Variable 2: The power depending on the task

- Real power in organization depends primarily on the type of task and its implementation and not from on hierarchical position

Variable 3: The managers behavior toward supporting DL

- Middle managers translate vision and strategy for organization into more concrete concepts that will be implemented by all employees
- Middle and top managers ensure that individuals would not achieve their performance at the expense of other parts of organization
- Managers act as mentors, advisors and intellectual partners for their subordinates
- The role of managers is primarily to create a safe and predictable environment for others (rev.)
- Any good idea for improving the organization receives emotional, financial and organizational support in its implementation, regardless of the position of its originators

Variable 4: Willingness to assume power

- Employees are trained to make decisions based on available information and their own judgment. They are also willing to take responsibility for their own decisions.

Variable 5: The atmosphere in the superior-subordinate relations favoring takeover of power

lack of trust	-	trust
secrecy	-	openness
passivity	-	commitment
discomfort	-	freedom
domination	-	partnership
formal	-	informal
contempt	-	mutual respect

Appendix 2. The items of the questionnaire measuring the degree of environmental uncertainty[2]

Variable: Environmental uncertainty

- Disposable, even accidental changes in the environment lead often in our industry to fundamental changes in the way business works
- Types of products and/or services change permanently in the long term
- Resulting technical and technological innovations mean that previously used technical equipment and applied technology rapidly become obsolete
- Products (or services) in our industry differ considerably by quality, image, buyers type, etc.

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[2] Each item of variable *environmental uncertainty* were assessed on a 5-point scale from 'not at all' to 'fully' with the midpoint of 'hard to say'.

ECOLOGY-ORIENTED ENTERPRISES AS INTEGRAL ELEMENTS OF SUSTAINABLE DEVELOPMENT OF THE RUSSIAN FEDERATION

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ABSTRACT

The article reveals the essence of ecological and economic imbalances, identifies the causes of this phenomenon in the Russian Federation; the calculation of genuine savings indicator showing that there is an imbalance between the economy and ecology of our country. It notes the role of eco-oriented enterprises within the concept of sustainable development, proposes institutional solutions that will help companies to make their ways towards ecological-oriented type of development.

Keywords: ecological and economic system, environmental and economic imbalances, ecological and economic crisis, factors disequilibrium, natural environment, genuine savings, nature of economic growth, ecology-oriented enterprises.

INTRODUCTION

The economic policy of modern industrialized countries based on the principles of sustainable development, organically combining economic, social and environmental factors. On the other hand, many developing countries, including Russia, have professed the old outlived model of economic growth based on the quantitative capacity and the exploitation of natural resources. Therefore, finding ways that can make the transition to a new paradigm of development is very urgent task. In this study, an analysis of the macroeconomic dynamics of the country through the use of an indicator of adjusted net savings, and grounded conceptual approaches to the formation of the key institute for sustainable development - ecology-oriented enterprises.

REVIEW OF THE LITERATURE

In formulating and developing of the general theory of economic development the outstanding contribution was made by such foreign scientists like J. Galbraith, J. Keynes, S. Kuznets, W. Leontief, F. List, K. Marx, A. Marshall, D. Ricardo, A. Smith, M. Friedman, F. Hayek and others. Problems of ecological and economic disequilibrium and crises in the system of nature and transition to sustainable development are presented in the works of V. Vernadsky, D.H. Meadows, D.L. Meadows, E. Pestel, A. Peccei, A. Popov, J. Forrester and other researchers.

METHOD

The following scientific methods of knowledge have been used in the process of preparing the article: scientific abstraction, induction and deduction, historical and logical methods, indicative method, analysis and synthesis as well as the methods of system, the structural and functional and economic and statistical analysis.

RESULTS

Ecological and economic balance represents a phenomenon which is difficult to achieve, so non-equilibrium situation is more common. Ecological and economic equilibrium means position of strength and stability inherent in the system of relationships and a balance between economic, social and environmental spheres. There is a certain optimal balance between economic potential and quality of life of a society in compliance with environmental practices and rational criteria for the development and rehabilitation of the environment with adequate support of production of natural resources [1].

The state of balance seems perfect and difficult to reach making non-equilibrium position wide-spread. As a result, quantitative accumulation of negative ecological and economic changes leads to a transition to a qualitatively new state defined as non-equilibrium one. When the measure of human intervention in the environment passes a critical threshold and contradictions reach their extreme severity, instability develops into a crisis.

