

Article

Financing Higher Education in Transition Economies: The Case of Uzbekistan and Central Asia

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Abstract: This study explores the evolving role of governments in financing higher education systems in Uzbekistan and other Central Asian countries. Employing a comparative policy analysis based on secondary data and selected case studies, the research identifies a gradual shift towards performance-based funding mechanisms and increased financial diversification. However, the findings also reveal persistent structural challenges, including insufficient public funding, regional disparities in resource allocation, and limited institutional autonomy. In response, the paper proposes policy recommendations focused on reforming funding frameworks, strengthening public-private partnerships, and advancing digital investments to enhance the financial sustainability and efficiency of higher education institutions.

Keywords: University fundings, education reform of Central Asian countries, financial autonomy, transparency and accountability of financial management, ESG, university-industry collaboration.

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Introduction

Higher education plays a pivotal role in national development by fostering human capital formation, stimulating innovation, and promoting socio-economic mobility. In Central Asia - comprising Uzbekistan, Kazakhstan, Kyrgyzstan, Tajikistan, and Turkmenistan - the higher education sector remains predominantly financed and regulated by the state[1]. This structure reflects the legacy of the Soviet system, under which higher education institutions (HEIs) operated within a centrally planned framework, offering tuition-free education with highly standardised curricula and tightly controlled admissions processes[2].

Following independence in the early 1990s, countries in the region initiated a range of reforms aimed at modernising their higher education systems and aligning them with international standards. Despite these efforts, public financing mechanisms have often remained rigid, characterised by line-item budgeting practices, limited institutional autonomy, and relatively low levels of per-student funding[3]. While the continued dominance of state financing is critical for ensuring equitable access to education, it has not consistently translated into improvements in quality, efficiency, or institutional performance across the sector[4].

In recent years, increasing economic challenges, global competition, and demographic changes have necessitated a reevaluation of higher education finance policies by governments throughout the region. Uzbekistan has enacted multiple reformative decrees: the 2019 Resolution PP-4391, which conferred financial autonomy to

prominent universities; the 2020 strategy for diversifying revenue streams; and the 2022 Presidential Decree No. PQ-81, which seeks to enhance digital infrastructure and align higher education with the labour market. In 2023, the Ministry of Higher Education, Science and Innovation of the Republic of Uzbekistan launched a pilot initiative for endowment funds and public-private partnerships at five national universities. Kazakhstan has implemented performance-based funding, whereas Kyrgyzstan has commenced changes to enhance transparency in scholarship distribution and institutional accountability.

Despite ongoing reform efforts, higher education systems across Central Asia continue to face substantial structural and financial challenges. Public expenditure on education - particularly in the higher education sector - remains relatively limited when compared to global trends, both in terms of its share of national budgets and per-student investment levels. In addition, significant regional disparities in funding allocation persist, with institutions located in rural and peripheral areas experiencing chronic underfunding and restricted access to financial and infrastructural resources[5].

Moreover, the absence of comprehensive and coherent policy frameworks governing endowments, tuition-setting mechanisms, and public-private partnerships constrains universities' capacity to diversify their revenue streams and strengthen financial autonomy. These structural limitations hinder the transition towards more sustainable, competitive, and innovation-driven higher education systems in the region.

Against this backdrop, the present study examines the evolving role of government in financing higher education in Uzbekistan and other Central Asian countries. The study aims to:

- assess existing funding models and their distributional implications;
- analyse the effectiveness of recent reforms in enhancing financial sustainability, accessibility, and institutional innovation
- propose policy directions to improve higher education financing frameworks.

The analysis adopts a comparative approach, drawing on cross-country data and selected national case studies to contribute to ongoing academic and policy discussions on building more resilient and equitable higher education systems in Central Asia[6].

Methods

This paper utilised a qualitative comparative policy analysis to investigate governmental involvement in financing higher education in Uzbekistan, Kazakhstan, and Kyrgyzstan. The methodology employed the triangulation of primary and secondary data sources, comprising:

- National education budget reports (2019–2024), statistical yearbooks, and ministerial statements;
- Recent academic publications indexed in Scopus and Web of Science;
- Case studies concentrating on flagship universities and financial reforms in the region.

Data from UNESCO and the World Bank were utilised to ensure consistency and cross-country comparability. In cases where 2024 statistics were not publicly available, estimates were derived through trend extrapolation and validated against national development strategies, fiscal frameworks, and sectoral forecasts.

