services) the enterprises on a special mode are demanded for the enterprises on general system of the taxation at the price, reduced by a rate of the VAT of 18 (10) %.

The reason of it is covered in imperfection of chapter 21 of the Tax Code of the Russian Federation «Value added tax». At an operating method of calculation of the VAT for payment is defined as a difference between a tax from realization of goods (works, services) and a «entrance» tax. Thus, if the enterprise working at the general system of the taxation, buys goods (works, services) from the enterprise which is not paying the VAT, he has nothing to put on a deduction, and the enterprise on general system of the taxation sustains financial losses of 18 (10) % of the buying price. Therefore, the enterprises on the simplified tax system are «undesirable» suppliers for the enterprises on general system of the taxation. At this Tax Code of the Russian Federation allows exposure to the buyer of invoices with the allocated VAT the enterprises on the simplified tax system, however, the standard of item 5 of Art. 173 of the Tax Code of the Russian Federation, orders to small enterprise to pay the sum of the VAT specified in the invoice, of the budget on a special mode. De facto the Tax Code of the Russian Federation imposes the receipts tax on a rate of the VAT of 18 (10) % for operations between the enterprises on general system of the taxation and a special mode. Thus, the taxpayer applying a special tax mode, sustains financial losses twice: it cannot put to a VAT deduction from acquired production and is besides compelled to reduce the price of goods (works, services) for a VAT rate that it was favorable to the buyer who is the payer of the VAT to work with it.

It should be noted that absence understanding of essence of a value added tax at conceptual level is the reason of defects of chapter 21 of the Tax Code of the Russian Federation. In particular, even among experts, the wrong opinion is widespread that financial results of the enterprises applying special modes, despite reduction of the price by a VAT rate, are absolutely equal with those who is on general system of the taxation.

3. Results

To disprove this opinion, we carried out the small analysis of influence of the taxation on financial results of two conditional organizations applying general system of the taxation and the simplified tax system, other things being equal managing, the realizable goods (works, services) to the enterprise on the simplified tax system and to the enterprise on general system of the taxation. For this purpose we considered two options of relationship between the enterprises:

- the buyer – the enterprise being on the simplified tax system or the natural person.
- the buyer – the enterprise being on general system of the taxation.

In the first case, for the buyer does not matter, what tax treatment at the seller and therefore the goods price (works, services) will be identical to both sellers.

At the enterprise on the simplified tax system the «entrance» VAT is not compensated, and belongs on prime cost, other things being equal profit to the taxation of the enterprise is one sum one simplified tax system less than the «entrance» VAT on goods (to works, services) that it is possible to reflect a formula (1):

Profit (simplified tax system) =

Profit (general system of the taxation) + VAT (exiting) – VAT (entrance) (1)

In this case at calculations are not taken into account the property tax sum which in small business while is insignificant, and also privileges on contributions to social funds which improve indicators of profitability of the enterprise on the simplified tax system a little that can give a small mathematical error.

The structure of expenses, the price of production and financial results are given in the fig. 1 (to the taxation) the enterprises depending on the tax treatment (or general system of the taxation), other things being equal, from which it is visible to the simplified tax system that profit at the enterprise is one simplified tax system considerable.

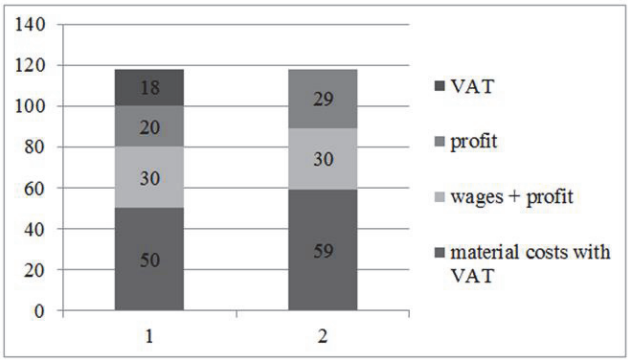

Fig.1. The structure of expenses, the price of production and financial results.

1. The price of production, costs of production and enterprise profit of general system of the taxation from the VAT of 18%.
2. The price of production, costs of production and enterprise profit of the simplified tax system.

