

ECONOSCITECH INTEGRATION

ISSUE
6

INTERNATIONAL SCIENTIFIC
ELECTRONIC JOURNAL



**TASHKENT STATE
UNIVERSITY OF ECONOMICS**



**American University
of Technology**

Powered by Arizona State University®

ISSN: 3060-5075



**Acceptance of articles
PUBLISHED MONTHLY**



**ARTICLE CONTRIBUTORS
PROFESSORS, SCHOLARS,
SPECIALISTS, AND RESEARCHERS**



Google
Scholar

**Academic
Resource
Index**
ResearchBib

BASE

OpenAIRE

doi
Digital
Object
Identifier

OPEN ACCESS

CONTACT:



+998 94 3540880



<https://econoscitech-integration-journal.uz>



2026

**EDITOR-IN-CHIEF:**

Zufarova Nozima Gulamiddinovna
DSc., Dean of Tourism Faculty, TSUE

DEPUTY EDITOR-IN-CHIEF:

Makhmudov Nosir Makhmudovich
DSc., Prof., Academician

DEPUTY EDITOR-IN-CHIEF:

Suyunov Dilmurod Xolmurodovich
Doctor of Economics (DSc), Professor,

DEPUTY EDITOR-IN-CHIEF:

Allayarov Shamsiddin Amanullayevich
doctor of economics (DSc), professor

RESPONSIBLE SECRETARY:

Otaboyev Axmed Maxsudbek o'g'li
TSUE independent researcher

THE SCIENTIFIC-POPULAR
ELECTRONIC JOURNAL
"ECONOSCITECH-INTEGRATION"
HAS BEEN REGISTERED UNDER
THE NUMBER C-5669651 BY THE
AGENCY FOR INFORMATION AND
MASS COMMUNICATIONS (AOKA)
OF THE REPUBLIC OF UZBEKISTAN,
EFFECTIVE FROM OCTOBER 9, 2024.

In accordance with Resolution No. 384/6 dated April 10, 2026, issued by the Presidium of the Supreme Attestation Commission under the Ministry of Higher Education, Science and Innovation of the Republic of Uzbekistan, this journal is included in the list of recommended international scientific publications for publishing the primary research findings of doctoral dissertations in the field of Economic Sciences.

Partners: Tashkent State University of Economics / American University of Technology in Tashkent (AUT)

Electronic publication, Issue 5. 374 pages.
Approved for publication on Iyun, 2026.

Editorial Board Members:

Sharipov Kongratbay Avezimbetovich,
Doctor of Technical Sciences (DSc), Professor



Teshabayev To'liqin Zakirovich,
Doctor of Economic Sciences (DSc), Professor



Said Irandoust,
Doctor of Chemical Engineering Sciences,
Professor



Abdurakhmanova Gulnora Kalandarovna,
Doctor of Economic Sciences (DSc), Professor



Khudoykulov Sadirdin Karimovich,
Doctor of Economics, (DSc), Professor



Tokunaga Masahiro,
professor, PhD of Economics of the Faculty of
Business and Commerce



