QO‘SHIMCHA MAHSULOTNI KO‘PAYTIRISHDA FAN VA TEXNIKA TARAQQIYOTI HAMDA INNOVATSION OMILLARDAN KENG FOYDALANISH

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Annotatsiya: *Ushbu maqolada mamlakatning ijtimoiy-iqtisodiy rivojlanishida fan-texnika taraqqiyoti va uning natijasida yuzaga kelgan innovatsion siljishlarning ahamiyati, innovatsion jarayonlarning rivojlanishiga ta’sir etuvchi omillar, fan va texnika taraqqiyoti innovatsion iqtisodiyot rivojlanishiga va mamlakatda qo‘shimcha mahsulot hajmining o‘zgarishiga, ayniqsa normasining oshishiga ta’sir qiluvchi eng asosiy omillardan biri ekanligi, ilm-fanni 2030-yilgacha rivojlantirish konsepsiyasi, innovatsion muhitni rivojlantirish muammolarini hal qilish yo‘llari bayon etilgan.*

Kalit so’zlar: *Qo’shimcha mahsulot, fan-texnika taraqqiyoti, innovatsion jarayonlar, innovatsion texnologiyalar, ilm-fan, mikro darajada innovatsiya, makro darajada innovatsiya, qo‘shimcha mahsulot normasi, ilmiy-tadqiqot va tajriba-konstruktorlik ishlanmalari.*

ШИРОКОЕ ИСПОЛЬЗОВАНИЕ НАУЧНО-ТЕХНИЧЕСКОГО ПРОГРЕССА И ИННОВАЦИОННЫХ ФАКТОРОВ ДЛЯ УВЕЛИЧЕНИЯ ПРИБАВОЧНОЙ ПРОДУКЦИИ

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Аннотация: *В данной статье рассматривается значение научно-технического прогресса и обусловленных им инновационных сдвигов в социально-экономическом развитии страны, факторов, влияющих на развитие инновационных процессов, развитие науки и техники, развитие инновационной экономики и описаны изменение объема прибавочной продукции в стране, особенно то, что это один из основных факторов, влияющих на увеличение нормы, концепция развития науки до 2030 года, пути решения проблем развития инновационной среды .*

Ключевые слова: *Прибавочный продукт, научно-технический прогресс, инновационные процессы, инновационные технологии, наука, инновации микроуровня, инновации макроуровня, побочная норма, научно-исследовательские и опытно-конструкторские разработки.*

EXTENSIVE USE OF ADDITIONAL PRODUCTS IN THE DEVELOPMENT OF SCIENCE AND TECHNOLOGY, AS WELL AS INNOVATIVE FACTOR

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Annotation: *In this article, the importance of scientific and technological progress and the resulting innovation shifts in the socio-economic development of the country, the factors influencing the development of innovation processes, the development of science and technology to the development of innovative economy and changes in GDP is one of the main factors influencing the growth of the norm, the concept of development of science until 2030, ways to solve the problems of developing an innovative environment.*

Keywords: *Additional products, scientific and technical progress, innovative processes, innovative technologies, science, innovation at the micro level, innovation at the macro level, additional product norm, research and development.*

Introduction. By-product is considered one of the central links of the science of economic theory. is one of the important central nodes reflecting the level of development of the processes of creation, distribution and consumption of social products through its development.

The importance of scientific and technological progress and the resulting innovative shifts in the socio-economic development of any country is incomparable. Because without the development of science, without the application of its latest achievements, no innovation, modernization and diversification will take place. Science and technology - as a result of development, an innovative economy is formed and developed [1].

Analysis of literature on the topic. Several scientists and professors of economics have different opinions about by-products expressed different theoretical views.

By-products have always been of interest to people as a central part of economic theory. No one disputes that the existence of additional products is manifested in various forms in the so-called stages of the development of human society - slavery, feudalism and capitalism. In the former socialist society, many economists believe that surplus value is unique only to the period of private ownership, and that it does not exist and does not apply during the period of social property. They did not yet understand that the material basis of these concepts

as a universal economic category will always be preserved and their social form will change.