The net profit of the enterprise on general system of the taxation after tax discharge on profit will make: 20 – 20*20% = 16%, and the enterprises on the simplified tax system: 29-29*15% = 24,65%.

Further we will consider a case, realization of goods (works, services) to the buyer on general system of the taxation when the price of the seller of the simplified tax system is rate VAT lower, than the price at the seller of general system of the taxation to be competitive in comparison with the prices of the seller of general system of the taxation. At the enterprise on the simplified tax system the «entrance» VAT is not compensated, and belongs on prime cost, with other things being equal the profit to the taxation of the enterprise is one sum one simplified tax system less than the «entrance» VAT on goods (works, services) that it is possible to reflect a formula (2):

Profit (simplified tax system) =

Profit (general system of the taxation) – VAT (entrance) (2)

Figure 2 shows the structure of the costs, the price of products and financial results (pre-tax) of enterprises, depending on the tax regime, ceteris paribus, which shows that the profits from the enterprise to the simplified system of the taxation in this case is much lower than organization on the basis.

The structure of expenses, the price of production and financial results (to the taxation) the enterprises depending on the tax treatment (general system of the taxation are given in the fig. 2 or to the simplified tax system), with other things being equal, from which it is visible that the profit at the enterprise on the simplified tax system in this case is much lower, than the organizations on general system of the taxation.

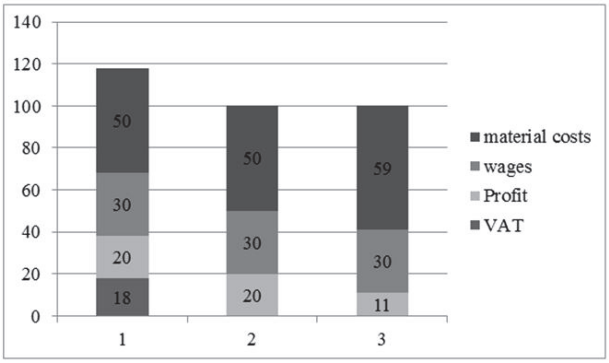

Fig.2. The structure of expenses, the price of production and financial results.

1. The price of production, costs of production and enterprise profit of general system of the taxation from the VAT of 18%.
2. The price of production, costs of production and enterprise profit of general system of the taxation without the VAT.
3. The price of production, costs of production and enterprise profit of the simplified tax system.

The net profit of the enterprise on general system after tax discharge on profit will make 20 – 20*20% = 16, and the enterprises on the simplified tax system of 11-11*15% = 9,35%. Thus, in a standard situation for small business, the net profit on the simplified tax system is approximately twice less, than on general system of the taxation.

4. Conclusions

The above-stated analysis shows that application of special tax modes profitable in the sphere of home shopping service and services to the population, and is unprofitable in the production sphere and construction where buyers of goods (works, services) small enterprise are larger enterprises applying general system of the taxation. As a result, the organizations of small business working in a legal framework, reducing the price of the production of a VAT rate, or, selling the production at the price of the enterprise of general system, but paying to the budget 18% of a tax according to item 5 of Art. 173 of the Tax Code of the Russian Federation, unfairly sustain considerable financial losses and are noncompetitive in the Russian market that also provokes the enterprises to address to short-lived firms for the purpose of evasion from so considerable tax by «illegal» compensation of the VAT.

As an improvement it is possible to avoid the above-named problems in the simple way: to exclude item 5 from Art. 173 of the Tax Code of the Russian Federation with simultaneous reduction of the top threshold of work on the simplified tax system mode for example by 10 times, i.e. to 6 million rubles. This step would be real support of small business in the production sphere and would lead to that small enterprises in the production sphere would receive serious incentive to development, and the state would raise a collecting of taxes and would receive one more tool in fight against firms engaged encashment.

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Development of Current Financial Derivative Markets

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Abstract

This paper covers the pressing challenges of derivatives market. Particularly, the authors substantiate the need for definitions to be clarified for futures instruments used in Russia. In addition, Russian derivative market is exposed to a number of factors, which analysis is required to ascertain its strengths and weaknesses and to determine the prospects for its further development.

