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Innovation Transfer Management in Higher Education Countries

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Abstract:

Enhancing the innovation activity of higher educational institutions has become even more important since contemporary economic relations are primarily based on the innovative economic development. The transfer process which makes up the important part of innovation activity should also be effectively set up for this purpose.

In his work the author has deployed several research methodologies such as inductive and graphical approaches. The author offers his recommendations on enhancing the process of transfer of innovations created at our country's higher education institutions.

Keywords: Innovation, innovation transfer, innovation fair, innovation potential, innovation environment, innovation infrastructure.

In recent years, the government of Uzbekistan considers the acceleration of innovative activities as the main means of ensuring sustainable economic development and promotes the development of innovative technologies and science as the most important priority of the state. In this regard, in recent years, a number of measures have been implemented in our country to coordinate the development of science and technology and to further improve the financing of innovative activities, to further expand the connection between science and production, and state programs for the modernization of economic sectors and the localization of production have been adopted and implemented. is being continued. In our republic, since 2007, the "Fair of innovative ideas, technologies and republican projects" has been held every year on the basis of the comprehensive plan of measures for the development of innovative products and technologies for the medium-term perspective.

Innovative and technological development is very important for Uzbekistan, and it is in this way that it is possible to form a modern technological base, produce competitive products, effectively use natural resources, increase efficiency in agriculture, and strengthen international competitiveness.

In the conditions of today's economic relations based on innovative economic development, higher education institutions are considered as one of the main resources that move the economy. Through the implementation of scientific achievements and innovation technologies obtained as a result of in-depth scientific research conducted by higher educational institutions, new goods and services are being produced, new enterprises are being established, jobs are being created, an opportunity is being created for technical and technological modernization of enterprises of economic sectors, in general New network directions are emerging. Therefore, further improvement of innovative activity in higher educational institutions, effective organization of the transfer process, which is the most important part of innovative activity, is important for the development of the country's

economy.

Effective activity of higher educational institutions in the field of transfer of innovations is not only about attracting highly qualified personnel based on having high monetary income, retaining the existing ones, but also because cooperation in the field of technology transfer between higher educational institutions and enterprises is the most important factor for the economic development of the state and society. is also necessary for

Effective organization of innovation transfer in higher educational institutions requires identification of factors affecting this process, consideration of identified factors in organization of this process.

As a result of research, a number of factors affecting the effective organization of transfer processes in higher educational institutions have been studied, and they can be summarized into the following groups.

1. Measures related to the implementation and promotion of the transfer of innovations by the state (adoption of regulatory legal documents related to innovation activities, comprehensive support of innovative activity entities, adoption of programs providing for the transfer of innovations, etc.).

Effective organization of the transfer of innovations in higher educational institutions is directly related to the formation of the legal framework related to this process by the state, giving various privileges to the subjects of innovative activity, providing all-round support to scientific staff and similar measures. Many economists attribute the United States' current leadership in innovation to the adoption of the Bay-Dole Act in 1980. For this reason, similar laws have been adopted in other countries and these laws serve as an effective tool in the transfer of innovations.

In our country, a number of regulatory and legal frameworks have been adopted for the introduction of innovations into production, and they play an important role in the effective organization of the innovation transfer process. In particular, on the basis of the decision of the President of the Republic of Uzbekistan dated July 15, 2008 No. PF-№916 "On additional measures to encourage the implementation of innovative projects and technologies" Republican Fair of Innovative Ideas, Technologies and Projects, established in 2008-2013 2282 contracts with a total value of 78,157.4 million soums were signed [1].

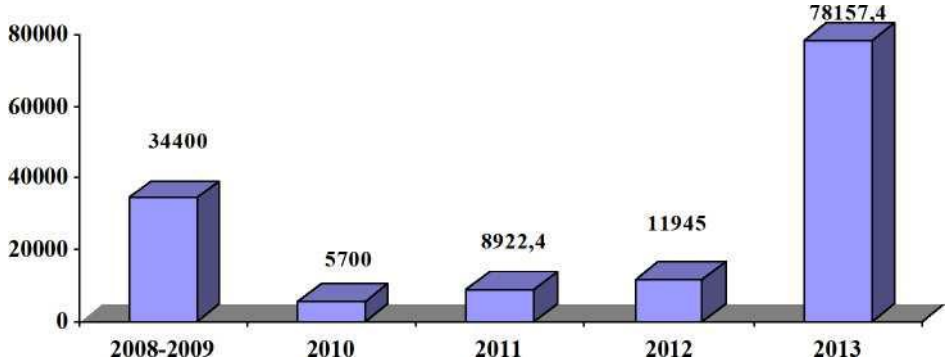

Figure 1. The total value of the "Republican fair of innovative ideas, technologies and projects" organized in 2008-2013

In the decision of the President of the Republic of Uzbekistan dated December 15, 2010 PQ-1442

[1]Source: Calculated by the author using information from the Coordinating Committee for Science and Technology Development website.

