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MECHANISMS OF INCREASING INNOVATION ACTIVITY OF INDUSTRIAL ENTERPRISES

Abstract--- *The research is dedicated to the conditions and factors of increasing innovation activity in industrial enterprises and the need to further increase the efficiency of industrial production through existing factors.*

Keywords--- *Investment, Innovation, Efficiency, Economic Efficiency, Innovative Efficiency, Cost Recovery Period, Innovation Profitability, Profitability of Innovations, Innovative Costs, Innovative Economy.*

I. INTRODUCTION

Innovation is the result of an innovative process that reflects the total labor processes for its implementation. In turn, innovation activity, by its nature, represents the organization of work at the stages of the innovation process in the implementation of various innovations within a particular enterprise. In the future, the technical level and efficiency of production will be determined by the direction and effectiveness of today's innovative activities. In addition, the activation of innovative activities is a key factor in ensuring the stability of the market occupied by enterprises and the dynamics of development, as well as increasing its competitiveness. Achieving this goal is impossible without a systematic analysis of the innovative activities of the enterprise.

It is very important to develop and analyze the mechanisms for increasing the innovation activity of industrial enterprises in the regard. Taking this into account, this article describes in detail the development of mechanisms for increasing the innovative activity of industrial enterprises and its further improvement.

II. LITERATURE REVIEW

Analysis conditions and factors for increasing innovation activity in industrial enterprises is a very complex process, and such research has been written by many scientists in their scientific works. Conditions and factors for increasing innovation activity in industrial enterprises had been studied by Ivanov V.V. [1], Krivoruchko N.Yu. [2], Waterman R. [3], Shumpeter J. [5], Sorokin P. [6], Draker P. [7], Tviss B. [8], Bogatyrev A. [9], Kondratev N. [10], Yakovets Y. [11], Fatkhutdinov S. [12], Vakhobov A.V. [13], Ernazarov O.E.[14] and Ernazarov O.E., Karjavova Kh.A., Djumaev A.H. [15].

It should be noted that in the scientific works of these economists, the mechanisms of increasing the innovative activity of industrial enterprises have not been thoroughly studied as an object of research. In the conditions of the innovative development of the economy, the lack of research related to the improvement of the mechanisms of the development of innovative activity in industrial enterprises requires the implementation of deep scientific and methodological research on this topic.

III. RESEARCH METHODOLOGY

In this research, we used of methods of grouping, comparative and structural analysis, induction and deduction, analysis and synthesis, and monographic observations.

IV. ANALYSIS AND RESULTS

The current “sleep” situation in the field of innovation is often due to the lack of targeted work to increase the activity and efficiency of innovative activities. In this regard, the ability of the enterprise to identify and use the resource of innovative activity is important.

Table 1

Global Innovation Index Rating

№	Countries	2015		2019		2020		2021	
		Index account %	Rating	Index account %	Rating	Index account %	Rating	Index account %	Rating
1.	Switzerland	68.30	1	67.69	1	68.4	1	67.24	1
2.	Sweden	62.40	3	63.82	2	63.08	3	63.65	2
3.	United States	60.10	5	61.40	4	59.81	6	61.73	3
4.	Holland	61.58	4	63.36	3	63.32	2	61,44	4
5.	United Kingdom	62.42	2	60.89	5	60,13	4	61.30	5
6.	Finland	59.97	6	58.49	8	59.63	7	59.83	6
7.	Denmark	57.70	10	58.70	6	58.39	8	58.44	7
8.	Singapore	59.36	7	58.69	7	59.83	5	58.37	8
9.	Germany	57.05	12	58.39	9	58.03	9	58.19	9
10.	Israel	53.54	22	53.88	17	56.79	11	57.43	10
11.	Russian Federation	39,32	48	38.76	45	37.90	46	37.62	46
12.	Ukraine	36.45	64	37.62	50	38.52	43	37.40	47
13.	Armenia	37.31	61	35.65	59	32.81	68	33.98	64
14.	Belarus	38.23	53	29.98	88	29.35	86	32.07	72
15.	Kazakhstan	31.25	82	31.50	78	31,42	74	31.03	79
16.	Azerbaijan	30.10	93	30.58	82	30.20	82	30.21	84
17.	Uzbekistan	25.89	122	-	-	-	-	-	-