Keywords: *financial derivatives; futures; securities market; securities indexes; correlation-regression analysis; factor analysis.*

1. Introduction

By now, the derivatives market takes a major lead in the global financial system. The futures contracts determine the prices for primary commodities. The derivatives have a significant effect on the share indexes, which, in turn, allow for investment in the portfolio of more liquid shares of a particular country using the only asset. The development of Russian derivatives market was a challenge. Failure of the short-term bond system in 1998 resulted in complete shutdown of the futures market. Significant activity started after a few years only.

The market has experienced explosive growth and shrinkage in recent years, specifically, at the acute phase of the global financial market. However, the flagship derivatives exchange of the country – the Russian Trading System Stock Exchange Futures Section – is within the top tens of largest world exchanges with the number of futures and options contracts concluded. The Russian derivatives market became an important part of the financial system so that the results of its functioning influence the entire financial sector. Orlova M. and Khafizova A. examines the role of the tax component of innovative activity assessment in the Russian Federation [1].

2. Theory

Russian experts draw the serious fire of mixing the definition “futures” and “derivatives”. The supporters of “financial derivative” be introduced into the civil laws define this definition as a special type of property (a right in things asset) or as an individual contract type. Currently, there several definitions of derivatives market instruments equally used in Russian theory and practice: “derivative”, “financial derivative” and “futures”. The variety of definitions used prevents the Russian financial market from further growth. Using different definitions leads to many inconsistencies in practical activity of the traders, particularly, for the accounting and taxation of deals with these instruments.

The definition “derivative” is frequently used in Russian business environment. Besides, the German law, which is the closet one to the Russian law, also uses the definition “derivate”. We have proposed the following definition for derivative: it is a forward financial instrument, which binds or entitles the contract parties to undertake as provided by the contract in terms of derivation of the contract value from the performance of an underlying asset and its final settlements. Therefore, this definition of the derivative rectifies most of the downsides and defects of existing theoretical researches and Russian laws. In addition, an exhaustive list of underlying assets means significant degradation of the market and its growth.

3. Results

Considering the individual segments of Russian derivatives market in details, the first thing the securities derivatives say futures and options should focus on is share indexes and single shares. Currently, the trading in this sector of the

derivatives market concentrates at the Moscow Central Stock Exchange of the Russian Trading System. The futures vs. options turnover seeks toward futures significantly. The monthly percentage of the options is 3% of the total forward contract trading, where the securities indexes are the underlying assets, while the options on equity futures have increased every month to average at about 8%. The options take less than 2% of the total standardized contract trading every month, where the rates of interest, commodities and foreign currencies are the underlying assets. Snider, L. examines the deals with different types of securities on the stock market [2].

The derivatives market participants are another significant factor of the derivatives market. There are three types of trading participants: Speculators, arbitrageurs and hedgers. Nazarova, V. provides a sufficiently detailed study of how the financial options hedging is imperfect on the Russian derivatives market [3]. The studies of Salmina S.V., Galimardanova Yu.M. and Khafizova A. R. describe in details tax debt individual customers in the Russian Federation [4].

Generally, the speculators handle the most liquid instruments, RTS index futures and equity futures. The commercial banks and export/import-oriented companies that hedge the foreign exchange risks are the hedgers. The management companies that mitigate the portfolio risks through the forward contracts are also among the hedgers. The current hedging instrument issues are examined by Ahmad A.A., Ab. Halim M.A.A. and Nordin, N. [5].

Only professions can trade at the stock exchanges. 135 trading participants operate at the FORTS trading floor, the Saint-Petersburg Exchange provides floor for 21 participants and the MICEX Derivatives Market hosts 163 participants. A detailed study of issues associated with corporate management of financial instruments is provided in the papers of the following authors: Chen C.-L., Fan H.-S. and Yang Y.-M. [6].

The price for RTS future, which determines the growth of the Russian derivatives market, is linked to various factors both the external and the internal, and is required to fix the relationship between the RTS future price level and the factors influencing it. In our hypothesis that the derivatives market is exposed to different factors, we determine the following factors having a rather strong effect on the RTS future price: Price per 1 US Dollar; price per 1 barrel of Light crude oil; contract trading volume at the FORTS main market; the Hang Seng Index; and the BSE Sensex Index. The behaviour of crude oil prices is a determinant, which characterises the dynamics of the domestic equity market and influences the global markets. A detailed study of derivatives pricing is provided in the papers of the following authors: Lyuu Y.-D., Wen K.-W. and Wu Y.-C. [7].

