

# FEATURES OF INNOVATION MANAGEMENT AT MODERN ENTERPRISES

Vasyl Baldynyuk<sup>1</sup>

**Abstract.** The article is *aimed* at substantiating the peculiarities of managing the innovative activity of enterprises in modern conditions. *Methodology.* The article substantiates the importance of innovation activity and innovations for modern enterprises. The review of statistical data on sources of financing of innovation activity in Ukraine is carried out. The reasons that led to the actual state of innovation in the country are indicated. The main stages of innovation management at enterprises, shortcomings and the most pressing problems are determined. *Results.* Considering the issue of innovation management, it is worth noting that currently there is no country where economic competition for leadership in world markets would not be associated with innovation, the innovation impetus, to a greater extent, concerns Ukraine. As never before, Ukraine must be ready to use innovative chances, increase competitiveness in order not only not to suffer losses, but on the contrary – to take advantage of new opportunities associated with EU enlargement. Under such conditions it is necessary to increase the efficiency of production factors, develop new competitive advantages that should ensure successful integration into the European and world markets. *Practical implications.* Innovation activity involves the development and implementation of new products, goods, technologies, organizational and managerial innovations through the development and use of the innovative potential of the enterprise. That is, development based on innovations enables enterprises to keep up with the times. *Value/originality.* It should be noted that the process of managing the development of an enterprise on an innovative basis includes the processes of introducing and using new equipment, technologies, management, organizational and other types of innovations carried out through the coordination, organization, streamlining, regulation of innovation processes and innovation activities of the enterprise. All this is aimed at preserving, maintaining and strengthening the competitiveness of the enterprise as a whole.

**Key words:** management, innovative activity, management of innovative activity, innovation, management process, enterprise.

**JEL Classification:** M11, M21, O31

## 1. Introduction

In modern conditions, the main way to increase the competitiveness of industrial goods, maintain high rates of development and profitability of enterprises is the introduction of innovations. However, innovations are a source of development only under the condition of their active and effective use, as well as the creation of a favorable environment for their implementation. Thus, of particular importance is the strategic management of innovative development of corporate enterprises, which focuses production activities on the needs of consumers, allows for a more flexible response and timely changes, to achieve long-term competitive advantages. That is why the

strategy of innovative development of an enterprise can be defined as a set of actions and methods of innovative activities that provide competitive advantages through the development and implementation of innovations. The ability to create and use innovations today is recognized as the most important factor in the formation of competitive advantages of the company. The acceleration of innovation processes has contributed to the emergence of a new category of companies for which innovation is the main activity, which leads to an increase in competitive position. For these companies, innovation can be interpreted as a factor that precedes changes in the external environment.

<sup>1</sup> Vinnytsia National Agrarian University, Ukraine (*corresponding author*)  
E-mail: [baldynyuk@gmail.com](mailto:baldynyuk@gmail.com)  
ORCID: <https://orcid.org/0000-0001-9014-8866>



## 2. The essence of innovation processes management at the enterprise

The innovation process is the preparation and gradual implementation of innovative changes. The result of this process is innovation as a change that is implemented and used.

In general, the innovation process consists of three stages – preparatory, production and market, each of which contains separate stages.

The innovative activity of the enterprise is aimed at creating and attracting innovations from the external environment, which contribute to increasing its competitiveness, strengthening its position in the market and provide development prospects. However, the ability of different companies to attract innovation varies significantly, which is mainly due to existing resource constraints. Management of innovative activity of the enterprise should be carried out, on the one hand, taking into account the potential of innovative activity in the formation of competitive advantages, and on the other – taking into account the investment opportunities of the enterprise (Telenchuk, 2022).

Management of innovation activity is a component of the management of a modern enterprise, which includes planning, organization and stimulation of innovation activity, implementation of innovative projects aimed at gaining competitive advantages and strengthening the market position of the enterprise (Stadnyk, 2006).

According to the Law of Ukraine "On Priority Areas of Innovation Activity in Ukraine", innovation potential is considered as a set of scientific and technological, financial and economic, industrial, social, cultural and educational capabilities of the country (industry, region, enterprise, etc.) necessary to ensure innovative development (Law of Ukraine "On Priority Areas of Innovation Activity in Ukraine", 2003). At the same time, such a potential component as innovative culture, which characterizes the level of educational, general cultural and socio-psychological preparation of the individual and society as a whole for the perception and creative implementation of the idea of developing the country's economy on an innovative basis, is separately distinguished.

