



## **SCIENTIFIC AND THEORETICAL BASIS FOR FINANCING HIGHER EDUCATION INSTITUTIONS**

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<b>ABSTRACT</b>	<b>KEY WORDS</b>
This article attempts to analyze the economic content, functions, and principles of financing higher education institutions from a scientific and theoretical perspective, as well as to identify the conceptual foundations of financing models. The results of this study serve to improve financial policy in higher education and effectively organize investments in human capital.	Higher education, human capital, education concept, state budget, private investment, grants, fiscal policy, mixed model, public-private partnership.

### **Introduction**

In a world economy where knowledge and innovation have become the primary factors, the higher education system is emerging as one of the strategic sectors that determine the competitiveness of countries. According to the concept of human capital, investments in education are crucial for long-term economic growth, increased labor productivity, and social well-being. These ideas were scientifically substantiated by T.Schulz and G.Becker, which paved the way for interpreting education expenditures not as consumption, but as investments that generate high returns.

In today's conditions of globalization and digital transformation, the issue of effective financing of higher education institutions is becoming one of the priorities of state policy. "The global higher education market was estimated at \$ 33.8 billion in 2025. IMARC Group predicts that the market will reach \$ 163.8 billion by 2034, which means an annual growth rate of 18.58% from 2026 to 2034. North America currently dominates the market. Market growth is associated with the introduction of advanced technologies, developed infrastructure, high consumer purchasing power and a strong focus on innovation in all sectors in the region <sup>1</sup>." The sustainable functioning of the higher education system, improving the quality of education, supporting research and development, and developing innovative infrastructure require scientifically based mechanisms for the formation and distribution of financial resources. From this point of view, the analysis of theoretical foundations of higher education financing is an urgent scientific task.

<sup>1</sup>from an international group of market analysis, research and consulting . <https://www.imarcgroup.com/higher-education-market>

In the scientific literature, the issue of financing higher education has been studied within the framework of various economic theories. In particular, the neoclassical approach assesses education as a source of private and social income, while the institutional theory explains the financing system based on the interaction between the state, the market, and public institutions. The theory of public finance focuses on issues such as the efficient distribution of budget funds, the improvement of subsidy and grant mechanisms, and the use of public-private partnership models. At the same time, various models of financing higher education institutions have been formed in international practice. For example, while the United States has a mixed (public-private) financing system, in Germany the state budget is the main source. In the experience of South Korea, the participation of the private sector is at a high level, and the quality of education is ensured by strengthening the competitive environment. These models show that financing mechanisms are formed depending on various institutional and economic conditions.

In Uzbekistan, reforms are also being implemented aimed at modernizing the higher education system, expanding financial independence, and ensuring the effective use of funds. In this regard, along with budget funds, the role of sources such as contract payments, grants, economic agreements, and international projects is increasing. Therefore, an in-depth study of the scientific and theoretical foundations of financing higher education institutions and their adaptation to national practice is of scientific and practical importance.

The purpose of this article is to analyze the economic content, functions and principles of financing higher education institutions from a scientific and theoretical point of view, as well as to reveal the conceptual basis of financing models. The results of this research serve to improve the financial policy in the field of higher education and effectively organize investments in human capital.

## Literature Analysis

The scientific-theoretical foundations of financing higher education institutions are formed within the framework of the theory of human capital, the concept of public goods, the theory of public finance and institutional approaches. This problem has been widely studied in the scientific literature in terms of the impact of education on economic growth, diversification of financing sources, and mechanisms for ensuring financial efficiency.

T. Schultz, who founded the theory of human capital, <sup>2</sup> evaluated investments in education and health care as the main factor of economic development. These ideas were later <sup>3</sup>developed by G. Becker, and the private and social efficiency of education costs was scientifically substantiated. This approach created the basis for the formation of investment views in the financing of higher education. J. Mincer's work is of particular importance in empirically substantiating the relationship between education and income. <sup>4</sup>The income function he developed made it possible to estimate the effect of the level of education on the growth of personal and national income. This served to improve the methodology of calculating the economic efficiency of funds directed to higher education.