The relation between the Russian stock indexes, the Russian stock market and oil prices is obvious. This dependence became more evident after the financial crises. Once the RTS index has dropped to 500 points, the Russian stocks also moved following the oil prices either being behind or ahead at particular instances. The studies of De Falco M. and Di Stasi D. describe in details how the derivatives are used for risk management [8].

The price per 1 US Dollar is one of the factors that influence the RTS future price as the RTS index is calculated in dollars. Moreover, the Asian indexes have a quite strong effect on the Russian derivatives market. Malkawi B.H. describes how the derivatives are applied by western standards of jurisprudence and Islamic financial system based on the comparative approach [9]. It is not improbable that the Russian stock market would adapt to the extension of influence by China and India as well. Therefore, our hypothesis also includes the influence of both Chinees and Indian indexes on the Russian derivatives market.

We believe that the FORTS trading volume has an effect on the RTS future price as well, but any way the liquid instruments are not too many. The problems of derivatives liquidity and historical deregulation aspects are covered by Funk, R.J. and Hirschman, D. [10]. We took monthly data to find the correlation with the variables and to construct a regression model. The Correlation software outputs a matrix of pair correlation coefficients as shown in Table 1.

Table 1. Matrix of pair correlation coefficients

	RTS future price, Rubles	Trading volume, thousand Rubles	Price per 1 US Dollar, Rubles	Light crude oil future, USD	HangSeng	BSE Sensex
RTS future price, Rubles	1					
Trading volume, thousand Rubles	-0.5646	1				
Price per 1 US Dollar, Rubles	-0.9696	0.3865	1			
Light crude oil future, USD	0.5933	-0.2737	-0.5623	1		
HangSeng	0.9522	-0.6396	-0.9265	0.5368	1	
BSE Sensex	0.8641	-0.6484	-0.8220	0.5295	0.8800	1

Based on Table 1 data analysis, the following conclusions can be made: Linearly, the resulting variable Y strongly depends on the factor variable X2: r (Y;X2) = -0.9696. A rather strong statistical link is also observed between the linear variable Y and the factors of HangSeng Index and BSE Sensex Index.

A mutual dependence of the factors will be found by the regression analysis having the link be presented in a strict analytical form. The results of the regression statistics analysis and calculations are given in Table 2.

Table 2. Regression analysis

	Coefficients	Standard error	t-tests	P-value
Variable Y	7020.7574	1518.873381	4.6223	0.00360648
Trading volume, thousand Rubles	6,93E-08	2.27064E-08	-3.0532	0.02242001
Price per 1 US Dollar, Rubles	-154.7792	29.15641975	-5.3086	0.00181486
Light crude oil future, USD	1.5227	1.648656607	0.9236	0.39130982
HangSeng	-0.0181	0.022760205	-0.7962	0.45625917
BSE Sensex	-0.0077	0.022047116	-0.3505	0.73792817

The R squared also being a coefficient of determination is a number that indicates how well data fit a statistical model – sometimes simply a line or curve. It is 0.986 in our calculations, which means variability of the model parameters. The multiple R coefficient of the multiple R correlation expresses a degree of dependence between independent variables (X) and a dependent variable (Y). The calculations resulted in the multiple R coefficient be 0.9932, i.e. the link between the variables is very strong. The normalised R squared is an R squared corrected to a number of degrees of freedom (df) being 11. The regression equation will then yield:

Y=6.93E-08*X1-154.77*X2+1.5227*X3-0.0181*X4-0.0077X5+7020.75 (1.)

Directions of the link between the variables based on the signs (negative or positive) of the regression coefficients (coefficient b) will be determined from this equation. In our case, the regression coefficient will have a positive sign; therefore, the relationship is also positive (direct).

The resulting equation is assumed to be statistically assessed using an F-test, which targets the ability of factors in question to explain a significant part of oscillation of function Y. The importance of the coefficient of determination should be verified using the F-ratio test.