A high level of education and intellectual activity, a pronounced sense of self-esteem, initiative, independence and independence of views, inherent creative inspiration, high efficiency, interest in obtaining results, the ability to perform labor functions at the level of world standards are important for the implementation of innovative activities. The more creative tasks and intellectual functions are involved in the work, the more noticeably the role of intangible incentives in the process of innovation increases.

Management of innovative development of a business entity should be focused on achieving its goals (winning a larger market share, increasing profits in the current period or in the future, ensuring high rates of sustainable economic development, etc.) in a competitive environment, even when the goals of other enterprises may not coincide (and usually do not coincide) with their goals (Cherep, Oleynikova, Cherep, Tkachenko, 2012). This conflict of goals must be duly taken into account, and the goals outlined must be reconciled with the possibilities for achieving them.

In today's economy, the role of innovation has increased significantly. This is due to the fact that in a market economy innovation is a weapon of competition, as innovation leads to lower costs, lower prices, increased profits, the creation of new needs, the flow of money, to improve the image (rating) of the manufacturer of new products, to open and capture new markets, including foreign ones.

## 3. Features of innovation process management

The main fundamental principle of economic prosperity of any enterprise and the country as a whole is the constant implementation of innovative activities and creation of industrial property objects – the basis for the production of new competitive products, the introduction of new competitive technologies, providing super-profits.

The peculiarity of innovative activity is that it is an activity of increased risk compared to ordinary entrepreneurship (which is also carried out at one's own risk). This increased risk is due to the novelty, the creative nature of scientific and technical work, the possibility of obtaining both positive and negative results, so most entrepreneurs do not want to engage in innovation (Steblii, Tuvakova, 2016).

The peculiarity of innovation management is to ensure quality decision-making under conditions of uncertainty and risk. However, the successful implementation of this task in most cases is hindered by the creation of the necessary organizational structure, which is especially relevant for large enterprises. In this regard, it is advisable for the latter to pay attention to the flexibility and adaptability of small firms to constantly changing conditions (Tomashuk, 2020). In such cases, the efficiency of innovation management can be significantly improved by creating special units or structural units on a permanent or temporary basis, for example, such as an internal enterprise. Adaptation of the organizational structure of a large enterprise to the specifics of innovation activity will contribute to its efficiency and effectiveness.

The process of management of innovative activity involves the implementation of certain functions

Table 1

**The number of innovatively active enterprises by type of economic activity**

	The number of innovatively active enterprises, units		Share of innovation-active enterprises in the total number of enterprises, %	
	2016–2018	2018–2020	2016–2018	2018–2020
<b>Total</b>	<b>8173</b>	<b>2281</b>	<b>28,1</b>	<b>8,5</b>
Industry	4060	1550	29,5	12,9
Mining and quarrying	107	26	21,9	10,7
Processing industry	3626	1452	31,8	13,1
Supply of electricity, gas, steam and air conditioning	143	37	20,0	11,5
Water supply; sewerage, waste management	184	35	15,8	8,9
Transport, warehousing, postal and courier activities	568	133	15,5	3,6
Information and telecommunications	619	121	31,5	6,4
Financial and insurance activities	222	12	38,3	6,5

Source: formed according to the data of the State Statistics Service of Ukraine

related to the organization, planning, motivation, regulation and control of the implementation of innovation. To ensure the effectiveness of this process, domestic enterprises should create appropriate systems for the implementation of these functions, that is, it is necessary to pay special attention to the formation of an effective mechanism of innovation activity management, both in theory and in practice.

#### 4. Innovative activities of industrial enterprises

Effective management of innovative activities involves the implementation of the following basic steps:

- 1) determination of the most risky areas of the enterprise's activity;
- 2) use of various sources of innovative ideas;
- 3) determination of the quantitative goals to be achieved by the innovative project;
- 4) determination of the main stages of work on the implementation of the innovative project, while the transition to the next stage is impossible until the previous one is completed. Table 1 shows the

number of innovatively active enterprises in Ukraine by type of economic activity.