Local scientists S. Gulomov, M. Saidov, N. Zhumaev, S. Buzrukxonov, D. Rakhmonov, A. Makhmudov, A. Sherov, Z. Khorozov and others also conducted their research on ways to effectively finance the higher education system.

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<sup>2</sup>Schultz, TW (1961). Investment in Human Capital. The American Economic Review, 51(1), 1–17.

<sup>3</sup>Becker, GS (1964). Human Capital: A Theoretical and Empirical Analysis. Chicago: University of Chicago Press.

<sup>4</sup>Mincer, J. (1974). Schooling, Experience, and Earnings. New York: Columbia University Press.

Thus, the analysis of existing literature shows that the problem of financing higher education institutions is a multifaceted scientific issue. It was formed at the intersection of the theory of human capital, the concept of public goods and institutional approaches, and it requires further improvement, taking into account the characteristics of the national economy in modern conditions.

## **Research methodology**

Methods such as abstract-logical thinking, generalization, and comparison were used to illuminate this topic.

## **Analysis and discussion of results**

The priority given to the education sector in the development of a country is directly related to its economic growth rates, social stability and cultural development. Investments in the education system not only increase the efficiency of the labor market, but also increase the quality of public administration, the scope and efficiency of public services. In this sense, education is one of the main factors of strategic development. The higher education system is the most important and highest stage of the educational process, playing a decisive role in the formation and development of human capital. Highly qualified specialists trained in universities and institutes serve the modernization of economic sectors, the expansion of innovative activity and the increase in scientific and research potential. The growth of the student contingent, as a rule, along with the expansion of the level of education, creates the basis for an increase in the volume of gross domestic product and national income in the long term. From this point of view, higher education is considered an important socio-economic mechanism for improving the well-being of the population. In addition, higher education serves to strengthen the social status of an individual, increase competitiveness in the labor market, and ensure social mobility. Through scientific research, innovative developments, and the creation of new knowledge, higher education institutions become drivers of economic development. As a result, the level of intellectual potential, civic culture, and social cohesion in society increases. At the same time, the stable and effective functioning of the higher education system is inextricably linked to issues of financial support. Financing higher education is one of the most pressing problems in this area, and its sources are mainly formed from the state budget and private sector resources. In recent decades, many countries have seen an increase in the share of the private sector in the financing structure. However, in most countries, budget funds still remain the main source of financing higher education. This once again confirms the social importance and strategic nature of higher education.

In the current context, two main paradigms have emerged in the field of education financing. The first paradigm is a model of state-guaranteed financial support for educational institutions, which is based on the principle that education is a universally recognized constitutional right. According to this approach, the state provides stable financial support from budget funds in order to provide educational services to the population on a mass and equal basis. In this case, education is considered a social good and its financing is carried out within the framework of the state's social obligations. The second paradigm is based on the concept of human capital. According to this approach, education costs are interpreted not as social expenses, but as a strategic investment that ensures economic growth. The formation of a competitive workforce that meets the requirements of the labor market, based on cooperation between the state, the private sector and educational organizations, is set as a priority task.

In this case, the financing mechanism is implemented through the integration of the state budget, private investments, grants and other sources.

Thus, the higher education financing system is a complex economic mechanism that includes financial relations between the state, market and public institutions, and its efficiency directly affects the country's innovative potential and long-term sustainable economic development.

In budget management, it is important to change the volume and efficiency of financial provision of higher education, first of all, through organizational supports such as priority national projects, republican and departmental target programs, tasks for training state specialists. "The role of higher education in shaping the knowledge economy in the context of digital transformation requires increased investment in higher education. In addition, the widespread use of higher education in many countries has forced individuals and governments to invest more and more in this area"<sup>5</sup>.

"There is a general consensus globally that the functional and institutional structure of higher education systems is a stable social structure. Therefore, to ensure the effective functioning of national higher education systems, the model of state support should cover all areas of university activity: teaching, research, and education"<sup>6</sup>.