The F-test will be determined by formula:

$$F = \frac{R^2}{1-R^2} \cdot \frac{N-m}{m-1}, \quad (2)$$

where m = 5 – the number of parameters in the regression equation;

N = 12 – the number of observations in the sampling population.

The F-distribution with the degrees of freedom v1=m-1=5-1=4 and v2=N-m=12-5=7 is the mathematical model of F-ratio test statistical distribution. The F-test critical value at α = 0.05 and with the degrees of freedom v1=4 and v2=7 is $F_{critical}$ (0.005; 4;7)=4.12. $F_{calculated}$ was 319.98. Therefore, $F_{calculated}$ is greater than $F_{critical}$ suggesting that the regression equation is statistically important and the coefficient of determination is other than zero.

We have verified the regression equation for importance. The effect of particular factors from X_1 through X_5 on the variable Y should be further determined. Hence, the regression of coefficients from b_1 through b_5 needs be determined.

To assess the quality of the model using the Student's test, the actual value of this test ($t_{observation}$) is compared with the critical value $t_{critical}$ taken from the Student's test table including the given importance (α = 0.05) the number of the degrees of freedom (n - 2). If $t_{observation} > t_{critical}$, then the pair correlation coefficient is acknowledged as a significant coefficient. The calculated tests are provided in Table 4. The F-test critical value at α = 0.05 and v =9 is $t_{critical}$ (0.005; 9) = 2.26.

Table 4. Student's t-test

Factor	$t_{observation}$	$t_{critical}$	Importance
x1	2.05	2.26	Insignificant
x2	11.8	2.26	Significant
x3	2.31	2.26	Significant
x4	9.35	2.26	Significant
x5	5.15	2.26	Significant

The factors selected for building a regression equation and model are significant, i.e. the regression coefficient is statistically significant and differs from zero. The verification for significance gives quite consistent results suggesting that all factors, which we have picked, are statistically significant. The statistical analysis of the regression equation allows for interpretation of the regression coefficients.

The absolute term (drift) b0 equal to 7020.75 should be understood as follows: The RTS future price is 7020.75, when all effective factors are absent. However, it is assumed that the indicated population misses similar cases (the factors are present constantly). Therefore, the drift b0 should be discussed as an ancillary quantity required for optimal predictions and should not be interpreted so literally. The regression coefficients from b1 through b5 should be considered as a level of effect of each several variables on the RTS future price, if all other independent variables remain constant. It should be noted that the studies that support our conclusions are described by Yelnikova, Y. [11].

Thus, the coefficient b1 equal to 6.93E-08 means that the growth of trading volumes at the RTS futures and options market by 1 per cent will increase the RTS future price by $6.93E^{-08}$%, all other thing being equal. The low coefficient can be explained by that all measures in the final regression equation are determined in Rubles, Dollars and percentage points while this factor is merely in thousand Rubles that is to say the factors vary in scales. The coefficients b_2 through b_5 have the same effect on the RTS future price and may be used for its prediction. All the mentioned regression coefficients show the effect on the parameter of only one variable provided always that all other variables (factors) are unaltered. Vasudev, H.M. also examines credit derivatives and the dodd-frank act.

4. Conclusions

Summarising the results of the correlation-regression analysis, it may be concluded that this or a similar model is applicable for further studies. Varying the amount and set of factors, and analysing different periods, we may achieve a more accurate result even though we can consider the existing result acceptable. The results of the regression analysis suggest our confirmation the price per 1 US Dollar and per a barrel of Light crude oil having a strong effect on the Russian derivatives market. This effect was one of the most significant factors, once again providing support for a strong dependence of the Russian stock and derivatives markets particularly on foreign factors. A great effect, which Chinese and Indian Indexes have on the global and Russian markets, is the result of great importance in our analysis. A few years ago, it was hard to imagine that undeveloped Chinese and Indian stock markets would play an important role globally. Now it is a reality to regard. The only factor, which is so influencing the RTS future price, is the trading volume. This is clear since the current level of liquidity of our market is not so high and plenty stable enough.

