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Problems of Formation and Evolution of The Terminological Base of Innovation Activity

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Abstract: The article examines the essence of the concept of “innovation” and highlights the methodological aspects of innovation process management. In the near future, the competitiveness of any country's economy will be determined by the degree of participation of both the public and private sectors in the formation and development of the national innovation system. The key factor will be the selection of priority industries capable of ensuring sustainable growth of the global economy and acting as an engine for increasing productivity in various fields of activity. At the same time, it is important that government policy takes into account the interests of all sectors of the economy. Unilateral focus on the areas included in the structure of the sixth technological order will not lead to the desired results without the parallel spread of innovative approaches to other spheres of society.

Keywords: Innovation, innovative development, innovative sustainability, the evolutionary aspect of innovation theory.

Introduction:

At the current stage of the national economy’s development, the key condition for the successful implementation of large-scale reforms is the transition from a commodity-export-oriented model to an innovative, knowledge-based one [1,3]. In this context, the analysis and generalization of international practice in the field of clarifying and developing the conceptual framework related to innovation can significantly enrich both the scientific and applied level of integration development in this area. The task of systematizing and comprehending the already accumulated knowledge is of particular importance, since it allows for more efficient use of existing resources, the potential of which can be disclosed only within the framework of an integrated approach and a clearly structured algorithm of actions. An important place in this process is occupied by the analysis and elimination of obstacles hindering innovative development in order to minimize their negative impact [4]. To date, the conditions for creating universal and flexible models of best practices based on cluster methodology have not yet been fully formed, although this area has high potential and arouses considerable scientific interest. It is the desire to explore this aspect that has become decisive in choosing the goals and objectives of this study.

METHODOLOGY

The research work was based on scientific publications by foreign authors related to innovation management, as well as legislative and other regulatory documents. The data of scientific and practical events organized on this topic also played an important role in the formation of the methodological base. A systematic approach and methods of logical, comparative and statistical analysis were used to analyze and solve research problems.

RESULT AND DISCUSSION

Serious difficulties in the organization and methodological support of innovation management at all levels of the economy are largely due to the lack of a generally accepted approach to defining concepts such as “innovation”, “innovation”, “innovation” and “innovation”. The variety of interpretations of these terms makes it necessary to clarify and systematize them. In addition, there are still open questions regarding the development of a system for assessing and measuring the state, level and real effect of the implemented innovative changes [5]. Nevertheless, the

term “innovation” has long occupied a stable place in scientific discourse and is widely used in practice.

Initially, the word “innovation” appeared in the cultural sphere and denoted the process of transferring cultural elements from one environment to another. It was used to describe new phenomena in a language or a situation where a certain phenomenon characteristic of one cultural area penetrated into another and was perceived as something new in relation to already established traditions. In the modern understanding, innovations are interpreted as changes made to human activity in order to increase its effectiveness [1], or as the introduction of new or significantly improved products, processes, marketing approaches or business organization methods [6].

A study of the literature on innovation issues suggests that the word “innovation” is borrowed from the English innovation, which translates as “innovation”, “innovation” or “innovation” [2]. In turn, the roots of this term go back to the Latin word innovatio, meaning “renewal” or “change”. That is why three concepts are often used in the scientific community at once – “innovation”, “innovation” and “innovation”, each of which is interpreted in different ways. In the framework of this study, it is important to consider the different scientific views on the relationship of these terms. In practice, they are often used synonymously, however, as some authors emphasize, there are fundamental differences between them.

Thus, a team of researchers edited by K. V. Baldin defines “innovation” as a new phenomenon, invention, or mode of action. “Innovation” is interpreted as the process of introducing innovations into practical activities. As soon as an innovation begins to spread and be used, it acquires a new quality and turns into an innovation, that is, into an innovation [3].

