



Emerging Markets Queries in Finance and Business

# The economy of the digital epoch in Russia: development tendencies and place in business.

Liliya Garifova<sup>a\*</sup>

<sup>a</sup>*Kazan (Volga region) Federal University, 18 Kremlyovskaya St. Kazan 420008, Russian Federation*

---

## Abstract

It is indicated in the article that the informational conversion processes in the world are irreversible, and Russian is approaching to proceed to the information technological progress of the economy due to the great number of developed objective programs and statutory acts. It is defined that the informational technologies are actively implemented in all Russian business areas, and due to this process enterprises have to redesign their structure, endeavors, communications, resources for the purpose of making all production forms more effective to provide the new quality of economic growth. The major benefits of applying information communicative technologies for the stable development of companies and organizations in the modern Russia are revealed.

© 2014 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/3.0/>).

Selection and peer-review under responsibility of the Emerging Markets Queries in Finance and Business local organization

*Keywords:* information, information communicative technologies, internet, enterprise, economy

---

## 1. Introduction

The world has entered the new digital epoch: an age of electronic economic activity, network communities and organizations without boundaries. An arrival of a new age is going to change radically economic and social fields of society's life. The McKinsey company shows in their latest researches the Information Communicative Technologies (ICT) are reckoned among the four leading economy departments in intensity of influence on the modern society along with health care, farming and infrastructure. It is the IT-industry, which would be able to take Russia out to the number of technology leaders and to promote elimination of raw materials dependence of Russian economy. It is impossible to solve problems of intellectual potential

---

\* Corresponding author. Tel.: +7-903-313-17-28  
E-mail address: [lgarifova@mail.ru](mailto:lgarifova@mail.ru)

development in the sphere of high technology, promotion of investment attractiveness of different economic sectors, and supporting Russian producers of high-technological production and services especially in the area of their advance in world market only by means of using market mechanism. There is the necessity of mechanisms of government regulation and involvement of government investment in development of ICT-infrastructure, creation of detailed, considered legal documents.

## 2. The analysis of the institutional environment

During the last 10 years in Russia have been developed and accepted documents, which are very important for the information technological development of economy: "The conception of using the informational technologies in the activities of state structures of governmental authority for the period till the year 2010", "The conception of regional informatisation till the year 2010", "The conception of development of informational technology market in Russian Federation"; the long-lasting strategy of development of informational society in Russia and many others were developed. In whole, they form a ground for the formation and developing of informational society.

In the first table the major program documents and normative acts created by Russian Federation Ministry of Information Technology and Communication and other involved Ministries and Departments of Russian Federation.

Table 1. The formation of institutional base of information economy in Russia

By the year 2008, it became obvious that the federal target program "Electronic Russia" (2002-2010)	
Year	The formation of institutional base of information economy in Russia
2000	Establishment of the official state structure responsible for the functioning of IT-sector in Russia – The Ministry of communication and informatization;
2000	Foundation of State Duma committee of information policy, information technologies and communication;
2000	Doctrine of informational safety of the RF is adopted;
2002	Federal target program "Electronic Russia" is accepted (2002-2010);
2004	"The conception of using the informational technologies in the activities of state structures of governmental authority for the period till year 2010" is accepted;
2006	The RF federal statute "About information, informational technologies and informational protection" is accepted;
2008	The long-lasting strategy of informational society development in Russia is elaborated;
2009	Federal laws #121-F3 "About alteration to several legislative acts of Russian Federation in connection with enactment of the Federal law "About activities in reception of payments from natural persons, realized disbursing agents" and #103-F3 "About activities in reception of payments from natural persons, realized disbursing agents" are accepted;
2010	Russian cabinet has stated The government program of development of informational society in years 2011-2020;
2011	The new variant of the "Electronic- digital signature" law was accepted.

wrecked, and the development of informational society in Russia is behind other countries, and there are no

visible changes in the existing conditions. The government decided to revise its approach to its own policy in the informational technology area. The time to understand that it is not the very value of the adopted technologies and developed informational systems counts, but their benefits for the citizens, business and the whole society, had come, so the governmental arrangement #1815 (October 20<sup>th</sup>, 2010) were accepted. The new governmental program got a name “The Informational society”. This program, developed for the establishment of the integral and effective system of using the informational technologies with the maximum benefits for citizens, includes those courses: the creation of electronic government, overcoming of the digital inequality, development of the new connectional technologies.

