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ARTICLE

Drivers of Higher Education Rankings: A Case Study of Uzbekistan

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ABSTRACT

Uzbekistan is strategically focused on enhancing its international academic stature by exploring the determinants influencing higher education institution rankings. This study delves into the myriad factors shaping these rankings through qualitative interviews conducted with university authorities, local expert consultants, and the QS Consulting Team. Key determinants identified include the academic reputation of the university, research output, internationalization efforts, faculty development initiatives, and industrial collaborations. The findings underscore the significance universities place on robust research infrastructure, fostering international relations, and ensuring student success. While there is a shared vision among institutions, disparities exist in resource allocation and engagement in international collaborations. This comprehensive review of higher education in Uzbekistan not only contributes to rankings research but also holds potential to inform policymakers and educational administrators in enhancing the national education landscape. Recommendations stemming from this study include the development of a comprehensive government framework for internationalization, increased financial investment in education, fostering industry-academic partnerships, and promoting acceptance and diversity within universities. This paper offers specific policy and practice recommendations tailored to assist Uzbek institutions in enhancing, sustaining, and attaining global recognition. Its detailed analysis of how rankings influence institutional policies and strategic decisions serves as a valuable resource for stakeholders within and beyond Uzbekistan, facilitating a deeper understanding of how higher education rankings shape global academic benchmarks.

Keywords: Higher Education; International Rankings; QS Rankings; Thematic Analysis; Internationalization; Uzbekistan

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1. Introduction

The significance of higher education rankings transcends national borders, playing a pivotal role in shaping global perceptions of academic excellence and institutional quality. In an increasingly interconnected world, where students and scholars seek institutions with robust academic reputations and research capabilities, the relevance of higher education rankings cannot be overstated (Altbach & Hazelkorn, 2021).^[2] These rankings serve as crucial decision-making tools for prospective students, educators, policymakers, and employers, influencing choices regarding academic pursuits, collaborations, and investments (Marginson, 2020).^[23] Furthermore, they contribute to the competitiveness of nations in the global knowledge economy, driving innovation, talent attraction, and international collaboration (Marginson & van der Wende, 2021).^[24] Thus, understanding the determinants and implications of higher education rankings in specific contexts, such as Uzbekistan, holds broader significance in the broader discourse on global educational excellence and competitiveness.

Since gaining independence in 1991, Uzbekistan has witnessed a notable improvement in the quality of higher education, particularly in vocational training (Ruziev, 2016).^[32] However, the efficacy of the teaching staff responsible for delivering globally competitive education may be hindered by structural barriers such as administrative challenges and institutional constraints (Umarov, 2020).^[33] Within this context, the nation's regulatory framework places significant emphasis on the global impact of higher education rankings, recognizing their role in driving university advancement and enhancing local competitiveness.

The education sector in Uzbekistan is undergoing a phase of globalization, evidenced by the growing influx of international students, the increasing recognition of educational institutions, and the proliferation of university rankings. Yet, like many other education systems, Uzbekistan faces the challenge of balancing modern advancements with the demands of the labor market (Khasanova et al, 2021).^[15] Government funding for higher education, despite its magnitude, has raised concerns regarding the practical application of graduates' skills, and the effects of governmental adjustments aimed at improving post-secondary education remain mixed (Ruziev, 2016).^[36]

Moreover, tourism and the introduction of new international educational systems have emerged as transformative agents (Umarov, 2020).^[33] Yet, a critical gap persists in understanding the criteria considered in evaluating higher education in Uzbekistan and the role of the education system or business schools in this evaluation. Thus, this study aims to bridge this gap by establishing a nexus between the ranking system and educational performance in Uzbekistan.

In the quest to investigate the components of Uzbekistan's higher education rankings, this study addresses a significant research void, shedding light on the unique educational landscape of the country, which has often been overlooked in global higher education literature. Given Uzbekistan's increasing integration into the global arena and ongoing educational reforms, comprehending these components is imperative for enhancing the global academic standing of its higher education institutions.

As higher education rankings in Uzbekistan continue to evolve, this study examines various aspects, including ranking methodologies, the influence of institutional and financial resources, and the impact of student outcomes on institutional status. Higher education rankings in Uzbekistan are changing, hence this study examines their aspects. The study evaluates ranking officers' practices, financial and institutional capacities, and student performance metrics' impact on institutional status.