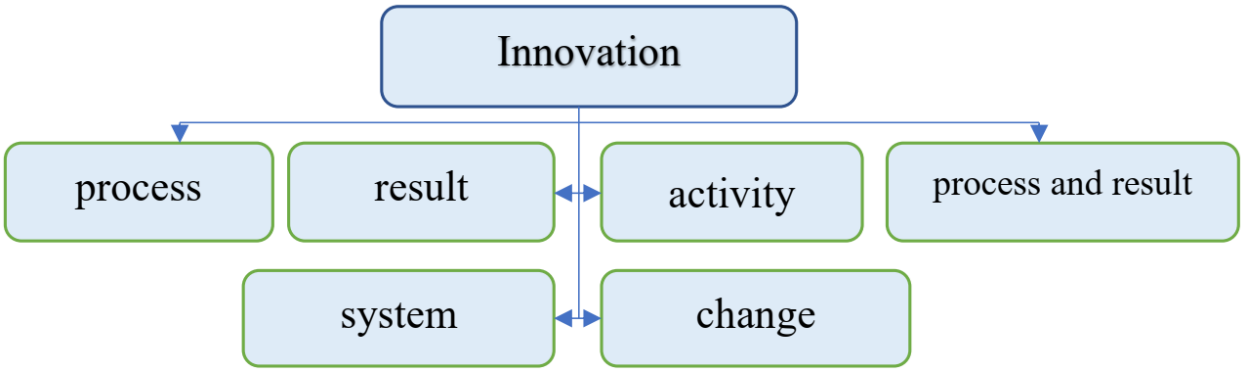
Similar difficulties are observed in the foreign scientific literature. For example, D. West and M. Bodgers point out that the use of the term “innovation” in the context of open innovation causes certain contradictions with the already established definitions adopted in the field of innovation management [7]. Scientists themselves interpret in different ways what exactly should be included in the concept of “innovation” [8]. In modern research on innovation management, attention can be focused on various aspects, from prerequisites [9] and processes [10] to final results [11]. In a number of works, the emphasis is not so much on the category of “innovation” itself, as on its connection with ideas [12], emerging problems [13] or knowledge [14].

In many scientific publications, innovation is equated with a technological achievement or technical invention. In this context, it is interpreted as the development of an idea undergoing the stages of commercialization, dissemination and implementation [15]. However, this approach creates the illusion that innovation can be measured solely by the number of patents. In practice, enterprises often use not only patented inventions as innovations, but also ideas, technologies, or even hidden forms of novelty [8].

One of the typical examples of confusion is the identification of knowledge with innovation, whereas in fact knowledge is the resources used in the development of innovations [16]. Knowledge itself is not an innovation, since successful commercial innovations are usually formed by creatively combining existing knowledge [17].

There are differences between the concepts of “innovation”, “innovation”, “innovation” and “innovation”. Innovation refers to such forms as discovery, invention, patent or know-how. A key stage in the development of an innovation is its commercial use. In other words, the introduction of an innovation means its transformation into an innovation, which implies the completion of the innovation process with the achievement of a positive result [4]. Thus, innovation can be considered as a potential innovation. However, without widespread market adoption and proven effectiveness, it cannot be considered an innovation. The insufficient degree of dissemination and lack of effectiveness make it possible to draw a clear distinction between the concepts of “innovation” and “innovation”.

After the differences in terms have been clarified, the next stage of the study is the analysis of existing definitions of the concept of “innovation” in the domestic and foreign scientific literature. It is necessary to identify common features and differences between the approaches of different scientific schools. A detailed list of all definitions of the term “innovation” can overload the text, as there are many interpretations and classifications. The main schools that have become the most widespread are shown in the figure below.



Variants of interpretation of the concept of "innovation"

After analyzing various interpretations, researcher E.V. Erokhina identified two main approaches to understanding innovation: as a process and as a result [5].

I.N. Polushkina and I.Y. Malyavina emphasize that two main concepts of understanding innovation are most widespread in the scientific community. The first interprets it as a continuous process of introducing new products, methods, ideas, and principles to replace outdated ones. This point of view is shared by such researchers as B. Santo, B. Twiss, F. Nixon and K.G. Galstyan. The second interpretation considers innovation as the end result of creative work, expressed in the form of a new product, technology, method, or technical solution. Among the supporters of this approach are A.E. Yakovlev, R.A. Fatkhutdinov, A.M. Medinsky and A.V. Plekhanov [6].

Depending on the subject and purpose of the research, innovations can be viewed from different perspectives - as a result, as a change, or as a process.

