



THE MAIN MODELS OF INNOVATION AND INDUSTRY DEVELOPMENT IN THE REPUBLIC OF UZBEKISTAN

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Article history:	Abstract:
Received: January 8 th 2023	The article analyzes the development of innovation and industry in the Republic of Uzbekistan. The ways of introducing innovations into the industrial sector of the economy, as well as modern models of managing innovation processes in the context of globalization are also considered
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INTRODUCTION. The current stage of development of the economy of Uzbekistan is characterized by its stability. According to the State Statistics Committee of the Republic of Uzbekistan, the gross domestic product (GDP) of Uzbekistan increased by 5.7% in 2022, but the growth rate slowed down compared to 2021 (7.4%). The growth rate of industry in comparison with 2021 slowed down slightly to 5.2% (in 2021, the growth was 8.8%). The largest increase is noted in the electricity, gas, steam and air conditioning sectors by 12.7%. The volume of manufacturing production increased by 5.3%. In the extractive sector, there is a slowdown in growth rates from 10.8% in 2021 to 2.1% in 2022. Meanwhile, the production of consumer goods in 2022 significantly accelerated to 19.4% (in 2021 - 13.9%)

The service sector increased by 15.9% in 2022 (19.5% in 2021). Growth is observed in all spheres. Financial services grew at the highest rates in 2022 - 29.3%, communications and information services - 25.5%, education - 15.3%, accommodation and food - 14.7%, rental and rental - 12.2%, healthcare - 11.5%. In the transport sector, the volume of services provided increased by 12.4%, motor transport services - 6.5%, passenger turnover - 5.6%. Meanwhile, the growth rate in terms of cargo turnover slowed down from 11.8% in 2021 to 0.5% in 2022. The growth rate of retail turnover, on the contrary, accelerated from 12% in 2021. up to 12.3% in 2022 y.

The economy of Uzbekistan represents more than a hundred industries of different directions. And then the economy of Uzbekistan will maintain this course.

The program "Strategy for the development of New Uzbekistan for 2022-2026" proposed by the President of the country Sh. Mirziyoyev defined the strategy for the transition of the republic's economy to an innovative path of development [1].

RESEARCH METHODS. The article uses such methods as system analysis and synthesis, economic assessment of innovation, forecasting, expert assessment.

RESULTS. At the same time, problems remain in the development of industry that affect the stability of the dynamics of production growth and the competitiveness of products.

Thus, the preservation of a low level of efficiency in the use of fuel and energy resources in almost all sectors and spheres of the economy makes the implementation of an active resource-saving policy in demand.

The low level of processing of raw materials remains due to the lack of an associated technological chain for the production of finished products with high added value.

The problem of a high level of wear of machinery and equipment negatively affects the growth of competitiveness of production. So, in industry, the wear rate is 45.9%. The negative growth trend and the highest degree of wear and tear of machinery and equipment has developed at manufacturing enterprises – 50.5%.

The high level of wear of machinery and equipment causes the problem of low labor productivity. Labor productivity in Uzbekistan's industries is 3-4 times lower than in rapidly developing countries such as China, India, Brazil, etc.

The low level of inter-industry cooperation does not allow maximum involvement of internal resources for the development of industry. This leads to an extremely high level of consumption of imported goods.

There is a problem of high costs of entering foreign markets due to high transport and logistics costs. In turn, this is due to the underdevelopment of



the logistics infrastructure, which requires the construction of a unified logistics system, logistics centers in each region of the country.

The problem of quality assurance of many types of industrial goods also prevails. This is mainly due to the lack of uniform strict requirements and national quality standards. The non-compliance of many goods with the quality requirements imposed on foreign markets negatively affects the competitiveness of domestic goods and restricts their export.

Virtually all industries lack a base for their own engineering and R&D, respectively, and their own scientific developments and technologies. This is a limitation in the development of innovations in industry.

The share of low-tech industries prevails in the structure of industry (29.8%). Accordingly, the share of high-tech industries remains at a low level (1.2%).

The export-raw materials model of industrial development, based on the accelerated increase in fuel and raw materials exports, is losing its potential.

Discussion. The persistence of these problems in the future may pose a threat to the sustainable and balanced development of industry. In addition, these problems will increase under the influence of external risks that can weaken the factors and sources of industrial growth.

In particular, there is an increase in global competition, which covers not only traditional markets for goods, capital, technology and labor, but also public administration systems, innovation support and human development.

A new wave of technological changes is expected, which will strengthen the role of innovation in the development of all sectors of the economy and reduce the influence of many traditional growth factors. The lag in the development of new technologies of the latest generation can reduce the competitiveness of the national economy, as well as increase its vulnerability in the conditions of increasing geopolitical rivalry.

In the context of economic modernization, an innovative approach is required for the development of any sector of the economy, including industry. By general definition, innovation is the final result of innovative activity, which has been realized in the form of a new or improved product, a new or improved technological process being implemented on the market, used in practical activities. An innovation is considered implemented if it is implemented in the market or in production. Accordingly, there are two stages of technological innovation – product and process [4].

