



THE ROLE OF INNOVATION IN ENSURING ECONOMIC SECURITY

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ABSTRACT

The article explores the concepts of economic security and innovation, their content and essence from a scientific and theoretical point of view. Particular attention is paid to the study of the role of innovation in ensuring economic security of the country, in which a mathematical apparatus for econometric assessment of the impact of innovation on economic security has been developed.

Keywords: innovation, economic security, innovative activity, investment, innovative security, economic stability.

INTRODUCTION

The issue of economic security is a broad concept, in which the role of innovation in ensuring the development of the country is of particular importance. Today's period shows that the level of development of innovative activities is one of the most important factors in ensuring economic security. The issue of ensuring the economic security of the country is directly related to the implementation of the tasks set out in the Action Strategy[3] for the five priority areas of development of the Republic of Uzbekistan for 2017-2021. Also, in his Address to the Upper House on December 22, 2017, President Shavkat Mirziyoyev said: "Today we are moving on the path of innovative development aimed at radical renewal of all spheres of life of the state and society. This is not in vain, of course. Because who will win in today's fast-paced world? A state based on new ideas, new ideas and innovations will win," he said. The above situation today calls for further revitalization of scientific research on this topic.

It is obvious that the most pressing issues in the countries today are economic security and labor market competitiveness. These are directly related to new innovations. The country's economic stability is influenced by its introduction of innovations in the world market. Sometimes we say, "We've always done this before ...?" or "Are we doing everything traditionally?" such questions hinder new innovative ideas. Introducing new innovations is a complex process. However, innovation plays an important role in ensuring economic security.[4]

According to research, the term "innovative potential" was first used by K. Freeman[5]. Also, different authors differ on the interaction of economic potential with a category such as „innovative potential“.



According to some authors, the innovation process consists of 5 stages, which include inventory, innovation, innovation, diffusion, rutinization [6]. Thus, the concept of innovative potential includes the number of organizations engaged in various developments and research, productivity, efficiency, intellectual property, innovation specialists, scientists, staff, funding and material production base, scientific information, innovation and innovation activity information, scientific schools and their role in national, world science, and so on [7].

MATERIAL AND METHOD

It is well known that innovations in economic security serve to accelerate economic growth. In this regard, we consider it appropriate to pay special attention to the essence of innovation and its concepts. In particular, Article 3 of the Law of the Republic of Uzbekistan "On Innovative Activity" clearly states the following [1].

innovation - a new development that is included in the civil circulation or used for personal needs, the application of which in practice provides a large socio-economic effect.

Innovative infrastructure - a set of enterprises, organizations, institutions, their associations of any form of ownership, providing material, technical, financial, organizational and methodological, information, consulting and other aspects of innovative activity.

innovative project - a set of measures for the creation of new developments, including the implementation of deadlines, executors, sources of funding and the formation of appropriate infrastructure.

innovative activity - activity on the organization of new developments, and also maintenance of their carrying out and realization in the field of production;

State order for the creation of innovations - an assignment for the implementation of an innovative project at the expense of the State Budget of the Republic of Uzbekistan and other sources not prohibited by law.

technology transfer - a set of measures aimed at the transfer of a new development from the field of its production (production) to the field of practical application.

new development - the result of intellectual activity (new or sophisticated technology, service and organizational and technical solution).

It is known that basic innovations are based on scientific discoveries and major inventions that underlie new generations of technology. Basic innovations are the basis for the formation of a new technological system and note its structure. For example, the structure of the modern technological system 5, which dominates in developed countries, is determined by:

- Microelectronics, biotechnology and informatics (genetic core of the 5th technological system);
 - Flexible technologies and robotics, non-traditional energy, composites and ceramics, low-emission and waste-free environmentally friendly technologies, computers, telecommunications, Internet, completely new modes of transport, space technology and aquaculture.
 - Completely new types of technical systems and technologies in the field of services, medicine, education, science, non-manufacturing management, consumer radio electronics.
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Innovative activity, which is a targeted activity for the creation, mastering and marketing of product, technological and organizational-managerial innovations, plays an important role in ensuring economic security. Innovative activity is at the heart of state and enterprise innovation policy, as economic growth is a prerequisite for improving the living standards and quality of life of the population. In general, the pace of development of the national economy and the competitiveness of certain industries and enterprises depend on innovation activity.