The ecological and economic system of Russia is influenced by different factors of both the external and internal environment, so the equilibrium state is considered relative, temporary and transitory [5]. Human intervention in the natural environment and production activities are the main factors to break the equilibrium. Resisting to this influence tends to return the ecological and economic system to the state of equilibrium in the new and changed conditions.

In the present article the indicative method is used to reveal a real ecological and economic state of the Russian Federation.

One of the reasons for the negative phenomena in the ecological and economic sphere is the imperfection of applied macroeconomic indicators. In our opinion, traditional macroeconomic indicators such as GDP and GNP have a number of drawbacks and limitations and seem to be the unreliable indicator of economic development. They appear to be the most common measure of welfare estimation and do not cover a number of welfare parameters of the country not relating to the social product (GDP). They do not reflect the uniformity of distribution of income and economic benefits among the population; they do not deal with damage to the environment and public health; they do not distinguish between useful and harmful products for society.

Therefore, in our research the true (genuine) savings indicator developed by the World Bank experts will be used. The main purpose of this indicator is calculation of the economic assets of the country adjusted for depletion of the mineral, environmental and energy damage to the natural environment (such an amount of assets or net savings available for use by the next generation).

According to the World Bank, the genuine savings indicator embraces 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 are 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) [2]:

$$GS = (GDS - CFC) + EDE - DPNR - DMGE.$$

The given formula is net savings used to calculate the data by country, and all the data used in it is taken as a percentage of GDP. In our calculations, we will show the results in value (absolute) terms, as well as take into account such additional factors affecting the change in this indicator like health care costs, social policy, physical culture and innovation policy.

The results of our calculations of the true (genuine) Russian Federation savings are reflected in Chart 1.

Dynamics of GDP and genuine savings, Billion rubles

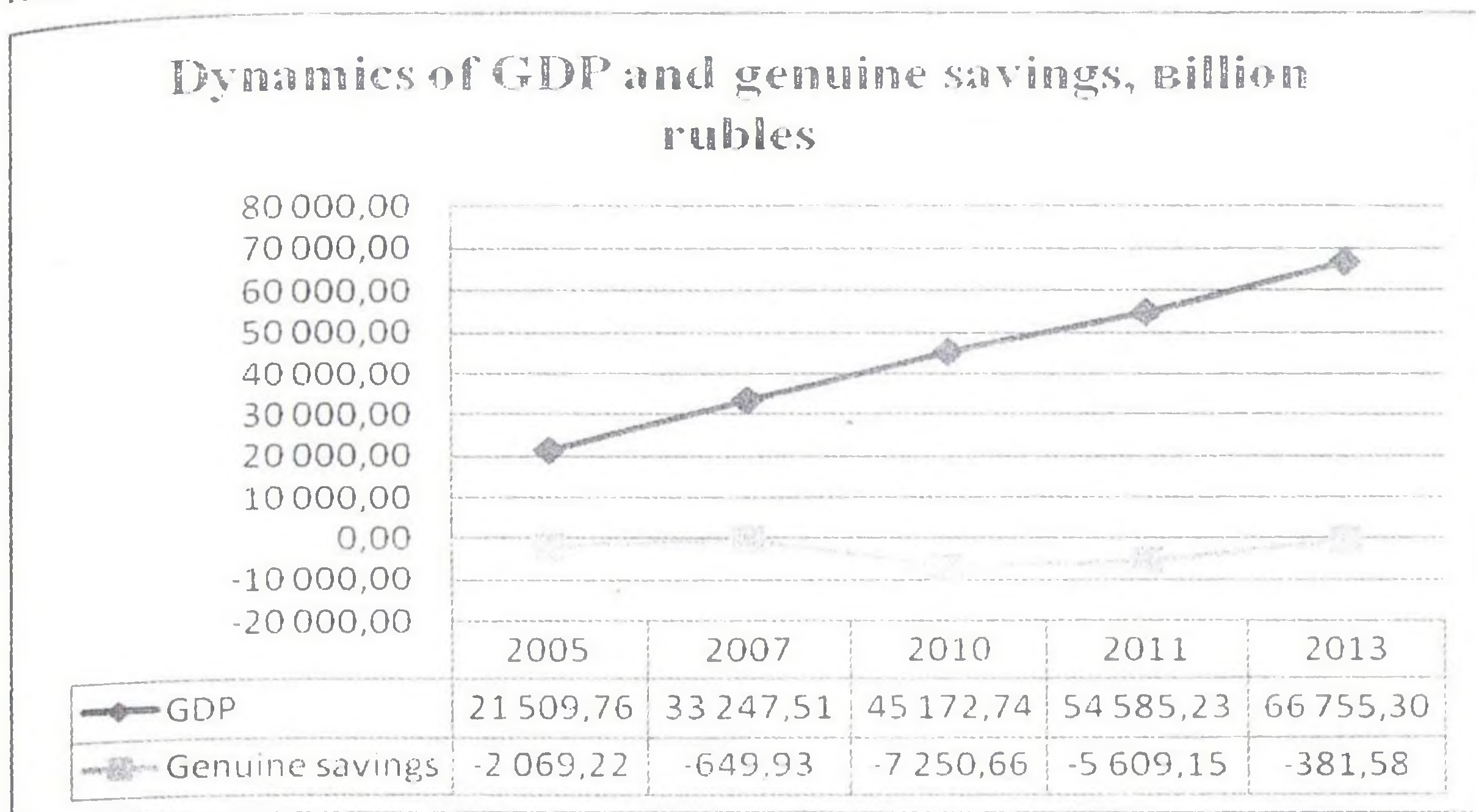|	2005	2007	2010	2011	2013
GDP	21 509,76	33 247,51	45 172,74	54 585,23	66 755,30
Genuine savings	-2 069,22	-649,93	-7 250,66	-5 609,15	-381,58

