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Rano Nazarova

Tashkent State University of Economics
Doctor of Economics.,
Professor of Department of Industrial Economics,
+998946037539
tdiunazarova@mail.ru

Gulchekhra Nurullaeva Nigmatullaeva

Tashkent State University of Economics
Assistant of the department of Industrial Economics,

THE STRATEGY FOR SCIENTIFIC AND TECHNICAL COOPERATION IN UZBEKISTAN

Abstract: *The article defines the role and importance of scientific and technical cooperation, considers the ways of implementing the strategy in the scientific and technical development of the country, and also presents the share of innovative products in the global economy in a number of countries.*

Key words: *Innovation, Innovation policy, Scientific and technical progress, the development.*

Language: *English*

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Introduction

Scientific and technological progress, recognized around the world as the most important factor in economic development, is increasingly associated both with Western and Russian literature with the concept of the innovation process. This, as rightly pointed out by American economist James Bright, is a one-of-a-kind process that combines science, technology, economics, entrepreneurship and management. It consists in obtaining innovation and extends from the inception of an idea to its commercial implementation, thus covering the whole complex of relations: production, exchange, consumption [1].

The place and role of innovation policy in the structure of state regulation of the economy is determined by the features of the innovation process as an object of management. It is more than other elements of scientific and technical progress, associated with commodity-money relations, subsequent to all stages of its implementation. This circumstance is quite convincingly manifested in the

conditions of a regulated market economy of the capitalist countries. The bulk of innovative processes are implemented here by private companies of various levels and scales, and such processes act, of course, not as an independent goal, but as a means of better solving the production and commercial tasks of a company achieving high profitability.

At present, economists distinguish three groups of countries according to the degree of state intervention in the economy: in the first, the concept of the need for active state intervention in economic management (Japan and France) prevails; the second is characterized by a predominant emphasis on market relations (USA, UK); the third adheres to the “intermediate” option in economic, including innovation, politics: state regulation is combined with a low degree of centralization of the state apparatus, indirect methods of influence are used with a developed system of coordinating the interests of government and business [7].

A special place in the system of “direct” interventions of the state on innovative business

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occupy of activities that promote the cooperation of manufacturing corporations in the field of R&D and cooperation with industry, universities. The second of these forms of cooperation caused by the realization of the objective necessity, on the one hand, bringing advanced scientific ideas to the stage of commercial implementation, on the other - creating conditions for the interest of industry in funding academic research. In this direction of the state innovation policy clearly manifested its future orientation, interest in scientific innovation, industrial innovation, which often is secondary when implementing the interests of industrial companies that solve manufacturing and business problems [2].

The creation of consortia, engineering centers, science and technology parks and other promising groups that successfully implement complex innovative ideas is a good example of the effectiveness of state support for such ideas, thanks to which various organizations not only realize the need for joint implementation of the innovation cycle, but also really feel the benefits of working together.

Entrepreneurs implement innovative processes in order to obtain greater profits. The propensity to entrepreneurship in General, innovation in particular, is governed by the level of profit taxation. Illustrating this idea, Hungarian economist B. Santo gives the following dependence is taken into account by the Ministry of industry Sweden: "if the amount of income tax varies between 0 and 25%, the propensity to entrepreneurship is rapidly decreasing, if the tax reaches 50% of the profits, the propensity for innovation and related capital investments virtually disappears." The importance of this instrument of state regulation is recognized in almost all industrialized countries, and each of them seeks to find his optimal model of taxation of profits. In the US system of tax incentives for R & d exists since 1981, the Tax credit suggests the possibility of deducting R & d costs associated with the main industrial and commercial activities of the taxpayer, of the amount of taxable income [3].

With all the variety of forms and methods of stimulation of innovative activities by state bodies in all industrialized countries can be traced, however, something in common, allowing to define innovation policy as a specific element of the system of state regulation. So, there is a coherence of innovation policy with all types of state economic policy in General; this is reflected in the use of common economic instruments of state influence, corresponding to the chosen economic course. A characteristic feature of innovation policy is also a latitude effect: it is aimed to offer innovative ideas,

initiate the initial demand for the results of innovation processes, helps to attract the innovative business and financial-credit and information resources, creates an innovation-friendly economic and political climate. Finally, a common feature of innovation policy - the peculiarities of the innovative process: it is cyclical, ruggedness stage probabilistic nature, high risk, etc. [6].