Debasis Das,
professor Department of Computer Science



Nitin Goje,
professor and Program Lead - Computer Science



Nargizakhon Shamshieva
Doctor of Economic Sciences, Professor



Rakhmonov Norim Razzakovich,
Doctor of Economic Sciences (DSc), Professor

Bayxonov Bahodirjon Tursunbayevich
Doctor of Science (DSc), Professor



Shomurodov Ravshan Tursunkulovich,
PhD, Associate Professor



Boymuratov Abduraxmat Djumayevich
Doctor of Philosophy (PhD) in Economics



Sharopova Nafosat Radjabovna
DSc, Associate Professor



Sultanova Kamila Mukhtorali Kizi
Master of Science

CONTENTS

MECHANISMS FOR IMPLEMENTING TECHNOLOGICAL AND DIGITAL INNOVATIONS.....	10
Shakirxodjayeva Zuxra Rustamxanovna	
DEVELOPMENT OF ORGANIZATIONAL AND ECONOMIC MECHANISMS FOR IMPROVING INVESTMENT PROCESSES IN THE CONSTRUCTION INDUSTRY	16
Aliyeva Zilola Mamatvalyevna	
CURRENT STATE AND STRUCTURAL ANALYSIS OF THE DEVELOPMENT OF SERVICE SECTORS IN TASHKENT CITY.....	23
Abdikayumov Bekzod Turdiniyozovich	
GREEN BONDS VS. SUSTAINABILITY LINKED LOANS: WHICH WORKS FOR INDUSTRIAL DECARBONISATION?	29
Ataxanov Umidbek Olimovich	
ИНТЕГРИРОВАННАЯ МОДЕЛЬ УПРАВЛЕНИЯ ЭКОНОМИЧЕСКОЙ БЕЗОПАСНОСТЬЮ БАНКА	34
Маликова Дилрабо Муминовна	
ECONOMETRIC MODELLING OF FAMILY ENTREPRENEURSHIP DEVELOPMENT IN THE TOURISM SECTOR: EVIDENCE FROM UZBEKISTAN	42
Pardayeva Ozoda Mamayunusovna	
AN INTEGRAL INDEX METHODOLOGY FOR ASSESSING THE INVESTMENT POTENTIAL OF AGRICULTURAL ENTERPRISES	49
Sayyora Bakhtiyorovna Nazirova	
ГОСУДАРСТВЕННЫЕ, ПУБЛИЧНЫЕ И ОБЩЕСТВЕННЫЕ ФИНАНСЫ В УСЛОВИЯХ ЦИФРОВОЙ ТРАНСФОРМАЦИИ: ТЕРМИНОЛОГИЧЕСКИЕ ГРАНИЦЫ И ИНСТИТУЦИОНАЛЬНАЯ ЭВОЛЮЦИЯ.....	53
Срождиддинова Зарина Хайриддиновна	
BLOCKCHAIN-BASED FINANCIAL TRANSACTION MONITORING SYSTEM (SMART CONTRACTS, DECENTRALIZED DATABASE, AND AUDIT TRAILS)	58
Olimova Mukhlisa Vohidjon qizi	
FAMILY ENTREPRENEURSHIP AS A DRIVER OF EMPLOYMENT IN THE TOURISM SECTOR: REGIONAL DISPARITIES AND INSTITUTIONAL MECHANISMS IN UZBEKISTAN.....	65
Pardayeva Ozoda Mamayunusovna	
ANALYSIS OF THE MAIN STATISTICAL INDICATORS OF LABOR RESOURCE UTILIZATION IN SURXONDARYO REGION	72
Haydarova Dinora Atamurot qizi	
ASSESSING THE ROLE OF SPECIAL ECONOMIC ZONES IN REGIONAL ECONOMIC GROWTH ACROSS THE REGIONS OF UZBEKISTAN USING INTENSITY COEFFICIENTS AND CLUSTER ANALYSIS.....	77
Anvarkhonov Abdulatifikhon Jamshidkhon ugli	
TECHNICAL, ECONOMIC, AND ENVIRONMENTAL EFFICIENCY OF IMPLEMENTING AGRIVOLTAIC SYSTEMS IN UZBEKISTAN	85
Jabborov Shaymurod Akram o'g'li	
Botirov Bozorbek Musurmon o'g'li	
Atoyeva Mohinur Amrilloevna	
Avazov Jonibek Azizbek o'g'li	
МОДЕЛИРОВАНИЕ ВЛИЯНИЯ ЧЕЛОВЕЧЕСКОГО КАПИТАЛА НА ТРАЕКТОРИЮ ЭКОНОМИЧЕСКОГО РОСТА.....	91
Хазраткулова Лола Нармуминовна	
FINANCING GREEN PROJECTS IN THE REPUBLIC OF UZBEKISTAN: STATUS, CHALLENGES AND PROSPECTS	97
Qorriyeva Shahnoza Safarbayevna	