Scholars and practitioners in the fields of higher education, economics, and management propose models for higher education financing that include various financial sources and methods, theoretical concepts and considerations, identification of advantages and disadvantages, and the interrelationship and importance of public and private financing. "Thus, depending on the structure of funding sources and the impact of funding entities on the higher education system, three main types of higher education funding are distinguished: budgetary, mixed and market-based financial models <sup>7</sup>. "The budgetary model of higher education financing is based on the principle of full state financing of educational institutions. Therefore, the government and the relevant ministries and agencies responsible for the implementation of the higher education strategy have a direct impact on the activities of universities in terms of legal and financial aspects (including the internal structure of the institution, faculty and staff, the number of employees and the direction of educational programs, research and development)". The main advantage of the budget model is that the state can fully satisfy the needs of society by ensuring the training of the necessary specialists, controlling their number and achieving a high level of quality in educational programs and scientific research"<sup>8</sup>. At the same time, taking into account the requirements and trends in the field of higher education, the following negative aspects of the budget financing model can be identified: - limitation of the autonomy and academic freedom of higher education institutions due to the high degree of centralization of the budget financing system; - strong dependence of the higher education sector on the state political direction.

Some researchers believe that: "There are four different methods of financing higher education in developed and developing countries. In the first method, higher education is financed through the use of public resources. In the second method, higher education is financed through tuition fees. The third

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<sup>5</sup> Blokdyk G. Sustainable development goals: a complete guide. 5 STARCooks , 2020. 309 p .

<sup>6</sup> Krokhmal L. A. Sovershenstvovanie modeli gosudarstvennoy podderzhki uslug vysshego obrazovaniya v Rossii // Problemy ekonomiki i uridicheskoi praktiki. 2018. No. 5. S. 72-78 .

<sup>7</sup> Pranevičienė B., Pūraitė A. The financing methods of higher education system [Electronic resource] // Jurisprudence. 2010. No. 4 (122). P. 335–356. URL : <https://repository.mr.eu/bitstream/handle/007/11619/document.pdf>

<sup>8</sup> Nizov A. N., Medžitova T. I. Zarubezhnyy opyt finansirovaniya vysshego obrazovaniya [Elektronnyy resurs] // Rossiyskiy ekonomicheskiy internet-journal. 2018. No. 2. URL: [https://www.e-rej.ru/Articles/2018/Nizov\\_Medzhitova.pdf](https://www.e-rej.ru/Articles/2018/Nizov_Medzhitova.pdf)

method of financing higher education is the use of private resources, and the last method is cooperation between universities and industry enterprises”<sup>9</sup>.

Several mechanisms can be involved in the financing of universities from the budget: for example, formula-based financing, performance-based contracts, implementation of university improvement programs, individual projects, etc. In addition, from a theoretical point of view, it is necessary to combine different financing mechanisms in order to form a comprehensive set of incentives for universities and ensure institutional diversity depending on the field of activity.

The theoretical views and approaches of various economists in the issue of higher education financing are mainly formed within the framework of the theory of human capital, the theory of public goods and institutional economics. According to the concept of human capital, expenditure on education is considered as an investment. Nobel Prize laureate American economist T. This is human capital defined the concept. According to his theory: “Education is a form of capital because it affects production and is important for the economy. In addition, spending on education can be considered capital because it provides the opportunity to earn some benefit or income in the future. Gives”<sup>10</sup>. G. Becker continued to develop the theory of human capital and is considered the founder of the modern theory of human capital. G. Becker distinguishes knowledge, skills and motivation within human capital. In his opinion : “Investments in the training of specialists and skilled workers can bring returns no less than the costs of machine technologies in the future”<sup>11</sup>.

The author of the second theory is N.Barr , who , from the point of view of the theory of public and private interest, considers higher education as a “mixed good”. N. Barr put forward the “cost-sharing” model in financing education. In his opinion: “the state spends on education for social benefit, and students for personal income”<sup>12</sup>.

In recent years, performance-based financing has become widespread. For example, “B. Jongbloed, H. Vossenstein in their studies paid attention to the issues of increasing the share of joint financing and transition to performance-based financing”<sup>13</sup>.