According to the opinion of the team of authors edited by A.I. Afonichkin, two leading approaches can also be identified in interpreting the key provisions of the theory of innovation. The first approach focuses on new factors, the second on new technologies or products [7]. The second approach is based on the scientific and technical paradigm, in which innovation is considered both as a process and as its outcome, which plays a significant role in the development of society.

Foreign researchers most often classify the concept of "innovation" in four main areas: as any change, as a result, as a process, or as a tool for achieving goals. In addition, E.V. Sibirskaya, O.A. Stroeva, and S.N. Martov identify six scientific schools in their research that interpret innovation as follows: as changes; as a result of scientific activity; as a process of generation, implementation and application of ideas; as a continuous activity, including the stages of creation, dissemination and practical application of innovations; as a movement from simple to more complex, that is, progress; as well as a set of these elements - change, result, process, activity and progress [18].

The authors note that sticking exclusively to one concept means ignoring the weighty advantages of other scientific approaches. It is impossible to establish the priority of one of the schools, since the scientific discussion on this issue remains open, and each of the points of view has the right to exist. In this regard, the most reasonable way to comprehensively analyze the category of "innovation" is to combine different views and approaches. To this end, it is advisable to identify the key contradictions between scientific schools, as well as to consider the strengths and weaknesses of their interpretations of the concept of "innovation".

One common approach is to understand innovation as a process. Most definitions boil down to the fact that innovation is a set of technical, industrial and commercial actions aimed at the practical application of ideas and inventions, as a result of which new or significantly improved products, technologies, production processes and equipment appear on the market, contributing to cost reduction or creating conditions for their optimization. From this combined interpretation, it can be concluded that innovation goes through certain stages of its development, which make up the so-called innovation process: from the origin of an idea to its implementation, dissemination and subsequent application. However, this presentation does not cover the causes of innovation, does not reveal the consequences of its implementation, and also does not sufficiently explain such important stages as diffusion and routine. Diffusion is understood as the spread of innovation and its multiple reproduction in various conditions, and routine is the integration of innovations into sustainably functioning elements of existing systems.

It should be emphasized that the innovation process differs from natural processes in its artificial nature - it is initiated and controlled, which makes it manageable. However, despite this, accurate prediction of its final results is often difficult due to the high degree of uncertainty and incompleteness of the initial data.

- Innovation as a result. Within the framework of this approach, innovation is interpreted as the final product of innovation, the purpose of which is to transform the

control object and achieve the desired effect in a specific field of application. This understanding allows us to classify innovations by type of innovation: they include logistical (product and technological), process, marketing, social, economic, organizational and managerial, and other types. However, the results-based approach has certain limitations. It does not cover the entire life cycle of innovation, as the process approach does, and does not take into account the possible risks that arise during the implementation phase. This can lead to an unsuccessful commercial launch and a rollback of the innovation to the innovation stage.

- Innovation as a process and result. In a number of scientific disciplines, including chemistry and physics, the opinion has been established that a result is impossible without the process that precedes it. Therefore, innovation can simultaneously be considered both as a path of transformation and as their outcome.

- Innovation as a change. In this view, innovation is understood as a conscious intervention aimed at transforming the environment in which innovation is introduced. Such an intervention ensures the transition of the system from one state to another, affecting its structure and functional elements. These changes, as a rule, contribute to achieving positive results and improving the functioning of the system as a whole.

At this stage of the study, it can be concluded that the earlier definitions of the term “innovation” only partially reflect its essential characteristics. At the same time, each of them has both advantages and certain limitations and contradictions. Nevertheless, it is possible to identify a number of features that are recognized by most representatives of various scientific schools. The first of these is traditionally considered to be novelty, the second is the presence of a positive effect, and the third is practical feasibility, that is, the possibility of introducing innovations into specific processes or fields of activity.

For a deep understanding of the importance and role of innovation in the modern economy, it is important to consider the evolution of approaches to this topic in the works of renowned economists. Of particular interest is the analysis of the classifications and typologies of innovations proposed by them.

