

ICEST 2021**II International Conference on Economic and Social Trends for Sustainability of Modern Society****EFFECTIVE MANAGEMENT AS A CONDITION FOR
INNOVATIVE DEVELOPMENT OF THE NATIONAL ECONOMY**

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Abstract

The construction of an effective system of the modern management in order to accelerate innovative development is considered today as a key factor ensuring the effectiveness of the work of entrepreneurial structures and the national economy as a whole. At the same time, the combination of the interests of the state and the owners of entrepreneurial structures, as well as their managers, forms a synergistic effect that ensures not only the acceleration of innovative development, but also a high level of national competitiveness in the conditions of globalization. In this context, we should talk about the positive impact of innovation on the satisfaction of the interests of producers, consumers and the state. Along with these aspects, the article also reflects the issues related to the increasing importance of innovative methods and management tools, which is closely related to the quality of human capital. This approach is no less important from the point of view of economic security, the increasing requirements for which in modern conditions of globalization cannot be ensured without the active development and implementation of innovations in all spheres of economic activity. An important tool for solving the complex of related urgent tasks is the comprehensive support by the state of the process of introducing innovations into the practice of managing entrepreneurial structures. Proceeding from this, the authors identified the most effective areas of management impact, activating the innovation process, and provided recommendations for their practical application.

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1. Introduction

The innovative development of the national economy represents the basis for ensuring a high level of its stability and competitiveness in the world economy. This statement is not only substantiated from the standpoint of modern economic science, but also tested in the modern practice. In this regard, it becomes necessary to concentrate the efforts of researchers on the search for general and specific factors that make it possible to transfer the economy to an innovative type of development, doing it most quickly and efficiently. The urgency of solving these problems is due to the increasing differentiation of countries in terms of the level of innovativeness of their economies at the present time and the presence of potential opportunities for innovative development in the future. The nature of the innovations being introduced, as well as the scale of innovative production, varies significantly in different countries, which determines their positions in the global ratings of competitiveness. So, today, the innovations are distinguished by different characteristics: innovations associated with the development of high-tech, science-intensive production (space exploration, production of new types of engines and industrial robots, as well as creation of equipment and technology for the production of innovative products), and innovations used in the production of "simple", not science-intensive, goods and services (food, everyday goods: clothes, shoes, furniture, etc.). In addition, such type of innovations as intermediate innovations is considered; the creation process of which presupposes a high degree of innovativeness, but they themselves relate rather to everyday goods, such as computers, communications, electric vehicles, etc. (Galkin, 2021). At the same time, all such classifications are quite arbitrary, since the same innovation, depending on many factors and conditions, can be attributed to different categories.

Taking this into account, we can say that the problem of ensuring innovative development significantly complicates a managerial work, both at the level of the company and on the scale of the entire state. In this regard, there is a need to rethink the theoretical and practical foundations of modern management, which today must be innovation-oriented and innovatively receptive. Obviously, if this is achieved at the firm level through the use of a scientific foundation and effective managerial efforts, then at the level of public administration some difficulties often arise due to the action of numerous, multidirectional factors. Today, the formulation and solution of various management tasks, including the tasks in the field of accelerating the national innovation process, is increasingly influenced not by economic, but by political factors. This implies additional scientific research and acts as an urgent problem, both for the development of management theory and for ensuring the effectiveness of public administration.

2. Problem Statement

The presence of many factors affecting the development, adoption and implementation of the management decisions in the field of providing an innovative type of development of economic entities of various levels presupposes a conducting of the system analysis. This analysis will determine how the economic system is innovatively receptive and how quickly it is ready to develop in innovative direction. Depending on the result obtained during the analysis, it will be possible to talk about what kind of managerial impact is needed to improve the national economic system and public management practice in order to increase the innovative receptiveness in production and management (Repnikova et al., 2020). This

will ensure a higher level of sustainability of the economic system in the conditions of the action of negative factors (including, as mentioned above, non-economic factors) and increase the country's global competitiveness. The solution of such a complex problem involves the development and implementation of numerous management tasks at various levels, from the primary economic entities (micro level) to the national economy (macro level), each of which can be considered as a specific subsystem that unites a number of interrelated elements.