To ascertain the drivers that impact the rankings of higher education institutions in Uzbekistan, this study is guided by the following specific research questions:

a) What methods and criteria are used to determine higher education rankings?

b) How do institutional and financial resources influence higher education rankings?

c) How do student outcomes like graduation and employment rates influence university rankings?

d) What kind of challenges are faced by Uzbek universities that hinder their institution's progress?

Guided by specific research questions, this study aims to uncover the drivers shaping the rankings of higher education institutions in Uzbekistan and the challenges they face in progressing institutionally through qualitative research, specifically interviews. Beyond merely elucidating the factors underpinning the rankings of Uzbek higher education, this research endeavours to promote strategic development within the system. By examining Uzbekistan's role in the global education market, the study seeks to propose policies and practices that enhance educational quality and competitiveness, thereby contributing to scholarly discourse and advancing the global knowledge economy.

Nevertheless, the study is pivotal in unravelling the intricate web of factors influencing Uzbek higher education rankings. Therefore, illuminating relevant elements aims to empower policymakers and educational leaders to make informed decisions, fostering systemic improvements and bolstering the country's educational standing on the international stage.

2. Literature Review

The higher education rating question is complex and multi-faceted because several factors are involved in the determination of institution quality. The complexity of the mentioned factors lies in the conception of worthiness and quality in the context of higher education, whereby this issue can be subdivided into three parts (Abdurakhmanov, 2019):^[1] The new role of higher education; The confinement of innovation by the requirements of learners and stakeholders; or The temptation to adopt the rankings as a tool for accelerating reforms. Improvements nevertheless may be related to several destructive consequences as well (Lugovskoy, 2020)^[21] and marks a change in the university's reputation (Delgado-Márquez, 2012).^[8] Global university rankings significantly influence higher education in Europe and possess the potential to profoundly alter the landscape (Erkkila, 2013).^[9] Ultimately, Hrynkevych and Sorochak (2021)^[12]emphasises the significance of enhancing the competitiveness of higher education to effectively oversee regional expansion, prioritising excellence, societal accountability, and economic efficacy.

2.1 Approaches (Methodologies) of Higher Education Rankings

Higher education ranking systems employed globally vary significantly, utilizing diverse assessment methodologies. Prominent examples include the Quacquarelli Symonds (QS) World University Rankings, the Times Higher Education (THE) World University Rankings, and the Academic Ranking of World Universities (ARWU).

The Times Higher Education World University Rankings utilize 13 performance metrics, categorized into teaching, research, citations, international outlook, and industry revenues. The aim of these metrics is to provide a comprehensive assessment of university excellence across various domains.

The ARWU, known as the Shanghai Ranking, evaluates research performance through six key parameters, categorized into academic achievements, research output, and citation impact. This ranking emphasizes scholarly contributions and global recognition.

Similarly, the QS World University Rankings utilize six indicators categorized into academic and employer reputation, faculty-student ratio, research citations, and international diversity. This approach offers a multi-dimensional evaluation reflecting diverse perspectives on university excellence (Bridge-stock, 2021).^[6]

2.1.1 Academic Reputation and Research Output

Multiple studies have been initiated to understand the correlation between the status of the academic institution in terms of prestige, research output, and rankings. Kuzhabekova (2018)^[19] points out the role of research publishing in the world competition of universities, with the most concentrated focus on promotion-linked publication. Ghabban (2019),^[10] mentions that information and communication technology and international collaboration among organisations are the most crucial factors in being efficient for high research productivity and reputation. Walle (2015)^[39] raises important questions in the operations of public credo rating; how to accurately rate article output and if it is at all possible to rate on the subject of public administration. Li (2022)^[20] considers the academic reputation and the role of publications in university ranking. These studies confirm the principal importance of research, based on reputation and rankings, as well as a multi-faceted approach to university prestige.

