

## THE TREND OF TRANSITION TO THE INNOVATIVE PATH OF THE ECONOMY OF UZBEKISTAN

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ABSTRACT	KEY WORDS
<p>The article substantiates the relevance of the role of the state in the formation of an innovative economy through close interaction between the state, scientific and educational institutions with the real sector of the economy. Based on the study of the experience of foreign countries, the mechanism and fundamental directions of state regulation of innovation activity are revealed. An analysis of the quantitative indicators of organizations and specialists performing R&amp;D in sectors of the economy and branches of science, as well as enterprises and organizations producing innovative goods, works, services, made it possible to show the trend of innovative development of the economy of Uzbekistan.</p>	<p>Uzbekistan, state policy, economy, innovation.</p>

### Introduction

In the first quarter of the XXI century the formation of a global market space is rapidly taking place, which intensifies international competition both for markets for strategic raw materials and markets for innovative products, technologies and services with a high degree of added value. Competition is also intensifying for advanced innovative, primarily digital, technologies and, as a result, the negative global trend continues to intensify - the shortage of foreign direct investment.

An open market dictates the need to improve product quality, reduce costs, attract new technologies, and promote market reforms. Consequently, the world economic system without a doubt recognizes the importance of innovation in the economic development of each country, as well as the indispensable role of state support, which is based on the individuality of the economic system. Since, each state, focused on the formation of an innovative economy, has its own innovative strategy and its own understanding of the methods for achieving it.

State support for innovation activity can be understood as a set of instruments and mechanisms of state policy adopted by public authorities within the framework of established legislation in order to create the necessary legal, economic and organizational conditions, as well as incentives for legal entities and individuals engaged in innovative activities.

However, as world experience shows, the goal of building an innovative economy cannot be achieved only through state support. Efficiency will be achieved only on the basis of close interaction between the state, scientific and educational institutions with the real sector of the economy. And here the role of the state should be limited to the use of special measures of state incentives: state guarantees, state orders, improvement of the regulatory framework, etc.

## Material and Methods

The article was prepared on the basis of studying the theoretical and methodological foundations for the formation of an innovative economy and the role of public administration in it. On the basis of a comparative analysis of statistical data of the State Committee of the Republic of Uzbekistan on Statistics, the trends in the development of an innovative economy in Uzbekistan are revealed.

## Results

During the years of independence, Uzbekistan has implemented large-scale reforms and comprehensive measures aimed at creating a modern diversified economy based on new technologies and market relations. Thanks to the consistent implementation of political, institutional and socio-economic reforms, the foundations of a rule-of-law state and a socially oriented market economy have been created in a historically short period of time. A significant economic, infrastructural, industrial, and social potential has been formed to further improve the quality of life of the country's population. However, in order to radically increase the effectiveness of the ongoing reforms, create conditions for ensuring the comprehensive and accelerated development of the state and society, modernize the country and liberalize all spheres of life, Decree of the President of the Republic of Uzbekistan dated February 7, 2017 UP-4947 "On the Strategy for Action on further development of the Republic of Uzbekistan". The Action Strategy for the five priority areas of development of the Republic of Uzbekistan in 2017-2021 (hereinafter referred to as the Action Strategy) was the most important program document that determined the priority areas of state policy for the medium term.

In the economic part of the Action Strategy, the priority tasks were the development and liberalization of the economy, aimed at further strengthening macroeconomic stability and maintaining high growth rates of the economy, increasing its competitiveness, modernizing and intensively developing agriculture, continuing institutional and structural reforms to reduce the presence of the state in economy, further strengthening the protection of the rights and the priority role of private property, stimulating the development of small businesses and private entrepreneurship, actively attracting foreign investment in the sectors of the economy and regions of the country by improving the investment climate.

In order to form an integrated approach to solving the tasks set in the Action Strategy, the Decree of the President of the Republic of Uzbekistan annually adopts State Programs, the tasks of which reflect all five priority areas for the development of Uzbekistan. Within the framework of the tasks set, one of the priority areas is assigned to the issues of the country's innovative development.