2.1. Tasks in the field of development of management at the level of the national economy

The managing of the development of the national economy is currently characterized as a very complex process, the implementation of which should take into account the increasing influence of non-economic factors. In particular, global transformations in the last decade have been taking place somewhat differently, compared with previous years. This is reflected in the strengthening of such a trend as the regionalization of globalization, which is increasingly manifesting itself in various spheres of life, including the economy. The aggravation of political problems and the struggle of various states and their groups for economic and political influence, up to a military confrontation, lead to sanctions pressure and an increase in the number and scale of imposed sanctions, both economic and non-economic. At the same time, even economic sanctions are losing their significance today and, in fact, cease to be instruments that allow one to achieve certain actions from the country against which they are imposed. In this regard, sanctions can be seen as a factor complicating development processes and reducing the degree of integration of the country in the global economy (Greenwood-Nimmo et al., 2021; Schmidt & Oelsnitz, 2020). In addition, the imposed sanctions harm those who impose them, or at least reduce the effectiveness of bilateral and multilateral economic relations between countries. In some cases, this encourages some countries that have not joined the announced sanctions to “make money” on them, offering themselves as a kind of “shadow broker”. This can be especially sensitive for participants of the innovative projects, both at the level of their development and in the process of their implementation. The new reality emerging against this background is reflected in the system of world economic relations as a whole, as well as in the choice of directions for innovative development by the states, taking into account the need to support science-intensive industries and ensure economic and technological security, which is especially important in the context of existing sanctions. At the same time, the actions of public administration acquire special significance, since they ensure the development, implementation and adjustment of the state innovation policy in order to integrate the interests of manufacturers and consumers of innovative products, as well as to organize mutually beneficial innovative cooperation with foreign partners.

2.2. Tasks in the field of development of management at the company level

Based on the increasingly complex globalization process and the need to raise the share of high-tech production in the economy, the management of the modern companies is keenly interested in accelerating innovative changes, as well as an adequate assessment of their effectiveness, both in quantitative and qualitative terms. This presupposes a rethinking of the very approach to the ideology of management in order to choose its dominant approach - technocratic or financial. Today, there are fewer and fewer doubts that companies are unable to ensure the dynamic development of high-tech production without government

support. This is especially true for developing countries, especially if any sanctions are imposed against them (Hu et al., 2018). This is due not only to the fact that the firm often does not have sufficient financial resources to implement or build up the innovative production, but also to non-economic motives. As already noted, in the modern global economy, in making economic decisions within the framework of bilateral and multilateral cooperation, more and more non-economic principles are used, which creates unequal conditions for companies from developed and developing countries. Because of this, a firm is not always able to effectively defend its interests and ensure the desired level of knowledge-intensive production without coordinating its actions with the state management system (Kuksa, 2021). This creates additional requirements for the communication system with representatives of the state administration apparatus from the standpoint of the potential economic and non-economic effect for the country as a whole. In addition, today we are witnessing a rapid transformation of the management process, which increasingly uses the modern information technologies (Yashalova et al., 2017). Taking into account this fact we must provide the adaptability and flexibility of the management system.

3. Research Questions

The concept of how to ensure an effective management of innovative development and increase the share of innovation-oriented firms in modern conditions is based on the search for effective and mutually beneficial interaction between public administration and enterprise management (Butorin, 2020; Schabacker & Vajna, 2020). For developing countries, this should be considered as a key research issue in the field of management theory and practice, the solution of which will allow them to find their niche in the global economy and gain a foothold on the innovative path of economic development. In the framework of this study, it is necessary to ensure the combination of the interests of the country and each separate firm in achieving the goals of innovative development; this should be considered as a subject of research. The object of this research is the management of innovative development.

A systematic understanding of this provision requires clarification of views on the effectiveness of management and its specifics in organizing the activities of innovation-oriented companies. At the same time, there is a need for an expanded interpretation of management efficiency in the context of determining the types of innovations and areas of the economy with the most potential useful result in the field of competitiveness, both for specific producers and the entire national economy. This presupposes the development of directions of management activity that ensure the successful solution of specified problem on the basis of construction a management mechanism corresponding to the innovative type of development and ensuring the country's stable positions in the global market.

