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# Activation of the innovative production process in the areas of economic activity

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## Abstract

It becomes clear that the implementation of innovative activities in the most important spheres of the national economy is necessary to ensure the maintenance of the country's competitiveness in the world market, tracing the global trends in the development of the components of public life and its dynamics. This is especially acute in areas such as information technology and the green economy, where innovation is a determining factor for success.

One of the factors hindering the activation of the innovation of the national economy is the personal disinterest of market elements and entrepreneurs in conducting innovative activities, caused by the lack of a standardized system for evaluating intellectual property objects and, as a result, the personal disinterest of entrepreneurs to invest in long-term innovative projects. World experience emphasizes the development of credit programs in the case of enterprise orientation towards the introduction of innovations, is not available for implementation in the Ukrainian realities.

**Key words:** innovation, national economy, innovative development, innovative activity.

## Introduction

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The activation of innovation is the main priority for the development of the national economy, since it can ensure the maintenance of Ukraine's competitiveness in the world market due to the increase in the efficiency of production and the activities of enterprises. One of the ways to ensure the competitiveness of the enterprise, is the basis of the country's economic growth and to ensure its financial independence, is the active production of innovations, which are components of the sustainable development of the national economy. The success of mastering innovative development mechanisms affects the future of Ukraine: will it become one of the developed countries, or will it continue to remain on the sidelines of socio-economic, scientific and technological progress.

The innovative development of the national economy is influenced by the activities of small enterprises that are able to adapt to the latest trends in a mobile manner and the increased

demand for new products and services. Small firms and enterprises initially use the so-called "breakthrough" technologies, accompanied by the introduction of new ideas and proposals and influencing the market, and only over time can they begin to be used by large enterprises.

The dynamics of innovation should be analysed based on statistical data of the real economy, which is the basis for economic phenomena, processes and trends at the national level. At the same time, one should not forget that most trends in the development of economic phenomena and processes, production and implementation of innovations arise at the global level in an open and highly competitive economy, creating difficult conditions for the survival and development of enterprises in all spheres of economic activity.

**The purpose of the article is** to study the dynamics of activation of the innovative production process in the areas of economic activity.

## Material and methods

Ukraine is one of the countries that declare the importance of introducing innovations to address the country's top-priority socio-economic problems. The current crisis demonstrates the futility of focusing on the export-raw material model of the development of the national economy. Overcoming the consequences of the crisis and the transition to sustainable growth depends on the effectiveness of the efforts made by all elements of the national economy in the context of increasing the level of innovation in the

economy, the implementation of creative ideas of the population, and diversification of the economy.

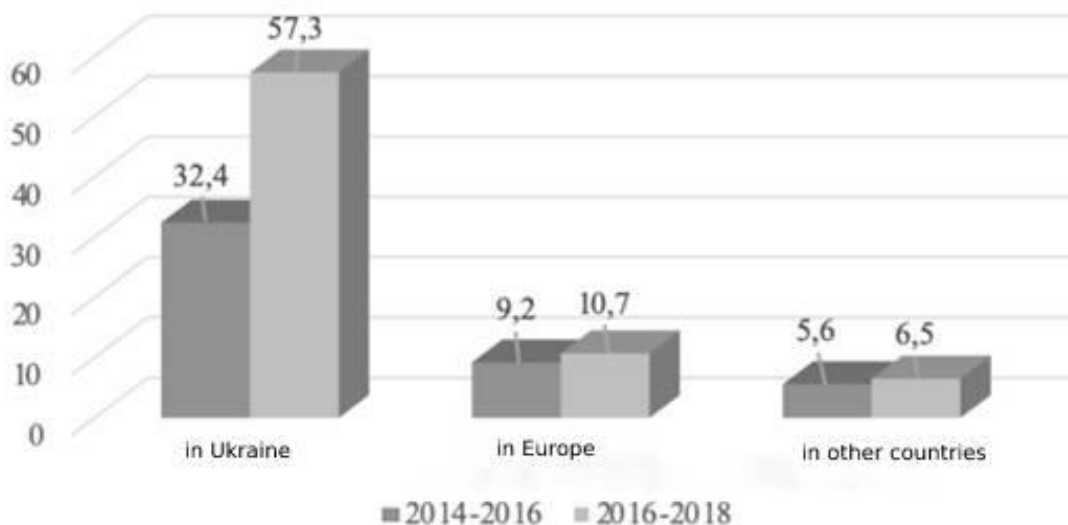
This topic has been studied by many domestic scientists and researchers, including: I. Shaidiuk, Ya. Mishchenko, O. Semeniuk, T. Polozova, O. Rudnytska, Yu. Diachkova, O. Babyna, M. Poplavskyi and others. In particular, the study of the state of innovation and global factors of influence on the national economy of the country was carried out by: T. Hrynko, M. Dzhaman, V. Husiev, A. Yakovlev.