In practice, the investment activity of industrial enterprises decreases from year to year. For example, the share of the number of innovation-active industrial enterprises in 2017 was 16.2%. In 2019, 782 enterprises carried out innovative activity in industry. At the same time, the share of the number of industrial enterprises that implemented innovations (production and/or technological processes) in the total number of industrial enterprises was 15.8%.

Of the total number of innovatively active enterprises were: internal and external GDRs – 24.4%; purchase of machinery, equipment and software – 64.7%; acquisition of external knowledge – 4.5%; other work – 20.6% of enterprises. By types of economic activity, the largest shares of innovatively active enterprises are food production – 16.8%, machinery and equipment production, n.i.i.o.g. (not included in other groups) – 10,2%.

The dynamics of changes in the number of innovatively active enterprises in Ukraine is shown in Figure 1.



Figure 1. Number of innovatively active industrial enterprises in Ukraine (2010–2018), units

Source: formed according to the data of the State Statistics Service of Ukraine

Based on Figure 1, it can be concluded that in recent years there has been a significant decrease in the number of innovatively active industrial enterprises in Ukraine, which can be partially explained by the fact that part of the country's territory with industrial production has become beyond Ukraine's control and, in general, by the deterioration of the cyclical component of the industrial products market.

### 5. Financing of innovative activity

Development and implementation of innovations requires investment resources, which are necessary to finance research and development, initiation and implementation of production of innovative products, their implementation and improvement. Effective innovation activity is possible only if the optimal amount of investment resources is attracted. The conditions for attracting investments depend on the investment climate of the country, region and enterprise. Today, the pace of investment in the country is low, and the distribution of investments by regions and sectors of the economy of Ukraine is uneven. To a large extent, investment activity in Ukraine is constrained by low effective demand of the population.

The analysis of statistical data on the sources of financing of innovation activities showed that only

a small share of the costs of innovation activities is covered by the state budget (Table 2).

The innovative activity of industrial enterprises in Ukraine directly depends on the results of their economic activity, as the largest source of financing for innovations at industrial enterprises is their own funds, which in 2020 amounted to UAH 12,297.7 million.

General trends in the development of market economic systems show that the most effective is the activity of business entities that choose an innovative model of development. For successful management in modern economic conditions, strengthening the position of the enterprise in the market, it is important to constantly improve existing products, production technologies, methods of their implementation, introduce technical innovations, develop new products and bring them to market (Steblii, Tuvakova, 2016).

The enterprise, which relies on innovations, is forced to improve the production base (logistics, structure of the distribution network, system of goods movement) and restructure the organizational structure of management in order to find strategic ways to increase competitiveness. On this basis, the adaptability of the enterprise to the dynamics of the market environment is expanding. The direction (development) of innovation development should correspond to both the internal and external environment, which is determined by the market

Table 2

#### Sources of financing of innovative activity of industrial enterprises

Years	Expenditures on innovations, UAH mln	Including at the expense of			
		own funds of enterprises	state budget funds	funds of non-resident investors	funds from other sources
		UAH mln	UAH mln	UAH mln	UAH mln
2000	1757,1	1399,3	7,7	133,1	217,0
2001	1971,4	1654,0	55,8	58,5	203,1
2002	3013,8	2141,8	45,5	264,1	562,4
2003	3059,8	2148,4	93,0	130,0	688,4
2004	4534,6	3501,5	63,4	112,4	857,3
2005	5751,6	5045,4	28,1	157,9	520,2
2006	6160,0	5211,4	114,4	176,2	658,0
2007	10821,0	7969,7	144,8	321,8	2384,7
2008	11994,2	7264,0	336,9	115,4	4277,9
2009	7949,9	5169,4	127,0	1512,9	1140,6
2010	8045,5	4775,2	87,0	2411,4	771,9
2011	14333,9	7585,6	149,2	56,9	6542,2
2012	11480,6	7335,9	224,3	994,8	2925,6
2013	9562,6	6973,4	24,7	1253,2	1311,3
2014	7695,9	6540,3	344,1	138,7	672,8
2015	13813,7	13427,0	55,1	58,6	273,0
2016	23229,5	22036,0	179,0	23,4	991,1
2017	9117,5	7704,1	227,3	107,8	1078,3
2018	12180,1	10742,0	639,1	107,0	692,0
2019	14220,9	12474,9	556,5	42,5	1147,0
2020	14406,7	12297,7	279,5	125,3	1704,2