Product innovations are introduced into new or improved products. Process innovations are the

development of new or significant products, the organization of production. The production of such products is impossible with the use of existing equipment or applied production methods. Note the differences between the American and Japanese innovation systems: for example, in the USA 1/3 of all innovations belong to the process, and 2/3 to the productive, in Japan – the opposite ratio.

Innovation is closely related to scientific and technological progress, being its result. Therefore, NTP is an essential factor of production, provided by improving the means of production and technologies based on the discovery of new laws, phenomena and properties of the surrounding world by science, increasing labor productivity [3.].

In the process of studying the theoretical and methodological foundations of innovative development of industrial enterprises at the first stage, the main content of innovative activity of industrial enterprises and stages of its implementation.

We consider the innovative activity of industry as an activity aimed at finding and implementing innovations in order to:

- updating and expanding the product range, increasing its functional and operational capabilities;
- improving the quality or reducing the cost of production when using new raw materials;
- creating opportunities for the production of new products, improving product quality, increasing labor productivity by creating new and improving existing technologies;
- improvement of organizational structures to increase the efficiency of economic activity;
- the development of new markets to strengthen their positions in business. In the economic literature, the main categories associated with the concept of innovation are distinguished. These are scientific and technological progress, innovative process, innovative activity, innovative efficiency, etc.

Innovations are interconnected and mutually conditioned by the unity of economic interests, on which the efficiency of the use of material, financial, intellectual, scientific, technical and other resources necessary for the reproduction of a competitive economy depends [7].

Improving the competitiveness of the economy of the Republic of Uzbekistan is impossible without the innovative development of the industrial complex and the implementation of a policy of modernization and import substitution, which is especially important in the conditions of economic and political sanctions. Theoretical and methodological issues of the study of the state and trends in the development of the industrial



complex of the country are acute today. During the transition to market relations, the republic's industry experienced a drop in production, was exposed to many crises, then there was a certain rise, albeit with fluctuations. Industry as the leading branch of the economy of the Republic of Uzbekistan is the basis for expanded reproduction, economic development of the country, increasing its defense capability of the state and providing the population with consumer goods [5].

The purpose of industrial policy is to ensure the rise of domestic industry by increasing efficiency and competitiveness in foreign and domestic markets, as well as the innovative development of individual industries. For the development of the industrial complex, it is necessary not only to increase the innovative activity of its constituent industries and enterprises, but also to increase their susceptibility to technological innovations, through the use of strategic planning tools that increase the competitiveness and profitability of the studied complex [6.].

The transition of the domestic economy from an export-oriented raw material model to an innovative development model involves the activation of domestic enterprises in the development and implementation of new processes and products. In the process of innovative development, domestic industrial enterprises face not only the problem of generating ideas for creating new processes and products that are competitive in the market, but also the problems of introducing innovative ideas into the production process. At the same time, the stages of testing, certification and standardization of new processes and products play an important role in the innovative development of industrial enterprises. These stages in the life cycle of innovation play the role of a kind of "Rubicon", overcoming which allows innovation to move from the development stage to the stage of industrial use.

The implementation of the stages of testing, certification and standardization of new processes and products in industry is traditionally associated with the adoption of management decisions as a result of complex compromise tasks.

Firstly, the testing of new processes and products by industrial enterprises is often associated with the use of specialized testing and measuring equipment. On the one hand, for reasons of preserving intellectual property and the promptness of testing, enterprises tend to have their own testing and measuring equipment. On the other hand, for reasons of minimizing the costs associated with the acquisition and use of testing and measuring equipment, it is more profitable for enterprises to use the services of collective use centers

for testing and measuring equipment. But in this case, the company has a less informative database and lengthens the testing process.

Secondly, the standardization of innovative processes and products by industrial enterprises, on the one hand, requires an assessment of the degree of adaptation of the implemented innovations from the standpoint of existing standards, ensuring through unification the minimization of current costs. On the other hand, the introduction of innovative processes and products often requires a revision of existing standards and is associated either with amendments to regulatory documentation or with the development of new standards [2].

Thirdly, the certification of innovative processes and products by industrial enterprises, on the one hand, increases the amount of time and money spent on the implementation of procedures for confirming the compliance of implemented innovations with specified requirements, and, on the other hand, increases the confidence of manufacturers and consumers in the quality of innovative projects and products being created.

Thus, each of the components of the innovative development of industrial enterprises at the stage of testing, certification and standardization of innovative processes and products requires compromise decisions related to the rationalization of the use of all types of resources. In this regard, the improvement of the system for managing the parameters of the innovation life cycle at the stage of testing, certification and standardization, taking into account the specifics of the innovations themselves, the strengths and weaknesses of the organization, market opportunities and external threats, is an urgent scientific task of great national economic importance.

CONCLUSIONS. In conclusion, it can be noted that only the choice and implementation of a new industrial innovation strategy that ensures the explosive development of fundamental science, inventions, discoveries, know-how and non-natural technologies with the subsequent mobile deployment of innovation cycles for the implementation of world critical technologies and the organization of mass production of high-tech industrial products at the level of world standards can bring the Republic of Uzbekistan to a new round of stable economic growth and social progress.

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