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ФАКТОРНОЕ ВЛИЯНИЕ НА РАЗВИТИЕ ИННОВАЦИОННОЙ АКТИВНОСТИ РОССИЙСКИХ ПРЕДПРИЯТИЙ

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Информация о статье

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Ключевые слова: инновационный менеджмент, инновационный процесс, конкурентоспособность, инновационное развитие предприятий.

Аннотация.

Модернизационные преобразования научно-технических ориентиров находят отражение в ключевых направлениях субъектов хозяйствования, как целенаправленные изменения, обеспечивающие повышение конкурентоспособности предприятия, рост уровня его результативности. Что представляется возможным посредством усиления положительного влияния ряда факторов и минимизация негативных воздействий на управление, развитие и регулирование степени инновационной активности предприятия.

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THE INFLUENCE OF FACTORS ON THE DEVELOPMENT OF RUSSIAN ENTERPRISES INNOVATIVE ACTIVITY

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Abstract.

Modernization transformations of scientific and technical landmarks are reflected in key areas of business entities, as targeted changes that ensure an increase in the competitiveness of an enterprise, an increase in its efficiency. That is possible by strengthening the positive influence of a number of factors and minimizing the negative impacts on the management, development and regulation of the degree of innovation activity of an enterprise.

1 Introduction / Введение

In the modern economic and sociological literature, there is a perception that currently competition is not rivalry for the possession of resources, wealth, and capacity for innovation. In the world economic literature, "innovation" is interpreted as the transformation of potential scientific and technological progress into real, embodied in new products and technologies. The mechanisms of this transformation are considered in a special branch of sociological knowledge - innovation (the science of purposeful changes, innovations in social organization).

According to the American sociologist and economist P. Drucker, innovation is an economic and social concept rather than a technical one, since even in the case of technical and technological changes, the value and consumer qualities extracted by the consumer from resources change.

Today, it is widely believed that the business world is going through a phase of rampant inflation, falling profits, social unrest and increased political instability. Therefore, the ability to perceive innovations and overcome difficulties has become an actual characteristic of a professional Manager. In this regard, there was a system of innovation management.

Innovative management is one of the areas of strategic management carried out at the highest level of the company's management. Its purpose is to determine the main directions of scientific, technical and production activities of the company in the following areas: development and introduction of new products (innovation); modernization and improvement of products; further development of production of traditional products; removal from production of obsolete products.

2 Materials and Methods / Материалы и методы

In the literature, there are many definitions of the term "innovation" (lat. - "innovation"). This term came into scientific use in the XIX century as an antonym of the term "tradition".

Currently, the concepts established by the Oslo Manual and reflected in International standards in science, technology and innovation statistics apply to technological innovation. According to these standards, innovation is the end result of innovation, embodied in a new or improved product introduced in the market, a new or improved technological process used in practice, or a new approach to social services. Thus, innovation is a consequence of innovation.

In our opinion, speaking about the need for innovation in management, we should recall the words of a famous innovator in organization and management Henry Ford, in his book "My life - my achievements": "All public institutions of man for thousands of years served the main goal - to protect against changes or at least - slow down these changes. Throughout history, change has been seen as a catastrophe, and immutability has been seen as the goal of man's organizational efforts."

At present, the life cycle of a product or service is rapidly decreasing, but consumer demands are increasing, and competition is intensifying. Innovation is the key to the success of any organization. Efficiency, and in some cases, the survival of the enterprise depends largely on how it is adaptive to the external environment, to what extent its structures are flexible, mobile, what is its ability to innovate [1]. The ability to introduce innovations in the organization serves as a sign and criterion for the level of professionalism of managers.

According to austrian scientist I. Schumpeter there are five groups of typical changes:

1. Use of new equipment, new technological processes or new market support of production (purchase and sale).
2. Introduction of products with new properties.
3. Use of new raw materials.
4. Changes in the organization of production and its logistics.
5. The emergence of new markets.

It should also be noted that "innovation" and "innovation process" as concepts are not unambiguous, although terminologically similar. The innovation process is associated with the creation, development and dissemination of innovations.