Particular emphasis was placed on the reforms implemented in Uzbekistan between 2019 and 2024. These encompass:

- Resolution PP-4391 (2019) regarding the enhancement of university financial autonomy;
- Presidential Decree PQ-81 (2022) emphasising digital infrastructure, online education, and the integration of higher education with the labour market;

- Endowment pilot programs (2023) facilitating universities in managing donor-based funds and attracting private investment;
- Implementation of performance-based grant distribution mechanisms for research and innovation funding.

Kazakhstan has implemented significant reforms in higher education financing, including the introduction of a performance-based funding model linked to research productivity and graduate employment outcomes, as well as strengthened accreditation mechanisms to align higher education institutions with international quality standards. In particular, the State Programme for Education and Science Development of the Republic of Kazakhstan (2020–2025) establishes performance indicators for universities, while the Law on Education of the Republic of Kazakhstan provides the legal framework for institutional autonomy, accreditation, and diversified funding mechanisms.

Kyrgyzstan has focused on improving the targeting of scholarships, promoting the integration of research and education, and conducting a comprehensive public expenditure review (2022) to reallocate funding towards priority areas such as STEM and innovation. Key regulatory frameworks include the Law on Education of the Kyrgyz Republic, which governs financing principles and institutional operations, and the Concept for the Development of Education in the Kyrgyz Republic (2021–2030), which outlines strategic priorities for funding reforms, quality enhancement, and innovation-driven growth.

The analysis included qualitative evaluations from policy studies, modifications to education law, parliamentary hearings, and university audits. These sources offered information into the perception and implementation of reforms at both institutional and national levels.

Results

Public Funding Frameworks. Public financing constitutes the fundamental basis of higher education funding in Central Asia. Governments furnish essential financial assistance for institutional operations, remuneration, and infrastructure. In 2024, Uzbekistan dedicates around 4.1% of its GDP to education, a level nearly comparable to Kazakhstan's 3.9%, however still below the OECD average of 5.1%[7]. Kyrgyzstan distinguishes itself by allocating 5.3% of its GDP to education, reflecting a more robust budgetary commitment in relation to its economic capabilities. Notwithstanding these allocations, the framework persists as input-oriented and inflexible, frequently devoid of performance incentives and accountability mechanisms.

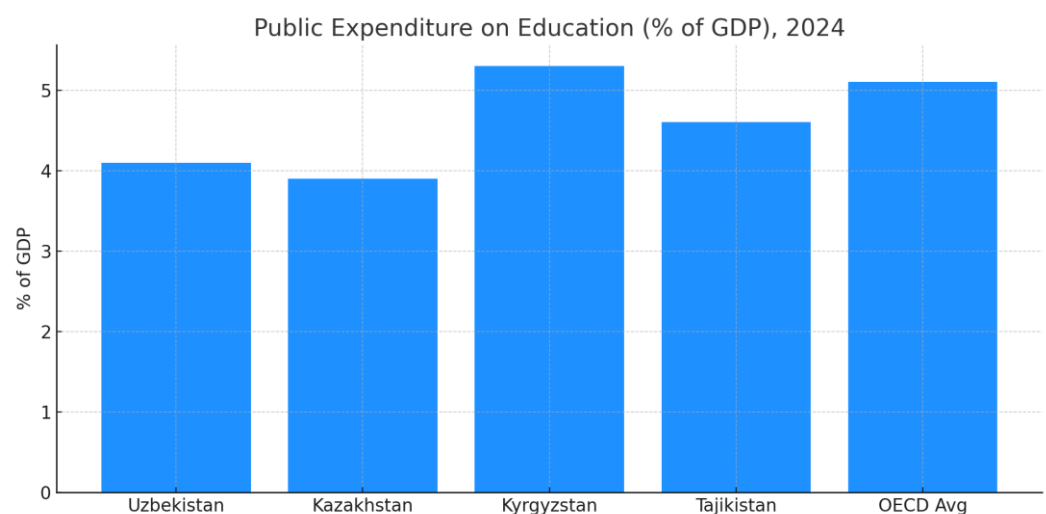


Figure 1. Public Expenditure on Education as a Percentage of GDP, 2024.

This figure demonstrates that the majority of Central Asian nations persist in allocating fewer resources to education compared to global standards. The limited percentage of GDP dedicated to education indicates persistent limitations in implementing changes, especially those necessitating infrastructure enhancements and better faculty conditions[8].