Source: formed according to the data of the State Statistics Service of Ukraine

Table 3

**Innovation expenditures of industrial enterprises**

Year	Expenditures on innovations, UAH mln	Among them			
		scientific research and development (GDR)	including		other innovation costs (excluding GDR)
			GDR performed by own forces	GDR performed by other enterprises	
UAH mln	UAH mln	UAH mln	UAH mln		
2010	8045,5	996,4	818,5	177,9	7049,1
2011	14333,9	1079,9	833,3	246,6	13254
2012	11480,6	1196,3	965,2	231,1	10284,3
2013	9562,6	1638,5	1312,1	326,4	7924,1
2014	7695,9	1754,6	1221,5	533,1	5941,3
2015	13813,7	2039,5	1834,1	205,4	11774,2
2016	23229,5	2457,8	2063,8	394,0	20771,7
2017	9117,5	2169,8	1941,3	228,5	6947,7
2018	12180,1	3208,8	2706,2	502,6	8971,3
2019	14220,9	2918,9	2449,9	469,0	11302,0
2020	14406,9	3486,3	2650,4	835,9	10920,6

Source: formed according to the data of the State Statistics Service of Ukraine

(market opportunities and threats), taking into account the pace of scientific and technological progress and is determined by changes in the micro and macro environment.

For an industrial enterprise, the technological and product innovations that have the greatest impact on its sustainable economic development can be divided into the following main categories:

- 1) innovations related to the method of manufacturing the product;
- 2) with a change in product characteristics;
- 3) with a change in the range of products.

Management of innovative activity is an integral part of the production and economic activity of the enterprise, which carries the impetus for development based on new approaches to solving ordinary production problems (Tychynsky, 2006). The optimal combination of production and innovation activities allows not only to constantly improve the production process and products, but also to act proactively, identify new promising areas or forms of business, diversify activities to meet new social needs.

## 6. Expenditures on innovation activities

In 2020, enterprises spent UAH 14,406.90 million on innovations, including UAH 10,185.11 million on the purchase of machinery, equipment and software, UAH 3,486.30 million on internal and external research and development, UAH 37.49 million on the acquisition of other external knowledge (acquisition of new technologies), and UAH 1,079.45 million on other work related to the creation and implementation of innovations (other costs) (Table 3) (Ministry of Economy of Ukraine, 2022).

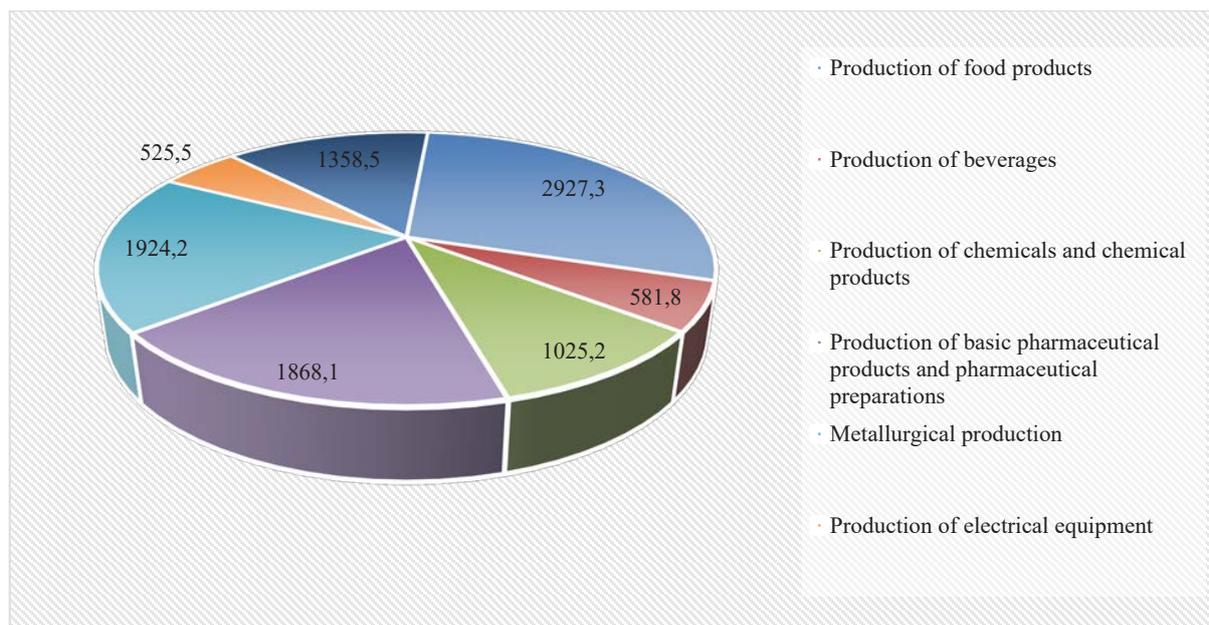
Consider the structure of expenditures on innovation by type of economic activity (Figure 2).