"On the priority directions of the development of the industry of the Republic of Uzbekistan in 2011-2015", large-scale modernization of industrial enterprises, technical and technological renewal, equipping them with the most modern high-tech equipment, in industrial sectors rapid implementation of modern scientific achievements and advanced innovation technologies, expanding the training of highly qualified personnel for the industry was set as a priority [1]. Based on this, it was determined that the main attention in the field of scientific research in our country should be based on the needs of industrial sectors.

Since 2012, the Cabinet of Ministers of the Republic of Uzbekistan has provided for a total of 131 innovative projects to be implemented in the economic sectors of our republic, of which 75 are proposed for direct implementation and 56 are proposed for pilot-testing [2].

The list of scientific and technical problems aimed at solving socio-economic issues proposed for the selection of innovation projects for 2014-2015 was published by the Coordination Committee for the Development of Science and Technology of the Republic of Uzbekistan. This list was formed based on the proposals of local government offices, large industrial production enterprises, organizations and institutions in our country. The announcement contains information about the task to be solved in innovative projects, the expected result from the implementation of the development, and the amount of funds allocated by the consumer.

In our opinion, the establishment of such a bank of problems and the indication of the funds allocated by the consumer enterprise to solve the problem in it will allow the institutions engaged in innovative activities to effectively direct their resources, and also ensure the implementation of the created innovations.

One of the important factors in revitalizing the transfer of innovations is the provision of various incentives by the state for taxation of enterprises operating on the basis of the implementation of intellectual property objects created in higher educational institutions. Funds left at the disposal of enterprises on the basis of the given benefits serve as an important financial source in the conditions of high need.

2. Innovative potential of higher educational institutions (scientific potential, their level of knowledge in the field of innovative business, the number of students involved in scientific research, availability of laboratories with modern equipment in the higher educational institution, etc.);

The scientific potential of a higher educational institution is one of the main factors affecting the quality and quantity of the results of scientific research conducted in it. The ability of professors-teachers to have in-depth knowledge of their fields, the ability to quickly absorb modern scientific and technical achievements, to be able to clearly see existing problems in various fields and to apply their knowledge to solve these problems is the innovative activity of the higher educational institution, the introduction of the created innovations into production. increases the possibility.

The level of knowledge in the field of innovative business means that innovators-inventors have sufficient knowledge in organizing and managing small enterprises to put these innovations into practice. Innovative activity of micro-firms and small enterprises in the republic is not significant. In the last five years, at least one small innovative enterprise was formed in 40% of higher educational institutions and 20% of scientific research institutes [2].

[2]National innovative system of Uzbekistan: Rating of potential and results. 2011. str. 68. (Project "Innovative policy and technology transfer support" within the framework of the UN Development Program in Uzbekistan (\\l\l\' piyu.i /), and the UN Development Program (\\l\l\'.i1k1r.i /) internet sites.

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Involvement of students in scientific research, formation of knowledge, qualifications and skills for conducting scientific research in them, higher education serves to expand the innovative potential of the country. The presence of laboratories equipped with modern technical equipment in higher educational institutions allows to ensure the maximum closeness of scientific research to the existing real situation, to perform complex scientific calculations with extremely high accuracy.

3. Existence of various organizational structures and their effective operation for the implementation of innovations created in higher educational institutions.