Recent measures in Uzbekistan, including the implementation of multi-year budgeting and digital transparency platforms, seek to enhance the efficiency of state expenditure. Nonetheless, the real execution is inconsistent throughout various locations.

Proportion of Budget Allocated to Higher Education. The proportion of higher education in total education budgets is a significant indicator of national policy priorities. In Central Asia, this proportion varies from 11% in Tajikistan to 19% in Kazakhstan, markedly lower than the OECD average of 26%.

This underfunding directly impacts institutional quality, research capabilities, and student services. Insufficient allocations restrict universities' capacity to provide competitive wages, update courses, and assist at-risk student demographics. Figure 2. Expenditure on Higher Education (% of Educational Budget), 2024

This figure underscores the systemic disparity in national education systems, wherein primary and secondary school predominantly dictate funding allocation. As higher education systems proliferate, governments must recalibrate their expenditure priorities[9].

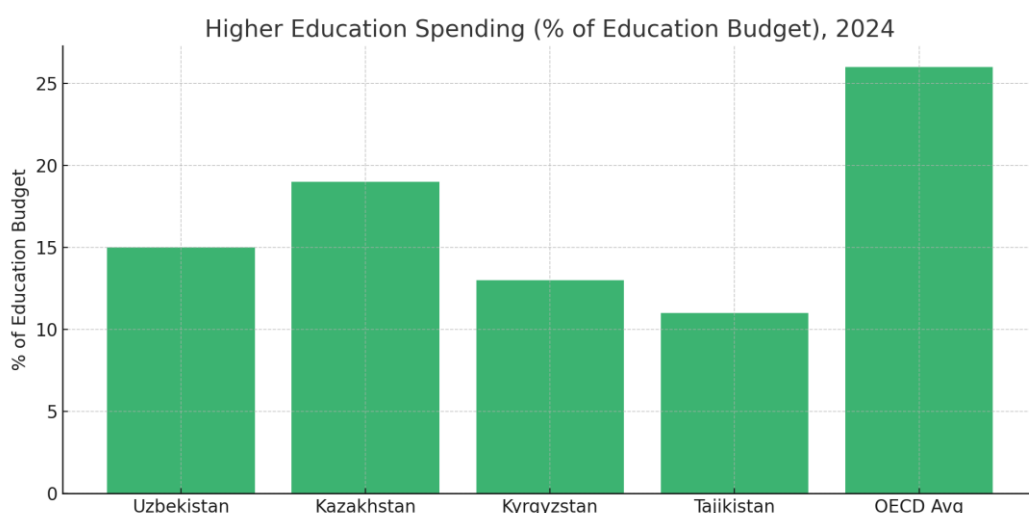


Figure 2. Expenditure on Higher Education (% of Educational Budget), 2024.

The 2023 reform package in Uzbekistan established a "development fund" mechanism enabling universities to keep a portion of unutilised public subsidies for internal innovation initiatives. Despite its potential, the size is confined to pilot institutions.

Trends in Enrolment. Access to higher education continues to be inequitable throughout Central Asia. In 2024, Kazakhstan boasts a 55% enrolment rate among the tertiary-age population, facilitated by a comprehensive network of public and private universities, alongside a somewhat substantial scholarship program[10].

Conversely, Uzbekistan's enrolment rate is 25%, whilst Tajikistan's is 29%. The low figures arise from constraints on both the demand and supply sides, including restricted institutional capacity, entrance examination hurdles, and affordability issues.

