

THE ROLE OF INNOVATION IN THE DEVELOPMENT OF ENTERPRISES

Mamajonova Odinaikhon Alisher kizi

Researcher Andijan Construction-Economic Institute

ABSTRACT

The article is to analyze the existing methods of assessing the innovation activity of the enterprise to choose a method and prove its advantages. The article reveals the problems faced by managers of enterprises that create systems for assessing the effectiveness of innovation activity. Considering the key principles of effective innovation management, the article emphasizes the principles of measurability and effectiveness of innovation. The main reasons for the creation of a system of indicators (metrics) that assess the effectiveness of innovation activity of the enterprise are revealed.

Keywords: innovation activity, efficiency of innovation activity, innovation metrics, methods of innovation efficiency assessment business models, globalization, innovation, radical innovation, innovation management

INTRODUCTION

Since 1911, when J. Schumpeter first used the term "innovative combinations in development that go beyond the limits of renewal in a closed circle"[22], interest in the category of "innovation" has not weakened. In modern foreign and domestic scientific literature we observe a large number of attempts related to the definition of the semantic content of this category. The authors have grouped all the variety of ideas about the concept of "innovation" in the following way.

According to a number of researchers, in particular V.A. Grachev, V. M. Kpecca [11], P. Doyle [5], G. Mayer, G. Hadutain [25], D. V. Sokolov [18], the term "innovation" should be considered as the result of the creative process in the form of creating new techniques, technologies, etc. Thus, D.V. Sokolov understands innovation as the final result of the creation and development (implementation) of a fundamentally new or modified means (innovation), which satisfies specific public needs and gives a number of effects (economic, scientific and technical, social, ecological).

According to the position of F. Valent, G.B. Skok, N.S. Nikitina [17], F. Haberland [24], N.I. Lapin [14], etc., innovation is a process of qualitative change, introduction of new products, techniques, technologies, formation of new relations about them, which have a complex nature. G.B. Skok and N.S. Nikitina define innovation as a process of introducing new things into the minds and activities of all participants of the innovation process, associated with the formation of their "innovative ability", and not only as the creation of a specific novelty. The definitions "invention" and "innovation" are the cornerstone of this approach. Economists traditionally emphasize the distinction between the concepts, which consists in the following, that an invention has little or even no economic significance if it is not applied. Therefore, innovation as a process carries more technical than economic meaning.

A synthetic approach to innovation as an outcome and as a process presented in studies of authors, in particular E.A. Utkin [21], A. A. Kuteinikov [13], A.G. Kruglikov [12], L.S.

Blyakhman [3]. E.A. Utkin believes that innovation is object, "introduced production as a result of scientific research or discovery, qualitatively different from qualitatively different from the previous analog". A.A. Kuteinikov defines innovation as a new way of satisfying the established social needs, giving an increase in useful effect, and, as a rule, based on achievements of science and technology". The category "innovation" as an integration of the result and process covers the entire cycle of transformation of scientific knowledge, ideas into innovation and in semantic content closer to the innovation process.

Under the latter we will understand a complex successive works from obtaining of purposeful new knowledge to the use of innovation, created on the basis of this new knowledge, by the consumer.

In our opinion, any innovation should be considered as a result. The latter presupposes the presence of a sufficiently pronounced social need, which is not fully or partially satisfied by both quantitative and qualitative parameters. In the conditions of resource constraints the ways of transition to the use of renewable resources are determined.

Innovation activity in Uzbekistan has not yet received that theoretical and practical development, which would contribute to the country's entry to a qualitatively new level of economic development, change the nature, volume and level of production in all spheres of national economy. In industrially developed countries the realization of innovation activity products accounts for more than 20% of the national income growth.

In our country at present there are no significant successes in the field of innovations, especially in the field of introduction of innovations in practical activity, and this leads to a steady lagging behind the technical and technological level of industrialized countries. Speaking about it, it is necessary to note the following negative phenomena:

- low share of radical, economically significant innovations;
- longer duration of development of innovations in production, leading to a shortening of their life cycle;
- few developments that have been widely spread in domestic and foreign markets.

The analysis of the process of emergence, development and dissemination of innovations within a particular organizational structure or on the scale of the state indicates the need to apply a systematic approach to determine the essence of innovation activity [6].