4. Purpose of the Study

Solving the problem formulated above will ensure a high level of economic sustainability, not only of innovation-oriented firms, but the entire national economy. This condition is especially important during periods of various kinds of crises and current economic sanctions. Taken together, this can become the basis for developing directions for improving the country's economic system (Kalenskaya, 2014), which should be defined as the goal of this study.

The construction of an efficiently working economic system will determine the nature of solving many urgent problems in a sphere of innovative development, including the tasks that were formulated by us in the second section of this article. At the same time, the process of improving the economic system is itself a complex task, the solution of which involves the synthesis of theoretical research and the development of an integrated model of managerial actions. Thanks to its solution, there will be a real opportunity to accelerate innovative development and allow domestic players to take leading positions in the national and world markets of high tech, innovative products. Here, we should once again draw attention to the particular importance of such activity for developing economies, from the standpoint of ensuring their global competitiveness and economic security.

5. Research Methods

To develop and substantiate recommendations aimed at improving the economic system in order to accelerate the process of innovative development, a number of interrelated methods and tools of scientific research should be used. First of all, we should start by modeling an economic system that satisfies a certain set of requirements. The authors of this article adhere to the position that the construction of such a model is a multi-stage process, which should be based on a comparative analysis of various models of economic systems according to the criterion of their innovative susceptibility. This will reveal the advantages and disadvantages of the models under consideration and, on the basis of this, select the most adequate managerial methods from the entire set of available methods, as well as the corresponding management tools.

Particular attention should be paid to methods for assessing the effectiveness of management at various hierarchical levels - from the linear level to the level of management of the national economy as a complex system. The assessment should be carried out on the basis of indicators reflecting the increase in the share of innovative goods and services in the total volume of production, as well as on the basis of the cost-benefit criterion. The assessment should be supplemented by statistical research methods that allow us to determine the effectiveness of the implementation of certain recommendations based on a comparison of statistical indicators.

The development of recommendations, which is the most important and responsible part of our work, requires the use of a specific set of research methods. So, the efficiency of managing innovation processes will largely depend on how well they are applied.

5.1. Factors and approaches to innovative development of business entities

An increase in the share of knowledge-intensive industries is a fundamental principle of the predominant innovative type of development, both of individual firms, industries, territories, and of the national economy as a whole. In this regard, it becomes necessary to study the factors that contribute to the adoption of managerial decisions aimed at increasing the share of knowledge-intensive industries at the level of an individual company. Among such factors we can identify the external and internal factors in relation to the enterprise (are presented in the Table 1).

Table 1. Factors ensuring the adoption of managerial decisions aimed at the innovative development of the enterprise

External factors	Internal factors
increased competition in the occupied market, which implies a constant search for new methods and opportunities to meet the growing needs of consumers, especially – in innovative focus; development of science, providing the additional opportunities in the development and production of new goods and services and entering unoccupied market segments; complication of access to various types of resources as a result of economic sanctions, pandemic conditions, etc., which increases an interest of the companies in activities related to deeper processing of available raw materials; improvement of human capital due to an increase in the level of education and an increase in the income of the population, which stimulates the demand for innovative products; increasing the interest of the state in the innovative development of the national economy and providing of state support for: <ul style="list-style-type: none"> - enterprises engaged in the development and implementation of innovations; - consumers with their demand for innovative products, both for using and industrial purposes. 	the ability to minimize costs per unit of production, which allows companies to get more profit from a unit of goods and stimulates an increase in volume of production; decrease of the amount of waste from the main production, ensuring a reduction in the costs of their disposal and improvement of the company's image as an environmentally responsible player (as a rule, this attracts new consumers); growth in the value of the company's shares and an increase in its capitalization due to escalating interest in high-tech production; activation of innovative processes in production and management due to the high level of education and professional skills of owners and managers.

Based on the detailed analysis of the influence of these factors and their combination, carried out by the authors, we can consider an evolutionary and revolutionary approach to making managerial decisions that provide an innovative type of development.

The evolutionary approach is expressed in an irreversible, progressive movement towards an increase in the share of innovations under the influence of the interaction of external and internal factors (presented in the Table 1). This gradually changes the structure of the economy, making it not only more innovatively receptive, but also, as a rule, more open. At the same time, the very characteristics of competitiveness are being transformed. The competitiveness of business entities (from the firm to the national economy) is determined from the positions of their readiness to implement innovative ways of production and the degree of openness for the penetration of innovative ideas. This allows us to consider competitiveness quite broadly, assessing the degree of innovativeness of production, goods and services, management, consumption, as well as the organizational behavior of business entities.