The innovation activity of a particular state is determined by the existing innovative conjuncture and innovative attractiveness in the country. Table 1 shows the ranking of the Global Innovation Index in the world, with countries such as Switzerland (67.24%), Sweden (63.65%), the United States (61.73%), and the Netherlands (61.44%) having the highest ratings. In 2015, Uzbekistan ranked 122nd in the Global Innovation Index.

The process of implementing innovative activities within each individual enterprise can go through different stages of innovation processes, only two of which: the period of development of innovations and their application in practice remains unchanged. Therefore, it is expedient to classify the opportunities to increase the innovative activity of the enterprise into stages of the innovation process.

Such a classification helps to take into account the factors and characteristics that actively affect the effectiveness of each stage of the innovation process, in increasing the efficiency of innovative activities of the enterprise - in achieving the overall goal. But this, in our view, does not take into account a number of factors that affect the innovative activity of modern enterprises when talking about the completeness of the existing aspect.

In our opinion, when considering the innovative activity of the enterprise as a whole, it is necessary to take into account the overall impact of the use of material costs, efficiency and time factors. This is explained by the fact that in the form of continuity of innovative activity in enterprises is carried out with the development and implementation of a number of innovations. In turn, the performance indicator represents the share of successful projects only in terms of the ratio of the development and implementation of innovations to the total volume of efficiency in terms of innovation. This determines the degree to which the goals facing enterprises are consistent with the innovative activities carried out.

The classification of opportunities to increase innovation activity over time of use is important. According to this sign, they can be divided into current and future innovations. Current opportunities reflect the fact that the existing opportunities to increase the efficiency of innovative activities of the enterprise are not used for one reason or another, and their implementation is carried out with a short period of time and low financial costs. Prospective opportunities require both certain financial costs and the duration of their realization over time. Being in this view of the opportunities to increase innovation activity, the improvement of the innovation mechanism of the enterprise allows to identify the priority and subsequent issues that ensure the planning of work.

Certain scientific interest calls for the division into open and secret types, depending on the form of manifestation of opportunities to increase innovative activity. When using this type of grouping, it is necessary to take into account the characteristics of the innovative activity of the enterprise. Therefore, if it is understood that the norms set on the basis of capacity building will be exceeded, it will be extremely difficult to establish norms in the field of innovation, especially at the initial stage of innovation activity. Therefore, when we say transparent opportunities, we need to understand the obvious differences in the level of effort expended to achieve individual results. Accordingly, hidden opportunities require additional efforts to uncover them.

Therefore, the important economic and institutional conditions for increasing the innovative activity of enterprises through the system of capacity building are the external competitive environment, the system of science and education, as well as the legal framework. In our opinion, innovation activity as a whole can be mainly aimed at:

- intellectual property subject matters (patents, know-how, etc.) on the basis of licensing agreements;
- conclusion of agreements with supporting organizations for the implementation of innovative activities;
- organization of joint research (joining forces of several industrial enterprises in addressing issues relevant to all participants);
- investing in venture firms that receive promising results but do not have sufficient financial resources to use them.

In our opinion, when carrying out innovative activities, it is necessary to take into account that the results can be achieved due to the active interaction of the enterprise with the external environment, which is:

- reduction of costs associated with the development and practical application of inventions (technical developments, ideas) in the activities of the enterprise;
- reducing the time it takes to master them;
- optimizing the efficient use of resource potential;
- helps to reduce the existing risk in the implementation of innovative activities.

In addition to the advantages, there are a number of issues that need to be considered in the period when enterprises are in the process of organizing innovations with the external environment. First, the main problem of the enterprise is to maintain its scientific potential, thus eliminating the need to carry out innovative activities of other enterprises or to use it in general when using ready-made results. The second problem arises as a result of increased competition, shorter product life cycles, and a number of other negative trends that reduce profitable production opportunities.