National benchmarks of innovation policy manifest themselves in specific models used in different countries. It reflects the unevenness of economic development of the countries reflected in the field of innovation. As a result, there is a need to focus national efforts on the key areas of science and technology, in which the country can achieve a leading position in the global market. In particular, we distinguish American and Japanese models of innovation policy.

The American model has the most complete autonomy of entrepreneurship. The orientation of economic development by dedicating a special area in recent years is military technology, where the state invests and thus provides its technological priority. up to 50% [1].

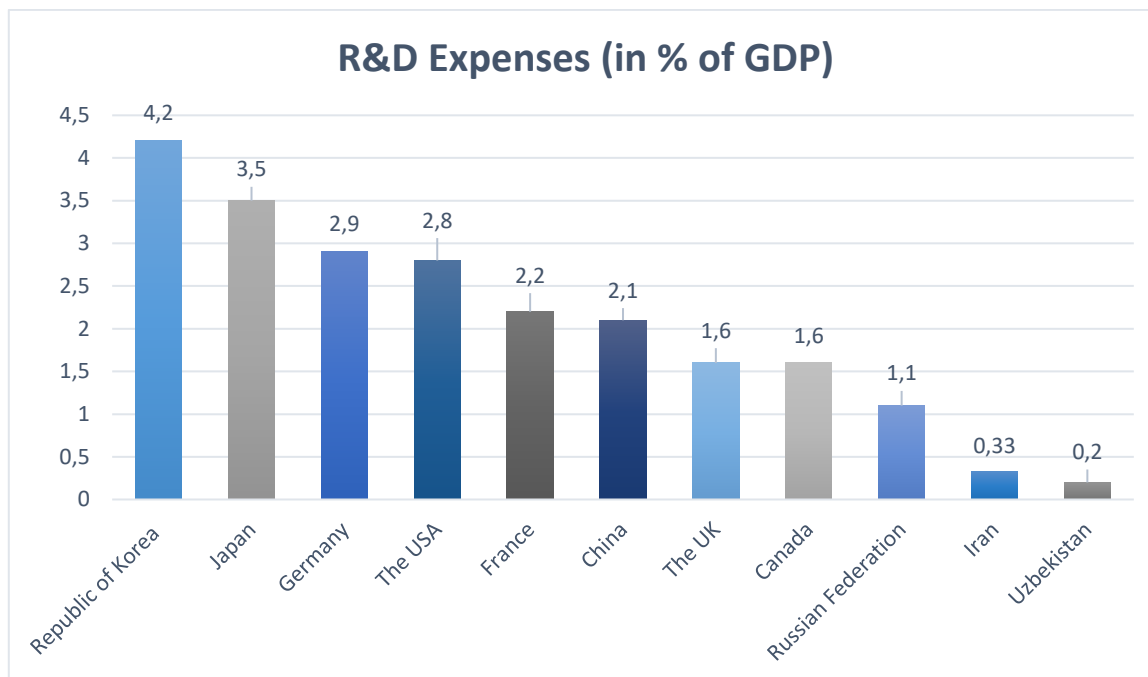
The Japanese model also involves the creation of process priority, but the emphasis is on a specific technology. Over the past 10 years, the technology of construction of large tankers has been replaced in the leading role of manufacturing technologies of robots. In other words, at the state level by the technological advantages that need to be achieved and supports their development, so that then translate into the new technology economy.

In the modern world economy, the share of innovative products by the amount of allocated funds is distributed as follows: USA - 39.2 percent, China - 21.2, Japan - 10.2, Great Britain - 7.8, Germany - 6.2, France - 6, Canada - 4, Russia - 2.9 and others account for 2.5 percent. The volume of general innovative products, for example, in the USA is 346 billion dollars, in China - 290 billion dollars, in the EU - 269 billion dollars. and in Russia - \$ 24 billion. R&D costs in the USA are 2.7 percent, in China 1.4, in Japan 3.3, and in South Korea about 6.5 percent (patents) relates to small business and innovative technology [9].

According to the UNESCO Institute for Statistics, in 2018, the cost of research and development in the Republic of Korea amounted to 4.2% of GDP, in Japan this figure is 3.5% of GDP, in Germany - 2.9%, in the USA - 2.8%, in France - 2.2%, in China - 2.1%, in the UK and Canada - 1.6%, in the Russian Federation - 1.1%. In developing countries, this trend is relatively small (picture 1).