Opinions about the additional product go back to the long history of economic life and the development of the science of "Economic Theory". For example, there is a story about the Chinese philosopher Confucius, who lived in 551-471 BC and has not lost his popularity until now with his philosophical thoughts: When he was young, he went to a fisherman, and the fisherman wanted to give him some of the fish he had caught. Then, looking at the young Confucius fisherman, - if you want to help me, don't give me fish, but teach me how to fish, so that I can feed myself and my family with this craft, and I will give the surplus to my neighbors, and even more to you and others - said[2].

In addition, the Arab scientist Ibn Khaldun Abdurakhman Abu Zayd tried to differentiate between necessary and additional products in his "Kitab-ul-ibar" (Book of Examples) written in 1370[3].

Later, the founder of the school of physiocrats, Francua Keene, in his book "Economic table", took a step forward in economic science, different from mercantilists, and stated that wealth does not increase in trade or foreign trade, it increases only in production, this increase in wealth is net product, especially, showed that it occurs in exchange for additional products. In it, he called the difference between the produced product and the costs incurred, that is, the additional product, the net product [4].

The theory of surplus value was developed in more detail by Adam Smith [5] and David Ricardo [6]. They argue that new value is created by hired workers, that the hired laborer's working time is divided into two, creating the value necessary to support himself and his family during the necessary work, and that during the overtime, which is the rest of the working day, the property owners o They showed that additional value that can be absorbed will be created.

The theory of surplus value is the cornerstone of Karl Marx's theory and is detailed in his 4-volume work Capital. Surplus product is a developped mathematical concept that focuses only on the value side of the surplus product, calls it surplus value, and uses it to specify the level of exploitation in capitalism [7, 8].

Karl Kautsky wrote in his "Economic Theory of Karl Marx" that the production process in the commodity production system is always a process of value creation, regardless of whether it is purchased or carried out with the help of own labor. But only when the process of value formation continues beyond a certain limit does it become a creator of surplus value and thus a process of growth of value. The production process, if its purpose is to produce surplus value, must continue beyond what is necessary to produce a value equal to the value of the purchased labor power [9].

In the works of the Russian economist A.I. Chuprov, Karl Marx's theory of value, surplus value, including the differences between them, its absolute and relative forms, and very brief teachings, Marx covered the historical trend of capitalist accumulation [10].

In the article “Место науки в хозяйстве и условия их взаимодействия” by Ilya Rubenovich, Bugayan connects the development of additional product production to science and information technology. Under the influence of the developing scientific and technical revolution and scientific and technical progress, entrepreneurship dominates the system of production factors. New information technologies play a big role in creating additional products. Possession of these technologies and their combination with other factors of production by modern entrepreneurship allows to acquire the largest additional product with certain costs compared to labor, land or capital. At the same time, science can act as a direct productive force only in the form of entrepreneurship, which ensures the operation of information technologies that help to use other available factors of production more efficiently [11].

In particular, in Sh.Sh.Shodmonov's article "Additional product as a criterion and source of economic development", additional product is one of the central links of the science of economic theory, not just an economic category, but also a society the basis of its development, it is one of the important central nodes that shows and explains the level of its development, reflects the level of development of the processes of creation, distribution and consumption of social products through its own development [12].

Research methodology. In the research process, statistical data study and economic comparison and analysis, abstract thinking, logical thinking, monographic observation and other methods were widely used.

Analysis and results. Innovations, if considered at the micro level, provide production and services with new equipment and technological processes, entering new markets by equipping labor with new equipment, creating new types of products with new quality, features, new and use of cheap raw materials, improvement of production organization, provision of new innovative goods and opening of new consumer markets. At the macro level, innovation is an activity that combines science, technology, entrepreneurship and management, aimed at modernizing the economy and diversifying production (Table 1.).

Table 1.