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Economic Depreciation in the Property Objects Valuation

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Abstract

The article reveals the essence of economic depreciation in the property objects valuation. We investigate the methodological aspect of quantitative evaluation of economic depreciation. Two groups of methods traditionally used in economic depreciation valuation of property objects have been examined: (a) based on comparison of similar objects sales, and (b) based on the analysis of income loss. A brief description of these methods is given, identified are the advantages and disadvantages of their use for external economic depreciation value calculation and economic depreciation of property objects. Recommendations have been formulated for practical application of various methods of economic depreciation valuation.

Keywords: *valuation, property, economic depreciation, paired sales method, operation loading method*

1. Introduction

As a result of alterations in the economic relations system and economic reforms in the 90s of the last century the majority of the property complexes belonging to the industrial enterprises in Russia found themselves in a disastrous state. Over time, the fixed assets of the Russian companies were exposed to various factors reducing their technical and operational indexes. The formation of the private property institution and the development of market relations in the real estate sphere started with the adoption of the Law "On Property in the USSR" in 1990. Thus the real cost parameters of property objects became the main factor of market transactions implementing.

The issue of the assets utilization efficiency increase at the Russian enterprises requires new approaches in modern conditions to the property objects valuation and correct calculation of all depreciation types with consideration of heavy moral and physical ageing of facilities, as well as external (economic) ageing, taking into account the changes in the objects' environment. In conditions of crisis the reducing factors associated with the environment are manifested more clearly, which provides for adequate assessment of the external depreciation of property objects.

Determining of opportunities for different methods for economic depreciation of property objects valuation is the aim of this study.

2. Method

The theory and practice of valuation activity construes the notion of "depreciation" from two points:

- from technical point of view – it is the degree of the initial consumer properties loss suffered by the object of valuation during its storage or operation;
- from economic point of view - it is the initial or the replacement value loss suffered by the object in relation to the economic impairment or ageing.

Problems in definition of obsolescence for objects of the property are researched in works of many scientists, in particular Constantinescu, M. and M. Francke [1], Jorgenson, D.W. [2].

The appraiser must necessarily explore all types of depreciation applied to the valuated property: physical, functional and external. Particular attention shall be paid to the definition of such property depreciation type as an external (economic) one. Such close attention may be determined both by conceptual features of this depreciation type and conditions of valuation practices in which it is applied.

The procedure of all three depreciation types recording implies a certain sequence: physical depreciation is always considered the first, then the functional one, and only then - the economic depreciation.

Economic depreciation is basically an impairment and restriction of utilization of the property object resulting from

the economic factors impact generated by the external market environment. The external factors affecting the value of property objects may include: reduction of market demand, the location of the object, transport accessibility, environmental infrastructure, the state of "habitat", legislative and regulatory conditions, etc. For example, the occurrence of a permanent waste disposal site next to an apartment building will lead to the cost of an apartment reduction, whereas the physical and functional characteristics of the premises remain unchanged. Taxation of cars with large engine capacity reduces the demand for them, which leads to reduction of their costs.

Features of definition of economic deterioration are researched in works Mansfield, J.R. and J.A. Pinder [3], Hwang, J.C. [4], Hulten, C.R. and F.C. Wykoff [5], Yakupova, N. and S. Absalyamova [12], Burganova, R.A. and M.F. Salahieva [13].

Economic depreciation caused by the external reasons has a group character and is extended to the entire complex of assets objects intended for example for production of lost demand products. In most cases, economic depreciation is unavoidable, but in some cases it can be eliminated as a result of positive changes in the external market environment [6].

The studies usually distinguish two groups of methods for determination of economic depreciation: (a) methods based on the comparison of similar objects sales under stable or changed external conditions, and (b) methods based on the analysis of the income loss related to the changes in external conditions (Fig. 1).

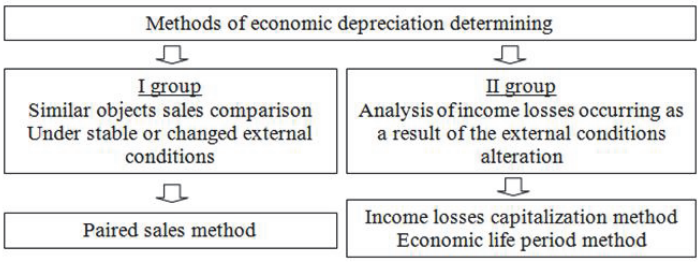

Fig. 1. Methods for determination of economic depreciation

Let us consider in detail the possibility of the indicated methods application.