### 3. Literature Review

The research center The Economist Intelligence Unit (analytical subdivision of British magazine Economist) with the support of International Business Software Alliance published results of Global IT Industry Competitiveness Index 2011 research. In the new rating of global IT-technology competitiveness Russia took the 46th place. Authors mention “human capital for the IT-sector” among the strongest aspects in Russia. What are the main causes of Russian low place in the rating of global IT-technology competitiveness? In our view, in the first place there is the Russian mentality, because they are not prepared for innovations, even if young people learn quickly to apply innovations in everyday life, but the most part of people over 35 years hardly take innovations in the field of information technology usage. Substantial proportion of population finds the electronic canals more complicated and is used to live in the conditions of ready cash economy. The next cause as we see it is that major part of citizens in Russian big cities has a computer at home or at work with the high-speed internet access, but it is different for people in the towns with population below 100.000 people. And if you pay attention to the small settlements as villages and farms, it can be seen that everything goes much worse there. There is even no mobile connection in some settlements to say nothing of internet access. The other causes are administrative boundaries are ineffectiveness of legal safety of business in the arguments with government and low indicators of realization of governmental programs in informational technology usage, the lack of IT-specialists. On the assumption of aforesaid we come to this conclusion: economic development backwardness is the result of informational sector underdevelopment, which causes the backwardness of education and ability of development on whole. As it could be seen from the global experience, high technology including information and telecommunication became the engine of social-economic development of the many world countries (Gaslikova, Gokhberg, 2001). Otherwise, in spite of backwardness in the rating of global IT-technology competitiveness, Russian internet economy shows the great rates of growth. According to the combined investigations of High economic school and Russian association of electronic communications composed only 1% of Russian GDP, and it is supposed to increase. The advertisement is the most quickly growing part of Internet-economy and it increases in the rate of 50% per year (Nocetti, Dolinskiy, 2013). Electronic commerce which includes retail trade and electronic payment system is also growing in the rate of 25-30% per year, the present part in country's GDP is less than 1%, the part of online-retail in the whole retail is near the 2% percent. And if the amount of internet-users in Russia in the last year became bigger than in Germany and now takes the first place on Europe (68 million – 48%), the amount of internet-customers is much less – 23 million (34%) against to German 41 million (61%) (The Economist, 2012). So, there are all signs that the growth of internet-users will layer as it happens in China the growth of customers part and regularity of buying's. E-commerce penetrating the most distant fields of Russian economy will show the certain growth. According to statistics, there are more internet-users in Russia than in the Germany of France. But the only small part of them are interested in the internet-shopping. At the same time the rate of this type of commercial development increases fast, so this tendency must stay the same. The backwardness of Russia from developed countries in the sphere of development and insertion of informational technology became familiar. But the slightest narrowing of this gap and especially its liquidation will give the visible growth of GDP. Russia has the great potential in development and usage of IT