Chart 1. Graphical display of genuine savings calculations of the Russian Federation [2]

As it can be seen from Chart 1, there was a positive GDP growth rate in the Russian Federation in 2005 - 2013 period simultaneously accompanied by negative genuine saving rate. This shows the low level of economic growth, which results in depletion of natural capital and environmental decline. Corresponding correction leads to a significant reduction in traditional economic development indicators (GDP and GNP), pushing them into negative data area [2]. It is obvious that in recent years there has been a small reduction in decrease of true savings indicator as the economy of the Russian Federation has been influenced by the economic sanctions imposed 2015.

According to international experience, costs of providing education, health, social policy and physical culture have a significant impact on the country's real savings [7,8]. 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 applied indicator and the low level of financing of social and innovation areas, on the other.

Certainly, the index of adjusted net savings is not a perfect indicator and has a number of drawbacks. However, its application will provide a constructive result since it allows determination of overall assessment of economic development as well as measuring of natural and human capital depletion. It is obvious that the Russian Federation is not ready to show the "reality" and use this indicator as a substitute for conventional macroeconomic indicators reflecting the economic prosperity of the country [4].

The results of the state policy in the field of sustainable development does not correspond to the country scale, its potential and does not provide ecological and economic balance. Environmental protection issues were at the bottom of the ranking of the real national priorities. The modern model of economic growth creates a huge burden on the environment.

Russia cannot afford decreasing economic growth, but at the same time it is not able to continue to ignore the aggravated ecological and economic contradictions and their negative impact on the nature of economic development. There is an urgent need to find new solutions.

We believe that the transition to sustainable development to a great extent will depend on the formation of eco-oriented businesses that can provide resolution of the escalating conflict between the economic, social and environmental spheres of society, to reduce human impacts on the environment, contribute to preservation of assimilative capacity of the nature [3]. This is due to the fact that enterprises are the main subjects of the ecological and economic relations; main actors of the national product; most major polluters of the environment; the main consumers of non-renewable natural resources.

However, many companies believe that the closer they are to the "green" production, the harder they resist the competitors, due to the high costs and long payback period of the project and, in many ways, this way of development is undermining the financial health of the business. Don't forget about the fact that consumers are affected by the economic crisis and low pay, which means they do not want to pay more for organic products, and it is difficult to make suppliers observe the environmental transparency.

In addition, majority of companies have not yet motivated to ecological reorientation, but creation of appropriate institutional incentives should encourage them to change their behavior and carry out more active if not the advancing policy [6].

One of those important steps towards promoting sustainable development was adoption of the Federal Law "On Environmental Protection" in 2002 and was intended to establish an institutional framework for the functioning of the Russian environmental market. It underlines a significant role of innovation in addressing environmental problems - in particular, the provision of tax and other benefits when implementing the best available technology, using non-conventional energy, recoverable resources and waste processing. It makes provision for state support for entrepreneurship and innovation activities aimed at protecting the environment [3]. However, these measures are not enough.

In our article we will propose some institutional solutions which, as we consider, will help companies to take a way of eco-oriented development. It is also worth noting that these decisions don't have consecutive, considered and system character.