As noted by the President of the Republic of Uzbekistan Sh.M. Mirziyoyev: "We have set ourselves the goal of joining a number of developed countries and we can achieve it only by conducting accelerated reforms, relying on science, education and innovation." It is known that, in addition to state financial support for research and development, it is also important to create effective mechanisms for putting the results of scientific research into practice, in particular, the use of mechanisms for indirect support of all participants in this process. In this regard, in the State Program in the "Year of Support for Active Entrepreneurship, Innovative Ideas and Technologies" for the period until January 1, 2023, the following are exempted from paying all types of taxes and mandatory payments, with the exception of the unified social payment:

- emerging venture funds that co-finance high-tech entrepreneurial start-up projects;
- high-tech start-up projects co-financed from venture funds;

- research institutions, innovation centers, design bureaus on income received from the sale (transfer for use) of their own new technologies to entrepreneurs;
- organizations for the transfer of new technologies to domestic entrepreneurship in terms of income from this activity.

An analysis of the experience of some economically developed countries in the formation of state regulation of innovation activity allows us to conclude that the mechanisms of state regulation of innovation activity in most of them are approximately the same. Which are either characterized by direct participation in innovative companies, or by indirect support and development of innovative infrastructure. In some countries, the focus is on active state support directly for the developments themselves, and in some countries, tax incentives for developers of intellectual activity and many others come to the fore.

However, based on the results of the study to determine the role of the state in the formation of an innovative economy, it is important to conclude that the innovation process at all stages of development directly needs state regulation, in which the state acts as the main initiator and coordinator of the formation of an innovative economy.

State support for innovation activity is based on a set of instruments and mechanisms of state policy, thus forming a key role in creating the necessary infrastructure, without which innovation activity will not be full and effective.

It is important to emphasize that the state scientific, technical and innovation policy pursued in the country forms the basis of the country's innovation systems, which largely depends on such factors as the market orientation of scientific research and development, the system for training scientific and educational personnel, a favorable investment and business environment, and etc.

However, a comprehensive analysis of the main indicators of the development of scientific and technical potential and innovation in Uzbekistan, covering the total number of organizations performing research and development (R&D), the dynamics of changes in the number of research specialists involved in R&D by sectors of the economy and branches of science, enterprises and organization producing innovative goods, works, services, will allow characterizing the general trend of the country's transition to an innovative economy.

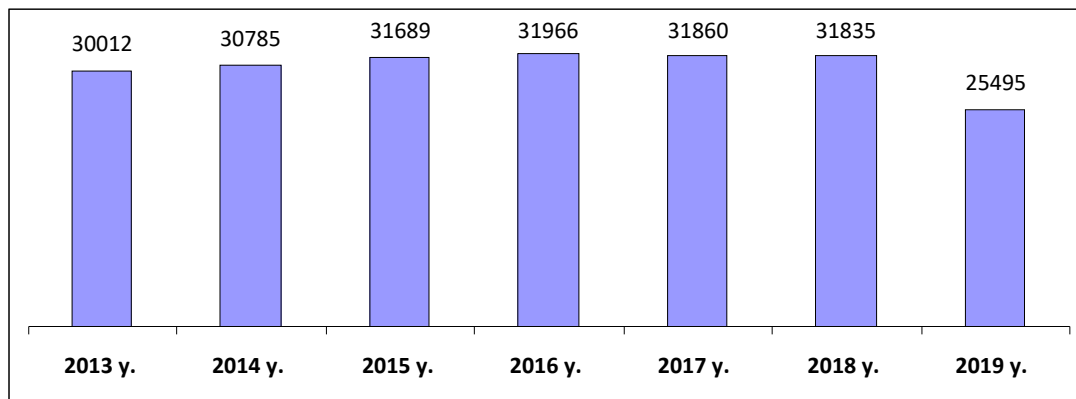
Thus, the analysis of the official statistical data of the State Committee of the Republic of Uzbekistan on Statistics indicates the action of 304 organizations performing R&D in 2019, which is a constant number since 2013, although phases of active growth of this indicator were observed during the analyzed period (Table-1).