Let us emphasize the basic concepts used in the theory and practice of innovation process management. The problem of the lack of generally accepted terminology and classification in the field of innovation activity has been repeatedly raised in connection with the delay in the implementation of the Federal Law

"On innovation activities" Various definitions of the term are presented and given in the literature of yuiroko "innovation" and proposed a diverse typology of processes related to this phenomenon. For greater transparency, it is advisable to begin the discussion of the problem with the definition of basic concepts, and first of all, it is necessary to distinguish between the concepts of "innovation" and "innovation" [26].

The concept of "innovation", derived from the English invention, is usually defined as a new idea, which in the process of development can be realized in a new product, new technology, new method, etc. The concept of "innovation", in the English innovation, should be understood as a new or improved product or technology, created as a result of the use of

innovation and sold on the market or implemented in production, management or other activities [8].

In other words, technological innovation is the source of technological innovation, which acquires this quality from the moment it is accepted for distribution in the form of a new product. The process of such transformation is called innovation. In turn, the process of introducing the innovation to the market is called the process of commercialization. From the moment the innovation appears on the market, it becomes an innovation [9].

Innovation is commonly categorized into:

- product-related ones, which are related to changes in the
- technological, extending to production methods;
- non-technological, affecting social, organizational and economic forms of economic activity.

According to the Draft Federal Law "On Innovation Activity" innovation activity is a process aimed at translating the results of scientific research and development or other scientific and technical achievements into a new or improved product sold on the market, as well as into a new or improved technological process used in practice. The point is that innovation activities can be carried out by specialized research organizations as the main activity. research organizations as the main activity and represent the development of new products for sale (lease) on the market of innovative technologies. At the same time, the widest range of enterprises is engaged in the development of new technologies as an auxiliary direction for their use in the production of products.

The process of innovation diffusion is called technology diffusion [9]. The speed of diffusion depends mainly on the efficiency of technological innovation. Moreover, the greater the number of enterprises used the given innovation, the greater the losses of those enterprises that did not use it. Moreover, the earlier an enterprise starts to innovate, the faster (and cheaper) it will be able to catch up with the leaders. In this regard, there is a natural necessity to identify the reasons associated with the innovation activity of enterprises.

At present, the scale of innovative products output at the enterprises of the Uzbekistan industry is extremely insignificant, and the share of innovative enterprises is extremely small, which, in turn, corresponds neither to the scientific and technical potential of the country, nor to its needs in modern high quality and competitive products.

However, the goals pursued by Uzbekistan enterprises in the implementation of innovation activity are quite young and diverse, and each innovation-active enterprise, engaged in the implementation of innovations, pursues, as a rule, not one, but several goals. At the same time, the greatest attention is paid to the development of the product range and improvement of its quality, which indicates the predominance of market motivations in the behavior of enterprises in the course of innovation activity.

The development of organizations and enterprises occurs through the development of various innovations, which can affect all areas of the enterprise's activities. It should be noted that any sufficiently serious innovations, as a rule, require immediate changes in related areas, and sometimes a complex restructuring of organizational management structures.

Successful innovation management requires a thorough study of innovation. It is necessary to distinguish innovations from insignificant changes in products and technological processes (for example, aesthetic changes, color, shape, etc.); insignificant technical and external

changes in products that leave the design unchanged and do not have a sufficiently noticeable impact on the parameters, properties, cost of the product, as well as included in the product of materials and components; from the expansion of the product range by mastering the production of products not previously produced at this enterprise, but already known in the market in order to meet the current demand and increase the income of the enterprise.

The novelty of innovations is assessed by technological parameters as well as from a market perspective.

Innovation activity in modern conditions directly depends on the scientific and technical potential of the enterprise, including:

- scientific, technical and engineering personnel;
- material and technical base of scientific and technical activity, i.e. the totality of means of labor in the field of scientific research;
- information support - reports, publications, data banks, normative technical, design and technological documentation, samples of new products;
- system of organization and management of research and development work at the enterprise.

Scientific and technical potential of the enterprise acts as a component of innovation potential, i.e. the ability of the enterprise to develop on the basis of development and implementation of new products and technologies.