in all economic fields. The phenomenon of international recognition of IT-industry in the world market is highly important for Russian economy, because it will show the existence of Russian potential competitiveness in the sphere of modern technology and allow to form preconditions of global competitiveness of every industry. Globalization and integrated development of industrial economy considerably increases the business possibilities. Information technologies and information systems (IT/IS) provide mobile access and analytic power, which satisfy the needs of providing trade and management of enterprises on a national and continental scale. Leading organizations in nearly every industry — including retail, financial services, manufacturing, life sciences and telecommunications — recognize information's benefits, sometimes even above some traditional assets, in generating revenue (Gartner, 2012). Economic activity involves making decisions. In order to make decisions, agents need information (Shafieepoorfard, Raginsky, 2012). If in the past, in the end of the 20th century traditional management style, which distinguished from others by its high rate of hierarchy, strict centralization and closeness could be traced, in the beginning of the 21th century this management style in the enterprises changed for the more liberal, distinctive with maneuverability, globalization and openness. Information technologies have changed not only the way of working – they have modified the way of business strategic thinking. The first high-speed computers were used by the business class for the automation of processes, which were provided manually by the big number of low-quality employees; the typical example is data processing. In Russia among the average enterprises, the most popular form of organization changes with IT is Business Process Automation. The first applications designed with IT affected financial operations and circulation of documents, because this is the most formalized part of business processes of enterprise. Computation and forming of payments, transaction control and document movement, the open source for the clients to their deposits are the standard examples of early automation. The risk of introduction of those technologies is minimal, but the profit is good. More deep form of organizational changes connected with production structure is the realization of work procedures and Business Process Improvement, but they are used more rarely on Russian enterprise than those mentioned earlier. The new IT are urged to change the nature of whole organization, transforming its aims and Paradigm Shifts, for example, mastering the principal new market niche, opening the branch offices in the other countries, acquisition of the other company, merging with partner companies etc. Other organization changes posses the biggest risk, but they give the highest return. The leaders of companies must provide changes of this type thoughtfully, understanding the whole arrangement of responsibility for global decisions. Information on enterprises is processed within the framework of different schemes, usually not connected with each other. Providing their huge accessibility for all the employees and outer partners and facilitation by its means of the acceptance of creative decisions could become the critical factor of success for many companies in present times. The information always was a valuable asset for those who have it (Branscomb, 1994). The orientation to the maximal approximation with the client caused enterprises to move to horizontal, hostless structures. Accepting of decisions in the conditions of decentralization caused the unexpected increase of necessity of information connected with process of goods and service production. The necessity of the more detailed acquaintance of the third person with the state of affairs in the requested business fields and product quality realization system appeared. In the new conditions supply of information in all spheres must work irreproachable. It is clear that usage of new information technologies increases productivity helps to achieve better business results. The major changes in the field of enterprises activity after the insertion of IT are shown in the second table.

Table2. The major changes in the field of Russian enterprises activity after the insertion of IT.

Before the IT insertion	After the ITinsertion
Information can occur only in one place and in one time, it is not equally accessible;	Information may occur and may be requested in any place and any time – when it is necessary; Dispersed data bases and hosts, search engines,

---

<p>The hard work of estimation of the situation could be provided only by experts;</p> <p>All decisions are taken only by the administrators and responsible managers;</p> <p>There is necessary specially equipped place for searching, requiring, analyzing, hosting and transmitting of the information;</p> <p>The best way to communicate with the customer is personal meeting;</p> <p>The initial plans are not revised correction is only after the end of the whole period;</p> <p>The necessary appearance of employees on the work places, a big number of different sectors;</p> <p>Dependence from the supplier, limited choice;</p> <p>The high price of transaction, expense of the conclusion of a treaty, negotiations, data transfer, employees business trips.</p>	<p>technologies of searching of the input data;</p> <p>Thanks to expert systems, the work of the expert could be provided by the general-duty specialist;</p> <p>Making of decisions is the part of every employee's work, responsible for his part of work; Means of supporting, access to data bases and hosts, data systems;</p> <p>Specialists can receive and send information from places where they are stated due to usage of Internet and Internet-technology, fiber-optic communication and satellite communication systems, mobile communication systems;</p> <p>The best way to communicate with potential customer is the effective research of person's special features; Interactional communication, data bases, interrogation system and exposure of preferences;</p> <p>Plans are revised and corrected operatively, as required and according to customer's demand;</p> <p>Expert systems, systems of responsive planning and management of risks, high-productive computers;</p> <p>The possibility of flexible place, outsourcing and freelancers;</p> <p>Independence from the supplier, free choice;</p> <p>The decrease of transaction price due to informational marketing, online-treaty, e-mail, fax, electronic signature.</p>
---	--

---

As it could be seen from the table, after the insertion of IT on the modern Russian enterprise the following happens:

- IT modifies unstructured processes to partially and fully structured, acceptable to automation of decision making preparing;
- IT substitutes and decreases the role of executor in the realization of standard routine functions and operations;
- IT provides the specialist with all necessary information and powerful analytic means;
- IT delivers all required information in administrative;
- IT allows to arrange processes in necessary succession with ability of parallel realization of stereotyped operations and simultaneous access of many devices and executors;
- IT organizes data collection, processing, systematization; formation and spreading of knowledge, expert and audit actions for improvement of processes;
- IT provides detailed tracing of process realizations and controls the realization of administrative influence;
- IT connects directly different parts of activity in the interconnected processes, which were accomplished with the participation of mediators and intermediate administrative links;
- IT quickly passes information for the realization of processes irrespective of the place of their realization.