**Table-1 Number of R&D organizations by sector in 2013-2019 (unit)<sup>1</sup>**

	2013 Y.	2014 Y.	2015 Y.	2016 Y.	2017 Y.	2018 Y.	2019 Y.
<b>Total</b>	<b>304</b>	<b>306</b>	<b>323</b>	<b>437</b>	<b>389</b>	<b>668</b>	<b>304</b>
including							
government sector	142	177	183	191	181	289	118
business sector	72	34	39	152	121	220	121
higher education sector	85	92	92	85	78	146	64
private non-profit sector	5	3	9	9	9	13	1

<sup>1</sup> Compiled by the authors on the basis of data from the State Committee of the Republic of Uzbekistan on statistics "Main indicators of the development of scientific and technical potential and innovations of the Republic of Uzbekistan" in 2013-2019.

Since 2017, there has been a steady decrease in the quantitative indicator of research specialists by industry, so if in 2013 30,012 people worked in science, then in 2019 their number was 25,495 people (or decreased by 4,517 people), a sharp decline in which is observed in 2019 (Figure-1).



**Picture 1. The number of research specialists, without part-time workers and working under civil law contracts in 2013-2019 (Human)**

In this regard, it is important to identify a decrease in the number of R&D specialists in sectors of the economy and branches of science, which will allow the state to take targeted measures in the near future to prevent the negative consequences of this trend (Table-2).

**Table 2 Distribution of research specialists by sectors and branches of science, without part-time jobs and working under civil law contracts by sector 2013-2019 (Human)<sup>2</sup>**

	2013 Y.	2014 Y.	2015 Y.	2016 Y.	2017 Y.	2018 Y.	2019 Y.	P.P.
by sector								
government sector	15,8	15,4	14,6	12,9	13,1	11,7	12,6	- 3,2
business sector	6,5	5,0	5,05	6,7	6,5	6,3	6,0	- 0,5
higher education sector	77,6	79,3	80,0	80,1	80,0	81,8	81,2	+ 3,6
private non-profit sector	0,2	0,3	0,4	0,3	0,4	0,2	0,1	- 0,1
by branches of science								
natural	22,7	23,6	23,8	26,2	24,5	28,1	28,5	+ 5,8
technical	19,2	19,3	18,9	16,0	18,0	16,5	16,5	- 2,7
medical	12,1	12,0	12,0	12,1	12,2	12,6	15,7	+ 3,6
agricultural	7,7	6,9	6,6	7,2	7,3	7,1	5,4	- 2,3
public	18,2	17,3	18,1	18,3	17,3	16,3	16,2	- 2,0
Humanities	20,1	20,9	20,7	20,2	20,6	19,4	17,6	- 2,5

One of the main results of innovation activity can be noted the growth trend of implemented innovations in the country. According to the statistics, the introduced innovations are divided into technological innovations, organizational and marketing innovations. Thus, for the analyzed period, a

<sup>2</sup> Compiled by the authors on the basis of data from the State Committee of the Republic of Uzbekistan on statistics "Main indicators of the development of scientific and technical potential and innovations of the Republic of Uzbekistan" in 2013-2019.

total of 15035 units were introduced. technological innovations, the trend of which from year to year had an increase, a sharp excess of which occurs in 2017-2019. which grew by 3165 units. (Figure-2).

Figure-2. Number of implemented technological innovations by organizations in sectors of the economy in 2013-2019 (units)

As the quantitative indicator of the implemented technological innovations grows, one can also note the steady growth of the organizations involved in the implementation of innovations (Figure-2). This indicator testifies to the created favorable conditions for the development of enterprises and organizations involved in innovation.