## Results and discussion

At the international level, to determine the innovative ability and innovative readiness of the country's economy, an integral assessment of the state of development of the innovation system is often applicable. Thus, it is worthwhile to analyse the state of the innovative sector of the national economy, based on data from international ratings that assess the innovative potential, as well as the innovative and technical competitiveness of the country. The most influential are the Global Innovation Index, the Bloomberg Innovation Index, the Global Competitiveness Index, the Innovation Union Scoreboard, the Global Talent Competitiveness Index, Readiness for the Future of Production Assessment.

According to the six indicated ratings, the efficiency of innovation activity of the national economy in 2018-2019 decreased by 4 indices. At the same time, the Global Innovation Index and the Innovation Efficiency Index improved Ukraine's position for high indicators in terms of created knowledge, obtained patents and utility models in relation to GDP, spending on computer software, export of ICT services as a percentage of total trade (The state of innovation).

Based on this, it is important to assess the dynamics of the interest of enterprises in the implementation of innovative activities during 2012-2018 (Pic. 1).



Picture 1 – The share of the number of innovatively active enterprises involved in innovative cooperation

The vast majority of innovation partners are located in Ukraine. With regard to international cooperation, among the foreign enterprises with which domestic business entities cooperate, partners from the EU countries prevail. This trend towards cooperation is positive, since it provides an exchange of experience and potentially contributes to an increase in the innovative potential of elements of the national economy.

To conduct effective innovative activities, it is necessary to assess the results of the enterprise, types of production, innovative prospects, potential, informatization and the general acceptability of innovations for a business entity, in particular financial. Such innovative activity is effective, the effectiveness of which in the current conditions is maximum.

The innovative development of enterprises is a lever that can determine the effective vector of economic development, priority areas of activity, cost optimization, prospects for increasing market positions, improving product quality, ensuring competitiveness and, as a result, developing the national economy. However, the introduction of innovations is a long-term process that requires significant investments and is accompanied by the emergence of a system of risks. Therefore, market participants are often hesitant to innovate, leaning towards the use of time-tested techniques and technologies.

Along with this, the level of interest of enterprises in the implementation of innovative processes in the period 2012-2018. It is growing (Pic. 2): their share in the total number of surveyed enterprises increased from 4.6% to 28.1%, respectively.

This is due to scientific and technological progress, the rapid development of information technologies, and is an integral part of the introduction of any new technology or idea and influential factors of economic growth and job creation, the orientation of not only elements of the national economy, but also the population of Ukraine, to the so-called "green economy" and conservation of natural resources.

It should be noted the awareness and

activation of the processes of innovative activity of enterprises in various spheres of economic activity, as well as a significant increase in demand for the introduction of innovations during 2012-2018.

Along with an increase in the rate of development of technologies and an increase in the needs of the population, there is a need to implement innovations in all spheres of society, to ensure not only the sustainability of the development of society and enterprises, but also the constancy of the innovative development of the national economy as a whole. Innovation activity has an impact not only on high-tech, but also on more traditional areas of economic activity. Thus, the innovation process contributes to the growth of production and, as a result, to an increase in labour productivity and to the promotion of investment in the production sector.

Table 1 shows the indicators of innovative activity of enterprises by spheres of economic activity during 2012-2018.

Minor fluctuations in the total number of enterprises are accompanied by a significant increase in the number of innovatively active enterprises, which is due to the acceleration of technology development, the popularization of such post-industrial areas of economic activity as the IT industry, and is successfully integrating into the global market environment. The sector of information and communication technologies is a powerful sector of the national economy of Ukraine, which continues to develop and will increase its competitiveness in the future.

The industrial sector is also characterized by an increase in the level of innovative activity of enterprises. Despite the increase in the share of innovatively active enterprises, innovative processes in the field of industry are most often extensive and are implemented through the implementation of scientific and technical knowledge of the past. This type of innovation implementation is ineffective and will not allow maintaining the competitiveness of domestic enterprises. At the same time, there is an orientation towards the introduction of energy-saving technologies, in particular, the use of fundamentally new means and systems for