Innovations are conventionally divided into three categories based on the depth of changes introduced: basic, improving, integrating [7].

Basic innovations are a new fundamental scientific achievement that allows to create a new generation of goods, products and technologies. Basic innovations, as a rule, require significant research and development, involve the restructuring of a number of related industries, are associated with higher initial capital investments and are designed for the long term. They are implemented within the framework of the infrastructure, which includes, along with academic institutions and state scientific centers, production enterprises and associations.

Improving innovations imply the use of the results of scientific, technological, organizational or design work ordered to improve the characteristics (parameters) of goods (services) available on the market. They are carried out by sectoral design-technological and research institutes.

Integrating (complex) innovations are the product of using (integrating) the optimal set (complex) of previously accumulated and proven in the world practice achievements of knowledge, technologies, equipment. They provide the most effective investment in production. A distinctive feature of this type of innovation is that their emergence is initiated by the needs of the market and occurs by selection rather than by the development of scientific and technical means. The optimal organizational structure for integrative innovation activities is working groups led by scientists.

In the practice of international scientific and technical exchange, know-how is becoming increasingly important. In some cases, this name conceals inventions, the essence of which is sought to be kept secret, or their elements, secrets of technology, production, etc.

Recent studies show that in 2009 the share of know-how in the total volume of purchased information products increased to 67%. The explanation is simple: it is more profitable to acquire know-how than other licensing objects.

To account, analyze, plan and improve the efficiency of innovations, it is necessary to classify them scientifically substantiated. The authors summarized and presented the classification of forms of innovation applicable to the industrial enterprise (tab. 1.1) [26].

Table 1.1 Classification of forms of innovation for industrialized countries enterprises

Classification packages	Forms of innovation
By type of visibility on the market	New to the industry globally New for the industry in the country New for this enterprise
By place in system (on enterprise, organization)	Innovation at the input of the enterprise (changes in selection and use of raw materials, materials, equipment, information, etc.). Innovation at the output of the enterprise (products, services, technology, information, etc.). Innovations of the system structure of the enterprise (managerial, production, technological)
Depending on the depth of the changes being made	Radical (basic) Improvement Integrative (composite)
By field of activity of the enterprise	Technological Production Economic Economic Trade Social Innovations in management
By prevalence	Singular Diffusive
By place in the production cycle	Raw materials Enabling
By continuity	Substitutes Returning Returning Opening.
By coverage of expected market share	Local Systemic Strategic
By innovation potency and degrees of visibility	Radicals Combinatorial Convergent

There are two types of technological innovations in industry - product and process innovations. Product innovations include the use of new materials, semi-finished products and components; obtaining fundamentally new products. Process innovations mean new methods of production organization (new technologies) and can be associated with the creation of new organizational structures within the enterprise (organization).

Product innovation covers the introduction of technologically new or improved products. A technologically new product (radical product innovation) is a product whose technological characteristics (functional features, design, additional operations, as well as the composition of materials and components used) or intended use are fundamentally new or significantly different from similar previously produced products.

Such innovations may be based on fundamentally new technologies or on a combination of existing technologies in a new application (including the use of research and development).

A technologically improved product (incremental product innovation) is an existing product whose quality or cost characteristics have been significantly improved through the use of more efficient components and materials, partial changes in one or a number of technical subsystems (for complex products).

Process innovations include the development and implementation of technologically new or significantly improved production methods, including methods of product transfer. Such innovations are based on the use of new production equipment, new methods of organizing the production process or a combination of these, as well as on the use of research and development results. Such innovations are usually aimed at improving the efficiency of production or transfer of existing products, but are sometimes also intended to produce and deliver technologically new or improved products that cannot be produced or delivered using conventional production methods.

The following are not related to technological innovation in industry:

- aesthetic changes in products;
- insignificant technical or external changes in the product that leave its design unchanged and do not have a sufficiently noticeable impact on the parameters, properties, cost of the product and its materials and components;
- expansion of the product range by introducing into production the types of products (possibly non-core) not previously produced at the enterprise, but already known enough in the sales market in order to ensure immediate demand and income of the enterprise.