2.1.2 Engagement with Industry and Alumni

The involvement of different stakeholders, which is mainly in the context of industry and alumni, has a massive effect on university rankings and graduate employment (Kinash, 2016).^[17] Through this participation, students can give feedback and access to collaboration which leads to strengthening the quality of education (Crammond, 2019).^[7] However, some feasible plans created by stakeholder groups could be a little different from the others (Kinash, 2016).^[17] Through the diverse stakeholder expectations, the quality assurance system (Beerkens, 2017)^[4] can metamorphose to become highly sophisticated, however, there is still a need for proper communication and being in unison (Whelan, 2010).^[41]

2.1.3 Interiorization and Global Engagement

Through the involvement of intellect, expatriate staff, international students and faculty, the major force behind educating internationalization (Nyangau, 2018)^[27] is assimilating internationalisation. There is a range of ways which give evidence for the existence of the institution which may include curricula internationalisation, exchanges, and recruitment of foreign staff and students among others. A defining characteristic of this trend can be found in the building of graduate skills, and global citizenship (Moir, 2018).^[25] Internationalisation of higher education is commonly seen as a priority part of the development of higher education universities, and that is with a focus on mobility, scientific collaboration and remote learning (Vitenko et al., 2017).^[37] This development is an intrinsic part of the process of preparing graduates for the requirements of the labour market and the information economy (Jeptoo, 2012;^[13] Wit, 2020).^[42]

2.1.4 Funding and Institutional Resources

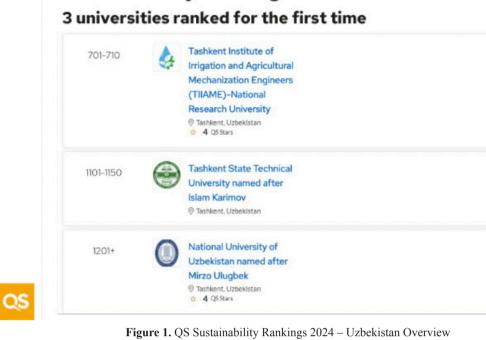
Research often shows that financial and institutional resources have a very important influence on the position of education systems. Benito $(2019)^{[5]}$ gives attention to the role of public financing in university rankings and additionally, shows the extent to which the rankings affect many groups in the higher education industry. Jin (2007)^[14] signifies the positive relationship between status and funding, both from subsidizing and government allocations. However, Kim (2018)^[16] remarks that it may reduce resource allocation and the institution may put more privileges on non-educational activities. Platis (2017)^[29] introduces the concept of rankings as a factor of resource problems requiring strategic decision-making and uncovering a correlation with institutions' reputation and prestige.

2.1.5 Inclusivity, Diversity and Sustainability

While Vught (2012)^[38] and Barnett (2020)^[3] underline the fact that these components are essential to identify with institutional values and to become responsible citizens, both scholars emphasize the necessity to consider such variables. Varga (2021)^[36] and Moreu (2021)^[26] attribute having the "inclusive" environment and "sustainability" of the diversity programmes, which depend on the behaviour change and assessment of the intervention by the stakeholders. Figure 1, signifies that only three of the universities from Uzbekistan have earned a place in the Sustainability Rankings 2024 made by Quacquarelli Symonds for the first time (QS Sustainability Rankings, 2024).^[30]

2.2 The Context of Higher Education in Uzbekistan

One of the main goals of Uzbekistan's development has been the internationalisation of higher Sustainability Rankings 2024 – Uzbekistan Overview



Source: QS Sustainability Rankings, 2024

education (Uralov, 2020).^[35] However, neither access nor quality have significantly improved because of the nation's top-down reform strategy. Major developments in this area include the growth of online and remote learning, as well as cross-border cooperation. There has been discussion about how university rankings support educational reform and competitiveness (Kurbatov 2012).^[18] It has been noted that a trustworthy national university rating system is essential (Lugovyi, 2019).^[22]

Therefore, the purpose of this research is to illustrate the method employed by the Uzbek universities that have achieved a place in the QS Asia Rankings. This paper identifies the major factors that influence higher education ranking in Uzbekistan by interviewing the QS consulting team and different university representatives. The objective is to identify the major aspects that contribute to the research ranking.

Although we manage to have 14 national universities featured in the QS Asia Rankings (QS, 2024),^[31] there exists a large gap to fill when it comes to the global ranking of these universities. Internationally recognized ranking still proves to be elusive

for Uzbek universities, which demonstrates bigotry between one region and the whole world. The objective of this research is to get rid of the existing gap by studying the techniques adopted by the universities that have already ranked internationally and analysing the role they could play in improving the worldwide rankings.