The revolutionary approach consists in the accumulation of a critical mass of innovations (various kinds), which leads to significant changes in the functioning of business entities in the short term. As a result, fundamental changes are taking place in the national, and even world, economy (associated, for example, with the practical use of new types of energy, means of communication and information transmission, new modes of transport or ways of moving people and goods, etc.). Revolutionary changes involve the use of new types of management, especially in the innovation sphere, as well as a significantly higher quality of human capital. This is ensured through the dynamic development of the education system

and professional development of employees, regardless of whether they are: simple performers or top managers; employees of business structures or the public administration system (Kharlamov et al., 2017; Koziół-Nadolna, 2020)

Thus, a revolutionary approach is, in a way, the result of a relatively long process of evolution. At the same time, today, in the context of the intensification of innovative development, the time gap between separate revolutionary changes is significantly narrowing. It is predicted that in the future, the time intervals will be further reduced due to the acceleration of innovative development and globalization. This presupposes the development of appropriate methods of management influence at the enterprise level. As for the public management system, there is a more difficult task: on the one hand, to stimulate the innovation process as much as possible, and on the other hand, to ensure the possibility of innovative adaptation of a wide range of consumers (primarily households), and their readiness to active consumption of innovative goods and services.

5.2. Promising directions of innovative development and assessment of their results

According to the main provisions of economic theory, supported by the modern economic practice, the determination of promising areas of innovative development should be based on an analysis of the development of the world market for innovations and the activities of the main economic partners for a particular country. This is due to the fact that long-term and stable partnerships, taking into account the economic specifics of a country, make it possible to accept with great confidence the innovative goods and services it offers and the innovative projects being implemented. In addition, strong business relationships and understanding of the business culture of foreign consumers facilitate the promotion of new innovative products to the market. Let's take a look at this provision at the example of Russia and its main economic partners.

To do this, we can use such an indicator as the volume of trade. As a base, 2020 will be considered, with all its ambiguity. Despite the fact that many economists today are not inclined to use the 2020 data as a baseline for making future forecasts, we are of the opposite opinion. We believe that the economy during the COVID-19 coronavirus pandemic can provide rich material for understanding the actual trends of innovative development. This is due to the fact that the pandemic has identified topical directions in which innovations should be developed, and they are not limited only to medicine, pharmaceuticals and individual protection products.

Following the logic of this study, we should start with an analysis of Russia's trade with foreign countries. According to the Federal Customs Service of Russia, the volume of the country's trade turnover in 2020 decreased by 15.1% compared to the level of 2019. The decrease was mainly due not to imports (-5.3%), but due to exports (-20.7%); at the same time, for some countries there was even an increase in the volume of imports. Thus, the volume of imports from Turkey increased by 2.7%, from China - by 1.4%. There was also a significant increase in exports to the UK: the increase was 74.9%, and this - during the period of active economic sanctions against Russia!

The main trade partner of Russia continues to be the European Union: its share in 2019 accounted for 41.6%, and in 2020 - 38.5% of trade turnover. In the period of the pandemic, many EU countries curtailed trade relations with foreign countries, and this fact had an indirect effect on the increase in trade

turnover between Russia and the Commonwealth of Independent States countries, which increased by 0.7% in 2020 and reached 12.9%. On the whole, in the analyzed year, there was a positive trade balance in Russia, estimated at almost \$ 105 billion.

It should also be noted that in 2020 the top ten countries leading in terms of trade with Russia have not changed (the descriptive statistics are presented in the Table 2).