At the macro level, innovation activity depends on the economic and scientific-technical potential of the country, the moral condition of society, its ability to express the national innovation doctrine, strategy of scientific and technological development, define directions and forms of innovation policy, direct resources to its implementation.

Innovative activity at the meso and micro levels depends on the choice of innovative strategy in the management of innovative activities, the flexibility of production systems, mobility in the use of resources.

Economic security depends in many respects on the innovative policy aimed at the implementation of the interests of the state, national capital and the national community in the creation, mastering and marketing of scientific, technological and organizational-managerial innovations.

The objects of innovation policy are:

- Research and development
- innovative activity;
- scientific and technical innovations

The subjects of innovation policy are:

- executive power;
- legislative power;
- industrial and financial associations;
- scientific community
- public organizations and trade unions.

There are three types of understanding the essence of innovation policy:

- Systematic understanding - a means of realizing the function of science
 - Geopolitical understanding - a means to achieve strategic national goals (leadership in a particular area of the world, membership in a group of highly developed countries, dominance in the region);
 - economic understanding - a way to perform the function of science as a means of wealth production
- Economic security is closely linked with an innovative strategy, which is understood as the selection of the most effective directions and ways of technical and technological development based on:

- long-term forecasting;
 - Comparison of external and internal factors;
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- taking into account resource constraints.

The formation and implementation of innovation strategies are the most important conditions for the economic growth of the national economy as a whole, including regions and enterprises

There are six main types of innovation strategy in the economic literature:

- offensive innovation strategy (its goal is to gain market leadership; to achieve a high level of cost-effectiveness of innovations);
- Innovative strategy for protection (its purpose is to be very close to the leader, to accept his innovations and make certain modifications (changes) to them, to spend on innovations at a slightly lower cost than the leader);
- imitation innovation strategy means following the first two groups of leaders
- Subordinate innovation strategy (the purpose of which is to maintain itself by performing subcontract work for innovative enterprises, as well as by spending less on innovation);
- Traditional innovation strategy (its purpose is to ensure its survival through the use of conservative technologies, the cost of innovation is minimal);
- opportunistic innovation strategy (its purpose - to occupy space in the market; the cost of innovation stems from tactical considerations)

The innovation strategy can be applied either in a pure form, or in a mixed form in the country and in some enterprises. The choice of innovation strategy depends on the economic and scientific-technical potential of the country, its economic structure, existing traditions, national doctrine, including geopolitical orientation, prestige, etc.

Risks play a special role in innovation strategy.

Based on the assessment of the overall innovation risk and the analysis of innovative activities, it is advisable to carry out work to ensure its economic security in several stages.

Measurement of innovative risks

In the first stage, a list of possible reluctant options in the development of the final actions that the implementation of the Venture Project may lead to is compiled. The system of measuring some quantitative characteristics of the overall innovative risk requires an assessment of:

- current and predictable state of the economic environment;
- general innovative environment in the country, region, industry;
- state and sectoral risks (economic, fiscal-monetary and socio-political);
- factors that are difficult to predict as alternative values for different scenarios;
- the sustainability of the Venture Project in relation to possible changes in the economic situation.

Innovative risk analysis:

In the second stage, the initial rules, risk factors and the sum of combinations of these factors are determined (the possibility of implementing this set is taken into account in the next analysis) and the feasibility of these situations is determined.

In the third stage, indicators of the overall innovation risk of the Venture Project are selected.

Analysis of the development of risky events in the implementation of the venture project:

In the fourth stage, when the Venture Project is implemented for each initial situation, the analysis of the scenarios of the development of events, the development chain of accidents and the main features of innovative risk are identified.