Prigozhin consider that the innovation process as a system phenomenon can be divided into three main stages:

1. Detection of the change impulse based on the analysis of information coming from the external environment;
2. Awareness of the need for change, associated with a deep psychological breaking of stereotypes, past experience, with a crisis of consciousness;
3. Implementation of innovative activities.

Analysing existing world practice we came to the conclusion that the driving force of innovative development is the competitiveness of the enterprise, which must be constantly maintained and improved. Companies increase the number of consumers only because of innovations, strive to compete with each other and thus are motivated to improve their financial performance. Guarantee of competitiveness of the enterprise is the level of its technological development [2]. Only those companies that do not stand still, move along the path of innovation, and therefore respond quickly and flexibly to changes in the competitive environment, market requirements, effectively organize their production process, optimize the management system are able to stay on the market and develop further in the conditions of tough market relations. In a rapidly changing environment, only advanced companies can survive, weak, non-developing players can not hold their positions [3]. However, it is worth considering the fact that not all innovations lead to increased competitiveness of the enterprise. It is necessary that they be oriented to new markets and contain unique developments.

It is necessary to take into account that any innovation requires significant financial investments, characterized by the duration of the research and production cycle, uncertainty of the final result and, consequently, high risk. In the area of innovation, there is often no direct link between the size of investment and the return on investment [4]. Therefore, the interest of enterprises in innovation is low, innovation remains underinvested, resulting in low competitiveness of products. In this regard, the role of the state is particularly important in the transition to an innovative way of development, which should create specific incentives for private organizations to develop innovations, promote cooperation between

the state, the business sector and the higher education sector in the field of innovation.

The rate of internal expenditures on research and development in percentage of Gross Domestic Product (GDP) is the principal in conducting international comparison of scientific-technical and innovative development. To ensure technical superiority, Research and Development (R&D) expenditures should be at least 2-3% of GDP. In Germany, the figure is 2.98 %, UK – 1.73%, Japan – 3.35%, Canada – 1.69%, USA – 2.79%, China – 1.98%. The level of this indicator in Russia does not exceed its level in developed countries.

Table 1. Intensity of GDP in 2012-2016, %

Rate	2012	2013	2014	2015	2016
Russian Federation	1,130	1,091	1,126	1,133	1,187

As shown in Table 1, until 2014, the share of domestic research and development spending in GDP did not exceed the level of 2012. Any innovation is aimed at improving the competitiveness of the company in the market environment. For a long time, companies have invested in technological and product development. Of course, this is important for the stability of the company, but modern realities dictate new requirements. It is organizational and managerial innovations that become a decisive factor in the success of an enterprise.

However, in the current economic conditions, Russian entrepreneurs can not deal with innovation. In order to gain a competitive advantage, Russian enterprises do not need to innovate. They use other tools to attract customers. Therefore, the introduction of new technologies has received little attention. Companies do not need to invest in R&D and improve their technological level. Even with low productivity, the company will be quite profitable [5]. About 36.8 % of companies do not invest in the development of new products and technologies. Enterprises prefer to use and adapt existing technologies and products, the share of such is about 29 %. But companies willing to invest in the development and new technologies, no more than 23.3 %. And only 10.9 % of enterprises are focused on entering the world market with new unique technologies and products.

In the Russian economy, as a rule, it is widely believed that first it is necessary to modernize the production base and only then engage in innovative developments. This explains the low level of investment in R & D (research and development) [6]. Nevertheless, investments in the development of production capacities and innovative activities not only do not interfere with each other, but complement it. Enterprises that have been actively investing in the development of new products and technologies in recent years are the most successful. At the same time, the share of companies that did not invest in R&D remains high (36.8 %).

In addition, consumer requirements for the quantity and quality of products determine the level of activation of innovative processes of the enterprise. Generation of innovations (cardinally new commodity positions) is a key task of innovative activity of the enterprise. Investment volumes for innovative projects are determined by the relevance of consumer needs in a specific product group [7]. The need for technological innovations consists of the degree of their potential implementation, the predominant technological dominants, sufficient financial component. Also, high value in the intensity of innovation processes in the enterprise have the volume of supply in the market, affecting, in turn, the price resource line [8]. That is, the correlation aspects in terms of assistance to the state or business structures, in the form of resource support (Finance, personnel, raw materials).

