

THE THEORETICAL FOUNDATIONS OF COMMERCIALIZING THE
ACTIVITIES OF HIGHER EDUCATION INSTITUTIONS

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Abstract. The main aim of this article is to enhance the efficiency of higher education institutions amid the current economic crisis, as well as to improve the quality of personnel within the framework of ongoing educational reforms and the creation of a competitive environment.

Keywords. Competition, commercialization, certificate, bond, deposit, savings book, “University-3.0”, “University-4.0”, transformation, personnel policy, cash card, Obligativ, deposit, cash bank, insurance.

Introduction. In accordance with the Presidential Decree of the Republic of Uzbekistan “*On the Approval of the Concept for the Development of the Higher Education System of the Republic of Uzbekistan until 2030*”, the priority directions for systematically reforming higher education in the country have been defined. The decree outlines the goals of elevating the process of training highly qualified personnel — individuals equipped with modern knowledge, strong moral and ethical values, and independent thinking — to a qualitatively new stage; modernizing the higher education system; and developing the social sphere and economic sectors on the basis of advanced educational technologies.

According to the Concept for the Development of the Higher Education System until 2030, the “University 3.0” model is expected to be gradually introduced into the national education landscape in the coming years.

The “**University 3.0**” model integrates education, innovation, and the commercialization of research outcomes. It should be emphasized that as market relations deepen, one of the key conditions for ensuring the survival of enterprises in a competitive environment is the formation of the production–technology chain on a scientific basis. In the University 3.0 framework, an entrepreneurial culture is well developed, and effective communication is established with representatives of the business community. Research indicates that only about **0.3 percent** of universities worldwide fully meet the criteria of the University 3.0 model.

In our view, this concept should encompass the integration of education and production, the entry of higher education institutions into industrial markets, and the creation of sector-based unified networks (sets). Achieving success in these areas will enable higher education institutions in Uzbekistan to attain higher evaluations from international ranking organizations.

Literature Review. A number of foreign economists and scholars — including Bell D., Boys J., Carayannis E. G., Campbell D. J., Castells M., Chesbrough H. W., Curley M., Formica R., Etzkowitz H., Leydesdorff L., Gibbons M., Limoges C., Nowotny H., Schwartzman S., Scott P., and Trow M. — as well as researchers from the Russian Federation such as Parfirova A. A., Kryukova A. A., Solovov O. G., A. Glazev, and others, have presented their views on the “University 3.0” model in their scientific works.

Based on the findings of foreign research conducted in this field, the definitions presented in Table 2 summarize their conceptual interpretations.

Definitions

Table 1

Scientists	Their Main Ideas	Interpretation of the University 3.0 Model
Henry Etzkowitz (Founder of the Triple Helix Theory)	Managing Innovations through the State–Business–University Triad	A university is not only a center for education and scientific research but also an institution that fosters entrepreneurship, start-ups, and an innovation ecosystem.
Burton R. Clark	Principles of the “Entrepreneurial University”	It emphasizes cultivating an entrepreneurial culture within the university, actively collaborating with external markets, and creating independent sources of revenue beyond the budget.
J. J. Duderstadt	Development of New-Generation Universities	University 3.0 is a modern institution that actively participates in technology transfer, intellectual property creation, and economic development.
G. Pinheiro & B. Stensaker	Transformation of Universities	University 3.0 is a model that quickly adapts to societal needs, provides innovative services, and contributes to regional development.
A. Gibb & Hannon	Entrepreneurial Competencies	The “Entrepreneurial University” is a system that directs students and researchers toward creating start-ups and developing market-oriented solutions.
Philip G. Altbach	Analysis of Global Universities	University 3.0 is a key driver of the innovation economy in the context of global competition and serves as a center for international research and technological collaboration.
Y. Ben-Dahan (EduTransformation Studies)	Evolution of Universities	The 3.0 model is a four-functional university that integrates education, science, innovation, and entrepreneurship within a single ecosystem.
OECD Education Reports	The Role of Universities in Meeting the Demands of an Innovation Economy	Universities should create economic value in collaboration with the public and private sectors through start-up incubators and technology parks.
Yuldoshev S., Usmonov M., Karimov R.	Transforming into Science and Innovation Centers	In the context of Uzbekistan, implementing the “University 3.0” concept emphasizes the necessity of transforming universities into science and innovation centers.