In this case, it is advisable to use the relationship between the enterprise and the external environment only in attracting professionals to introduce next-generation innovations to enterprises. In addition, it was important to organize information monitoring to identify changes in products and technologies in the external environment, to predict the development of labor and production methods, as well as to maximize the use of the situation and to take timely measures.

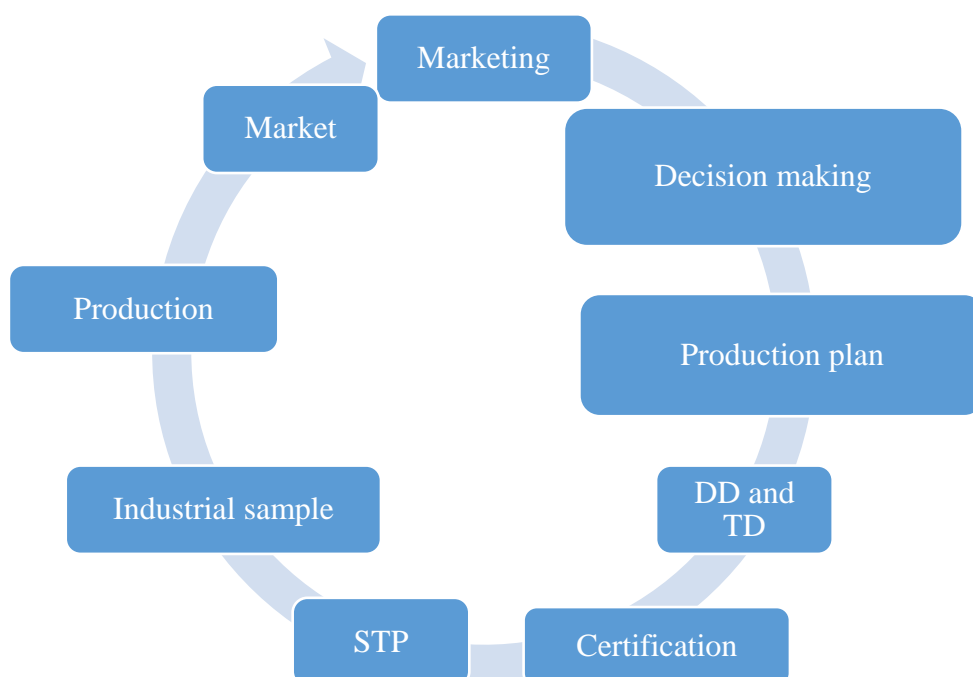
Therefore, the external competitive environment encourages the search for and application of new technologies, as the efficiency of the enterprise, the increase in the quality of its products and the reduction of its cost depend on it.

Moreover, the innovative activity of modern production cannot be realized without the use of 'human capital' and its knowledge, which can be incorporated into future innovations. The effectiveness of the stages of innovative activity is in many cases due to the creative activity of the workers engaged in it, and therefore it cannot be increased only by the scientific organization of labor and rational management. Accordingly, it would be appropriate to engage professionals with certain qualities. As R. Waterman points out, "the key to success is to choose the best workers, taking into account the fact that over time, some professionals may lose their skills."

Therefore, it is necessary to certify and improve the skills of employees engaged in innovative activities in a timely manner in higher research and education centers, which in turn will maintain the necessary level of staff qualifications and helps to create the conditions to increase the efficiency of the innovation organization phase. To do this, the company must develop methods of selection, training and retraining of employees for the implementation of innovative activities, as well as control over their skills.

Thus, the application of scientific developments in production and staff training will help to increase the innovative activity of the enterprise.

Under natural conditions, the innovative activity of the enterprise should develop from top to bottom and from bottom to top on the basis of the principle of hierarchy. However, in the current context, the initiative applies to both the national and regional levels. At the high stage of the innovation flow (national and regional level of management in the scientific field), the production requirements that are constantly based on the planning of its activities should be well defined. It should be aimed at developing a system of incentives to improve production management at all levels and increase innovation activity.