FORMULA-BASED DISTRIBUTION OF INTERGOVERNMENTAL TRANSFERS TO LOCAL BUDGETS IN UZBEKISTAN: A COMPARATIVE SIMULATION ANALYSIS BASED ON 2026 FORECAST INDICATORS.....	103
Umidjon Pardaev Sarvar Maxmudov	
GOVERNMENT FUNDING AND THE DEVELOPMENT OF INNOVATIVE ACTIVITIES: FINANCIAL PROMOTION MECHANISMS.....	115
Bahriddinov Nodirbek Zamirdinovich	
FORECASTING EXPORT AND IMPORT INDICATORS OF BUKHARA REGION	122
Ergashev Mirjon Yorqin o'g'li	
A CUSTOMER-ORIENTED INTEGRATIVE METHODOLOGICAL MODEL FOR IMPROVING THE EFFICIENCY OF TOURIST SERVICES IN THE TOURISM AND HOSPITALITY INDUSTRY	130
Bakayev Ziyovuddinkhan Toshbolta ogli	
A PESTLI ANALYSIS OF THE EFFICIENCY OF THE HOUSING STOCK MANAGEMENT SYSTEM.....	139
Mamanazarov Oybek Shomurodovich	
ANALYSIS OF THE DEVELOPMENT STATUS AND EXPORT ACTIVITIES OF SMALL BUSINESS AND PRIVATE ENTREPRENEURSHIP IN UZBEKISTAN	146
Khikmatullayeva Nargiza Jamoliddin kizi	
CHANGE MANAGEMENT DURING QUALITY ASSURANCE REFORM IN HIGHER EDUCATION INSTITUTIONS	154
Urinov Bobur Nasillovovich	
СТРАТЕГИИ УСТОЙЧИВОГО РАЗВИТИЯ ПАЛОМНИЧЕСКОГО ТУРИЗМА В УЗБЕКИСТАНЕ	162
Каримова Дилафруз Садриддин кизи	
E-COMMERCE AS A DIGITAL FORM OF ENTREPRENEURSHIP IN INCREASING HOUSEHOLD INCOMES	167
Eshbayeva Shahnoza Fakhriddinova	
ADVANTAGES OF IMPLEMENTING AN OCCUPATIONAL AND SKILLS MAPPING SYSTEM IN UZBEKISTAN'S LABOUR MARKET	172
S.B.Goyipnazarov S.M.Kurbanbaeva	
ASSESSMENT OF THE EFFICIENCY OF FIXED ASSETS UTILIZATION IN RAILWAY ENTERPRISES: EVIDENCE FROM UZBEKISTAN.....	178
Turdiyeva Irodaxon Ismoil qizi	
SCIENTIFIC AND METHODOLOGICAL APPROACHES TO ASSESSING RESOURCE USE IN THE CONTEXT OF A GREEN ECONOMY.....	183
Karimov Islombek Bekpolat o'g'li	
THE IMPACT OF ECOTOURISM ON REGIONAL ECONOMIC DEVELOPMENT	
Samiev Siroj Saitovich Ochilova Guli Rashid kizi	
THE IMPACT OF RISK ALLOCATION ON INVESTMENT EFFICIENCY IN PUBLIC- PRIVATE PARTNERSHIP (PPP) PROJECTS	197
Khaydarova Charos Nizomiddinova	
PROSPECTS FOR CHANGING THE VOLUME OF GRAPE CULTIVATION DUE TO THE USE OF INNOVATIVE TECHNOLOGIES IN THE VITICULTURE COMPLEX.....	202
Boltaev Nazarbek Narzullaevich	
ЦИФРОВЫЕ МЕХАНИЗМЫ ОБОСНОВАНИЯ НАЧАЛЬНОЙ ЦЕНЫ В ГОСУДАРСТВЕННЫХ ЗАКУПКАХ: ПРОЗРАЧНОСТЬ, КОНКУРЕНЦИЯ И РАЦИОНАЛЬНОЕ ИСПОЛЬЗОВАНИЕ СРЕДСТВ.....	209
Тухтаинов Бобомурод Исақжон ўғли	

