LEGISLATIVE BASES OF THE NATIONAL INNOVATION SYSTEM OF THE USA

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Abstract: This article describes the legislative framework established by the state for the development of the US national innovation system.

Keywords: Innovation Development national innovation system, innovative enterprises, technology transfer.

The United States is a leader in all areas due to its emphasis on the development and implementation of innovative technologies. Throughout the history of the United States, especially in the second half of the 20th century, the economic growth of the country was ensured by innovative development. The U.S. continued to lead the 2022 Global Innovation Index ranking of innovation performance, ranking No. 1 in innovation overall[1].

It should be noted that in the 1980s, the conceptual foundations of the US national innovation system were formed. The monograph "Economic theory and technical development" was published as a result of collective research work by scientists from different countries of the world. The authors of this monograph[2], Professor B. Lundvall of the University of Sweden, K. Freeman, an expert at the research center at the University of Sussex, UK, and R. Nelson, a professor at the Columbia University in the United States, based the main idea of the concept of forming a national innovation system with the following.

Full-fledged innovative development of the economy is impossible without transferring to private business the technological reserve accumulated by state scientific organizations, primarily universities and companies of the military-industrial complex. By the beginning of the 1980s, it became clear that the huge intellectual property in the form of patents accumulating the results of research conducted at the expense of state budget funds remains unclaimed. According to experts, less than 5% of such patents were implemented by the US industry.

One of the reasons for this was strict legislation that made it difficult for economic entities to access state intellectual property. In order to establish an economy largely based on innovation, the United States created conditions that stimulated the transfer of technologies developed in state research organizations using federal budget funds to small innovative enterprises, and their large-scale commercialization with scientific,

[1] https://www.wipo.int/web-publications/global-innovation-index-2024/en/gii-2024-at-a-glance.html#h2-global-leaders-in-innovation-2024
[2] Technical Change and Economic Theory, Pinter, 1988. URL: http://freemanchris.org/publications

advisory, and information support from state research organizations and specialized structures at both the federal and state levels.

The legal basis for the creation and development of the national innovation system in the United States was laid by the Bayh-Dole Act (1980) and the Stevenson-Wydler Technology Innovation Act (1980), both passed by the country's parliament in 1980. The Bayh-Dole Act transferred all rights to patents obtained in the process of scientific research financed from the state budget exclusively to the developer. However, the rights to reports and other documentation on the development remained the property of the state. This law encouraged the patenting of the results of scientific and technological research, a detailed and accurate description of patent formulas, and the commercialization of the results.

The Stevenson-Wydler Act regulated the procedure for technology transfer between the private and public sectors of the economy. According to the law, specialized departments must be created in federal scientific organizations to identify technologies created with government funding that can be transferred to private firms. As a result of the laws, the number of patents has increased significantly, and thousands of firms specializing in the commercialization of scientific and technical developments have been created at federal scientific institutions and universities.

In development of the Bayh-Dole and Stevenson-Wydler Acts, a number of other laws were passed encouraging economic development through innovation. The extension of the Bayh-Dole Act to universities and small businesses gave them the right to patent the results of R&D conducted under a contract with federal agencies at the expense of state budget funds. In addition, the law gave federal agencies that financed R&D the right to grant private firms an exclusive license for the technology obtained in this way. Preference was given to universities and small US firms. The Small Business Innovation Development Act of 1982 legally enshrined the requirement of state scientific and technological policy on the primacy of small business in economic development through innovation.

The law obliged US federal agencies to involve small innovative enterprises that had proven themselves to be reliable performers in the execution of federal orders for R&D. The law obliged US federal agencies with a budget for R&D to allocate funds to small innovative enterprises for the execution of research work on federal orders in the amount of up to 100 million dollars. From 1983 to 1997, the share of funds allocated to small innovative businesses from the total volume of federal appropriations for R&D increased from 0.2% to 2.5%. Tax incentives were also introduced for venture funds and expenses for the acquisition of equipment for research and development work were excluded from taxation.

To stimulate research aimed at generating innovations, the National Cooperative Research Act (1984) was passed. Under this law, targeted fundamental, theoretical, and

experimental research conducted by scientific and technical consortia established jointly by federal and private enterprises was exempted from the scope of antitrust legislation. In a new version of the law adopted in 1993, the emphasis was shifted from research itself to new industrial developments, and parties to cooperative research, including federal national laboratories, were allowed to jointly develop the technologies created.

The Trademark Clarification Act of 1984 made it easier to apply the Bayh-Dole and Stevenson-Wydler Acts to protect and transfer federally funded intellectual property. The Act allowed government laboratories and contractor laboratories to license patents and for contractors to receive compensation for the use of their scientific results. The Act allowed laboratories at universities and nonprofit research organizations to retain ownership of inventions they licensed for use.

The Federal Technology Transfer Act of 1986 opened access to scientific and technological achievements of federal laboratories to all US firms, taking into account national security requirements. To facilitate such transfer, the law allowed the conclusion of cooperative agreements. At the same time, commercial information that becomes available to the parties to the cooperative agreements must not be disclosed to third-party organizations for 5 years. In 1992, as a follow-up to this law, the Small Business Technology Transfer Act of 1992 was adopted. According to it, federal agencies with a budget for R&D by third-party contractors that exceeds $1 billion must allocate 0.3% of it for the transfer of their technologies to small firms.