DD and TD - design and technological documentation
STP - scientific and technical progress

Figure 1. The sequence of the process of selling a new type of product in a competitive market

In this regard, the main directions of increasing the innovative activity of the enterprise are based not only on the activation of the direct activities of those who implement the innovation process, but also on a system of specific government measures aimed at activating this process.

A non-competitive market is conditioned by the fact that the buyer tries to get a more competitive product from the manufacturer and forms a private order for both the market and the seller, who is the initiator and shaper of a particular type of innovation in it. The sequence of the process of selling a new type of product in the market includes the stages from the implementation of marketing activities to its entry into the modern market (Figure 1).

Thus, the main form of support by public authorities is the development of a legal framework for innovation and the adoption of normative and other legal acts aimed at creating favorable conditions for the innovative development of the economy and enterprises as a whole. This work should include the development and improvement of innovations:

- development of legislation, scientific, technical and innovative activities for the formation of a unified state innovation policy, as well as the creation of favorable conditions for its promotion;
- regulatory support of protection of copyright and intellectual property, its involvement in economic activities;
- normative and legal support of public-private partnership in the implementation of innovative activities;
- regulatory support of training for innovative economy.

In addition, it is necessary to increase the interest of enterprises achieving scientific and technological achievements through the transfer of intellectual property rights at the

expense of the budget. At the same time, it envisages increasing the interest of enterprises developing advanced scientific and technical achievements by giving them the right to intellectual property created at the expense of the budget. It is also necessary to develop a procedure for the use of budget funds in the foreign patenting of inventions, utility models and industrial designs.

Forms and methods of financial support of scientific, technical and innovative activities is up to date. Budget funds should be directed to the creation of a favorable environment for the development of science and innovative business, which is mainly radical (drastic), including the implementation of new innovative projects, the formation of innovative infrastructure. Financial support from the budget should be focused on creating conditions for innovative activities that are more cost-effective than any other. To do this, it is necessary to create a state system that encourages participants in innovative and scientific and technical activities. It should provide participants with a variety of benefits and exemptions, including tax breaks and benefits for renting land and buildings. The incentive system should include incentives for businesses that are embracing innovation. Without it, innovative activity will not develop.

The Action Strategy for the five priority areas of development of the Republic of Uzbekistan for 2017-2021 sets specific goals for radically improving the welfare and quality of life, comprehensive and accelerated development of society and the state, modernization of the country and liberalization of all spheres of life.

In other words, we must transform Uzbekistan into a stable market economy with a high share of innovation and intellectual contribution in production, a competitive industry in the modern and global markets, as well as a rapidly developing country with a favorable investment and business environment.

These goals cannot be achieved without fully implementing the innovative model of development of the country, which requires the creation of an effective system of state support for innovative activities in the country and encourage the implementation of innovative ideas, developments and technologies in public administration, priority sectors of the economy and society.

In order to solve existing problems, as well as to radically improve the institutional and organizational-legal framework to support innovative activities, encourage the introduction of innovative ideas, developments and technologies, scientific achievements Decree of the President of the Republic of Uzbekistan "On the establishment of the Ministry of Innovative Development of the Republic of Uzbekistan" dated November 29, 2017 No PF-5264 accepted. This Decree can be considered as an important step in the implementation of the concept of administrative reform in the widespread introduction of innovative ideas, developments and technologies.

The decree provides for the creation of a strategic planning system, the introduction of innovative forms of public administration, the formation of modern infrastructure for the development of science and innovation, attracting investment, improving the legal framework, support and encouragement of research and innovation, social and economic life. The main directions of the country's innovative development, such as the active introduction of advanced technologies, were identified.

The decree established the Ministry of Innovative Development of the Republic of Uzbekistan and envisages the main directions of its activities in the field of state and society building, economy, agriculture, social development, introduction of advanced technologies, as well as environmental protection and nature management.