Innovative risk management:

In the fifth stage, based on the results of the previous stages, methods will be developed to reduce the level of innovative risk acceptable for the venture project to an acceptable level and to manage innovative risks.

In each country, the cost of innovation is determined by the amount of capital investment. The closest to technological innovations are investments in the reconstruction of existing enterprises, the reconstruction of existing shops and facilities, which are associated with the improvement of production and increase its technical and economic level on the basis of scientific and technological progress.

The Decree of the President of the Republic of Uzbekistan dated May 7, 2018 No PP-3698 "On additional measures to improve the mechanisms of introduction of innovations in industry and the economy" serves as software for work in this area. At present, the socio-economic potential for the development of entrepreneurship in the regions of the Republic of Uzbekistan is not fully realized, which is especially important in the field of small business.

The development of entrepreneurship in local economic systems is beneficial for a number of reasons: it stimulates the structural structure of the economy, promptly returns investment, responds quickly to changes in consumer demand, and increases competition.

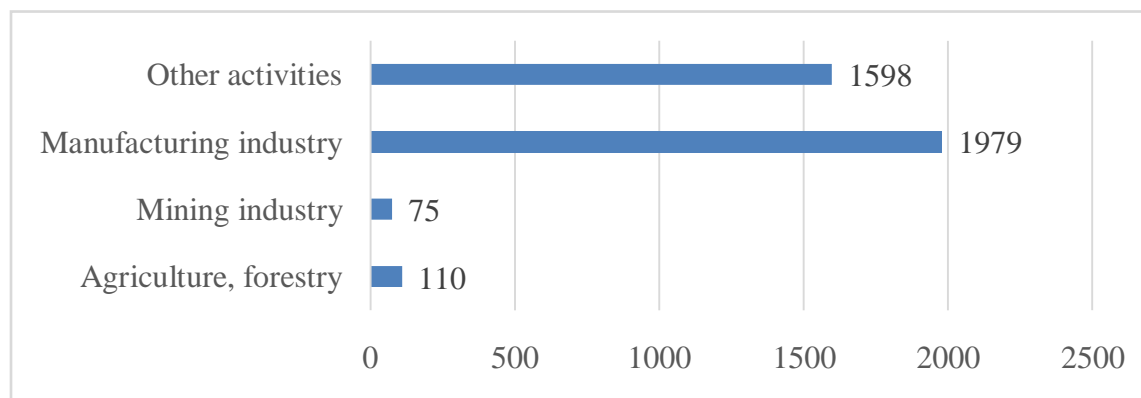


Figure 1. Innovative products in the Republic of Uzbekistan, small businesses producing products and services and the number of microfirms. (2019) [9]

The above diagram shows the dynamics of enterprises and organizations that produce innovative products, products and services in the country in recent years. In 2019, the number of small enterprises and micro-firms implementing innovative projects was 3,753, while the largest figure

was in the manufacturing industry - 1,979. According to 3,916 organizations, the most innovative achievements were in Tashkent, Navoi and Fergana regions.

We distinguish between different innovations, including technological, marketing, and organizational types. In 2019, the volume of innovations in the regions will reach 26293.8 billion. In Tashkent, the rate was 45.5 percent, and in Andijan region - 15.1 percent. In total, in 2019, the cost of technological, marketing and organizational innovations will reach 6603.5 billion soums. Of this amount, the organizations spent 3342.9 billion soums at their own expense. sum Due to foreign investments - 1083.7 billion soums, loans from commercial banks - 1060.1 billion soums, budget funds - 727.9 billion soums, extra-budgetary funds - 307.2 billion soums, other sources of financing - 81.8 billion soums. soums. In 2019, 4,689 innovations were implemented at one or more levels, of which 4,427 were technological, 128 marketing and 134 organizational. Of these, 3,544 are innovative product designs and 884 are innovative processing methods.