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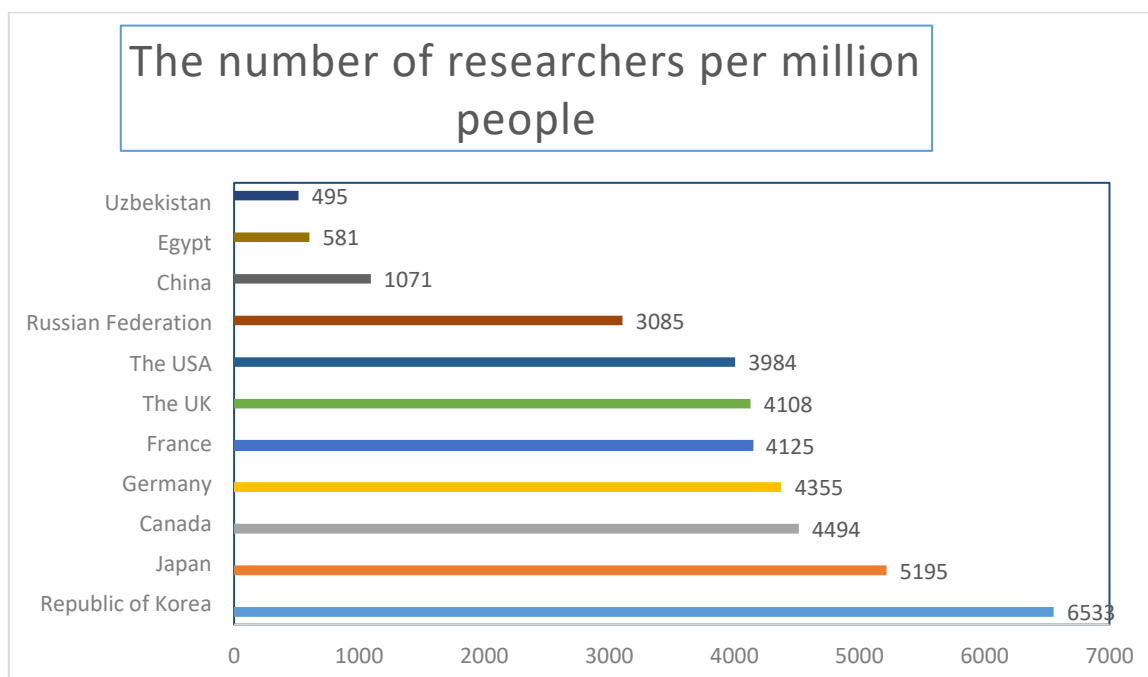
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Picture 1. R&D Expenses.

The number of researchers per million people also shows that developed countries are far ahead of developing ones. In particular, in the Republic of Korea there are 6,533 researchers per million people, in Japan - 5,195, in Canada - 4,494, in Germany -

4,355, in France - 4,125, in the UK - 4,108, in the United States of America - 3,984, in the Russian Federation - 3,085, in China - 1,071, in Egypt - 581 and in the Republic of Uzbekistan - 495. (picture 2) [10].



Picture 2. The number of researchers per million people

Of course, today in the era of the pursuit of innovation, as well as increased competition in all areas, the most important development factor is the

rejection of an ineffective past and the discovery of wider ways of developing innovation.

At the same time, I would like to quote the words of Steve Jobs - the founder of the world famous

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company Apple: "Innovation distinguishes a leader from a catch-up."