3. Result

Calculation methodology relates the first group to the comparative approach to the property objects valuation, which is based on the principle of substitution, assuming that the buyer will not pay for a particular property more than the possible cost of the similar property object with the same utility. For calculation of economic depreciation using a comparative approach, for example, the method of paired sales, you will need to use information on market prices of similar objects sales. Calculation of the relative index value of economic depreciation (k) is performed using the formula:

$k = (C^1_A – C^2_A) / C^1_A$,

where C^1_A – is the value of the object with no signs of external depreciation;

C^2_A – is the value of the object with the external sign of depreciation.

In practice of valuation activity information on transaction prices is limited, or closed, as the subjects in most cases do not disclose information on the parameters of committed transactions. With a lack of the necessary information on prices of similar objects sale, it is possible to use pricing proposals information making adjustments to the value of discounts information acquired in the bidding process or the amount of growth as a result of the auction. The value of such adjustment is directly influenced by the parameters of a specific property object, market conditions, expected terms of the transaction. Experience shows that for typical objects in a stable market conditions the discount resulting from trading will be 5-10%.

The advantage of this method is the accuracy and clarity of the calculation, its drawback is the complexity of two identical objects finding that may differ only in one parameter.

Calculation methodology relates the second group to the income approach in the property objects valuation. The loss of income capitalization method and the economic life method are the most commonly used ones.

The absolute value of economic depreciation using the loss of income capitalization method is defined as the

present value of losses (lost profits) related to the economic impairment signs of the property object [7]. Calculation of the absolute value of the external depreciation (D) by the losses capitalization method can be done by the formula:

D = LP / R x 100%,

where LP – is the lost profit (losses) related to the external factors impact;

R - capitalization rate,%.

Capitalization rate is determined by the following formula:

$R = I + I_r \pm G$,

where I – discount rate, %

I_r - rate of return, %;

G - growth (+) or decrease (-) rate of losses in post-forecast period, %.

Rate of return is taken into account for objects with a deadline of economic life. There are three main methods for the rate of return determining: Ring's, Inwood's and Hoskold's methods.

The Ring's method is applied on the assumption that the principal amount refund will be effected in equal parts. In the Ring model it is assumed that the income flow will decrease annually in a linear mode. The rate of return is calculated as a ratio of 100% of the asset cost to the remaining economic life period of the facility [8].

The Inwood's method is applied if the amount of capital return is reinvested at the rate of return on investments. The traditional Inwood's model refers to the situation, where the residual lifetime of the object as a whole acts as the forecast period, this ends with the complete loss of the valuated object value [9].

The Hoskold's method is applied in case the income comes regularly; the reimbursement sum is calculated annually and placed on deposit or in other risk-free but low-income instruments [10].

Let us consider the example of economic depreciation calculation using the income loss capitalization method in the valuation of the private brewery building. The brewery is located in a brick building with the total area of 1214 square meters, standard service life of which comprises 100 years.

Chronological age of the valuated object is 47 years.

Tightening of the requirements to the production and sales of alcoholic beverages, a six fold increase in excise duties on beer over the past six years (from 3 rubles per liter in 2009 to 18 rubles per liter in 2014), led to a reduction in production and to the unearned scheduled income.

In 2014, the amount of income losses caused by the tightening of regulatory requirements totaled to 537,802 rubles. Operating income excluding external influences shall amount to 11,251 rubles a year on a per 1 sq.m. of the floor area basis, the actual value of the operating income taking into account external factors has accounted for 10,808 rubles a year.

It is expected that during the three-year forecasted period the absolute value of unearned income will increase; the growth rate of losses in the post-forecast period will be 15.6%. The discount rate is assumed at the level of 12%.

The capitalization rate calculation by the Ring's method is shown in the Table 1.