By types of economic activity, the largest amount of funds for innovation activities was spent by food production (2927.252 million UAH), metallurgical production (1924.217 million UAH), production of basic pharmaceutical products and pharmaceuticals (1868.092 million UAH).

## 7. Implementation of innovations at industrial enterprises

In 2020, the Ukrainian industry introduced 4066 units of new products, see Table 4.

Among the most important areas of innovative development of industrial enterprises should be highlighted further improvement of products in terms of integration into its characteristics of modern digital technologies related to the operation of products. Expanding the range of products with different price-quality ratio will also contribute to reaching a wider range of consumers (Kolomiets, Tomashuk, 2021). It is important to change the priorities of industrial production development in favor of those industries that are able to create high-tech products and move away from the raw material model of national economic development. The innovation policy of the enterprise should take into account the specifics of the industry to which it belongs, try to ensure the efficient use of available resources, build partnerships with all potential participants in the innovation process. At the same time, when making managerial decisions, it is important to determine the effects of the introduction of innovations in the areas of their formation (economic, technological, social, environmental). Among the promising directions of increasing the innovative potential of an industrial enterprise, it is necessary to note the need to develop teamwork methods among



**Figure 2. Structure of expenditures on innovation by types of economic activity**

Source: formed according to the data of the State Statistics Service of Ukraine

Table 4

**Implementation of innovations at industrial enterprises**

Year	Share of the number of industrial enterprises that implemented innovations (production and/or technological processes) in the total number of industrial enterprises, %	Number of types of innovative products (goods, services) introduced in the reporting year, total units	Among them		Share of the volume of sold innovative products (goods, services) in the total volume of sold products (goods, services) of industrial enterprises, %
			are new to the market	were sold machines and equipment	
2000	14,8	15323	-	631	9,4
2001	14,3	19484	-	610	6,8
2002	14,6	22847	-	520	7,0
2003	11,5	7416	-	710	5,6
2004	10,0	3978	-	769	5,8
2005	8,2	3152	-	657	6,5
2006	10,0	2408	-	786	6,7
2007	11,5	2526	881	881	6,7
2008	10,8	2446	840	758	5,9
2009	10,7	2685	719	641	4,8
2010	11,5	2408	606	663	3,8
2011	12,8	3238	900	897	3,8
2012	13,6	3403	672	942	3,3
2013	13,6	3138	640	809	3,3
2014	12,1	3661	540	1314	2,5
2015	15,2	3136	548	966	1,4
2016	16,6	4139	978	1305	... 4
2017	14,3	2387	477	751	0,7
2018	15,6	3843	968	920	0,8
2019	13,8	2148	418	760	1,3
2020 <sup>5</sup>	14,9	4066	691	647	1,9

Source: formed according to the data of the State Statistics Service of Ukraine

the staff, to improve the skills of those employees whose activities are related to innovative developments.

## 8. Conclusions

Thus, it can be stated that the innovative activity of the enterprise is the key to its effective functioning. However, innovation activity, like any other, requires systematic management through a mechanism that should be an element of the overall mechanism of strategic management of the enterprise. Innovation activity is one of the main components of the process of ensuring the successful functioning of enterprises. Therefore, modern economic conditions require intensive innovation activities, effective organization of research and development, implementation of innovations, reduction of innovation risks, strategic management of innovation activities of each enterprise.