Factors influencing the development of innovation processes[24]

Factors	Factors promoting the development of innovative activities	Hindering factors to innovative activities
Political	State antitrust policy, the formation of a free economy, the development of the national innovation system	Bureaucratic barriers to entrepreneurship, incomplete state guarantee of private property, political instability
Legal	Intellectual property protection system, level of copyright protection	Lack of deficiencies in patent and licensing legislation
Economic	Encourage businesses to produce innovative products and services	Intensification of competition in innovation markets, high economic risk and risk in the implementation of innovative activities
Technological	Achieving scientific and technological advances in the use of modern innovative technologies, the introduction of high technology	Lack of material, scientific and technical and modern laboratory equipment, obsolescence of fixed assets of enterprises
Financial	The effectiveness of a system of funding fundamental, applied research, development, or experimental work	Delays in the implementation of major investment projects, the slow pace of the formation of innovative infrastructure
Organizational	Identification and implementation of measures to increase the scientific and scientific-technical potential of the country	The slow pace of the formation of an innovative economy that combines science, technology, economics, business and management, the lack of new programs for the rapid training of specialists in the fields
Management	Development of strategies for innovative development of national, regional and priority sectors of the economy, including innovation, motivation, economic, organizational and administrative components	Problems in the training of personnel in the field of innovation management and the implementation of scientific achievements
Social	Strengthening the material and technical base of the educational institution, training of quality personnel that meet the requirements of production and the level of development of society	Problems in the formation of advanced ideas in society and the means of adapting the development of science and technology to modern requirements and the process of globalization

The development of science and technology is one of the main factors influencing not only the development of an innovative economy, but also the change in the volume of additional products in the country, especially the growth of norms. I will give an example to understand the results of scientific and technological progress and the impact of the application of innovative innovations on the increase in the amount and rate of additional production. As a result of advances in science and technology and the application of innovations, labor productivity will increase dramatically, and each worker will be able to extend overtime by reducing the amount of time he or she spends to reproduce his or her workforce. The following example illustrates this process. For example, the workday should be 8 hours, with 4 hours as required and 4 hours as overtime. (4 hours x 2 dollars. = 8 dollars.) Assuming that a worker creates a product for two dollars per hour, a worker earns 8 dollars a day. necessary product and 8 dollars. an additional product in total, creating a new product for $ 16. Now, assuming that productivity has increased by 25%, the worker will be able to create the product he needs in 3.2 hours, instead of 4 hours. Then the composition of the day will change and the required working time will be 3.2 hours, and the additional working time will be 4.8 hours. If the required product created during this period does not change, it will cost $ 8, and the additional product will cost $ 12. The rate of overproduction is 100% in the first case and 150% in the second case, when labor productivity increases by 25%. In this case, the rate of overproduction increases due to two factors: the reduction of required working time and, consequently, the increase in overtime, and the increase in productivity during this overtime [20, 21, 23].

Accelerated development of economic and social spheres, full use of scientific and innovative potential with full mobilization of scientific, intellectual and financial resources, identification of priorities for future systematic reform of science, highly qualified personnel with modern knowledge and independent thinking The concept of development of science until 2030 was approved in accordance with the state program for the preparation, modernization of scientific infrastructure to a qualitatively new level (Table 2.).

Table 2.

Targets of the Science Development Concept until 2030 (%)[13]

№	Targets Indicators	Indicators						
		2021	2022	2023	2024	2025	2027	2030
1	The share of funds allocated to science in relation to GDP	0.5	0.8	1.0	1.1	1.2	1.6	2
2	The share of private sector funding for research and development in the total funding of science	12	15	17	18	20	25	30
3	Uzbekistan's share in the total number of articles published in international scientific journals indexed in the international scientific database "Web of Science"	0.017	0.025	0.036	0.042	0.05	0.1	0.2
4	The share of innovative products (goods, works and services) in the total volume of products (goods, works and services) sold in the field of research and development	3	5	7	9	10	15	20
5	Coefficient of inventive activity (number of patent applications for local inventions filed in the country, per 10 thousand population)	0.35	0.5	0.7	1.0	1.2	1.5	2
6	The share of expenditures on self-implemented technological innovations in the total cost of technological innovation in research and development	11	15	17	21	25	35	65
7	The share of new markets for innovative goods, works and services in the volume of innovative products (goods, works and services) in the field of research and development	6	7	8	9	10	12	15