3. Research Methodology

3.1 Research Design

The research design for this study involved a qualitative method with a case study. Through this approach, we coped with numerous aspects that are specific to higher education rankings in the Uzbekistan context. The study was thus purposefully designed to capture specialists, professors, ranking bodies, and university administrators' points of view, attitudes and experiences. The research pursued an objective to elaborate upon the key factors that rank a university using qualitative content analysis and interviews and to unveil the strategies deployed by institutions to modify their position in ranking systems.

3.2 Participant Selection

Purposive sampling was employed to choose participants, ensuring that those with the required skills and experience could provide in-depth analvsis (Wan, 2019).^[40] The selection criteria included representatives from universities known for working hard to improve their rankings, as well as specialists with extensive understanding of Uzbekistan's higher education system and ranking systems. Six universities were interviewed in total: representatives from Tashkent State University of Economics (TSUE); Tashkent State Technical University named after Islam Karimov (TSTU); Tashkent Institute of Irrigation and Agricultural Mechanization Engineers (TIIAME)-National Research University (TIIAME NRU), expert's view on Tashkent State Pedagogical University (TDPU), National University of Uzbekistan (NUUz), Jizzakh Polytechnical Institute (JizPI) and interview from the QS Consulting Team.

3.3 Data Collection Methods and Analysis

This study adopted a qualitative approach, specifically, interview to provide a comprehensive and coherent synthesis of all the impactful rankings on institutional policy, strategy development and Uzbek universities' accreditation and recognition in the world.

Thematic analysis was employed in the data analysis process (Herzog et. al, 2017)^[11] which involved meticulously reading interview transcripts to seek trends and themes related to the study's goals. The analysis process included a manual case-by-case classification, and synthesis of the data to build a cohesive story about the factors driving Uzbekistan's higher education rankings. The data highlighted key themes on institutional methods, challenges, and the perceived impact of rankings on institutional actions and policy decisions.

3.4 Ethical Considerations

Following the ethical code, all participants were given a note that included the study aims, their role in the study, and their right to freely choose their participation in the study. Before the interviews were conducted, the testimonies gave their approval. The assurance was given that their responses would be personal and anonymous to openly participate, and they would be informed that they could withdraw from the study at any point if they wanted. To protect privacy, personal and institutional identifiers were either deleted or anonymized before revealing the results.

4. Results

4.1 Overview of Findings

The combination of interviews of the QS Consulting Team, University Representatives, and a Local Consultant give us an idea of how the various institutions in the higher education sector in Uzbekistan work using initiatives to improve institution rankings.

The analysis of Central Asian universities performed by QS Consulting Team experts determined that internationalization, research quality, and academic reputation are among the most significant variables to be considered. This process is not excluded for Uzbekistan's universities. Lifting a particular country's position in the rankings may lead to a better awareness and reputation, however, the problem of having to deliver courses in English and hiring both international students and faculty persists.

The QS Consulting team observes that Uzbek universities are now absent from global university rankings, with a score of zero. QS foresees potential future adjustments considering the significant worldwide growth observed among higher education institutions in Uzbekistan. Notwithstanding the present circumstances, there has been evident advancement in the Asia rankings, with a growing participation of Uzbek universities.

They observed that eight universities from Uzbekistan were included in the Asia rankings in 2023. In 2024, the Figure 1 has increased to fourteen, suggesting notable progress within the higher education sector of Uzbekistan. Furthermore, the fact that all of Uzbek universities have not yet made it to any international rankings calls into question the untapped potential of this country which currently has 14 universities accentuated in the QS Asia rankings (Figure 2).

The growing representation of Uzbek universities in these rankings, along with the observed enhancements from the previous year to the present, is a promising indication. While not all universities that were previously listed have made significant progress, a considerable number have, and there are recently added institutions. Tashkent State University of Economics (TSUE) achieved the notable feat of being included in the top 500 rankings, as recognised by QS (Figure 2).