Table 1. Capitalization rate calculation by the Ring's method

Index	Value
1. 1. A discount rate, %	12
2. 2. The income loss growth rate in the post-forecast period, %	15.6
3. The standard life of the valuated building, years	100
4. Chronological age of the valuated building, years.	47
5. The useful life of the building, years (item 3-4)	53
6. The rate of return, % (100%/item 5)	1.9
7. The capitalization coefficient , % (item1 + 2 + 6)	29.5

The absolute value of the valuated building's economic depreciation equals to:

D = ((11,251-10,808) x1214) / 0.295 = 1,823,058 rubles.

The main difficulty in the practical application of the above studied methods is in determining the zero point of the external depreciation and performance parameters of the object in the absence of external depreciation. Therefore the method basing on the analysis of the operating load is the most widespread in practice for determining of the external depreciation.

The relative value of the external depreciation (k) is determined by the method of operating load by the following formula:

$k = (1- L^n) \times 100\%$,

where L – is the operation loading of the asset (group of assets);

n - braking coefficient or scale factor (usually taken at the level of 0.6-0.7) [11].

The average value of economic depreciation using the method of operation loading can be determined by statistical data about the level of annual production capacity of organizations for the production of certain products. For example, for other enterprises of the brewing industry the maximum loading level reached 81% in 2007, with a minimum rate growth of excise duty during the studied period (Fig. 2).

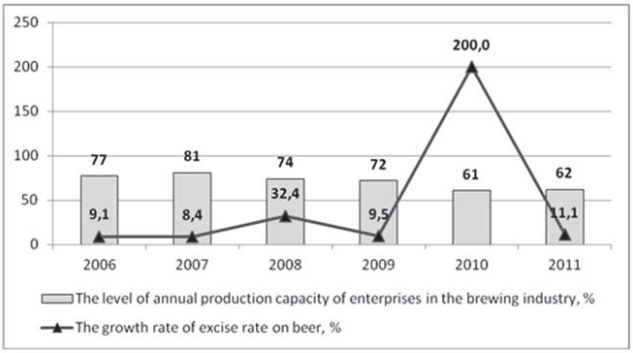

Fig. 2. Dynamics of the annual production capacity level and the rate of the excise duty rate increase for the period of 2006-2011 in the brewing industry

Using the data presented in Figure 2, let us calculate the value of the average economic depreciation in the industry for enterprises of the brewing industry for 6 years:

$k = (1-(62/77)^{0.6}) \times 100\% = (1-0.8052^{0.6}) \times 100\% = 12.2\%$.

It should be noted that the method of operation loading has significant limitations and can be used in practical calculations only by in-depth analysis of the economic depreciation reasons. Under loading of capacities may be associated not only with the external factors, but also with such as unprofessional management, temporary unfavorable situation, etc. In addition, it would be wrong to take into account in calculation of economic depreciation the under loading of the versatile equipment that can be used in the manufacturing of other products.

Determination of external depreciation is one of the trouble spots of the cost approach to the valuation, as the economic ageing usually affects the entire industry at once, but not each individual object separately. In such circumstances it becomes almost impossible to determine what percentage of the cost is losing one or another particular object under the influence of a general decline in the industry. For example, by valuation of industries, which are in a state of stagnation and regression, the rate of economic depreciation theoretically can reach 100%. But this would mean that the market value of the object is equal to 0, which in many cases is absurd. Still the object can be sold for some albeit small amount.

There may be no possibility to calculate the external depreciation altogether. At the same time, a situation may occur when the calculated external depreciation, on the contrary, judging from logical reasoning, distort the price estimation of the object. Therefore, the only best solution in this situation is to abandon the calculation of the external depreciation by substantiation of impossibility reasons for determining the external depreciation for an object of valuation.

4. Conclusion

Accounting for economic depreciation can reasonably bring the cost of property objects to the real value corresponding to their market prices. At the same time, the recognized methodology for determining of the value of the external depreciation and the inclusion of amendments to the value of the object is still missing. Each of the discussed methods of the external depreciation valuation has both advantages and disadvantages. The choice of method for evaluation remains up to the appraiser. Herewith, by the refusal from economic depreciation calculation it is necessary to give a clear justification for such refusal. In comparative and income approaches the economic depreciation is taken into account indirectly through the relevant industry factors or through the income stream of a particular enterprise. However, by the

cost approach economic depreciation is subject to a separate valuation.

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