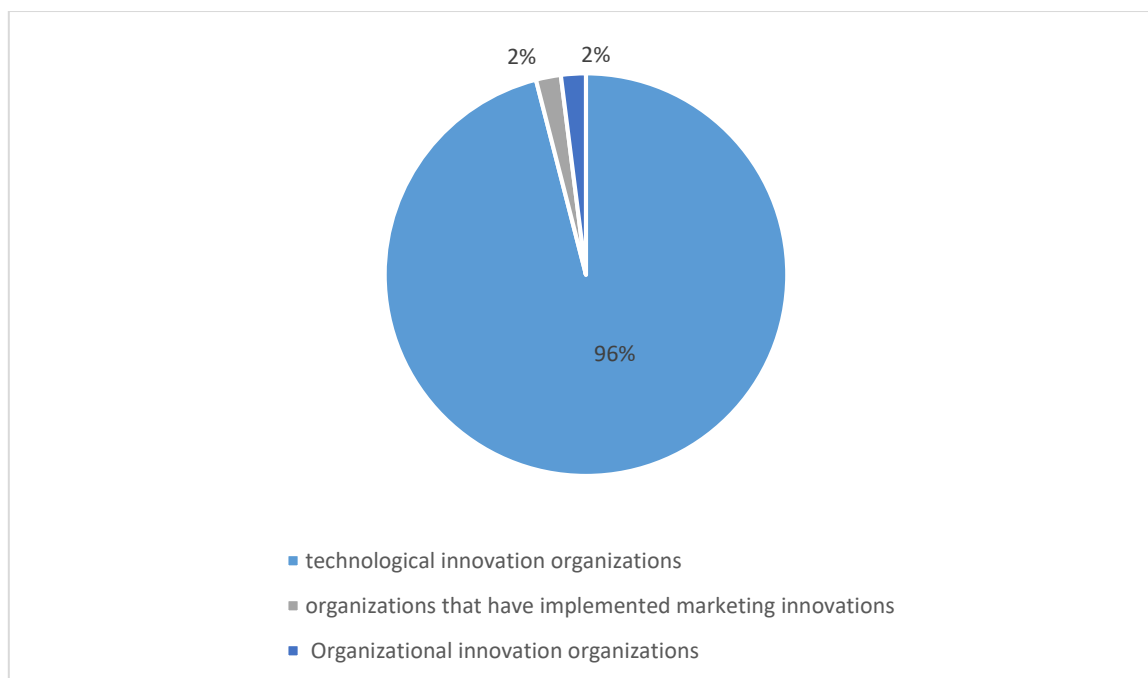
Today, Uzbekistan has everything necessary for the transition of a modern model of an innovative type of development, based on the expanded and effective use of the created scientific and technical potential, widespread implementation of the achievements of fundamental and applied science, high technology, an increase in the number of highly qualified gifted scientific personnel. The implementation of priority areas for the development of science and technology is carried out through state scientific and technical programs financed from the state budget.

No wonder today the head of our state insists on the rapid implementation of innovations in all areas of society. Indeed, innovation is an important factor in achieving a high level, such as in developed countries.

They allow you to take a worthy place in the world community.

Currently, the state, within the framework of the established priorities of the scientific and technical policy, will support the activities of an intersectoral nature in the creation, development and dissemination of equipment and technologies, which will lead to fundamental changes in the technological basis of the country and reduce the industrial impact on the environment.

In 2018, in the republic as a whole, 933 enterprises and organizations introduced innovations, most of them, namely 893 (96% of the total number of organizations), introduced technological activities in their activities, and the remaining 40 introduced marketing and organizational innovations (picture 3) [10].



Picture 3. Types of innovation organizations.