The Omnibus Trade and Competitiveness Act of 1988 confirmed the need to create centers for the transfer of industrial technologies and industrial services as places for the implementation of cooperation between the public and private sectors of the economy in the use of R&D results. The Act authorized the creation of technology transfer training centers at the US Department of Education.

The law also encouraged the establishment of regional centers for industrial technology transfer. The National Institute of Standards and Technology Authorization Act of 1989 expanded the scope for consortiums to agree on copyrights in addition to patent rights. The law also extended rights to receive remuneration for the use of R&D results to primary and external software developers.

The National Technology Transfer Improvement Advancement Act of 1995 expanded the rights of federal laboratories in the transfer of technologies, issuance of licenses, distribution of remuneration, and protection of commercial secrets. In order to develop cooperation between federal scientific institutions and private businesses, the Technology Transfer Commercialization Act of 2000 was adopted in 2000, which allowed both the transfer of individual technologies on the basis of licenses, as provided for by the Bayh-Dole Act, and the transfer of technologies as a contribution to the capital of the created partnership. The law strengthened control over compliance

with national security requirements in the transfer of technologies, and also introduced reporting by federal laboratories on the commercial use of the technologies they created.

The national innovation system of the USA has a reliable legal foundation - a set of interrelated laws that not only declare the need for an innovative path of economic development, but also ensure the functioning of the economic mechanism of constant generation and promotion of new innovations. No other country in the world has such a ramified and detailed system of laws aimed at stimulating innovative economic development. The system of US laws regulating the introduction of scientific and technological achievements obtained with state financial support into the economic activities of economic agents served as an example for the creation of corresponding laws in other industrially developed countries: Japan, Great Britain, France and, with some reservations, Germany.

REFERENCES:

1. Shakirova, F. B. (2022). INNOVATIVE DEVELOPMENT MODELS AND THEIR RELATIONSHIP WITH ECONOMIC GROWTH. *Galaxy International Interdisciplinary Research Journal*, *10*(10), 662-665.

2. Shakirova, F. B. (2022). ТЕМИР ЙЎЛ ТРАНСПОРТИ СОҲАСИДАГИ ДАВЛАТ-ХУСУСИЙ ШЕРИКЧИЛИК МУНОСАБАТЛАРИ. *Journal of new century innovations*, *16*(3), 82-85.

3. Boltaevna, S. F. A., & Upashevna, A. L. (2022). Signs of Innovation Economy and its Assessment Indicators. *Special Education*, *2*(43).

4. Shakirova, F. B. (2015). Development of Economy in Uzbekistan on the Basis of Innovation Activity (Uzbekistan, Tashkent). *Problems of Modern Economics*, (3), 55.

5. Шакирова, Ф. Б. (2022). ТРАНСПОРТ СОҲАСИДА ДАВЛАТ-ХУСУСИЙ ШЕРИКЛИК МЕХАНИЗМЛАРИДАН ФОЙДАЛАНИШНИНГ ХОРИЖИ ТАЖРИБАСИ. *Journal of new century innovations*, *15*(3), 66-74.

6. Shakirova, F. B., & Sattorova, S. B. (2022). "O 'ZBEKISTON TEMIR YO 'LLARI" AJ FAOLIYATINI RIVOJLANTIRIShDA XALQARO HAMKORLIK FAOLIYATI. *Eurasian Journal of Academic Research*, *2*(9), 4-9.

7. Sattorova, S. B., & Shakirova, F. B. (2022). TRANSPORT KORXONALARIDA AN'ANAVIY VA INNOVATSION MARKETINGNING O'ZIGA XOS XUSUSIYATLARI. *Scientific progress*, *3*(6), 102-105.

8. Шакирова, Ф. Б., & Исмаилходжаев, А. И. (2018). Инновациялар асосида барқарор иқтисодий ўсишни таъминлашнинг айрим назарий жиҳатлари. *Иқтисодиёт ва инновацион технологиялар" илмий электрон журнали*, *5*.

9. Shakirova, F. B. (2018). *Improving the mechanism of sustainable economic growth based on the innovative development* (Doctoral dissertation, Dissertation abstract of doctor of Philosophy in Economics (PhD) p).

10. Шакирова, Ф. Б. (2022). ИННОВАЦИОН РИВОЖЛАНИШ МОДЕЛЛАРИ ВА УЛАРНИНГ ИҚТИСОДИЙ ЎСИШ БИЛАН АЛОҚАДОРЛИГИ. *Journal of new century innovations*, *17*(1), 101-105.

11. Шадиева, Г. (2021). Инновацион иқтисодиёт шароитида тадбиркорликни ривожлантиришнинг айрим назарий жиҳатлари. *Экономика и образование*, (4), 210-215.

12. SHADIYEVA, G. SOCIAL AND ECONOMIC CONCEPT OF “FAMILY ECONOMY”, ITS DEVELOPMENT AND CONCEPTUAL WAYS TO RAISE WELFARE. *ЭКОНОМИКА*, (9), 168-176.