In spite of some decrease (in the period) of innovative activity (Fig. 1 [4, 9]) to dominate the industry market, strengthen competitive positions, enterprises need to intensify innovation processes to improve production efficiency

3 Results and Discussion / Результаты и обсуждение

The achievement of significant results in the development of innovation among a wider range of enterprises in the near future is problematic due to the existence of a number of factors that constrain innovation development:

1. The lack of significant experience in innovation in market conditions has a major impact. The roots of this problem go back to the past and are associated with the orientation of research organizations

to perform state, mainly military-industrial, orders and the lack of previously opportunities for self-introduction of new products to the market.

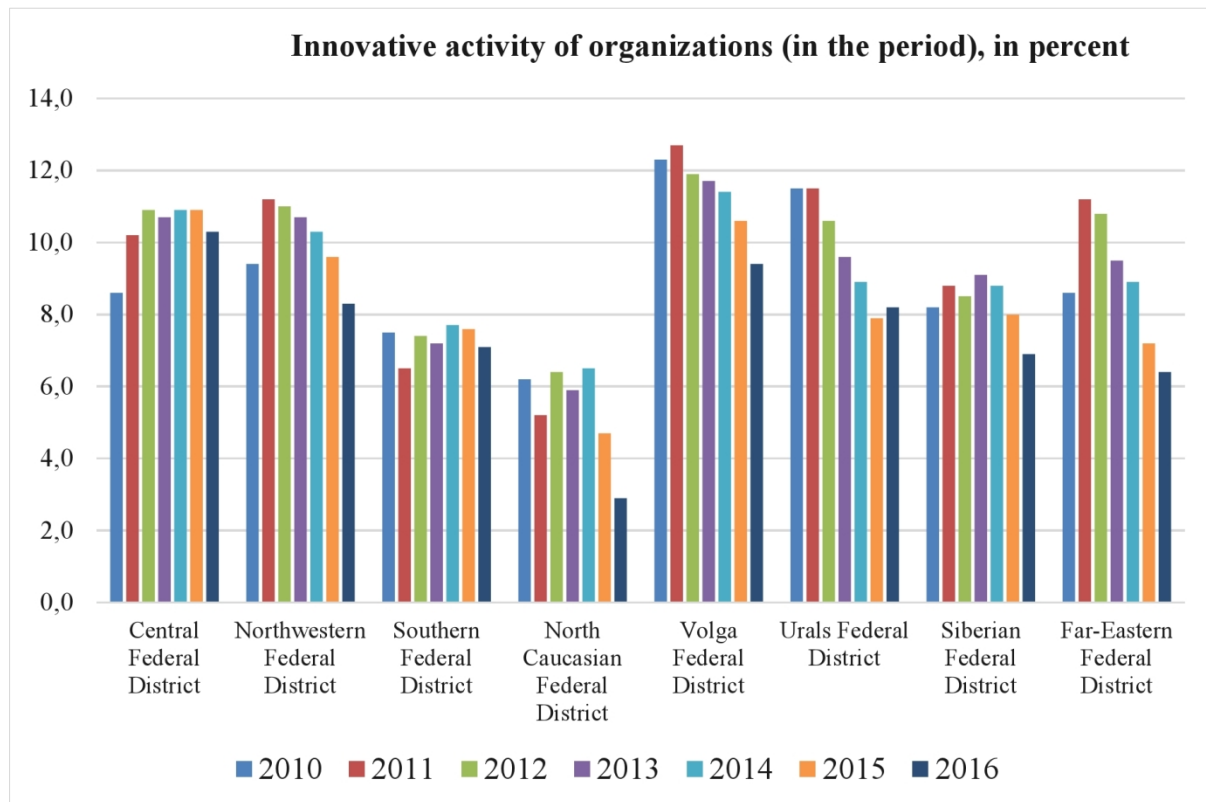


Fig. 1. The level of innovation activity of business entities (by region), in the period from 2010 to 2016

2. The legal basis of innovations has not been developed, The Federal law "on innovation in the Russian Federation" has not yet been adopted in the legislation of the Russian Federation, although its preparation was started in 1998. The government does not sufficiently control the activities of state customers, pays little attention to the practical use of the results of R&D financed from the Federal budget, does not ensure the wide dissemination and use of market mechanisms for the support and development of science [10]. The share of budget funds in innovation costs of enterprises does not exceed 5%.