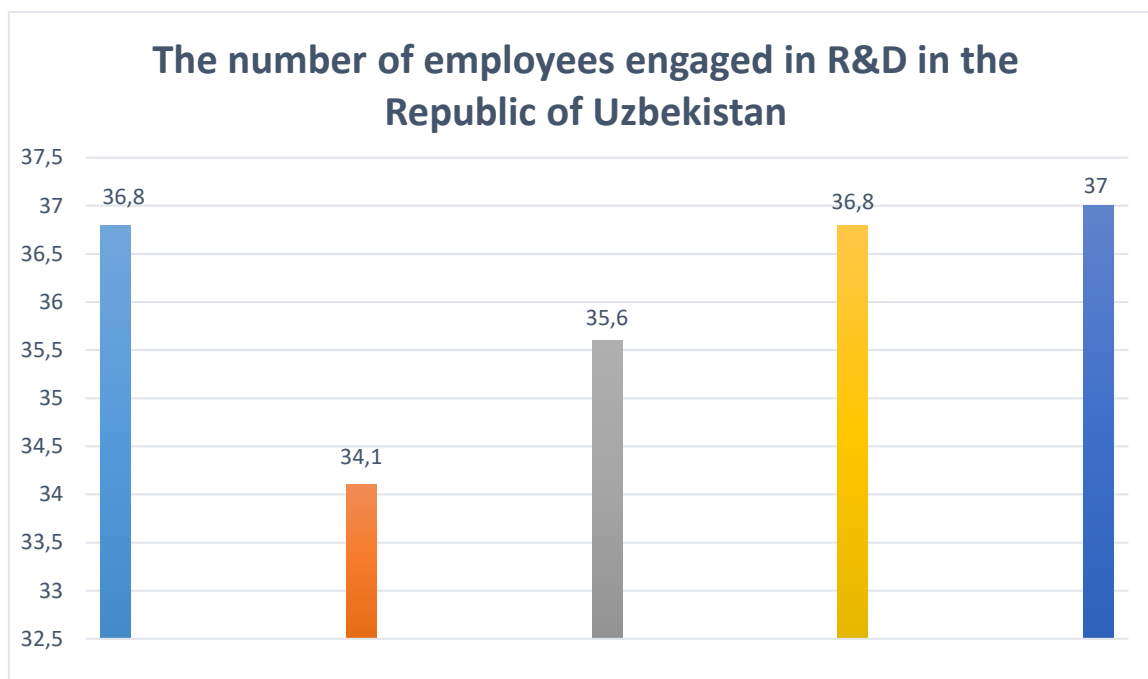
During 2018, about 2,000 innovations were introduced by more than 900 organizations and enterprises of the Republic of Uzbekistan. Moreover, most of the innovations introduced, i.e. 1816 of them were aimed at modernizing enterprises using new effective technologies. This means that the introduction of innovations in our country mainly occurs through the import of machinery and equipment from abroad.

It is planned to adopt a program of phased increase in state budget expenditures for research and bringing them to 1% of GDP.

In addition, the number of employees engaged in research and experimental development in the Republic of Uzbekistan has not changed significantly over the past 16 years (picture 4). [10].

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Picture 4: The number of employees engaged in research and experimental development in the Republic of Uzbekistan

Today in Uzbekistan the cost of research and development, which is one of the most important indicators for assessing innovation activities of countries amount to 0,2% of GDP.

Therefore, in our country developing effective mechanisms for the introduction of scientific developments in the real sector of the economy.

Special attention is paid to the stimulation of research and innovation activities, the creation of effective mechanisms of implementation of scientific and innovative developments in practice education at higher educational institutions and scientific research institutions, scientific experimental specialized laboratories, high-tech centers and technology parks.

Along with this, in direct dialogue with the people in the regions of the Republic the President of our country sets specific objectives for the revival of the scientific potential in all the regions and effective use of intellectual potential in the comprehensive development of the territories, active involvement of young people in research activities. When these tasks are important targeted mobilization of scientific research on solving the real problems of socio-economic sphere, ensuring close integration of science and production and in turn create mechanisms to improve implementation of industrial enterprises, scientific and technological developments of scientists.

Uzbekistan adopted the laws "On innovation activity" and "About science". At present these laws to enact, in a new edition, improved control system NIS, established the Ministry of innovation and its departments in the regional centers. Along with this

transition of Uzbekistan's economy on innovative way of development is associated with some problems.

First, no universal model of innovative technology for accelerated economic growth.

Secondly, are not enough theoretical research in the field of nanotechnology, although it has financial resources.

Thirdly, you need to fully make the transition from the economy of raw material resources to the economy of innovations based on the use of new and innovative ideas.

Fourth, it is necessary to revise the system of examination of innovative innovations with the invitation to the work of foreign scientists and specialists.

Based on the foregoing, for transition to innovative way of development we suggest the following [1]:

1. It is necessary to improve the institutional foundations for the development of the national innovation system, wherein: a) implemented in the sectors of small and fast-payback innovative projects with participation of private large businesses with available opportunities for financing entrepreneurs and private investors with state support; b) support of demand for innovative products from the private sector, to create a "technology corridors", through the improvement of the mechanism of support of export of high technology products.

2. To develop the infrastructure of the national innovation system (NIS) through the establishment of technoparks, innovative and technological centers and business incubators.

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3. To form the normative legal base, providing favorable conditions for development of innovation.

4. To deepen the processes of formation of business environment, able to ensure the development of competition in the country that will inspire and reinvigorate innovation.

5. To improve the quality of education, to provide training and retraining of qualified personnel

in technological and innovative disciplines, including specialists in innovation management.

Thus, the solution of these tasks is the priority to accelerate the transition to innovative development of economy, increase of competitiveness of the country and decent living standards.

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