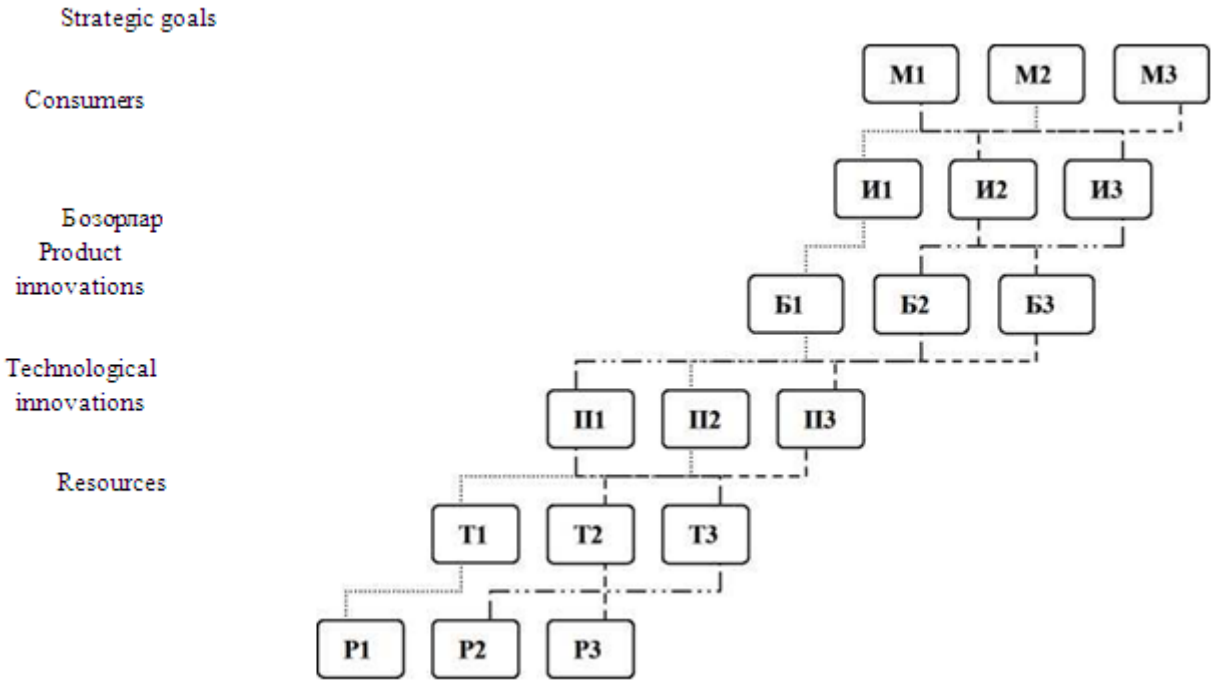


Figure 2. Innovation transfer process

In this:

Strategic goals: entering the M1-world market; M2-improving the image of the organization; Leadership in the M3 network.

Consumers: I1-joint enterprises; I2-small business and private entrepreneurs; I3-state enterprises.

Markets: B1-external market; B2-regional market; B3-domestic market.

Product innovation: P1-creating a new product; Differentiation of P2-product; P3-product branding;

Technological innovations: T1-creation of new technological lines; T2-modernization of current lines; T3- creation of know-how technologies.

Resources: R1-scientific and technical staff; R2-material resources; R3-financial resources

The transfer process is not only about obtaining a patent for the created inventions and giving them to practice under license agreements for their use. Technology transfer includes all types of activities related to conducting scientific research works by scientific research institutions in cooperation with various enterprises and associations, licensing or selling intellectual property, providing technical assistance, and exchanging information.

The innovation transfer process in scientific research institutes of developed countries includes offices, specially organized institutes, entrepreneurshipcenters, non-commercial scientific research

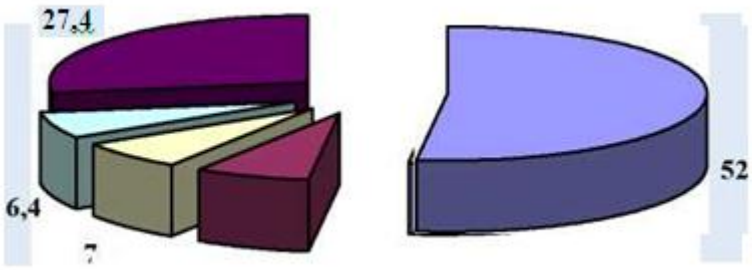
funds and similar structures. Strategic objectives of the transfer process, customers, markets, new product innovation and new process (technological) innovation are considered as a system in relation to resource provision.

Therefore, the organization of such a wide range of activities in higher educational institutions, their management and the effectiveness of these activities require the formation of special structures, which are engaged in the organization of the transfer process within higher educational institutions, and have professional employees with knowledge, skills and qualifications in this direction. is enough.

4. The economic potential of the regions where higher educational institutions are located (economic health of the region, types of enterprises located in it, directions of activity, number, the formation of a competitive environment between them, their ability to absorb innovations, the infrastructure created to support new enterprises in the region, etc.).

The process of transfer of innovations is also influenced by the economic potential of the region where higher educational institutions are located. The large number of enterprises operating in the region and the increasing competition between them creates the need to use the cost-free method of competition and introduce innovations into production to maximize profits.

For example, 52 percent of the total enterprises that implemented innovations in our republic are located in Tashkent. 45011 out of 298859 enterprises registered as of January 1, 2012, i.e. 15%, 40.2% of 402 scientific research institutions, 41.8% of institutions engaged in scientific research, and the number of people engaged in scientific research It can be explained by the fact that 53.3 percent corresponds to the contribution of the city of Tashkent [3].



- ✓ Tashkent city
- ✓ Tashkent region
- ✓ Fergana region
- ✓ Navoi region
- ✓ other provinces

Figure 3. Distribution of enterprises that have introduced innovations on the territory of Uzbekistan, in percent

Source: author development.