3. The current tax legislation contains only a limited set of benefits for enterprises engaged in innovation, which has a negative impact on the scale and pace of scientific and technological progress. As a result, with significant scientific potential, innovative activity is characterized by low indicators of innovative activity. According to the survey of the the Analytical Center for the Government of the Russian Federation , the share of enterprises engaged in innovation was 32%.

4. The problems of training and securing qualified personnel in domestic science and industry are becoming more acute [11]. Due to low wages, lack of assistance from the state in the acquisition of scientific equipment, young people leave science, experts go to work in foreign scientific laboratories, there is a so-called "brain drain" and aging of scientific personnel.

5. The innovative development of enterprises is also hampered by the unfavourable business climate due to, on the one hand, the high level of fiscal pressure, on the other hand, the inactive role of the state in the protection of property rights, weak support for innovative enterprises and the lack of equal conditions for competition. State programs have little impact on the innovative activity of industrial enterprises. Thus, according to the majority of the surveyed managers, 95%, "participation in state support programs" did not have a significant impact on the innovative activity of enterprises.

6. Transaction costs and administrative barriers to innovation remain extremely high.

In addition to these constraints on innovation, there are obstacles related to poor enterprise management and a low level of corporate culture. Unfortunately, quite often managers of companies act only in their own interests or in the interests of a narrow group of shareholders.

Domestic problems of domestic producers significantly slow down their innovation activity. Infrastructure plays a key role in the functioning of the enterprise innovation system [12]. With the lack of effective management of innovation processes, the lack of structure and coordination is not provided by the flow of information, knowledge, technology, market flows, interacting with different structures.

The underdeveloped level of innovation policy of the enterprise and technology marketing leads to the inability to reliably predict, identify consumer preferences and respond accordingly.

When choosing the direction of innovative development of the enterprise should be based on the available technical and economic opportunities, industry and other factors. Evaluation of innovation will allow enterprises to objectively assess their internal capabilities to successfully engage in innovation, thereby contributing to the efficiency of enterprises, improve competitiveness.

Undoubtedly, innovation increases the competitiveness and efficiency of the enterprise, but it is necessary to objectively assess their capabilities before you engage in innovation. Innovation development is a complex process [13]. Its implementation is impossible without a well-built system, which includes: setting objectives, resource assessment, development of business processes for innovation. There are already positive changes in this direction, but the activity of enterprises in this area is still low. We need a set of macro and microeconomic measures and efforts at the state level, combined with the initiative of entrepreneurs themselves. Organizational, administrative, legislative and economic measures are required [14].

According to author, the state should pay attention to strengthening the link between science and production. This requires:

- training of specialists whose task will be to stimulate the interaction of science and industry;
- develop special measures to support innovative projects. With these tools, the whole cycle can be combined into one system, from research to market entry. Research institutes and Russian enterprises can be involved in this process at the same time.
- encourage joint participation of research institutes and enterprises in innovation and R & D projects.

Also, the author believes that the problem of inconsistency between R&D management and innovation activity is especially important because of the General fragmentation of national innovation system (NIS) in Russia. There are many agencies that are responsible for implementing their own program. Such disunity hinders the consistent implementation of national innovation policies, and there is a lack of coordination between functions and authorities at different levels. There is no clear distribution of competencies at different stages of the innovation program. On behalf of the President, Agency of Technological Development is being established in Russia. Its main purpose is to attract innovative technologies to the Russian Federation [15]. At the same time, a proposal to organize a project office of the national technology initiative is being prepared. Its launch is expected on the basis of the Russian government's fund of funds and the development institute of the Russian Federation. Then it is planned to allocate it to a separate organization outside the Government fund of funds Development institute of the Russian Federation (RVC system). In addition, proposals for joint financing of R&D have been made to certain preferential systems. A large share in the financial support of the program is still occupied by the so-called funders (this is both official assistance and private funding). Although funder support stimulates some innovative programmes, it cannot be seen as a stable instrument in the long term.