In service industries, a service whose characteristics or methods of use are fundamentally new or significantly (qualitatively) improved in technological terms is considered a technological innovation. The use of substantially improved methods of production or transfer of services is also a technological innovation. The latter covers changes in equipment or in the organization of production associated with the production or transfer of new and radically improved services that cannot be produced or transferred using existing production methods, or with increased efficiency in the production and transfer of existing services.

Changes are not technological innovations if they do not relate directly to the introduction of new or significantly improved services or methods of their production (transfer):

- organizational and management changes, including transition to advanced management methods, introduction of significantly changed organizational structures, implementation of new or significantly changed directions in the economic strategy of the enterprise;
- implementation of quality standards, e.g. ISO 9000.

Systematizing the above, we can consider innovation (innovation) as the result of a complex process consisting of creation, development, commercial use, and dissemination innovation,

that satisfies a specific social need. In the course of this process, the invention or idea acquires economic content, the innovation becomes a commodity and acts as an object on the market. The result of innovations, as a rule, is a rapid and significant increase in labor productivity. Technological innovations can have the same or even higher commercial effect as product innovations, with a high share of productivity gains due to process innovation. Since technological innovations provide a reduction in production costs and subsequently in prices, the greatest benefit from these innovations is received by producers who have a high market share of product sales. The most important prerequisite for accelerating the introduction of innovations and improving their scientific and technical level is the widespread use of mathematical modeling and modern computer technologies.

Thus, innovation is the result of purposeful qualitative change of the object, possessing the element of novelty, by the subject, focused on the satisfaction of a certain social need in conditions of limited resource opportunities. This definition to a greater extent reflects the economic content of the definition.

It follows from the given definition of "innovation" that a person (innovator) acts as a subject influencing the object, possessing the element of novelty, or more enlarged - the enterprise. The latter is characterized by the presence of external and internal environment, within which innovation changes are also possible. The main feature of the enterprise, as it was noted above, is its susceptibility to the impact of internal and external factors.

From the point of view of development management, innovation processes can also be divided into external and internal environments. External innovation processes are focused on changes in the market environment and scientific and technological progress. They inevitably change the de facto sustainability of the enterprise through changes in costs and the volume of consumer demand.

Internal innovation processes have a dual nature, pursuing one goal - to improve the efficiency of the enterprise. They can be caused by the reaction to external changes, as well as as the result of strategic search decisions.

The authors propose to define the concept of innovation as a category that reflects the reaction of the production system to external and internal influences that lead to a new level of system stability.

Regulation of innovation activity as a complex system is possible only through the allocation of its constituent elements and their consideration through the prism of various classification features. The authors propose to use the allocation of clusters within each classification feature for each constituent element of innovation activity. Classification, or cluster approach to the regulation of innovation activity consists in the classification of the constituent elements of innovation activity, their assessment and identification of the directions of regulation. The latter leads to an increase in the efficiency of utilization of a certain constituent element of innovation activity.

Allocation of clusters on components of innovation activity allows to reveal and differentiate interests of separate subjects on development of this element. Each of the classification features reflects the interests of different parties of innovation activity. The classifier of factors should reflect the principal features of innovation activity of the corporation.

In the study, the classification of innovations at the industrial enterprise, allowing to take into account the factor of time of realization of innovations in order to ensure their competitiveness.

Considering the directions of innovative development of the enterprise, the authors distinguish information, technical and technological, intellectual, spatial, commercial, financial, organizational, production innovations.

The activity of the enterprise is influenced by a number of factors, the reaction to which is the process of innovation implementation. According to the authors, the time factor acts as the main factor determining the effectiveness of innovation implementation. In this regard, it is proposed to expand the classification of innovations at the enterprise (Table 1.2).

Table 1.2 Classification of innovations by time factor

Classification feature	Parameter
Timeframe for realization of the effect of innovations	<ul style="list-style-type: none"> - past innovations - current innovations - deferred innovations
Effect planning period	<ul style="list-style-type: none"> - operational innovations - tactical innovations - strategic innovations
The nature of the effect	<ul style="list-style-type: none"> - delayed innovation - timely innovations cutting - edge innovation
Control option time of innovation	<ul style="list-style-type: none"> - coincidences - planned - forecasting
Effect on efficiency enterprise development	<ul style="list-style-type: none"> - negative - parallelism - synergistic
In terms of stability of manifestation effects	<ul style="list-style-type: none"> - unstable - displacement innovation - systemic

The proposed classification allows to build a system of innovation management in time, which ensures the manifestation of economic effect.