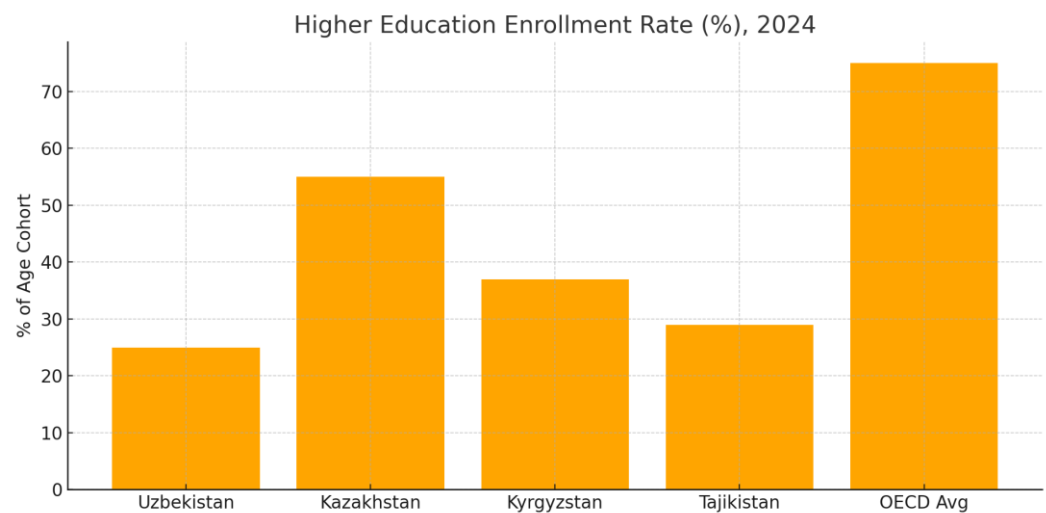


Figure 3. Enrolment Rate in Higher Education (% of Age Cohort), 2024.

This chart highlights substantial inequalities in access to higher education. Uzbekistan's government initiatives, including the "1 Million Coders" digital scholarship, the enhancement of evening and distant study options, and the recent decentralisation of admissions, have commenced efforts to mitigate access disparities. Nonetheless, in the absence of consistent financial support and fair scholarship distribution, significant portions of the population - particularly in rural regions - continue to be marginalised from higher education opportunities[11].

Discussion

The findings of this study confirm the continued predominance of government funding in higher education systems across Central Asia. While strong state involvement has historically ensured broad access and systemic coherence, relatively low and rigid budget allocations have increasingly become a structural constraint in meeting the demands of modern, globally competitive higher education systems[12].

Despite notable reform efforts, Uzbekistan, Kazakhstan, and Kyrgyzstan continue to face significant challenges in aligning financial frameworks with the principles of performance, equity, and institutional sustainability. In Uzbekistan, recent regulatory advancements - such as Presidential Resolution PP-4391 (2019) and PQ-81 (2022) - have strengthened financial autonomy and supported digital transformation initiatives. However, the effective implementation of these reforms remains uneven, as many institutions continue to struggle with outdated financial management systems, limited human capital capacity, and insufficient experience in revenue diversification strategies[13].

Kazakhstan's adoption of performance-based funding models, alongside Uzbekistan's pilot initiatives on endowments and public-private partnerships, represent important steps towards transitioning from input-based to outcome-oriented financing. These reforms aim to incentivise efficiency, improve quality, and strengthen alignment with labour market needs. Nevertheless, their application remains largely concentrated in leading institutions and is still at an early stage of institutionalisation, limiting their system-wide impact[14].

A critical and growing concern is the persistence of regional inequalities in access to and funding of higher education. Urban universities tend to benefit disproportionately from reform measures, while rural and newly established institutions remain heavily dependent on constrained line-item state budgets. This dualistic structure risks

undermining national objectives related to inclusive and balanced socio-economic development.

Moreover, relatively low enrolment rates in countries such as Uzbekistan and Tajikistan - despite expanding youth populations - highlight ongoing barriers to financial accessibility. Limited scholarship coverage, high tuition fees in private institutions, and underdeveloped student support mechanisms continue to constrain equitable participation. In contrast, Kazakhstan's comparatively higher enrolment rates reflect not only stronger financial capacity but also a more diversified higher education ecosystem, including private providers and vocational pathways.

The analysis also underscores the urgent need to strengthen data systems and enhance fiscal transparency. Reliable and disaggregated data are essential for evaluating the effectiveness of emerging financing models and ensuring accountability in resource allocation. Strengthening education finance monitoring systems - potentially with support from international development partners - would significantly improve evidence-based policymaking in the sector.

In conclusion, while the overall direction of reform in Central Asia is positive, limitations in institutional capacity, governance frameworks, and uneven implementation continue to constrain the full realisation of financing diversification and performance-based accountability. A coordinated policy approach that simultaneously expands the resource base and strengthens institutional capabilities will be essential for developing sustainable, equitable, and high-quality higher education systems across the region[15].

Conclusion and recommendations

The trajectory of higher education reform in Central Asia reflects a growing recognition of the need to modernise financing frameworks in order to enhance institutional efficiency, accessibility, and innovation. While government funding continues to play a central role in sustaining university systems, traditional input-based budgeting approaches are increasingly insufficient to meet the evolving demands of a competitive and knowledge-driven economy.