It also approved a new strategy for the development of Uzbekistan in 2022-2026, based on the principle of "Strategy of action - development strategy" and the state program for its implementation in the "Year of Human Interest and Neighborhood Development"[14]. Widespread introduction of innovations in the economy, development of cooperative relations of industrial enterprises and scientific institutions in the areas that are being transformed into innovative zones. A total of 195 projects worth 165.9 billion soums will be implemented, including the creation of 1,920 new jobs [19, 22].

Table 3.

Target parameters for expanding funding and diversification of funding for science and research in 2021-2023 (mln) [13]

Name of expense items	Total	2021	2022	2023
Total costs	8599289.7	1559785	2479022,3	4 614 244.4
Funds allocated for the development of infrastructure for scientific and innovative activities based on the implementation of Phase II of the program to strengthen the material and technical base of scientific organizations in 2022-2025	250,000	-	-	250,000
Funding of regularly published thematic research projects	711 502.4	184621.2	227 239.5	299 641.7
Funding of targeted research projects	776 115.4	113295.1	274 688.2	388 132.1
Funding of regional programs related to scientific activities	364,000	28,000	112,000	224,000
Funding of research projects on research priorities	644 524.7	13312.9	234 363.2	276 548.6
Priority experimental design and financing of "startup" projects	294,000	42,000	84,000	168,000
Financing the implementation of the program "Academic Mobility" of scientific personnel	37 051.7	5 293.1	10 586.2	21172,4
Financing the cost of training scientific personnel through basic doctoral, doctoral and internship research institutes	139 498.6	23 423.7	52 133.1	63 941.9
Funds for the needs of the Fund for Support of Innovative Development and Innovative Ideas	331,000	100,000	110,000	121,000
Development of international scientific cooperation and financing of joint fundamental, practical and innovative projects	92 654	8 030	36 208	48416
Development of international scientific cooperation and financing of joint fundamental, practical and innovative projects	92 654	8 030	36 208	48416
Financing the costs of organizing the state scientific examination	4 286.9	1,200	1 416	1670.9
Gradual increase in funding for research and development infrastructure and research and development activities	2,617,547.2	708909	825 584.1	1,083,054.1
Forecast of dividends on the state share in companies with a state share of 50% or more in the charter capital, as well as allocations of state enterprises to the state budget	220257.6	172,000	451 320	1,579,037.6
Commercialization of scientific and technical results The financing of projects at the expense of the Presidential Fund	100,000	16,000	35,000	49,000
Improving the basic funding mechanisms aimed at directly reimbursing the salaries of researchers of scientific organizations of the Academy of Sciences from the state budget	192 800	40 600	60 900	91 300
Attracting funds from international credit institutions on favorable terms for the development of science and innovation	113,000	3,000	55,000	55,000

As a result of the implementation of the research and development of scientists engaged in research and development in the country, new types of goods and services are being created in the country. Research and development includes systematic work based on existing knowledge gained from research or practical experiments and aimed at creating new material, product, process, device, service, system or method (Table 3.). Developments include design, engineering and technological work [13].

The implementation of innovative developments creates conditions for the production of import-substituting goods. As the President Sh. Mirziyoyev said, it should be noted again and again that a state based on new ideas and new ideas, innovation will always win and develop. Therefore, it is necessary to increase the number of scientific developments aimed at import substitution and localization of production, and these developments should be of interest and demand to local manufacturers [16].