In addition, the attraction of external financing may carry certain risks for the implementation of the NIS strategy.

Such support can form a dependency and then lead to the development results moving into the sphere of private interests [16]. At the state level, it is necessary to bring the programs implemented with the involvement of funders in accordance with national priorities. In the future, the task of the authorities should be to reduce the share of external funders in support of innovation. To implement this strategy, the following measures can be proposed:

develop in the long term additional scenarios to increase own public funds allocated to support innovation, while reducing funder investment;

- to develop a system of indicators, according to which the Government and funders will Finance programs to promote innovation aimed at achieving national strategic goals;

– to regularize the system of innovative activity management in order to minimize the load on the coordination mechanisms.

4 Conclusion / Заключение

In summary, coordinated action is crucial because of limited finances, staff and time for good results. Only an agreed plan would avoid inefficient use of resources, duplication of processes and suspension of projects. It is necessary that the economic community, represented by industrial enterprises, responsibly expressed its desire to develop a constructive dialogue with the authorities in order to determine the beneficial directions that will allow to develop innovative activities in the industry, as well as for the resource support of economic growth.

Therefore, the state and the economic community are partners which, thanks to consolidated actions, can regulate the growth of innovative activity of the enterprise. It is the coordination of common efforts between the state and the economic community that is one of the most important organizational tasks, allowing to solve the problems that exist in the innovative activity of enterprises today, so that it is possible to ensure sustainable innovative development of the Russian economy.

Список источников

1. Бердникова Т.Б. Анализ и диагностика финансово-хозяйственной деятельности предприятия. – М.: ИНФРА-М, 2016. – 224 с.
2. Блинов А.О., Рудакова О.С. Процессные инновации в системе управления развитием предприятия. Интернет-портал «Доклады и сообщения». URL: <http://www.innclub.info> (последнее обращение 10.12.2018).
3. Кулаков Ж.Н. Инновационный потенциал строительных предприятий: формирование и использование в процессе инновационного развития. – М.: ACB, 2017. – 803 с.
4. Официальный сайт инновационного проекта PRO INNO EUROP. URL: <http://www.proinno-europe.eu> (последнее обращение 10.12.2018).
5. Бургонова Г.Н. Бухгалтерский учет на предприятиях различных организационно-правовых форм. – СПб: Б.И., 2016. – 102 с.
6. Макаренко О. Бенчмаркинг инновационного потенциала промышленного предприятия. – М.: Ламберт Академик Пабблишинг, 2017. – 116 с.
7. Базилевич А.И. Инновационный менеджмент и экономика организаций (предприятий): практикум. – М.: Инфра-М, 2016. – 393 с.
8. Хрусталев Б.Б. Инновационные процессы в управлении предприятиями и организациями. – Пенза: Приволжский дом знаний, 2016. – 260 с.
9. RAND. Global Technology Revolution 2020: Technology Trends and Cross-Country Variation. RAND Corporation Report. URL: <http://www.rand.org> (последнее обращение 10.12.2018).
10. Стратегия инновационного развития Российской Федерации на период до 2020 года (Распоряжение Правительства РФ от 8 декабря 2011 г. № 2227-п). URL: <http://government.ru/docs/9282/> (последнее обращение 10.12.2018).
11. Пилипенко А.В. Инновационная активность российских предприятий: условия роста. – М.: Маркет ДС, 2014. – 432 с.
12. Федеральная служба государственной статистики. URL: <http://www.gks.ru> (последнее обращение 10.12.2018).
13. С&ТФ. Инновации в России. URL: http://www.strf.ru/material.aspx?CatalogId=223&d_no=47208 (последнее обращение 10.12.2018).
14. Кузнецова Т., Руд В. Конкуренция. Инновации и стратегия развития российских предприятий // Вопросы экономики. – 2017. – №4. – С. 82-103
15. Маховикова Г.А., Кантор В.Е. Инвестиционный процесс на предприятии. – СПб: Питер, 2017. – 176 с.
16. Ильдяков А.В. К вопросу о факторах, сдерживающих инновационное развитие предприятия // Вопросы экономики и права. – 2011. – №1. – С.157-160.