Therefore, the Ministry of Innovative Development has been designated as the body implementing a single state policy in the field of innovation and scientific and technological development of the Republic of Uzbekistan. The Ministry will be the sole

customer of state scientific and technical programs and projects, coordinate the activities of government agencies, research, information and analytical institutions and other organizations for the introduction of innovative ideas, developments and technologies.

It is worth noting the global trend towards the establishment of specialized agencies, conditionally called "ministries of the future", which develop modern approaches to development at the expense of innovative technologies.

The establishment of the Ministry of Innovative Development is aimed at ensuring the implementation of a unified state policy in the field of innovation and scientific and technological development. The new office will ensure the mobilization of available resources and funds through the rational use of budget funds for the implementation of innovative ideas, developments and technologies.

Ultimately, the innovative path of development of Uzbekistan should be a driving force of economic growth, a factor in ensuring the stability of the country and the well-being of the population.

Perfect infrastructure will be needed to move the economy on the path of innovative development. It should include many enterprises and organizations that can be conditionally divided into the following groups:

- bodies for management and coordination of innovative activities;
- innovative enterprises specializing in the introduction and development of innovations in a particular sector of the economy;
- service enterprises providing financial, expert-consulting, legal, patent, information, advertising, design, production, educational and other services to participants of innovative activities.

But creating any infrastructure takes a long time and a lot of money. Therefore, the next step should be carefully thought out to build the innovation infrastructure slowly, using the available resources of the country, on the basis of economically developed multifaceted scientific and innovative development forecasts.

If we pay attention to the analytical data, in accordance with the main indicators of innovation activity in the country, as a result of large-scale implementation of incentive programs, the volume of investments in innovation in economic sectors has been steadily increasing in recent years (Table 1).

The experience of developed countries shows that the use of budget funds in the form of direct investment in the creation and development of innovative infrastructure is appropriate. However, such investments should be made on the basis of public-private partnership, combining the resources of the state and the business community.

In recent years, special attention has been paid to the development of innovative activities in the country. Accordingly, the main indicators of innovation activity were analyzed on the basis of statistical reports of enterprises on the assessment of innovation activity in manufacturing enterprises and express assessment.

If we pay attention to the analytical data, as a result of improving the institutional framework of innovation activity in the country and the development of its incentive system, the motivation to increase innovation activity in enterprises is also changing (Table 2).

As can be seen from the data of Table 2, the comparative weight of the enterprise's innovative activity, i.e., enterprises implementing technological, organizational, and marketing innovations during the reporting period, in the total number of audited enterprises was 8.4 percent in 2017, and this indicator was 9.5 percent in 2021. The relative weight of innovative goods, works and services in total goods, works and services in industrial enterprises was 4.1% in 2017, and 6.3% in 2021. This, in turn, shows that

innovative goods are growing year by year, especially the demand for innovative goods is increasing.

Table 2

Key indicators of innovative activity in industrial enterprises, %¹

№	Indicators	Years				
		2017	2018	2019	2020	2021
1.	Innovative activity of the enterprise (the share of enterprises engaged in technological, organizational, marketing innovations in the total number of inspected enterprises during the reporting period)	8.4	8.5	8.6	9.1	9.5
2.	The share of enterprises implementing technological innovations in the total number of inspected enterprises during the reporting period	6.5	6.8	6.8	7.5	7.8
3.	The share of innovative goods, works and services in total goods, work performed and services	4.1	4.5	4.6	5.8	6.3
4.	The share of expenditures on technological innovation in total goods, work performed and services	1.0	1,2	1,2	1.5	1.9
5.	The share of enterprises implementing organizational innovations in the total number of inspected enterprises during the reporting period	1.1	1,2	1.3	1.7	1.9
6.	The share of enterprises implementing marketing innovations in the total number of surveyed enterprises during the reporting period	2.2	2.3	2.3	2.5	2.5

Among the parts of the innovation infrastructure, innovative enterprises specializing in the development of scientific and technical achievements are of great importance. Therefore, when it comes to the mass introduction of innovations, such enterprises require the implementation of innovation policies that promote the emergence of networks.