“Russian scientists E.G. Chernova, T.D. Akhobadze, A.S. Malova, A.A. Saltan have empirically studied higher education financing models and their effectiveness. In their research, they also focused on the nature of mechanisms for financing the higher education system from the state budget, including formula financing, performance-based financing, and mutually agreed financing mechanisms. Passed”<sup>14</sup>.

I.V. In his research, Abankina: “researched a number of specific investment models of higher education financing, including individual financing, financing through endowment funds, and targeted financing mechanisms, and analyzed several foreign experiences in this regard”<sup>15</sup>.

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<sup>9</sup> Soyler, I. & Karatas, S. Establishment and financing of private higher education institutions in Turkey. International Higher Education and Congress: New Trends and Issues, (UYK-2011), Istanbul.-2011

<sup>10</sup> Shultz, T. Capital Formation by Education // Journal of Political Economy. 1960. Vol . 68. No. 6. P. 571– 583.

<sup>11</sup> Dragonchuk, L. S. Obrazovanie i razvitie human capital in Russia // Problemy sovremennoy ekonomiki. 2011. No. 1.

<sup>12</sup> Barr, N. Economics of the Welfare State. OUP Oxford, 2012 . 389 p.

<sup>13</sup>Jongbloed , B. , Vossenstein , H. Universitetskoe i studencheskoe finansirovanie: international comparison. December 2016 Oxford Review of Economic Policy 32(4):576-595, DOI: 10.1093/oxrep/grw029

<sup>14</sup> Chernova Ye . G. , Akhobadze T. D. , Malova A. S. , Sultan A. A. Model financing higher education I effektivnost ' deyatel ' nosti University student . Empiricheskoye issledovaniye evropeyskogo opyta i otechestvennaya praktika [Models of financing higher education and efficiency of universities. Empirical study of European experience and domestic practice]. *Voprosy obrazovaniya – Questions of Education*, Educational Studies, Moscow, 2017, no. 3.

<sup>15</sup> Abankina IV Financing education: trend neither personalization [Financing education: the trend towards personalization]. *NEA Journal* , 2019, no. 1 (41), pp. 216-225.

Local scientists S. Gulomov, M. Saidov, N. Zhumaev, S. Buzrukxonov, D. Rakhmonov, A. Makhmudov, A. Sherov, Z. Khorozov and others also conducted their research on ways to effectively finance the higher education system (Table 1).

For example, “S. Gulomov is one of the main scientists who developed the concept of **human capital and the knowledge economy in Uzbekistan**. In his work, investments in education are considered the main driver of economic growth”<sup>16</sup>.