ENHANCING FOREIGN DIRECT INVESTMENT INFLOWS IN THE POST-CRISIS ERA: AN ECONOMETRIC ANALYSIS OF UZBEKISTAN	215
Foziljon Rustamov Xazratkulovich	
CURRENT STATE AND DEVELOPMENT TRENDS OF THE TEXTILE INDUSTRY	219
Musayeva Shoirazimovna	
IMPROVING TEXTILE LOGISTICS AND SUPPLY CHAIN MANAGEMENT IN UZBEKISTAN	225
Isroilov Madaminjon Mukhsinovich	
CHALLENGES OF ATTRACTING INVESTMENTS IN HUMAN CAPITAL AND STRATEGIES FOR THEIR RESOLUTION	231
Aloviddin Zayniddinov Zayniddin ugli	
ANALYSIS OF THE EXPERIENCE OF SUCCESSFUL AGROTOURISM DESTINATIONS IN DIFFERENT COUNTRIES: RECOMMENDATIONS FOR UZBEKISTAN	237
Aktamov Olimjon Abdugani o'g'li	
ASSESSING THE EFFICIENCY OF STRATEGIC MANAGEMENT OF EDUCATIONAL SERVICES EXPORT AT THE REGIONAL LEVEL	247
Alimova Shamsiya Abidovna	
ECONOMIC ESSENCE OF THE EXPORT POTENTIAL OF BUSINESS ENTITIES AND CLASSIFICATION OF THE FACTORS SHAPING IT: THE CASE OF BUKHARA REGION	254
Djurayeva Munira Sadillovovna	
THE ROLE OF INDUSTRIAL ENTERPRISES IN THE ECONOMY OF BUKHARA REGION AND THEIR DEVELOPMENT TRENDS: AN ANALYSIS OF STRUCTURAL CHANGES AND REGIONAL CONCENTRATION	261
Azizjon Anvarovich Kadirov	
Nigina Djurayevna Yusupova	
IMPROVING THE ECONOMIC MECHANISMS FOR THE DEVELOPMENT OF BORDER TRANSPORT SYSTEMS	268
Ikromov Elyor Ibodulloyevich	
ПУТИ ИНТЕГРАЦИИ НАЦИОНАЛЬНЫХ И МЕЖДУНАРОДНЫХ СТАНДАРТОВ АУДИТОРСКОЙ ДЕЯТЕЛЬНОСТИ В УЗБЕКИСТАНЕ	273
Бобонарова Камола	
GREEN BONDS AND SOVEREIGN DEBT INSTRUMENTS FOR INFRASTRUCTURE ASSET RENEWAL: AN ANALYSIS OF FINANCIAL MECHANISMS	278
Suleimanov Farrukh	
ENHANCING THE COMPETITIVENESS OF HIGHER EDUCATION INSTITUTIONS: A COMPARATIVE ANALYSIS OF INTERNATIONAL AND NATIONAL EXPERIENCES	286
Qudratova Gulzoda Mahmudovna	

ENHANCING THE COMPETITIVENESS OF HIGHER EDUCATION INSTITUTIONS: A COMPARATIVE ANALYSIS OF INTERNATIONAL AND NATIONAL EXPERIENCES

Qudratova Gulzoda Mahmudovna

Department of Economics, Asia International University, Uzbekistan

ORCID: 0009-0009-2429-094X

E-mail: qudgulzod@gmail.com

Abstract. This article presents a systematic comparative analysis of the models and mechanisms used to enhance the competitiveness of higher education institutions (HEIs) across advanced, emerging, and transitional economies, with particular emphasis on Uzbekistan. Drawing upon the Triple Helix framework, the Resource-Based View (RBV) theory, and the Balanced Scorecard approach, the study examines the experiences of Finland, South Korea, Singapore, and Germany alongside Uzbekistan's ongoing higher education reforms. The findings indicate that institutionally embedded research cultures, diversified funding sources, strong university–industry partnerships, and targeted internationalization strategies constitute the primary drivers of sustainable competitiveness. Since 2016, Uzbekistan has achieved significant progress in reforming its higher education system; however, persistent challenges related to research productivity, quality assurance, and institutional autonomy suggest that further systemic improvements are required. The article proposes a convergent adaptation framework aimed at selectively integrating internationally validated practices while maintaining alignment with national development priorities and contextual conditions.