But for businesses to succeed in innovation, especially on a global scale, it must meet a number of criteria. Innovative enterprises must have advanced achievements of scientific technology, qualified specialists and scientists with experience in implementation, as well as modern, scientific, experimental, engineering and production infrastructure.

Another important task of innovation is the creation of financial infrastructure, especially funds to finance innovative projects. At present, commercial banks do not finance long-term, radical innovation projects because banks and investors are concerned about the risks associated with innovation. In developed countries, this gap is filled by venture funds that finance innovation. Often mastering these only harms such funds, and at the expense of successful innovations they make a good profit for themselves.

¹ It was compiled by the author on the basis of the data obtained through express evaluation (selection) with the managers and experts of industrial enterprises of Samarkand region, as well as statistical reports of enterprises.

The organization, planning and management of innovative activities require adequate staffing. To do this, it is necessary to manage innovation activities and organize a system of training and retraining in the economy. It is necessary to involve the country's leading higher education institutions in this work.

Raising the profile of scientific, technical and innovative activities is another form of state support.

Public authorities should create conditions for the implementation of legal, advertising, information and consulting assistance to all participants in innovation activities in all areas, especially small and medium-sized scientific, technical and innovative enterprises.

Implementation of all forms of stimulation of innovative activity by the state, in turn, requires significant budget funds. But the experience of developed countries shows that the costs incurred to create the necessary conditions for such activities quickly pay for themselves.

It is necessary to take into account most of the factors capable of influencing economic activity from the implementation of innovative activities, which can be conditionally classified into the group of internal and external factors (Figure 2).