Table 2. Russia's main partners in terms of trade turnover in 2020

Country	Trade turnover in 2020, \$ billion	Change by 2019, %
China	104.0	- 6.7
Germany	41.9	-21.1
Netherlands	28.6	- 41.4
Republic of Belarus	28.5	-15.7
Great Britain	26.6	+ 53.6
USA	23.9	- 8.9
Turkey	20.8	- 20.2
Italy	20.2	- 19.9
South Korea	19.6	- 19.5
Kazakhstan	19.1	- 4.9

Source: (List of Russia's main economic partners in 2020, 2021)

Detailing the data on trade turnover, we can notice a decrease in imports to Russia in 2020, compared to 2019, for the following commodity groups:

- land transport means - by \$ 5.3 billion;
- pharmaceutical products - by \$ 3.3 billion;
- ferrous metals - by \$ 1.3 billion;
- items made of ferrous metals - by \$ 0.9 billion;
- products of inorganic chemistry, rare earth metals, radioactive elements - by \$ 0.8 billion.

In contrast to this, the largest increase in imports (\$ 0.8 billion) was observed in the procurement of various types of equipment and devices (optical, photographic, cinematographic, measuring, control, medical, etc.), which, practically without exception, belong to innovative products.

It is interesting to correlate these data with the indicators for the volume of exports from Russia in commodity groups, which underwent the largest reduction in 2020 compared to 2019. The products of the following commodity groups have undergone the greatest reduction:

- mineral raw materials, oil and mineral products of oil distillation - by \$ 95.5 billion;
- ferrous metals - by \$ 2.1 billion;
- mineral fertilizers - by \$ 1.4 billion (Trade turnover of Russia 2020, 2021).

Based on this, we can talk about the impact of the pandemic on the structure of world trade. As a result, the innovative products began to be of greater value and provide a greater contribution to maintaining a high level of competitiveness, both of an individual firm and the entire national economy. This

presupposes the identification of real and potential opportunities that Russia possesses, and the determination of directions for their effective use.

5.3. Innovative potentials of the branches of the Russian economy and the directions of their use

The modern researches in the field of innovative activity of Russian entrepreneurship demonstrate that the leaders are, first of all, the companies belonging to the industrial complex, since the share of their innovative products exceeds the share of construction and agriculture.

The following industries are among the most innovation-oriented sectors of the Russian industry today:

- mechanical engineering (its separate subsectors, for example, the production of electrical equipment);
- chemical industry;
- pharmaceuticals.

According to available estimates, the level of investment activity in these sectors is 20-30%, which corresponds to the European average. A number of innovative products produced by the Russian manufacturers are in demand not only by national, but also by foreign consumers:

- equipment for renewable energy sources;
- additive technologies;
- technologies in the field of organic, green and smart chemistry;
- selected niche products such as night vision systems for agricultural machinery;
- pharmaceuticals, including the COVID-19 coronavirus vaccine (Batalova, 2020).

Obviously, these data characterize only the leading industries and do not allow us to unambiguously assess the status of innovation processes in the entire Russian economy (Kharlamov & Kharlamova, 2019). The existing dynamics of the development and use of innovative technologies (Figure 1) demonstrates the existence of problems that should be solved on the basis of joint efforts of the company's management and the state.



Figure 1. Development (in the diagram on the left) and use of innovative technologies in the Russian economy, units (Innovative development of the Russian Federation in 2019, 2020)

Along with the existing achievements, the presence of significant problems in the field of innovative development reflects current trends in the global economy and requires the development of effective managerial solutions and practical recommendations for management at the level of firms and the state in order to increase the competitiveness of the national economy.

6. Findings

To activate the process of introducing innovations into the activities of Russian enterprises, a reasonable combination of managerial efforts of entrepreneurial structures and government bodies is required in a number of areas, presented below.

6.1. Managerial tasks for the creation of infrastructure stimulating the development and implementation of innovations

The activation of innovation processes presupposes the presence of a developed infrastructure of state support that stimulates the implementation of innovations in economic activities, from the development and production of new types of goods to the management of the activity of high-tech enterprises, both already operating and newly created (Kurniawat, 2020). The increase in the number of such enterprises also means the creation of new work places, which will be occupied by applicants with the appropriate education and skills, as well as a high level of personal innovation receptiveness (Hanseth & Nielsen, 2013; Isgandarov & Rasulov, 2019; Josa & Aguado, 2016). Thus, the unity and consistency of requirements for all participants in the innovation process will be ensured: an individual employee - an enterprise - the national economy as a whole. We can expect, as a result of such transformations, a dynamic development of the economic system and a higher level of its economic and technological security.