Keywords: higher education institutions, competitiveness, Triple Helix, Resource-Based View, Balanced Scorecard, internationalization, Uzbekistan, university rankings, University 3.0.

Аннотация. В статье представлен систематический сравнительный анализ моделей и механизмов повышения конкурентоспособности высших учебных заведений в развитых, развивающихся и транзитивных экономиках с особым акцентом на опыт Узбекистана. Исследование основано на модели Тройной спирали, теории ресурсного подхода (Resource-Based View) и концепции Сбалансированной системы показателей. В работе рассматривается опыт Финляндии, Южной Кореи, Сингапура и Германии в сопоставлении с современными реформами системы высшего образования Узбекистана. Результаты исследования показывают, что ключевыми факторами устойчивой конкурентоспособности являются развитая исследовательская культура, диверсифицированные источники финансирования, эффективное взаимодействие университетов и промышленности, а также целенаправленные стратегии интернационализации. С 2016 года Узбекистан достиг значительных результатов в модернизации системы высшего образования, однако сохраняющиеся проблемы в сфере научной продуктивности, обеспечения качества образования и институциональной автономии свидетельствуют о необходимости дальнейших системных преобразований. В статье предлагается адаптационная модель внедрения международно апробированных практик с учетом национальных особенностей и приоритетов развития.

Ключевые слова: высшие учебные заведения, конкурентоспособность, модель Тройной спирали, ресурсный подход, сбалансированная система показателей, интернационализация, Узбекистан, рейтинги университетов, Университет 3.0.

INTRODUCTION

The contemporary higher education landscape is characterized by intensifying global competition, in which institutions compete not only for students and faculty members but also for research funding, international partnerships, and reputational standing reflected in global ranking systems. For transitional economies, this challenge is particularly complex, as they must simultaneously expand access, modernize curricula, attract international partnerships, and align educational outcomes with labor market demands, often under conditions of constrained public financing.

Uzbekistan clearly illustrates this challenge. Since 2016, the country has increased its gross enrollment ratio from approximately 9 percent to 42 percent and expanded the number of universities from 77 to 213. Despite this impressive quantitative growth, no Uzbek higher education institution is currently ranked among the global top 500, and internationally indexed research output remains limited compared with that of comparable economies. Therefore, examining the strategies that have enabled universities in Finland, South Korea, Singapore, and Germany to achieve competitive prominence has direct policy relevance.

This article pursues three main objectives: (i) to develop a conceptual framework for understanding the competitiveness of higher education institutions; (ii) to analyze the strategies underlying competitive success in four internationally recognized higher education systems; and (iii) to situate the Uzbek experience within this comparative context and propose a convergent adaptation framework.

LITERATURE REVIEW

Competitiveness in higher education encompasses three interrelated dimensions: competition as an environmental condition, competitiveness as an institutional capability, and competitive advantage as an achieved outcome (Ojo et al., 2023). Porter's (1985) theory explains competitive advantage through either cost leadership or differentiation. In the context of higher education institutions (HEIs), these dimensions may be reflected in tuition affordability, distinctive research performance, educational quality, or student experience. More recently, the dynamic capabilities theory (Teece, Pisano, & Shuen, 1997) has reframed sustainable competitive advantage as an institution's ability to sense environmental changes, seize emerging opportunities, and continuously reconfigure its resources and capabilities.

The Triple Helix model (Etzkowitz & Leydesdorff, 1995) conceptualizes innovation-driven development as the outcome of dynamic interactions among universities, industry, and government. Within this framework, universities are viewed as active knowledge-producing institutions whose entrepreneurial capacity contributes significantly to regional and national economic development. The Resource-Based View (RBV) theory (Barney, 1991; Penrose, 1959) complements this perspective by arguing that sustainable competitiveness derives from valuable, rare, inimitable, and non-substitutable (VRIN) resources, including highly qualified faculty, advanced research infrastructure, unique institutional culture, and accumulated intellectual capital. The Balanced Scorecard approach (Kaplan & Norton, 1992) operationalizes institutional strategy through four interconnected perspectives—financial performance, internal processes, learning and growth, and stakeholder satisfaction—allowing universities to align strategic objectives with measurable outcomes.