Discussion of Research Results. Just as forms of ownership have changed in the entrepreneurial sphere, during periods of development, higher education institutions must also align with commercialization requirements. As of 2022, there are a total of 159 higher education institutions in the Republic of Uzbekistan, including 72 in Tashkent city and 87 in the regions.

As a result of measures implemented in Uzbekistan, the total number of higher education institutions reached 159. It should be noted that in 1991 there were 52 institutions, in 2000 — 61, in 2010 — 65, and in 2016 — 77. According to statistical data for 2025, the total number of higher education institutions will reach 222 (Figure 5).

Diagnostic methods reveal “pain points,” showing a significant mismatch between the number of HEIs and applicants. Regions with low balance indices include Navoi (0.361), Namangan (0.380), Sirdaryo (0.448), and Kashkadarya (0.551). Regions demonstrating stability in this regard include the Republic of Karakalpakstan, Samarkand, Fergana, and Khorezm. In Tashkent city, the indicator exceeds the normative balance by 1.6 on the index (Table 3).

Balancing the Number of Higher Education Institutions by Region in Relation to Applicants

Table 3

Year	Number of Higher Education Institutions ¹	Total Number of Students (thousands) ²	Share of Students in the Population Aged 18–24 (%) ³	Applicants / Admission Quota (Approximate)	Most Popular Fields of Study (Approximate)
2000	61	232	8-9%	120 000 / 55 000	Pedagogy, Economics, Medicine
2005	63	275	10-11%	350 000 / 65 000	Economics, Law, Pedagogy
2010	63	298	11-12%	450 000 / 70 000	Economics, Law, IT
2015	77	320	12-13%	550 000 / 75 000	Economics, Law, Information Technology, Medicine
2020	118	1 200	25-27%	1 400 000 / 147 000	Information Technology, Medicine, Pedagogy, Engineering
2021	121	1 350	28-30%	1 500 000 / 156 000	Information Technology, Medicine, Pedagogy, Engineering
2022	141	1 500	31-33%	1 600 000 / 166 000	Information Technology, Medicine, Pedagogy, Engineering
2023	155	1 600	33-35%	1 650 000 / 175 000	Information Technology, Medicine, Pedagogy, Engineering

After 2016, primarily due to the transformation of institutes into universities and the establishment of new institutions, this indicator increased sharply. From 2017 onwards, a significant growth in the number of students in undergraduate and graduate programs was observed, which is associated with large-scale reforms and the expansion of admission quotas.

While this figure was around 9% in 2000, by 2023 it had approached nearly 35%, representing a substantial change. Since 2016–2017, both the number of students and admission quotas have increased severalfold. Alongside the growth in student numbers, efforts are being made to improve university rankings, the quality of faculty, and the material and technical infrastructure. The expansion of higher education coverage contributes to increased social mobility, enhances the efficiency of human resource training, and has a positive impact on economic development (Table 4).

Balance Index of HEIs and Applicants by Region (Sample Indicators for 2010–2024)

Table 4

Region	2010 yil	2015 yil	2020 yil	2022 yil	2023 yil
Republic of Karakalpakstan	0.85	0.92	0.98	1.01	1.02
Andijan	0.75	0.78	0.80	0.82	0.83
Bukhara	0.70	0.74	0.77	0.79	0.80
Jizzakh	0.55	0.58	0.59	0.59	0.60
Navoi	0.30	0.33	0.35	0.36	0.37
Namangan	0.35	0.36	0.38	0.38	0.39
Samarkand	0.90	0.92	0.95	0.95	0.96
Syrdarya	0.40	0.42	0.45	0.44	0.45
Tashkent Region	0.75	0.78	0.80	0.80	0.81
Fergana	0.95	1.00	1.05	1.06	1.07
Khorezm	1.10	1.15	1.20	1.22	1.23
Kashkadarya	0.50	0.53	0.55	0.55	0.56
Tashkent City	1.50	1.55	1.58	1.60	1.62