REFERENCES

1. Belomestnov V.G. Methodology for managing the potential of regional socio-economic systems. - St. Petersburg: Publishing House NPK ROST (Library of the journal "Problems of Modern Economics"), 2005.

2. Belomestnov V.G., Zubarev N.M. Formation of resource-innovation policy of economic entities as a factor in the growth of investment potential of complex socio-economic systems of the region. – Irkutsk, BGUEP Publishing House, 2003.
3. Blyakhman L.S. Economics, management organization and planning of scientific and technological progress. - M.: Higher School, 1991.
4. State industrial policy of Russia. Problems of formation and implementation. – M.: Publishing House of the Russian Federation Chamber of Commerce and Industry, 2003.
5. Doyle P. Management: strategy and tactics. - St. Petersburg: Petersburg Publishing House, 1999.
6. Innovative management / Proc. manual for universities Yu.P. Morozov. - M.: UNITY Publishing House, 2003.
7. Innovative management: Proc. for universities / R.A. Fatkhutdinov - M.: Petersburg Publishing House, 2003.
8. Innovative management: Proc. allowance / Ed. L.I. Ogolevoy. - M. Publishing House Infra-M, 2000.
9. Innovative management: Textbook for universities / Ed. S.D. Ilyenkova. - M, Publishing House Infra-M, 1997.
10. Kovalev S.G. The theory of transformational breakthrough development of Russia in a globalizing world: Textbook. manual - St. Petersburg: Publishing house of St. Petersburg State University of Economics and Economics, 2002.
11. Kress V.M., Grachev V.A. Legislative support of scientific and technological progress at the present stage // Economics and management. 1997. No. 1-2.
12. Kruglikov A.G. System analysis of scientific and technical innovations. - M.: Publishing house Nauka, 1997.
13. Kuteynikov A.A. Technological innovations in the US economy. M.: Progress Publishing House. 1990.
14. Lapin N.I. Current problems in innovation research. //Social factors of innovation in organizational systems. Proceedings of the conference - M., 1980.
15. Melekhin V.T., Bagiev G.L. Organization and planning of energy management. – St. Petersburg: Publishing house Energoatomizdat, 1988.
16. Sangadiev Z.G., Zubarev N.M., Belomestnov V.G. Strategic changes in the management of enterprises in the region. - Ulan-Ude: Publishing House of the All-Russian State Technical University, 1999.
17. Skok G.B. , Nikitina N.Sh. Quality of education at a higher technical university: status, trends: Layout of the annual report. - M.: Publishing house Research Center for Problems of Quality of Training of Specialists. 1998.
18. Sokolov D.V. , Shabanova M.M. Prerequisites for analysis and formation of innovation policy. - St. Petersburg: Publishing house GU-EF, 1997
19. Strategic plan for long-term socio-economic development of Ulan-Ude until 2020 / Belomestnov V.G. and others - Ulan-Ude, Publishing House of the Administration of Ulan-Ude, 2009.

20. Tatarin V.A., Shneerova G.V. Formation of a plan of organizational and technical measures based on the multi-objective optimization method // Improvement of the economic mechanism in the energy sector. - Grodno: GSU Publishing House, 1980.
21. Utkin E.A., Morozova N.I., Morozova G.I. Innovative management. - M.: Publishing house AKALIS, 1996.
22. Schumpeter J. Theory of economic development: A study of entrepreneurial profit, capital, credit, interest and the business cycle / Transl. from English V.S. Avtonomova and others; total ed. A.G. Mileikovsky. – M.: Progress Publishing House, 1982.
23. Yaremenko Yu.V. Economic conversations. - M.: Publishing house Center for Research and Statistics of Science, 1998.
24. Haberland F. Die Wirtschaft. Berlin. No. 10. 1980.
25. Maier H. Innovation, efficiency cycle and strategy implications. Vienna. 1978.
26. http://www.mirrrobot.com/work/work_70727.html Formation of methodological foundations for assessing and managing innovation activities at an industrial enterprise.