Table 1. Institutional decisions on the way to ecology-oriented developments of the company

Institutional decisions on the way to eco-oriented developments of a company	Descriptions of institutional decisions
1. Use of eco-focused strategy of behavior in the market.	1. - Creation of new products having new eco-friendly properties. 2. - Emphasis on environmental friendliness of a product (emphasize is made on the concealed environmental properties of the product). 3. - Purchase of eco-oriented projects. 4. - Merger of a company and eco-oriented brands. 5. - Gain a name of the greenest company. 6. - Launch manufacture of a new range of products and services based on the closed ecologically oriented production cycle. 7. - Strategy of continuity of environmental traditions.
2. Compliance with laws and standards relating to the concept of sustainable development	Normally, moving to eco-oriented development of the company can be done through laws and standards, for example, the Kyoto Protocol (to reduce the atmosphere of gases that cause the greenhouse effect), the standards of the Forest Stewardship Council (which confirm that the source of product is the forest, which complies with the rules of sustainable development), EPEAT standards (certifies the products (electronics) with "environmental standards"). It is very important make a business in compliance with the laws and standards of countries and international agencies. We believe that companies that are well-read to abide by these rules, starts seeing opportunities to develop and create innovations in the field of eco-oriented production. The need for compliance with the principles of sustainable development forces them to be careful in choosing partners, technologies, resources and business processes.
3. Establishment of the eco-oriented value system	Here we can talk about the company's ability to restructure the production system in such a way that it consumes less electrical power, water, reduce carbon emissions and waste, increase use of renewable natural resources, solar and wind. Ongoing analysis of the product life cycle within the context of carbon emissions tracking. Establishment of a line of closed ecological production, distribution of the final products, exchange and consumption of the resources.
4. Generation of the new environmental-oriented business processes	- Constant search for new ecological production methods. - Analysis of the existing business model on of compliance with the concept of sustainable development. - Creation of ecological value chain, which will enable consumers and suppliers to dispose of the contractual agreements, products and services in a new way. - The ability to not only satisfy the current needs of the market environmental products and services, but also to anticipate their future requirements.

CONCLUSIONS

In the conclusion we can tell what business owners while setting purposes of their enterprises need to resolve the conflict of interests between economy and ecology. The two extremes may appear in this situation: either domination of economic interests, or prevalence of the ecological orientation. In case of prevalence of economic interests ecological requirements are taken into account only in a degree demanded by the state laws and prohibitions. Prevalence of ecological purposes means conscious restriction of economic interests, including profitability, competitiveness in the long term perspective. Unfortunately, the eco-oriented production doesn't give short-term payback so the companies should sacrifice profitability for the sake of future success.

The main mission of the eco-oriented enterprises is that they form the institutional framework allowing harmonization of contradictions between economy and ecology as well as combination of nature protection actions with changes of products, processes of production and management.

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ECONOMIC GROWTH MODELING USING NON-LINEAR PREDICTION METHODS

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ABSTRACT

Growth models are considered to be interesting to economists. The article shows the analyses of the basic approaches to growth models. Under the conditions of economic uncertainty the theories that take into account non-leaner relationships between development factors are considered to be very powerful. Moreover the solutions to the development factors that form cyclical path and the model based on the use of cyclical nature of economic development can be also very helpful. For this purpose special attention is given to the dynamic models, since leaner nature of relationships can be used to predict economic processes under the circumstances of planned economy. The latter is characterized by stable conditions of economic growth. Under the circumstances of transition-type and market economy, when most of economic processes have unstable nature, leaner models simplify the model, decrease adequacy of dynamic process description. In the course of research development attractors were formed using an example of the Kursk region.

Keywords: economic growth, growth models, development attractors

INTRODUCTION

Currently the issues related to the economic development of the economy as a whole as well as individual industrial companies step forward, since efficient development is the basis of progressive growth of any State. From the scientific point of view, development is considered to be translational motion of advance; it is seen as a process implying natural qualitative changes. General system theory describes development as a change in a system condition over a long period of time, and each state of the system is characterized by structural and quantitative characteristics that show system structure evolution. The vital component of economic development is economic growth, which is considered to be the result of the influence of long-term factors development of the economic system -level of capital, the growth of labor resources and technological shifts. In the modern economy, full of crises, falling and rising waves of different economic cycles, there is a need to study the factors of economic growth, its potential in describing the downward force of backward linkages in economy. The uneven performance of economy as a cyclical one implies that the growth periods are interspersed with recession periods; hence the cyclicity is limited to these two extreme states. At the same time, the sequence of changes: recovery - decline, development - stagnation is repetitive, but not periodic. Pulses that generate a successive change in ups and downs naturally arise in the process of reproduction and are generated by the system itself. At the stage of cycle initiation, the emerging fluctuations in the structure of needs initiate corresponding changes in the structure distribution of productive forces placement.