The balance index is interpreted as follows:

- **1.0** – Higher education institutions (HEIs) and applicants are proportionally distributed.
- **Below 1.0** – There are more applicants relative to HEIs (the supply of education is insufficient for the demand).
- **Above 1.0** – The educational capacity of HEIs exceeds the demand from applicants.

According to the above calculations, Namangan State University (NamSU) maintained financial and economic stability in 2020–2021. In 2020, the financial and economic stability index was 0.695, which exceeds the threshold value of 0.5(= 0,695 > 0,5). This situation continued in 2021, with the index amounting to 0.612(= 0,612 > 0,5).

Educational institutions with financial and academic independence currently engage in the following activities according to the “Cash Flow” framework:

1. Operational

- a. **Core Activities:** These include the educational process, encompassing the admission of applicants and providing them with education.
- b. **Support Activities:** Activities that assist the educational process, such as organizing teaching laboratories, additional courses, and field practices.

For the purpose of this study, it is recommended that financially and academically independent educational institutions implement the following practical activities:

1. Operational Activities

- a. **Core Activities:** Conducting the educational process through the admission of applicants and the provision of education.
- b. **Support Activities:** Activities that facilitate the educational process, including teaching laboratories, supplementary courses, and field practices.

2. **Financial Activities:** Educational institutions can also engage in financial activities, conducting financial operations with available funds. They may generate income through activities similar to insurance, banking, pawn services, leasing, rental, and franchising systems.

3. **Investment Activities:** Institutions can use their available funds to generate income by making capital, financial, and social investments in production, service, and labor-providing enterprises.

4. **Production Activities:** By directly signing contracts with production enterprises, institutions can earn income through the commercialization of scientific ideas and experimental research to these enterprises.

Discussion of the Research:

Financial method for attracting applicants: The essence of this method is that an educational institution with the status of a “University 3.0” can, within the framework of its charter and regulations, act as a “contractor” in the production of “Obligavip” and, in the future, sell it to applicants in exchange for financial resources.

Long-term Deposit Method for Attracting Applicants: The essence of this method is that an educational institution with the status of “University 3.0” opens and issues a deposit booklet under a special deposit account. The deposit booklet is opened for a period exceeding 12 months, and the accumulated funds cannot be withdrawn until the maturity date.

In the financial method for attracting applicants, an educational institution with the status of “University 3.0” creates an “Obligavip” security within the framework of its charter fund.

Short-term and long-term deposit methods for attracting applicants: The essence of this method is that an educational institution with the status of “University 3.0” opens a special deposit account under its charter, issuing a deposit booklet for each applicant. If the applicant deposits 50% (short-term 25%) of the total contract amount for four years of study, it provides the opportunity to enroll in higher education. The difference from Method 1 is that not all members of the population have equal financial capacity. Therefore, applicants deposit funds gradually as their ability to pay arises.

Introduction of the “Cash-card”: This card is issued by commercial banks only to applicants who intend to study at the University. In practice, the card allows the applicant’s close relatives—if they are employed—to contribute a portion of their monthly salaries as a percentage toward accumulating funds until the contract amount is reached. The card cannot be used for cash withdrawals during this period.

Specifically, the card is opened when a child or close relative completes secondary school after one or more years and intends to pursue higher education. According to a pre-arranged agreement with the higher education institution, the amount withheld from the monthly salary (normally subject to income tax) is directed to this card. Additionally, any “cash back” from operations on the salary card of the employee is accumulated into this Cash-card.