Finland's higher education model is distinguished by the principle that quality and equity are mutually reinforcing objectives. Universities are publicly funded, governed through multi-stakeholder boards, and granted substantial autonomy in curriculum design, personnel management, and financial administration. The 2010 reform, which strengthened cooperation between universities and polytechnics, generated economies of scale in research while preserving disciplinary specialization. The close integration of research and teaching activities produces graduates equipped with both strong theoretical knowledge and practical competencies. Key lessons from the Finnish experience include the positive impact of institutional autonomy within a coherent national accountability framework and the importance of cultivating a quality-oriented educational culture from primary education through doctoral studies.

South Korea's rapid rise in global university rankings reflects a state-supported strategy for enhancing higher education competitiveness. The Brain Korea 21 program directed substantial funding toward graduate education and research in strategically important fields. The Corporate Helix model implemented at institutions such as POSTECH and Sungkyunkwan University illustrates a high level of university–industry collaboration, including joint research projects, intellectual property development, corporate R&D facilities located on university campuses, and technology commercialization initiatives. The Korean experience demonstrates the importance of long-term strategic investment, targeted government support, and strong industry engagement in achieving global academic competitiveness (Sain & Bozkurt, 2023).

The National University of Singapore (NUS) and Nanyang Technological University (NTU) consistently rank among the world's leading universities due to a comprehensive internationalization strategy that includes globally competitive faculty recruitment, a diverse international student body, and advanced research infrastructure aligned with national priorities in engineering, biomedical sciences, and sustainability. The Singaporean experience highlights the importance of aligning university research agendas with national economic development strategies, thereby creating strong demand for academic outputs and innovation.

Germany's Excellence Strategy allocates competitive funding to leading research clusters and graduate schools within designated Universities of Excellence, while Universities of Applied Sciences (*Fachhochschulen*) focus on practice-oriented research and professional education closely linked to industry needs. This institutional differentiation enables the higher education system to pursue multiple competitiveness objectives

simultaneously. Germany's dual education model, which combines academic study with workplace-based training, is widely recognized as an effective mechanism for aligning educational outcomes with labor market requirements.

Uzbekistan's higher education reforms since 2016 represent one of the most ambitious modernization efforts in Central Asia. Student enrollment has expanded significantly, reaching approximately 1.3 million students, while the number of higher education institutions has increased from 77 to 213, including 97 non-state and foreign branch campuses. The establishment of the Ministry of Higher Education, Science and Innovation (MHESI) in 2023 created an integrated governance framework linking higher education, research, and innovation policies, consistent with the principles of the Triple Helix model. Furthermore, the adoption of the "University 3.0" concept, which integrates teaching, research, and commercialization as complementary institutional missions, reflects a strategic commitment to modernizing the traditional higher education model.

By 2024, Uzbekistan hosted 38 international branch campuses, ranking among the leading countries globally in this regard. This approach reflects a distinctive internationalization strategy focused on attracting internationally recognized educational providers rather than relying primarily on outbound student mobility. The introduction of the credit-modular system has facilitated double-degree programs and academic mobility, while 38 educational programs across six universities have obtained international accreditation. The implementation of the Uzbekistan–2030 Strategy has been accompanied by substantial investments in higher education, exceeding USD 5 billion in 2023.

Despite these achievements, several structural challenges continue to affect the international competitiveness of Uzbekistan's higher education system. First, research productivity in Scopus- and Web of Science-indexed journals remains comparatively limited, reflecting a historical emphasis on teaching rather than research activities. Second, many public universities continue to rely primarily on state funding and tuition revenues, with relatively limited diversification through research contracts, innovation activities, and technology commercialization. Third, although universities have gained greater flexibility in academic and personnel management, strategic and financial decision-making remains influenced by centralized governance mechanisms, which may limit institutional initiative and entrepreneurial development. Addressing these challenges will be essential for further strengthening the global competitiveness of Uzbekistan's higher education institutions.