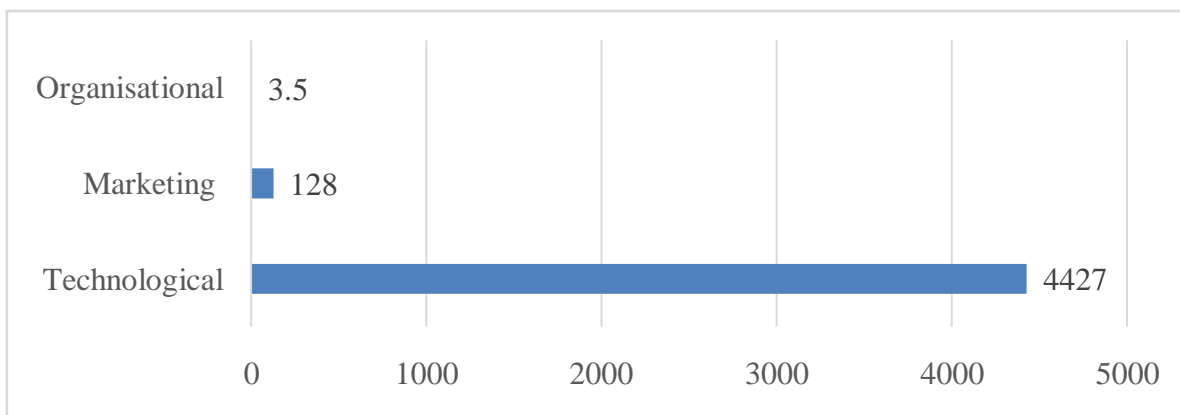


Figure 2. Expenditures on technological, marketing and organizational innovations in the Republic of Uzbekistan by sources of funding. (2019, billion soums) [9]

To be considered a novelty, a product or process must be innovative or significantly improved. Innovation involves bringing a new or improved product to market, which involves reworking existing ideas to develop a new product.

The results of a sample survey conducted in the country showed that the level of innovation impact of business entities is estimated at 17.8%, on average 42.1%, 21.5% and did not affect 18.7% of cases. The basis of standard monitoring is the organizations registered in the single register of subjects of the republic.

The total volume of R&D conducted by organizations of the Republic of Uzbekistan in 2019 amounted to 853.4 billion soums. soums. Of these, the public sector - 314.7 billion. soums, in



the sphere of entrepreneurship - 429.2 bln. soums, in the field of higher education - 106.7 bln. soums, private non-profit sector - 2.8 bln. soums.

The state budget for the volume of research and development work carried out by organizations is 724.6 billion soums. soums. Research and development activities amounted to 438.9 billion soums. Design and technological works - 91.8 billion soums, production of prototypes - 4.9 billion soums. soums, design works on construction - 50.4 bln. soums, scientific and technical services - 140.1 billion soums.

Total expenditures in science increased by 13.9% compared to previous years and amounted to 602.3 billion soums. soums, including 387.0 bln. soums in natural and technical sciences, -106.6 bln. soums in medical and agricultural sciences, -108.7 bln. soums in social sciences and humanities. soums.

Uzbek enterprises are currently at the stage of modernization and development of innovative activities. They cannot be fully implemented without attracting foreign investment. Large-scale innovative changes in enterprises are not possible without a constant flow of investment.

In the modern economy, more than half of all investments are directed to the reconstruction and technical re-equipment of existing enterprises. However, this level of cost is not sufficient to massively re-equip the production apparatus. Both investment activity and investment structure are related to the phases of innovation cycles (medium-term, long-term, very long-term). The wave of innovation reaches its peak in the recovery phase of the economy. However, in times of crisis and depression, innovation activity declines sharply. When a new technological system is created, the wave of innovation increases, especially during the transition to a new technological method of production, which is the material and technical base for future generations. Innovation cycles are intertwined with scientific and economic cycles. In the growth and stabilization phases of the economy, improving innovations that are associated with smaller capital investments and take into account smaller risks are of paramount importance. During this period, government support for innovation decreased.