**Table 1 Research directions of some local scientists on the financing of the higher education system<sup>17</sup>**

1. Concept of human capital and knowledge economy	S. In the work of Ghulomov, investments in the field of education are justified as an important driver of economic growth. The scientist evaluates education as a strategic resource that ensures the innovative development of the economy. According to him, expanding the financing of higher education will serve to increase labor productivity and national competitiveness.	Source: Gulyamov SS et al. The effectiveness of human capital factors in Uzbekistan [The effectiveness of the interaction of human capital factors in Uzbekistan]. <i>Journal of Finance</i> , Tashkent, 2014, no. 4, pp. 119-127.
	A. Mahmudov studied the formation of the market of educational services, expanding the participation of the private sector and attracting investments in education in the field of education economy. He emphasizes the need for a combination of state and market mechanisms in financing education.	Source: Mahmudov A. Improving the mechanism of financial resources management in higher education institutions [Improving the mechanism of financial resources management in higher education institutions]. Abstract of PhD thesis. Tashkent, 2019, 45 p.
	N. Jumaev analyzes the impact of education costs on economic growth from a macroeconomic point of view and justifies that investment in human capital is an important factor of economic stability.	Source: Jumaev NX, Rakhmonov D. A. High education to take private from sources financing: theory and practice [Private funding for higher education: theory oath practice]. <i>Economics and innovative technologies – Economy oath innovative technology</i> , 2018, September-October, no. 5.
2. Research in terms of public finance and budget policy	M.Saidov, based on the priority of education expenses in the composition of state expenses, puts forward a socially oriented model of budget policy.	Source: Saidov MX High education in the system financial management [Financial management in higher education]. T ashkent, Tafakkur bustoni, 2011, 432 p.
	S. Buzrukhanov researched the issues of increasing the efficiency of financing the education sector within the framework of the state budget and fiscal policy, cost planning and targeted use of budget resources.	Source: Buzrukxonov SM Financing mechanism for innovative development of higher education and innovation investment attractiveness evaluation methodological approaches [The mechanism of financing the innovative development of higher education oath methodological approaches until assessing the investment attractiveness of innovations]. <i>Logistics and Economics</i> , 2021, iss. 1, p. 84.
3. Financing and financial management of higher education institutions	A. Sherov researched the issues of financing higher education institutions from extra-budgetary sources, using endowment funds, grants and private investments. The scientist emphasizes that ensuring the financial independence of the university serves to increase the quality of education and competitiveness.	Source: Sherov A. Ways to improve the financing of higher education institutions from the budget. <i>Oriental Renaissance: Innovative, educational, natural oath social science</i> , 2021, no. 1 (10), pp. 1121- 1133.
	D. Rahmonov studied the issues of improving the financial management system, effective use of resources and strategic financial planning in higher education institutions.	Source: Rakhmonov D. In Uzbekistan social the field financing improvement methodological foundations [Methodological base of improving financing of the social sphere in Uzbekistan]. Tashkent, Science and Technology, 2017, 248 p.
	Z. Khorozov in management and financing of universities analyzes the importance of institutional reforms and justifies the need to strengthen university autonomy.	Source: Pulatov D., Khurozov Z. High education institutions and their under education increasing the financial independence of institutions [Increasing the financial independence of higher education institutions and educational institutions under them]. <i>Business-Expert</i> , 2019, no. 1 (133).

<sup>16</sup> Gulyamov SS et al. The effectiveness of the interaction of human capital factors in Uzbekistan [The effectiveness of the interaction of human capital factors in Uzbekistan]. *Journal of Finance*, Tashkent, 2014, no. 4, pp. 119-127.

<sup>17</sup> Author development.

Analysis of the research of Uzbek scientists shows that the theoretical and methodological foundations of financing higher education institutions are formed in the context of the concept of human capital and the knowledge economy; the theory of state budget and fiscal policy; financial independence of universities and financial management and diversification of financing sources. Thus, the local scientific school is characterized by its orientation towards the formation of a mixed state-market model of financing higher education.

## Summary

The analysis of the scientific-theoretical basis of financing of higher education institutions shows that this area is of strategic importance in ensuring economic growth, innovative development and social stability. Financial resources aimed at education are the main factor in the formation and development of human capital and serve to strengthen the competitiveness of the national economy in the long term. According to the results of the study, it is advisable to operate in harmony with two priority approaches to financing higher education - state-guaranteed financial support and the concept of investment in human capital. The first approach ensures the essence of education as a social good, while the second allows it to be assessed from the point of view of economic efficiency and innovative development. Therefore, in modern conditions, financing models should be formed on the basis of the proportionality of the principles of social justice and economic efficiency. An analysis of the financial activities of higher educational institutions shows the need for their transition to a multi-source financing system. Along with state budget funds, the development of private investments, grants, scientific projects, economic contracts and public-private partnership mechanisms serves to ensure financial stability. In this regard, it is important to organize the processes of formation, redistribution and effective use of financial resources on the basis of transparent and result-oriented management principles. Also, considering higher education as a complex, interrelated and multi-component system requires improvement of its financial management mechanisms. The financial system functions as a relatively independent subsystem of the financial system of society and coordinates the movement of resources between state and market institutions. In this process, one of the priority tasks is the introduction of guaranteed financial mechanisms aimed at supporting innovative activities and developing the intellectual and creative potential of students.

In short, in-depth study of the scientific and theoretical foundations of financing higher education institutions and their implementation in national practice is of great scientific and practical importance in improving the quality of human capital, forming an innovative economy, and ensuring the stable socio-economic development of the country.

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