RESEARCH METHODOLOGY

This study employs a comparative and qualitative research approach to examine the factors influencing the competitiveness of higher education institutions (HEIs). The research is based on the analysis of scientific literature, international reports, policy documents, and statistical data related to higher education development in Finland, South Korea, Singapore, Germany, and Uzbekistan.

Methods of comparative analysis, synthesis, and logical generalization were used to identify the key mechanisms that contribute to institutional competitiveness. The study also applies the concepts of the Triple Helix Model, the Resource-Based View (RBV), and the Balanced Scorecard framework as theoretical foundations for evaluating competitiveness. Based on the comparative assessment of foreign and national experiences, practical recommendations were developed for strengthening the competitiveness of higher education institutions in Uzbekistan.

ANALYSIS AND RESULTS

The comparative analysis produces a three-principle framework for adapting international competitiveness strategies to the Uzbek context.

The first principle is contextual selectivity. This implies that not all elements of successful international models can be transferred directly. For example, the deep university–industry integration observed in South Korea reflects decades of coordinated industrial policy and corporate investment. However, specific mechanisms from this model can be selectively adopted in Uzbekistan, including joint research centers, industry advisory boards, cooperative education placements, and technology transfer offices. These mechanisms can be established with relatively modest initial investment and progressively strengthened as institutional capacity develops.

The second principle is sequential prioritization. This recognizes that resource constraints require a phased approach to reform implementation. In the short term, Uzbekistan should consolidate quality assurance improvements by ensuring that international branch campuses function as genuine knowledge-transfer platforms and by expanding the number of internationally accredited academic programs. In the medium term, attention should shift toward research capacity building through competitive grant programs modeled on South Korea's Brain Korea 21 (BK21) initiative and aligned with national industrial priorities. In the long term, the

strategic focus should be placed on strengthening institutional financial autonomy and governance frameworks that enable entrepreneurial university behavior.

The third principle is systemic coherence. This requires reforms in funding, governance, quality assurance, and internationalization to reinforce one another. The Finnish and Singaporean experiences demonstrate that competitive higher education systems are built through the sustained and coordinated pursuit of coherent institutional visions, rather than through isolated initiatives. The Ministry of Higher Education, Science and Innovation (MHESI), established in 2023, provides the governance architecture needed to coordinate such reforms.

Table 1 summarizes the main dimensions of the international cases and the Uzbek national experience, together with the corresponding adaptation priorities (Table 1).

Table 1
Comparative Overview of HEI Competitiveness Strategies

Country	Primary Model	Key Mechanism	Research Focus	Main Challenge
Finland	Quality-Equity	Institutional Autonomy, Collaborative Governance	Society-Oriented	Fiscal Pressure
South Korea	State-Industry-University Helix	BK21 Grants, Corporate Helix	Technology-Intensive R&D	Credential Competition
Singapore	Strategic Internationalisation	Top Faculty Recruitment, Govt-Industry Alignment	Engineering, Biomedical	Scale Constraints
Germany	Differentiated Excellence	Excellence Strategy, Dual Training	Frontier Research	Quality–Access Trade-offs
Uzbekistan	Expansionist Transformation	Branch Campus Attraction, University 3.0	Emerging; instruction-led	Research Culture, Autonomy

Source: Compiled by the author based on case analysis and cited literature.

CONCLUSION AND RECOMMENDATIONS

This article examined the strategies and mechanisms that underpin the competitiveness of higher education institutions (HEIs) across internationally advanced and transitional higher education systems, situating Uzbekistan's national experience within this global analytical framework. Three main conclusions can be drawn.

First, HEI competitiveness is not determined by a single factor, but by the coherent interaction of governance autonomy, research intensity, depth of internationalization, and funding diversification. The most successful systems, including Finland, South Korea, Singapore, and Germany, have achieved competitiveness through sustained and strategically coordinated investment across these dimensions, embedded within broader national innovation strategies.