Among all the variety of directions for infrastructural supporting of innovative development, we consider the following as the most important and promising:

1. Digitalization of all types of economic activity. The peculiarity of our proposals is to increase the attention of the state to the provision of high-quality public services using the possibilities of digitalization. This will not only simplify the process of providing services, but also minimize the time, and even financial, costs for this (Kovalenko et al., 2020). Undoubtedly, the administrative policy of "one window" is not something fundamentally new and is quite positively perceived by both business and citizens. However, today it is important to develop this policy, constantly improving different digital services and adding more and more new ones. This can be considered as an important step in the field of state support for innovative development, albeit of an indirect nature, stimulating the expansion of innovative interaction between various types of business entities.
2. Expansion of venture financing. The most important problem in the field of business development, especially innovation, is the need to attract financial resources using such a tool as venture financing. The very idea of venture financing is not new, but its potential in the Russian economy is not being fully utilized today. Nevertheless, 40 private venture capital funds operate in our country (Private venture capital funds, 2021); the key role in funding belongs to JSC "Russian Venture Company", which is the most important institution for the development of the venture capital market. The activity of this company is aimed at supporting innovation-oriented Russian entrepreneurial structures, including small businesses, as well as information and investment support for covering of innovative projects. At the same time, the inadequate development of most domestic companies does not allow them to compete for promising projects, and this turns out to be a factor holding back innovative development due to the lack of funding or its unsatisfactory volume.
3. Creation of federal funds for the development of innovations. In our opinion, the most significant of these funds is the Innovation Promotion Fund, created under the Ministry of Industry and Trade of the Russian Federation. At the same time, it should be understood that in the conditions of functioning of a super competitive global economy, reliance only on budget financing will not allow domestic innovation-oriented companies to ensure the dynamic development. Budgetary funds should only be considered as additional sources of funding, although in our country they are often the main and only sources. Consequently, the managerial task at the level of public management should be associated with attracting interested representatives of the business community to financing innovations, which will significantly speed up this process. At the same time, business should play the role of not only a partner of the state, but also its competitor. Competition of this kind for the opportunity to finance and implement innovative projects in production and management will create the necessary conditions for accelerating innovative development.

7. Conclusion

Based on the results of the study, the conclusions combining positions of state administration and management of business structures can be drawn.

7.1. Effective state administration as the basis for stimulating innovative development

The state, as the main regulatory institution, must determine the goals and directions of economic development, as well as build an effective management system to ensure this development. The state administrative system, stimulating the process of development and implementation of innovations, is designed to ensure a reliable level of economic security of the national economy in the face of negative factors and processes that are emerging in the global economy.

As shown in our study, this became highly relevant during the period of economic sanctions. It is the sanctions that shape the demand from society to increase the level of stability and economic security of our country, especially when it comes to the production and use of various innovations, including technologies and equipment. Limited access, and sometimes even a complete blocking, for the delivery of a wide range of foreign technologies and equipment to our country is considered as the most important factor stimulating the innovative activity of national entrepreneurs. At the same time, the support from the state administration can be expressed in the simplification and acceleration of companies' access to government services, as well as the provision (directly and indirectly) of government funding, which is especially important in the context of extremely limitation of Russian structures to borrowing in the global financial market.

This actualizes the interaction between managers of innovation-oriented enterprises and representatives of government bodies, solving common tasks to accelerate the innovative development of the national economy.

7.2. Effective management as the basis for the innovative development of domestic enterprises

The efficiency of management at the enterprise level could be achieved if its owners and managers are highly interested and motivated to introduce innovations and ensure an innovative type of development (Kutsenko & Boyko, 2018). As recommendations for managers, here we can offer at least three areas of their practical activity:

- introduction of new technologies to produce more competitive products;
- practical application of innovative materials and technologies, which will not only impart new consumer properties to the manufactured goods and services, but also allow companies to offer the market absolutely new goods that can better meet the needs of individual and collective consumers;
- development and practical use of innovative management methods and the necessary tools, which will increase production efficiency and improve human capital.

In general, all this will accelerate the innovative development of each individual entrepreneurial structure, as well as the industry, region and national economy as a whole. The larger the process of introducing innovation, the more tangible the synergistic effect will be, and the more stable and competitive the national economy will be. This means a constant increase in the role of the management of domestic enterprises in the process of organizing innovative development.

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