Development of innovative priorities in ensuring economic security is based on:

- long-term economic and scientific-technical forecasts;
- registration of these priorities in innovative programs and normative documents;
- state support of priority-based innovations and state innovation programs implementing them;
- support of small innovative business;
- Creating a legal framework for innovation.

The role and importance of state innovation policy will increase in times of technological crises, the transition to a new technological system, ie when it is absolutely necessary to apply antitrust law in order to support basic innovations by the state and to prevent the impact of monopolies seeking to preserve old technology.

Due to the above, the following problems of the innovation sector are currently in the forefront in our country:



- Elimination of "non-transparency" of the innovation market, ie the elimination of informal methods of technology transfer, as well as the complexity of financial and legal relations;
- Development of communication channels that provide communication between the subjects of innovative processes;
- creation of specialized means of financing innovative projects.

The above problems cover the term "innovative market infrastructure". The term refers to a set of economic entities and mechanisms that cover the material and organizational support of effective cooperation between producers and consumers of science-based products in the creation of innovations, and the subsequent distribution of science-based products in the economy.

RESULTS

Based on the above, we consider it appropriate to allocate the following functional subsystems of innovation infrastructure to ensure economic security:

- financial - various types of funds (budget, venture, insurance, investment, as well as other financial institutions);
- production-technological (or material) - technoparks, investment-technological centers, business incubators, transfer centers, technology centers, etc.

Information-related - own data and knowledge bases and information retrieval centers, as well as analytical, statistical, information and similar centers (ie service organizations);

- personnel - educational institutions that train and retrain personnel in areas such as scientific and innovative management, technological audit, marketing;
- Expert-consulting - organizations providing services on intellectual property, standardization, certification, as well as consulting centers specializing in general and specific areas (finance, investment, marketing, management, etc.).

According to the study, large companies should focus on financing 15-20% of research currently conducted in the country. Therefore, the state innovation policy should give priority to the development of large companies and all other sectors. In this regard, the implementation of innovative activities and their effectiveness require the improvement of mechanisms of state support. As a result, the country's economic security will be ensured through the implementation of innovative policies.

DISCUSSION

Above, we have analyzed the interdependence of concepts such as innovation, innovation policy, innovation potential in ensuring economic security. In general, in today's globalization, the problem of economic security remains a priority, and the "urgency" of the problem is that the country that pursues an active policy of innovation "rapidly" is becoming one of the leading countries in the world.

It should be noted that the study of the impact of innovations on this problem, namely in ensuring economic security, has not been sufficiently studied in practice.



In some scientific articles, the potential for innovation has been studied separately from the concept of economic security [4,5], the concept of innovation is also limited to the scientific and theoretical aspects of the research work of most authors [6,7]. Therefore, the issue of economic security can not be studied separately without innovation, because the main issue of ensuring the development of the country is related to the development of innovation. This means that the revitalization of scientific research in the chosen field requires the study of foreign best practices in this area.

CONCLUSION

1. From the second half of the twentieth century, developed countries began to move from the industrial type of social reproduction to the innovative type. In an innovative economy, we can highlight three main aspects:

- There is a demand for innovations both in the national economy and in the world economy as a whole;
- market failures in the field of innovation require the government to regulate the innovation cycle;
- Human capital serves not only as a source of additional production, but also as a subject of innovative income.

2. Thus, the innovative economy is a new type of economic relations, which, according to foreign practice, requires the following conditions for its development:

- intellectual and technological potential to ensure the innovation process;
- increase in the number of participants involved in the innovative structure of new social groups;
- institutional system focused on innovative types of development;
- the need for innovation of most entities (businesses, individuals, the national innovation network in general).

3. Ensuring the economic security of the country requires the development of the intellectual property market. It is necessary to further improve the mechanisms of state support in creating a highly innovative system. It is the state, through legislation and legal norms, that determines the rules of the game in a market economy for the benefit of society as a whole, because business itself is not able to carry out structural reforms, eliminate imbalances, smooth economic and social differences.

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