A number of positive steps have been taken in our country to form and develop innovative infrastructure. Decree of the President of the Republic of Uzbekistan dated April 1, 2021 PF-6198 "On improving the system of public administration for the development of scientific and innovative activities" and PQ-5047 "On state policy in the field of science and On Measures to Further Improve Public Administration in Innovative Development ". A "Methodological Regulation for the Formation of Statistical Indicators in the Field of Innovation" was developed and approved by Joint Decisions No. 1-q/q of March 31, 2021 [18].

The relatively low innovation activity of Uzbek enterprises is also evident in comparison with other developing countries (Table 4.).

Table 4.

Indicators of innovation activity in developing countries (%)[17]

	Central Asia and Europe	Low- and middle-income countries	Uzbekistan
Those who spent for research	25,1	17,1	34,8
Introduced product innovations	28,6	36	23,2
Introduced process innovations	19,7	35,4	14,4

Conclusion. Over the past three years, due to the introduction of innovative technologies in production, mine trolleys, vacuum pumps, cranes, various types of fire and acid resistant materials, construction equipment, sandwich panels, artificial synthetic lawns, glass jars, bottles , the production of more than a hundred new products, such as starch, yeast for bakery products. Imports of more than 350 types of products, including household electrical appliances, car filters and radiators, steel pipes, ceramic tiles, medical ampoules, polygraphic paints, children's toys, sports equipment, have more than halved. Of course, a lot has been done in our country in this area. However, in the process of our scientific research, in general, there are a number of problems in the development of the innovation environment in the country, which can be addressed in the following areas:

- Accelerate the development of fundamental sciences, the creation of innovative products and the system of incentives for innovative reconstruction of the economy, which is the basis for increasing the share of innovative products in GDP;

- creation of special zones for innovation cooperation and intensification of innovative activities in the private sector of the economy;

- Accelerated development of modern, high-tech industries on the basis of technological modernization, creation and improvement of the infrastructure of the national innovation system;

- Innovative development of services and social spheres, creation of necessary conditions for introduction of innovative products of national producers to foreign markets;

- Gradually increase the amount of budget funding for research, education and innovation, taking into account the need for their effective use;

- development of a policy for attracting external sources of financing and the creation of large business entities capable of developing large-scale investment projects;

- activation of domestic demand for innovative products, promotion of innovative modernization and implementation of a differentiated approach to state support;

- improving the quality of education, training and retraining in innovative specialties.

In short, the development of science and technology and the resulting innovations, goods and services play an important role in increasing the country's gross domestic product.

Today, in most developed countries of the world, due to the improvement of research activities and the effective use of their results in practice, "Innovative Active Enterprises" in the field of manufacturing make up a large part of all enterprises in the industry. Therefore, based on the experience of

developed countries and the specifics of our republic, it is important to pave the way for the development of this industry in our country and its support by the state.

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ИННОВАЦИОН ХИЗМАТ КЎРСАТИШ ЖАРАЁНЛАРИНИ ИСЛОҲ ҚИЛИШДА ИНТЕГРАЦИОН АЛОҚАЛАРНИ ТАШКИЛ ЭТИШ

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Аннотация. *Инновацион хизмат кўрсатиш жараёнларини ислоҳ қилишда хизматлар соҳасидаги субъектларнинг инновацион фаолияти соҳасида муаллифларнинг мавжуд назарий методологик тадқиқотларига таянган ҳолда хизматлар инновацияларининг ташкилий ва иқтисодий янгиликлар билан боғлиқ бутун доирасини маълум бир тизимга келтириш ва уларнинг юзага келишига сабабчи бўлган асосий қонуниятларни аниқлашга ҳаракат қилиб кўрамиз. Бироқ ташкилий-иқтисодий инновациялар ролини янада чуқурроқ англаш учун инновацион фаолиятнинг ушбу ўзига хос объекти қандай вужудга келиши ва режалаштирилишини тушуниб олиш зарур.*

Калит сўзлар: *инновация, ташкилий янгиликлар, иқтисодий янгиликлар, режалаштириш, объект, инновацион жараён, инновацион фаолият, янгилик.*