Intensification of innovation activity of domestic enterprises will contribute to strengthening the competitive advantages of the industry both in domestic and foreign markets through the implementation of scientific and technical potential, which will be manifested in:

- 1) increasing the quality and, accordingly, competitiveness of products due to the use of new or modernized production methods;
- 2) capturing new markets and increasing the volume of product sales through the introduction of innovative technologies in the sales organization and positioning of goods on the market;
- 3) improving the financial results of enterprises due to the increase in cash receipts from the sale of innovative products;
- 4) optimization of business processes and rational use of the enterprise's production capacities by launching advanced innovative technologies.

Industrial enterprises in Ukraine are the main subjects of the market economy, and the competitiveness of the national economy as a whole depends on their competitiveness. Therefore, the introduction of innovations at industrial enterprises should be considered as a continuous process aimed at creating products and organizing production processes that are more efficient than their existing counterparts in the market environment.

## References:

- Bokovets, V. V. (2017). Improvement of management of innovation processes at modern enterprises. *Scientific Bulletin of Kherson State University. Series "Economic Sciences"*, 24, 1, 88–92.
- State Statistics Service of Ukraine. Retrieved August 08, 2022 from <http://www.ukrstat.gov.ua>
- State Statistics Service of Ukraine. Retrieved August 09, 2022 from [https://ukrstat.gov.ua/druk/publicat/kat\\_u/2020/zb/09/zb\\_nauka\\_2019.pdf](https://ukrstat.gov.ua/druk/publicat/kat_u/2020/zb/09/zb_nauka_2019.pdf)
- Kaletnik, G. M., Zabolotnyi, G. M., & Kozlovskiy, S. V. (2011). Innovative models of strategic economic potential management within contemporary economic systems. *Actual problems of the economy*, 118, 4, 3–11.
- Kolomiets, T. V., & Tomashuk, I. V. (2021). Entrepreneurship and development of rural areas in Ukraine. *Solloquium-journal*, 9(96), 3, 29–42.
- Law of Ukraine "On Priority Areas of Innovative Activity in Ukraine" dated January 16, 2003, № 433-IV [latest revision dated July 14, 2009]. Retrieved August 12, 2022 from [www.zakon.rada.gov.ua](http://www.zakon.rada.gov.ua)
- Ministry of Economy of Ukraine. Retrieved August 16, 2022 from <https://www.me.gov.ua/Documents/Detail?lang=uk-UA&id=69b9a9bf-5fbc-4035-8c0f-ac26b853c0eb&title=InformatsiniMaterialiSchodoStanuInnovatsiinoiDiialnosti>
- Stadnyk, V. V. (2006). *Innovative management*. Kyiv: Akademvydav.
- Steblii, G. Ya., & Tuvakova, N. V. (2016). The mechanism for improving the management of innovative activities of enterprises. *Economic analysis*, 15, 185–187.
- Telenchuk, V. S. Theoretical principles of management of innovative activity. Retrieved August 21, 2022 from <http://intkonf.org/telenchuk-vs-teoretichni-zasadi-upravlinnyainnovatsiynoyu-diyalnistyu-pidpriemstva/>
- Tychynsky, A. V. (2006). *Management of innovative activities of companies: modern approaches, algorithms, experience*. Taganrog: TRTU.
- Cherep, A. V., Oleynikova, L. G., Cherep, O. G., & Tkachenko, O. V. (2012). *Management of innovative development of enterprises based on reengineering: monograph*. Zaporizhzhia: Zaporizhzhia National University.
- Tomashuk, I. (2020). Features of formation and use of innovative potential of rural territories of Ukraine. *Slovak international scientific journal*, 46, 2, 27–42.
- Tomashuk, I. V., & Tomashuk, Ir. O. (2021). Enterprise development strategy: innovation and internal flexibility. *Solloquium-journal*, 3(90), 4, 51–66.

Received on: 5th of September, 2022

Accepted on: 10th of October, 2022

Published on: 31th of October, 2022