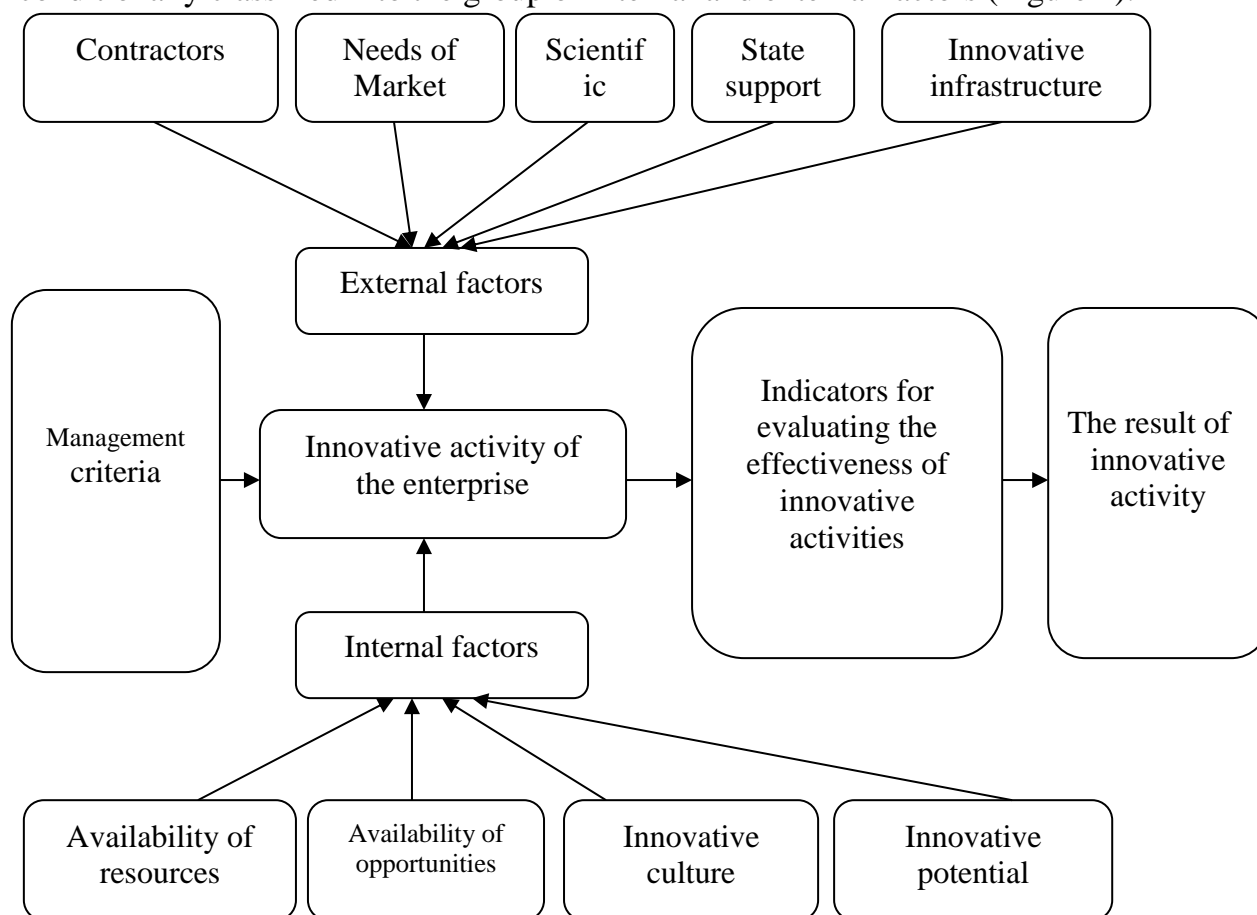


Figure 2. Factors influencing the innovative activity of the enterprise¹

In our opinion, the factors influencing the innovation processes of enterprises can be divided into two groups: internal and external factors. Therefore, the incoming information of the innovation management system of enterprises is:

¹It was compiled by the author on the improvement of mechanisms

- criteria for managing the innovative activities of enterprises, expressed in dimensional or logical size;
- analysis of statistical information based on the description of external factors affecting the innovative activity of the enterprise and the appropriate historical approach;
- analysis of statistical information based on the description of internal factors influencing the innovative activity of the enterprise and the appropriate historical approach;
- a set of changes describing the level of success of innovative development outcomes.

The innovation management system of the enterprise should take into account many factors that can affect economic activity, from the implementation of innovative activities, which can be conditionally classified into a group of internal and external factors (Figure 2).

The group of external factors influencing the innovative activity of the enterprise includes factors that are not able to be influenced by the management of the enterprise, only such factors can be monitored and analyzed. Such factors include:

- state of innovation infrastructure of the state;
- demand for products and services in local and global markets;
- indicators of the state of the scientific environment in the country and the quality of education;
- the formation of the relationship between supply and demand for innovations, inventions and innovative technologies created in the market of innovative developments.

The group of internal factors influencing the innovative activity of the enterprise includes factors that have the potential to influence the management of the enterprise. These factors include:

- timely implementation of innovative activities of the enterprise and the amount of funding;
- availability of material and technical base of the enterprise for the implementation of innovative activities;
- availability of qualified labor resources in enterprises for the implementation of innovative activities.

In our opinion, the risks that may occur in the implementation of innovative activities in industrial enterprises are:

- risks associated with ensuring its optimality in the selection of an innovative project;
- risks associated with the inability to provide adequate funding for innovative projects;
- marketing risks associated with the current supply of resources necessary for the implementation of an innovative project;
- marketing risks associated with the implementation of innovative project results;
- risks associated with non-performance of business contracts;
- risks associated with unforeseen expenses and declining revenues;
- risks associated with increased competition in the market;
- risks associated with securing ownership of an innovative project.

V. CONCLUSION/RECOMMENDATIONS

The above risks can be divided into two groups: the risks associated with increasing attention and the risks associated with the low level of implementation of innovative

projects. It is necessary to introduce innovation management tools to minimize the risks of this group in the implementation of the process of innovation management in industrial enterprises. They include:

- means of realization of innovative projects taking into account internal and external factors of innovative activity;
- tools for selecting promising projects for the introduction of innovative ideas;
- tools for optimizing the implementation of innovative projects in enterprises of high-capacity industries.

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