In that way the main role of IT in modern Russian business is to assist the management, adequately react to the market dynamics, create, support and deepen the competitive advantage with the aim of the maximal profit!

## Conclusion

In the present time, it is necessary for technologies to be implanted in modern Russian enterprises massively for the purpose of more widely applying of modern informational technologies, cardinal increase of product quality, operational efficiency and competitiveness. Undoubtedly, those measures which are provided by the RF government at present could exist, but this is not enough; it is necessary to provide more careful study of legal matters in conduction of business in internet-sphere, to widen the usage of electronic channels not only by introduction them into different fields of human activity, but also territorially – it means that usage of electronic channels must be general and equally accessible for people in big cities and villages. The role of information technology in Russian business depends on the sector, history of the enterprise, its size and territorial location, the personality of the manager and his team members, existing interrelations and chosen strategy of development. Of course, the outer factors such as federal and local government policy, customs and tax system, sharp leaps of state of the market also have influence. It is pointless to speak about regular introduction and development of information technology for all organizations and describe the “right steps” of their introduction and usage, because each enterprise should be considered separately. Also we wanted to point out that introduction of information technology in present days is necessary on every Russian enterprise, because in modern economy of digital epoch the economic activity considers mostly in production and application of information technology and collected information to make all other forms of production more effective in purpose of providing the new quality of economic growth and forming a huge informational wealth consisted from informational goods and service.

## References

- Babe, R.E., 1994. *Information and Communication in Economics*. Massachusetts: Kluwer.
- Darell M. W., 2011. *The Next Wave: Using Digital Technology to Further Social and Political Innovation*. Brookings Institution Press, Washington O.C.
- Gaslikova R., Gokhberg L. M., 2001. *Information technology in Russia*. Centre for Science Research and Statistics, p. 181.
- Pandey V.C., 2004. *Information And Communication Technologies*. Gyan Books, p.91.
- Plomp T., Anderson R.E., Law N., Quale A., 2009. *Cross-National Information and Communication Technology: Policies and Practices in Education*. Information Age Publishing, Charlotte, North Caroline pp.585-601.
- Rahman H., 2007. *Information And Communication Technologies for Economic And Regional Developments*. Idea Group Inc (IGI), p.351.
- Sacchetti S., Sugden R., 2011. *Knowledge in the Development of Economies: Institutional Choices Under Globalisation*. New Perspectives on the Modern Corporation Series. Edward Elgar Publishing.
- Branscomb A.W., 1994. *The Economics of Information. Public and Private Domains of Information: Defining the Legal Boundaries*.  
URLs: <http://www.asis.org/Bulletin/Dec-94/branscom.html>
- Gartner D. L., 5/22/2012. *Infonomics: The Practice of Information Economics*.  
URLs: <http://www.forbes.com/sites/gartnergroup/2012/05/22/infonomics-the-practice-of-information-economics/>
- Nocetti J., Dolinskiy A., 20/02/2013. *The Russian Internet Economy*.  
URLs: <http://valdaiclub.com/economy/55160.html>
- Shafieepoorfard E., Raginsky M. 2012. *The Information Structuralist. Information theory in economics, Part I: Rational inattention*.  
URLs: <http://infostructuralist.wordpress.com/2012/06/01/information-theory-in-economics-part-i-rational-inattention/>
- The internet business in Russia. Europe's great exception. Why local firms dominate the Russian internet. May 19th 2012 /The Economist/ URLs: <http://www.economist.com/node/21555560>
- The McKinsey Company. April 2009. «Effective Russia: productivity as the Foundation of growth».  
URLs: <http://www.mckinsey.com/>