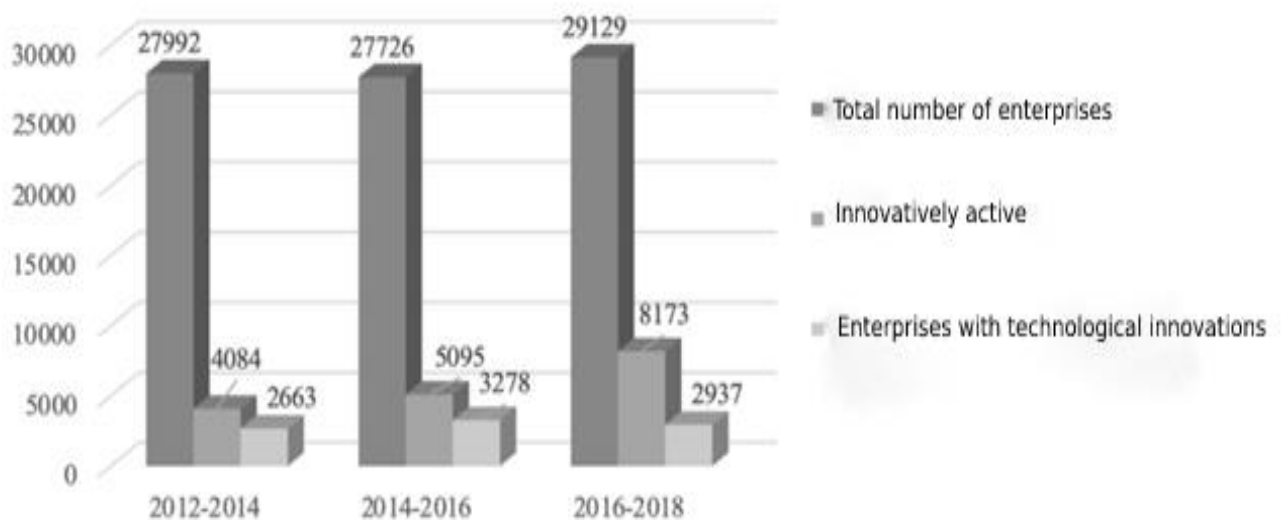
monitoring energy consumption.

Rapid innovative development can be traced in other industries as well. Thus, it is important to innovate technologies and means aimed at combating terrorism, modernizing military equipment and strengthening the country's security. In the service sector, innovation activity has intensified only in recent years, which is due to changes in developed countries, primarily in the EU countries. The analysis of the above data indicates the propensity of enterprises to provide services to non-technological innovations, while organizations are focused on scientific activity,

inclined to technological innovations.

An important factor in the implementation of innovative activities by enterprises is the size of the enterprise, in particular, a number of differences between large and small companies are highlighted by scientists, namely:

- speed of decision making;
- attitude to risk;
- resource allocation;
- understanding and managing the business model;
- difference in the understanding of innovation (Kolishchenko P.).



Picture 2 – Characteristics of the innovative activity of enterprises in Ukraine in 2012-2018

Let us consider the orientation of enterprises in industrial sectors and the provision of services in general, as well as the dependence of interest in carrying out innovative activities depending on the size of the subject of economic relations (Pic. 3).

During the study period, the average level of interest in conducting innovative activities of small enterprises is 17.3% in the field of industry and 16.3% in the provision of services, while for large enterprises the share of innovatively active enterprises is 44.4% and 32.7% respectively. There is also a regularity of the interest of small enterprises in conducting innovative activities aimed at non-technological improvements both in the provision of services and in the field of industry. The orientation of the introduction of innovative ideas and methods of effective

enterprise management by small enterprises is explained by a lower level of investment risk than the introduction of technical innovations. Since the technological innovation of production is accompanied by high risks of ineffective scientific and technological research at the initial stage of innovation implementation and, accordingly, ineffective spending of investments, such activities are often carried out by large enterprises and organizations for which such costs are acceptable.

At the same time, it is small businesses that are considered catalysts for innovation, which is due to a combination of advantages over large enterprises, namely: fast approbation of the proposals put forward; short duration of the innovation cycle; high labor motivation; low level

of indirect costs; direct personal contacts with partners. Also, such enterprises do not require significant investments and the attraction of

significant resources (energy, material, labor), have a high level of flexibility and efficiency in decision-making.