References

1. Berdnikova T.B. Analiz i diagnostika finansovo-hozjajstvennoj dejatel'nosti predpriyatija [Analysis and diagnostics of financial and economic activity of the enterprise]. Moscow: INFRA-M, 2016. 224 p.
2. Blinov A.O., Rudakova O.S. Processnye innovacii v sisteme upravlenija razvitiem predpriyatija [Process innovations in the enterprise development management system] Internet portal «Doklady i soobshhenija» = Internet Portal "Reports and Papers". URL: <http://www.innclub.info> (last access 10.12.2018).

3. Kulakov Zh.N. Innovacionnyj potencial stroitel'nyh predpriyatij: formirovanie i ispol'zovanie v processe innovacionnogo razvitiya [Innovative potential of construction enterprises: the formation and use in the process of innovative development]. Moscow: ASV, 2017. 803 p.
4. Oficial'nyj sajt innovacionnogo proekta PRO INNO EUROP [Official site of the innovative project PRO INNO EUROP]. URL: <http://www.proinno-europe.eu> (last access 10.12.2018).
5. Burgonova G.N. Buhgalterskih uchet na predpriyatijah razlichnyh organizacionno-pravovyh form [Accounting at enterprises of various legal forms]. Sankt Petersburg: B.I., 2016. 102 p.
6. Makarenko O. Benchmarking innovacionnogo potenciala promyshlennogo predpriyatija [Benchmarking innovative potential of an industrial enterprise]. Moscow: Lambert Akademik Publishing, 2017. 116 p.
7. Bazilevich A.I. Innovacionnyj menedzhment i jekonomika organizacij (predpriyatij): praktikum [Innovative management and economics of organizations (enterprises): workshop]. Moscow: Infra-M, 2016. 393 p.
8. Hrustalev B.B. Innovacionnye processy v upravlenii predpriyatijami i organizacijami [Innovative processes in the management of enterprises and organizations]. Penza: Privolzhskij dom znanij = Volga Science Chamber, 2016. 260 p.
9. RAND. Global Technology Revolution 2020: Technology Trends and Cross-Country Variation. RAND Corporation Report. URL: <http://www.rand.org> (last access 10.12.2018).
10. Strategija innovacionnogo razvitiya Rossijskoj Federacii na period do 2020 goda [The strategy of innovative development of the Russian Federation for the period up to 2020] (Rasporyazhenie ot 8 de-kabrya 2011 g. № 2227-r = Order of the Government of the Russian Federation of December 8, 2011 No. 2227-p). URL: <http://government.ru/docs/9282/> (last access 10.12.2018).
11. Pilipenko A.V. Innovacionnaja aktivnost' rossijskich predpriyatij: uslovija rosta [Innovative activity of Russian enterprises: growth conditions]. Moscow: Market DS, 2014. 432 p.
12. Federal'naja sluzhba gosudarstvennoj statistiki [Federal State Statistics Service]. URL: <http://www.gks.ru> (last access 10.12.2018).
13. S&TRF. Innovacii v Rossii [Innovations in Russia]. URL: http://www.strf.ru/material.aspx?CatalogId=223&d_no=47208 (last access 10.12.2018).
14. Kuznecova T., Rud V. Konkurencija. Innovacii i strategija razvitiya rossijskich predpriyatij [Competition. Innovations and development strategy of Russian enterprises]. Voprosy jekonomiki = Economics Issues. 2017. Vol. 4. pp. 82-103
15. Mahovikova G.A., Kantor V.E. Investicionnyj process na predpriyatii [Investment process in the enterprise]. Sankt Petersburg: Piter, 2017. 176 p.
16. Il'djakov A.V. K voprosu o faktorah, sderzhivajushhih innovacionnoe razvitie predpriyatija [To the question of factors constraining the innovative development of the enterprise] // Voprosy jekonomiki i prava. = Economics and Legislation Issues. 2011. Vol. 1. pp.157-160.

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