According to research by the World Bank Group, factors constraining productivity growth and employment growth in the manufacturing industry in Uzbekistan highlight the difficulties that are expressed with the search and purchase of technologies and innovations. And also, according to the results of the study, about 34% of small and 29% of large enterprises introduced the release of new products to the market of Uzbekistan in the period 2014-2016. However, at least 1/3 of the products of both large and small manufacturing enterprises in Uzbekistan potentially infringe intellectual property rights, as these “new” products were copied from competitors for free. Only 5 percent of the total innovation and technology adoption in large enterprises was the result of R&D by the enterprises themselves or research centers commissioned by the enterprises, and none of the large enterprises acquired patents or licenses.

About 3% of small enterprises acquired patents or licenses for products, and only 1% of small enterprises that introduced any innovations or mastered technologies independently engaged in R&D or ordered R&D from any research centers.

Competition for market share drives innovation at 65% of small businesses and 51% of large businesses. Reducing costs and improving the quality of products, design and packaging have been the main benefits of technology absorption and innovation in both large and small enterprises. However, small enterprises paid more attention to product quality, as well as design and packaging, while large enterprises paid more attention to saving costs on electricity, fuel and wages. Small businesses generally matched large businesses in introducing simple organizational and managerial innovations such as automated accounting or improved warehouse and sales management in 2016. Small enterprises had a higher capacity utilization rate (69%) than large enterprises (65%).

In 2016, large enterprises were more likely to replace old machinery and equipment than small enterprises, since small enterprises usually already have newer equipment. In addition, in 2016 a higher proportion of large enterprises replaced old equipment than in 2014, which is a positive trend. About three-quarters of large enterprises and just over half (56%) of small enterprises tried to find (or had incentives to look for) external markets to sell products in 2016.

## Discussion

Based on research conducted by the World Bank Group, proposals based on international experience have been developed, which propose to encourage innovation in products and in production processes (in enterprises, in government bodies, in research institutes and universities) through tax deductions or tax credits on research and development, remove barriers to product innovation, so that enterprises can expand the output of new products and create jobs, and increase government spending on research and development in product innovation.

In this regard, in our opinion, in addition to increasing government spending in the field of product innovation, it is necessary to pay parallel attention to both marketing innovations and process and organizational innovations, since they are very interconnected.

## Conclusion

Based on the study of the trend of transition to the innovative path of the national economy, it is important to note that state policy and innovation activity form a single system and are inseparable, since all interactions are based on the national interests of the state.

When determining the role of the state in the transition to an innovative path of economic development, an analysis of the experience of some foreign countries allows us to conclude that in most of them they are identical and are based on several fundamental areas:

1. Formation and constant support of regulatory and legal support: legislative consolidation of innovative development; creation of legislative bases for copyright and protection of intellectual property, legislative bases for encouraging authors of inventions that form the basis of innovations;
2. Financial support: direct financing: state budget expenditures; interest rate compensation on loans from commercial banks; indirect financing: tax breaks, preferences; tax exemption; gratuitous transfer of state property;
3. Organizational measures: formation of an innovative infrastructure; scientific and methodological support of innovative activity; staffing of innovation activities.
4. Creation of a favorable environment for the emergence of business entities of various forms of ownership (enterprises of various forms, innovation and investment funds, small investment business, etc.), incl. support for startups and venture projects. This implies the creation and preservation of a comfortable environment (primarily financial and economic conditions) for the growth of innovation activity, the development of venture capital and investment activity.

But, in view of the high risks and large capital costs, private organizations are not always ready for innovation. In this case, the state can stimulate entrepreneurs by providing additional benefits and subsidies, reducing taxes, customs duties; minimization of risks by issuing state guarantees, developing a system of insurance and reinsurance of projects against innovative risks.

5. Stimulating investment in fundamental research. Preservation and support of fundamental science, building up its production and technological potential.

## Literature

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