An important contribution to the development of the economic theory of innovation was made by the Austrian economist Joseph Schumpeter, who outlined his ideas in his work “Theory of Economic Development”. He proposed one of the first comprehensive definitions of innovation in economics. Schumpeter noted that production activity is reduced to combining existing resources and forces, and creating something new means forming other combinations of these elements. By “new combinations” he meant the following categories: release of a previously unknown product or improvement of its qualities; the introduction of a new method of production or commercial use; entry into a new market; the development of new sources of raw materials or semi-finished products; as well as organizational changes aimed at gaining a monopoly position or undermining it from competitors [8].

In the 1920s, the economist N.D. Kondratiev introduced the theory of long economic cycles. In his work “Large Business Cycles and the theory of Foresight, “he demonstrated that industrial development is subject to a regular change of phases, thereby substantiating the idea of the existence of cycles of varying duration. Kondratiev identified three types: short-term (lasting about 3-3.5 years), medium-term commercial and industrial (from 7 to 11 years) and long-term, so-called “big” cycles lasting from 48 to 55 years. He identified empirical patterns accompanying protracted fluctuations in economic activity, and also established a link between the phases of boom and bust in large cycles and waves of technical discoveries and their implementation. According to his observations, before the start of the growth phase, and sometimes at its very beginning, there are serious shifts in key economic conditions.: production technologies, output volumes, money circulation are changing, and the influence of new states on the global economy is increasing [9]. In fact, we are talking about waves of technological and economic innovation.

According to Yu.V. Yakovets, the main provisions of J. Schumpeter’s innovation theory include the following ideas: innovation activity is considered as a central function of entrepreneurship; a distinction is made between innovation in the form of a product and a process, as well as between radical and improved, technological and economic forms of innovation; the role of innovation in the cyclical development of the economy and the need to overcome the resistance of the environment, arising from the inertia of existing systems [10].

G. Pisano believes that the main reason for the insufficient level of innovation in companies is the lack of a clearly formulated strategy in the field of innovation. He emphasizes that a strategy is not just a set of sequential and interrelated steps aimed at achieving a specific result. First of all, the strategy should serve as a unifying element for the team, determine priorities and guide the development of the enterprise. According to Pisano, most modern companies lack an integrated approach that combines innovation and business strategies. Without a clear innovation policy, organizations tend to only repeat the successful practices of others: create autonomous

NIOKR teams, stimulate initiative, enter into partnerships, introduce elements of open innovation, use crowdsourcing, etc. However, simply copying other people's models rarely gives the desired effect, since there are no universal solutions for all companies. Borrowing experience is useful, but relying solely on other people's mechanisms is a strategic mistake. Therefore, in order to ensure sustainable competitiveness, organizations need not to adapt other people's solutions, but to develop their own innovative strategies that meet their unique conditions and development goals [19].

At the level of the economy as a whole, the competitiveness of the state in the near future will depend on the active participation of both the private and public sectors in the creation and development of national innovation infrastructure. An important factor will be the competent selection of priority industries that can act as drivers of global economic growth and contribute to increased productivity in all areas of activity. However, at the same time, government policy should take into account the needs of all industries, and not just focus on the key areas of the sixth technological order. Without widespread dissemination of innovative ideas in various spheres of society, it will not be possible to achieve sustainable development and a large-scale effect.

CONCLUSION

Based on the above, the key advantages of the proposed methodological approach to innovative development can be identified. They are as follows:

- When developing strategies for regional innovative development, priority should be given to spatial and temporal aspects;
- When evaluating the effectiveness of implemented innovations, special emphasis should be placed on their qualitative characteristics, and not only on quantitative indicators.;
- The formation of an algorithm for the commercialization of the knowledge economy is possible only on the basis of a dual NIOKR model, in which the processes of creation, reproduction and consumption of an innovative product are clearly separated.;

A deep modernization of the system of program-oriented support of innovation activities in the country is required to ensure its compliance with international scientific and practical standards. This includes:

- combining process and performance indicators within a single system for comprehensive multifactorial analysis;
- promotion of marketing innovations as a priority over technological and organizational solutions.

Thus, only compliance with these principles and the active implementation of international experience in the innovation field will allow us to achieve tangible results in the development of the domestic economy.

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