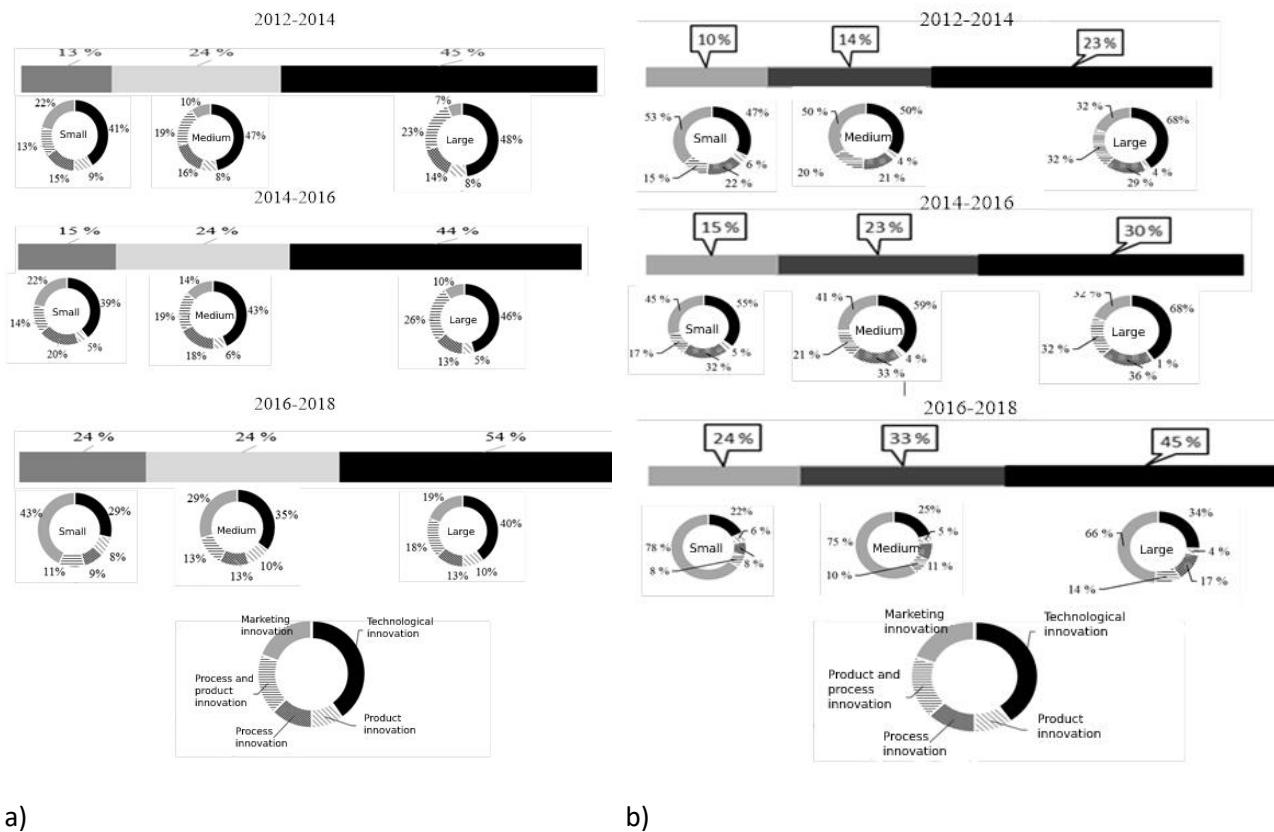
Table 1 – Innovative activity of enterprises by spheres of economic activity

	Number of enterprises			Including					
				innovatively active enterprises			of them		
							enterprises with technological (product and / or process) innovations		
	2012-2014	2014-2016	2016-2018	2012-2014	2014-2016	2016-2018	2012-2014	2014-2016	2016-2018
Industry	13529	12815	13762	2492	2598	4060	1888	1859	1985
Wholesale trade, except trade in motor vehicles and motorcycles	7592	6737	7216	850	1164	2174	308	597	332
Transport, warehousing, postal and courier activities	3646	3466	3655	267	336	568	160	208	144
Information and telecommunications	1517	1972	1963	287	435	619	186	258	196
Financial and insurance activities	...	696	580	...	151	222	...	86	67
Activities in the field of architecture and engineering; technical testing and research	1468	1208	1195	188	213	262	121	134	90
Research and development	...	364	305	...	118	114	...	103	87
Advertising and market research	...	468	453	...	80	154	...	33	36

Source: Compiled by the author based on (Statistical compilations 2012-2018)

Despite this, the need for innovative activity of large enterprises is explained by the need to maintain competitiveness and technological necessity. Large enterprises are able to

accumulate significant amounts of human and material resources, financial capital, as well as attract large-scale loans for the introduction of new technologies and processes.



Picture 3 – Innovative activity of enterprises by enterprise size  
a) in the field of industry; b) in the provision of services

## Conclusions

Effective innovative development of the national economy can be ensured by supporting the most important areas of economic activity, attracting and increasing the number of creative personnel and forming a strategy where the innovative activity of enterprises will be a continuous process of developing and implementing innovations, and not a separate event for the introduction of any type of innovation. As possible solutions to accelerate the further development of the innovation of the national economy, one can imagine:

- allocation of priority areas of innovation;
- development of mechanisms for strengthening cooperation between educational institutions, enterprises and the state, which will contribute to the generation of innovative ideas and technologies through the organic combination of the educational and scientific potential of the HEI with the market interests and resources of economic objects;
- improving the investment climate;
- direction to ensure cooperation between business and the state.

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