Countries such as Uzbekistan, Kazakhstan, and Kyrgyzstan have initiated a transition towards more diversified and performance-oriented funding models, incorporating elements of institutional autonomy, public-private partnerships, and targeted grant allocation. However, the implementation of these reforms remains uneven, often concentrated in leading institutions and limited in systemic scope. Persistent challenges including relatively low enrolment rates, regional disparities between urban and rural institutions, and insufficient financial management capacity - continue to constrain the long-term sustainability and effectiveness of these policy initiatives.

To consolidate reform progress and address structural weaknesses, the following policy recommendations are proposed:

1. Governments in Central Asia should expand the share of public expenditure allocated to higher education, ensuring adequate funding for infrastructure development, quality assurance, and improved access. Strengthened public investment is essential to support the expansion and modernisation of higher education systems in line with national development priorities.
2. Funding allocation models should be standardised and based on clear, formula-driven criteria that incorporate both performance indicators (such as graduation rates, research output, and graduate employability) and equity considerations. Such mechanisms can incentivise institutional effectiveness while addressing regional and socio-economic disparities.
3. Universities should be granted greater financial and managerial autonomy to enable more efficient resource allocation and strategic planning. Regulatory frameworks should support the development of alternative revenue streams, including endowment

funds, industry partnerships, continuing education programmes, and the commercialisation of research outputs.

4. Governments should prioritise investments in digital technologies and infrastructure, particularly in underserved and rural regions. Expanding broadband access and supporting the adoption of online and blended learning models will be critical for reducing regional inequalities and enhancing system resilience.

5. Governments ought to include Environmental, Social, and Governance (ESG) principles into the financing frameworks of higher education. This entails encouraging colleges to implement sustainable campus initiatives, pursue environmentally friendly research agendas, and uphold socially responsible governance via specific financing programs and performance metrics.

6. Public funding methods ought to actively promote collaborations between universities and industry through co-financing of joint research, innovation hubs, and applied initiatives. Matching grants and tax incentives can enhance corporate sector involvement in higher education.

7. Promote transnational cooperation in financial frameworks, collaborative initiatives, and benchmarking systems among Central Asian nations.

REFERENCES

- [1] President of the Republic of Uzbekistan, "On measures to introduce new management principles into the system of higher and secondary specialized education," Resolution No. RQ-4391, Jul. 11, 2019.
- [2] Ministry of Education and Science of the Republic of Kazakhstan, *State Programme for Education and Science Development of the Republic of Kazakhstan for 2020–2025*, Nur-Sultan, 2020.
- [3] Ministry of Education and Science of the Kyrgyz Republic, *Education Development Strategy of the Kyrgyz Republic 2021–2030*, Bishkek, 2021.
- [4] Ministry of Education and Science of the Republic of Tajikistan, *National Strategy for Education Development 2021–2030*, Dushanbe, 2020.
- [5] S. M. Buzrukhonov, *Improving the Financing of Higher Education in the Context of the Transition to an Innovative Economy*. Tashkent: Nihol Print, 2021.
- [6] N. H. Jumaev, "Improving Funding for Higher Education Institutions in Uzbekistan," in *Education in Central Asia*, pp. 93–107, Sep. 2020.
- [7] World Bank, *Towards Higher Education Excellence in Central Asia: A Roadmap for Improving the Quality of Education and Research through Regional Integration*, 2023. [Online]. Available: <https://surli.cc/oyrcva>
- [8] OECD, *Education at a Glance 2023: OECD Indicators*, 2023. [Online]. Available: <https://surl.lu/fehtqr>
- [9] G. Karlibaeva, "Financing Mechanisms in Higher Education: Trends and Challenges in Uzbekistan," *Central Asian Economic Review*, 2022.
- [10] G. Karlibaeva et al., "Economic Forecasting in Higher Education: ARIMA Model Application for Financial Planning at Tashkent State University of Economics," in *Intelligent Sustainable Systems (WorldS4 2024)*, pp. 503–513, Apr. 2025. [Online]. Available: https://link.springer.com/chapter/10.1007/978-981-97-9559-8_44
- [11] World Bank, *Higher Education for Development: An Evaluation of the World Bank Group's Support*, Washington, DC, 2017.
- [12] OECD, *Funding of School Education: Connecting Resources and Learning*, Paris, 2018.
- [13] UNESCO, *Global Education Monitoring Report 2022*, Paris, 2022.
- [14] Asian Development Bank, *Higher Education Across Asia: An Overview of Issues and Strategies*, Manila, 2011.
- [15] J. Salmi, *The Challenge of Establishing World-Class Universities*, Washington, DC: World Bank, 2009.