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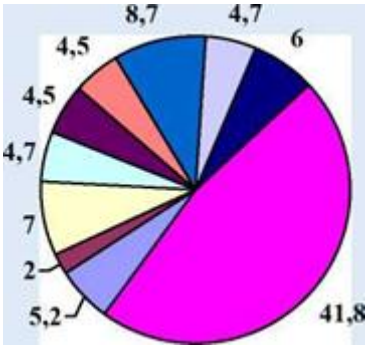
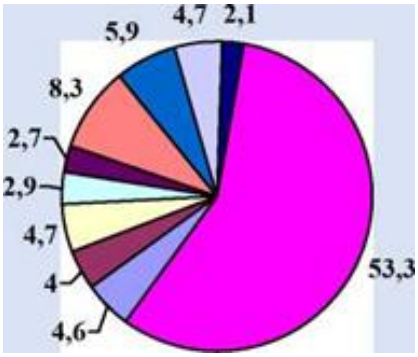


- ✓ **Republic of Karakolakhistan**
- ✓ **Andijan region**
- ✓ **Bukhara region**
- ✓ **Navoi region**
- ✓ **Namangan region**
- ✓ **Sarmarkand region**
- ✓ **Tashkent region**
- ✓ **Fergana region**
- ✓ **Khorezm region**
- ✓ **Tashkent city**

Figure 4. Distribution of organizations involved in research and development on the territory of Uzbekistan, in percent

Source: author development



- ✓ **Republic of Karakolakhistan**
- ✓ **Andijan region**
- ✓ **Bukhara region**
- ✓ **Navoi region**
- ✓ **Namangan region**
- ✓ **Sarmarkand region**
- ✓ **Tashkent region**

- ✓ **Fergana region**
- ✓ **Khorezm region**
- ✓ **Tashkent city**

Figure 5. Distribution of people engaged in scientific research work on the territory of Uzbekistan, in percent

Source: author development.

The introduction of innovations into production requires the presence of personnel with a high level of knowledge who can quickly absorb innovations. This, in our opinion, will lead to the strengthening of cooperation between higher educational institutions and production enterprises on the improvement of personnel qualifications and personnel exchange.The fact that enterprises have sufficient financial resources to cover the costs associated with the introduction of innovations into production serves to increase the demand for innovations.

It is known from the experience of developed countries that most of the inventions created by scientific research institutions are not implemented by large enterprises. This is mainly done by small enterprises operating at low cost and relatively small profit, quickly adapting to changing conditions, and in the future, this new product will be transferred to large enterprises for production and offering to the market. This, in turn, requires the existence of a mechanism for encouraging small enterprises involved in the implementation of innovations, and the formation of an infrastructure supporting new growing business.

5. Effective use of the means of conveying information to manufacturing enterprises about the directions of scientific research activities carried out in higher educational institutions, the patents obtained by professors and teachers of the higher educational institution for intellectual property objects ((the official website of the higher educational institution or the structure established on the transfer) on the Internet) , booklets, information leaflets, etc.) .

In the conditions where the competitive environment is not sufficiently formed, the main attention should be focused on the effective use of scientific research conducted in higher educational institutions, their results, and methods of conveying information about the created innovations to manufacturing enterprises. Because the low interest in innovations in production enterprises, the small number of competing enterprises prevents them from making additional costs related to the introduction of innovations into production.

Based on the results of the conducted research, the following suggestions and recommendations can be made to further improve the transfer of innovations in higher educational institutions of our country:

1. Consideration of the possibility of establishing branches of higher educational institutions in the free economic zones being established in our republic. The main purpose of this is to ensure the connection between the university and high-tech production enterprises, to create conditions for the free movement of professors and students between universities and enterprises, as well as to create conditions for the employees of the enterprise to work together in university laboratories.
2. To strengthen scientific research work in higher educational institutions, to involve young people in this work, and to further encourage professors and teachers who are engaged in creating innovations.
3. In order to further revitalize the transfer of innovations, to further increase the innovative activity of private enterprises, it is considered appropriate to establish the following tax benefits

for them:

- provision of research and investment tax credit, i.e. deferment of tax payments on the part of profit spent for innovative purposes.
- reducing taxes in an amount equal to the increased share of innovation costs;
- provision of "tax holidays" for taxation of profits from the realization (implementation) of innovative projects for several years ;
- giving benefits to legal entities and individuals in the taxation of dividends received on the shares of innovative enterprises;
- reduction of tax rates in relation to the part of the profit directed to the order-based and collaborative scientific research and experimental construction works;
- providing benefits taking into account the priority of projects being implemented;
- preferential taxation of profit received from the use of patents, licenses, know-how and other intangible assets that are part of intellectual property;
- reducing the taxable profit by the amount of equipment and tools transferred to higher educational institutions and other innovative organizations;
- deduction of contributions to charitable foundations engaged in innovation financing activities from the amount of taxable profit.

to the transfer process and the support of its participants in the country where it operates.

it depends on its formation, the economic potential of the region where it is located, the ability of operating enterprises to absorb the created innovations, and similar external factors.

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