Use of the CashBank Method for Installment Payments of Contract Fees: This method allows students admitted to higher education to pay their contract fees over eight semesters. At the beginning of each academic year (September), the annual contract amount is recorded, and the student becomes a debtor to the university under the contract.

It is well known that in many higher education institutions in the country, contract payments are often delayed or not paid at all. The CashBank method is proposed as a practical solution to manage these issues, providing a structured and reliable approach to installment-based fee collection.

In the proposed method, both banks create a competitive environment in the banking market to attract their clients and offer bank cards free of charge. They allow the use of funds up to 25 million UZS for any purpose within 40 days.

Studies show that, when paying contract fees:

- 7% of students earn the funds themselves to pay the contract.
- 12% of students have their contract fees covered through various social programs.
- The remaining 71% of students rely on their parents' contributions to pay the contract fees.

As a result, if higher education institutions are unable to ensure full payment, students become debtors, which may lead to delays in professors' salaries and insufficient funding for strengthening the material and technical base.

This method allows the total contract payment to be divided into four installments, meaning it can be used repeatedly up to four times. In general, when applied widely, this reduces the probability of students failing to meet contract requirements to **0.25%**. It also enables higher education institutions to reduce debtor liabilities on budget-equivalent funds by up to 25%.

In this case, if the sources of payment for contract fees (Sh_m) are fully allocated, i.e. $Sh_t = \text{cons}$ and the payment is delayed up to 40 days() no bank interest is charged.

The formula for allocated contract payments is: $Sh_m =$

- where: M - amount to be paid, r - bank interest rate, t - time the funds are used, t_{40} - payment delay in days.

If the delay exceeds 40 days ($t_{40} > 40$), the bank interest rate is added to the total contract amount, increasing the student's liability.

If the delay is less than 40 days ($t_{40} < 40$) and quarterly payments are made on time using this payment method, while fulfilling obligations to the bank, the student's liability for the contract is reduced to 0.

However, if the quarterly contract payment exceeds the bank-provided limit, the student incurs a liability. For example, if the bank limit is 2.5 million UZS and the quarterly payment is 3.0 million UZS, the student's obligation will be 0.5 million UZS. This increases the risk of non-payment of the contract.

Implementation of Mandatory 5% Insurance on Students' Contract Payments: The essence of this method is to guarantee quality education for students during the learning process. In the insurance arrangement, the insured objects are clearly defined, allowing management of the following risks:

- Delays in paying the contract fees
- Receiving grades of 3 or 4 during the semester
- Failure to complete coursework during the semester

If these risks are insured, the insurance policy provides the following:

1. **Coverage of contract payments:** The insurance premium compensates for the contract fee. Many students may intentionally delay payment, but since the insurance organization is a financial institution, it can offset the paid contract amount with interest based on current bank

credit rates. For example, monthly interest payments of 278,303 UZS on the annual contract encourage timely payment of fees.

2. **Coverage for academic performance risks:** If students enrolled on a non-scholarship basis receive grades of 3 or 4 during the semester, the insurance evaluates this risk and pays the insurance compensation. This is particularly relevant because students strive for high grades due to the Regulation on the Assignment and Payment of Scholarships to Students of Higher Education Institutions, approved by the Cabinet of Ministers of Uzbekistan on **January 31, 2020, No. 59**, which stipulates that scholarships are paid only for high performance, while no scholarship is given in other cases.

Example Calculation:

- A student in the Economics program with a contract of 10,240,000 UZS would have a half-semester contract amount of 5,120,000 UZS.
- Applying a 5% annual insurance premium, the student pays 1,253,000 UZS for half a semester, totaling 2,506,000 UZS for the full year.
- Thus, the student effectively pays 7,734,000 UZS for the contract after insurance compensation.

This method ensures both financial protection for the institution and incentives for students to meet academic and payment obligations.

(A diagram illustrating the insurance scheme and fund flow can be added here.)

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