Second, Uzbekistan's quantitative achievements provide a solid structural foundation for quality-oriented and research-intensive development. The convergent adaptation framework proposed in this article offers a sequenced pathway: consolidating quality assurance in the short term, developing research capacity in the medium term, and pursuing greater institutional autonomy in the long term.

Third, the aspiration articulated in the Uzbekistan–2030 Strategy to become a regional hub of education, research, and innovation is achievable. However, it requires sustained commitment to deeper structural reforms related to quality assurance, research productivity, governance autonomy, and university–industry cooperation. The international experiences reviewed in this article demonstrate that, when successfully implemented, such transformations can significantly strengthen national economic competitiveness and human capital development.

REFERENCES

1. Barney, J. B. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*, 17(1), 99–120.
2. Etzkowitz, H., & Leydesdorff, L. (1995). The Triple Helix: University–Industry–Government Relations. *EASST Review*, 14(1), 14–19.
3. Frontiers in Education. (2023). Mapping the Helix Model of Innovation Influence on Education: A Bibliometric Review. *Frontiers in Education*, 8. <https://doi.org/10.3389/feduc.2023.1142502>
4. Kaplan, R. S., & Norton, D. P. (1992). The Balanced Scorecard: Measures That Drive Performance. *Harvard Business Review*, 70(1), 71–79.
5. Mahdi, O. R., Nassar, I. A., & Almsafir, M. K. (2019). Knowledge Management Processes and Sustainable Competitive Advantage. *Journal of Business Research*, 94, 320–334.
6. Muratov, A., & Wilkins, S. (2024). International Branch Campuses in Uzbekistan. *Journal of Studies in International Education*, 28(2), 145–162.
7. OECD. (2024). *Education at a Glance 2024*. Paris: OECD Publishing.
8. Ojo, A., et al. (2023). Competition, Competitiveness, and Competitive Advantage in Higher Education Institutions: A Systematic Literature Review. *Studies in Higher Education*, 49(11), 2153–2177.
9. Penrose, E. T. (1959). *The Theory of the Growth of the Firm*. Oxford: Basil Blackwell.
10. Porter, M. E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. New York: Free Press.
11. Sain, K., & Bozkurt, K. (2023). Transformation of Knowledge into Economic Value in Higher Education. *Educational Policy Analysis and Strategic Research*, 18(3), 223–251.
12. Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic Capabilities and Strategic Management. *Strategic Management Journal*, 18(7), 509–533.
13. The Asia Today. (2025). *Higher Education Transformation in Uzbekistan*. Available at: <https://theasiatoday.org>
14. The Borgen Project. (2025). *Beyond the Blueprint: The Uzbekistan 2030 Strategy*. Available at: <https://borgenproject.org>
15. Triple Helix. (2014). Technological Catch-Up and South Korea's Innovation-Based Growth Explained Through the Corporate Helix Model. *Triple Helix*, 1, Article 2.
16. UNESCO. (2022). *Global Education Monitoring Report 2022*. Paris: UNESCO Publishing.
17. World Economic Forum. (2024). *Global Competitiveness Report 2023–2024*. Geneva: World Economic Forum.

Proofreader: Xondamir Ismoilov
Layout and Designer: Hasan Maqsudov

2026. № 6

© When materials are reproduced, the ECONOSCITECH-INTEGRATION journal must be cited as the source. Authors are responsible for the accuracy of the information in materials and advertisements published in the journal. Editorial opinions may not always align with those of the authors. Submitted materials will not be returned to the editorial office.

To publish articles in this journal, you may submit articles, advertisements, stories, and other creative materials through the following links. Materials and advertisements are published on a paid basis.

You may subscribe to the journal at any time using the following details. Once subscribed, please send a screenshot or photo of your payment confirmation to our Telegram page @iqtisodiyot_77. Based on this, we will send the latest issue of the journal to your address each month.

Our address: Tashkent city, Yunusobod district, 19th block, House 17.