Figure 2. QS Asia Rankings 2024

Source: QS Consulting Team, 2024

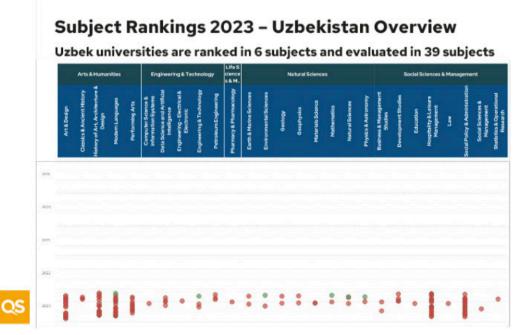


Figure 3. Subject Rankings 2023- Uzbekistan Overview

Source: QS Consulting Team, 2024

In addition, QS (Figure 3) has noted the inclusion of new universities from regional areas, such as Karakalpak State University, as well as universities from Fergana and Jizzakh. This indicates a more extensive geographical presence in the rankings. Samarkand State University, being a well-established and long-standing university, is renowned for its steady academic achievements. In general, QS acknowledges and praises the advancements witnessed in the higher education sector in Uzbekistan according to the interview with QS Consulting Team.

The relative importance allocated to various criteria like the academic reputation, research production, student-faculty ratio, employability index and the participation of local and foreign students are factors that drive university rankings. Such plans are not merely 'wish lists' which include details such as quality research, building international relationships, working towards a better learning environment, and upholding inclusivity and diversity on campus. This demonstrates a complex balance between meeting immediate ranking demands and planning for longterm academic achievement.

According to the local expert, the existing ranking landscape does not always reflect the genuine level of higher education in Uzbekistan, with numerous projects seeking solely to improve their rankings. The local consultant emphasises the mismatch between theoretical objectives and practical implementations in higher education institutions, arguing for a more comprehensive approach that includes policy formulation, pedagogical excellence, and research integration.

NB: All other filed interviews on University Representatives; Expert's Views on Other Uzbek Universities, and Interviews with QS Representatives are shown in the Appendices (see appendix case 1, 2, & 3)

5. Discussion

The path of HE excellence in Uzbekistan as expressed in the international rankings is a rather complicated issue since it depends on the country's overall socio-economic development. The results of interviews with university officials as well as the QS Consulting Team represent the pronounced strategy of all universities in the transformation to the internationally accepted standards and rules. This is achieved by recognizing the worldwide influence of HE ratings that function as a thermometer of academic quality and institutional reputation.

The literature emphasizes the complexity of HE rankings which depend on a wide range of influential factors including academic reputation, research output, dedication to the expansion of internationalistic education, and university-industry-alumni cooperation (Vught, 2012;^[38] Kurbatov, 2012).^[18] These components correlate with the remarks made by the university representatives, who stress the key aspects, namely, the presence of scientific potential, participation in research activities and faculty development, as well as international collaborations, that may determine the position of HE institutions in Uz-bekistan in the given ranking.

5.1 Thematic Analysis - Similarities and Differences

Similarities Between University Groups

Integration of Global Standards

The interviews of the university representatives from the Uzbek universities depict a similar opinion about the application of global standards and internationalization issues which is highlighted in the literature review that identifies the importance of academic mobility and global involvement (Nyangau, 2018;^[27] Moir, 2018).^[25] In the context of TSUE and TIIAME NRU, there is an evident effort to raise the quality of education by inviting more foreign teachers to participate in international Olympiads, which indicates a strategic adoption of global educational practices.

Emphasis on Research and Academic Reputation

As illustrated by research (Kuzhabekova, 2018;^[19] Ghabban, 2019)^[10] all universities claim that the research output and academic reputation are the most important criteria to measure university performance. The approach of universities such as TSTU which involves funding of research infrastructure and interactions with high-performing international institutes, is consistent with the thought that enhanced research capabilities and networks increase the university's global reputation and rankings.

Stakeholder Engagement and Graduate Employability

The practical measures TSTU and TSUE have been making to enhance the contacts with industry and boost the employment of university graduates indicate an agreement with the literature on the topic of stakeholder involvement effect on university performance (Kinash, 2016;^[17] Perkmann, 2010).^[28] This is further supported by the fact that a university being able to build up its ranking and popularity because of alumni networks and industry partnerships is an important measure of credibility.

Differences Between University Groups

Resource Allocation and Strategic Planning

Institutional commitment to increase their ranking position is a shared goal, while the approaches to resource allocation and strategic planning differ among these institutions. The strategic planning of TSTU is holistic, and the resources are well-targeted on specific issues, as proposed by Platis (2017),^[29] to discuss the factors that can help in the improvement of rankings. On the other side, several institutions are still facing problems with the allocation of resources, which in turn can relate to one of the remarks by the local consultant - the government money is not always used properly. The local rivalry and lack of internal academic cooperation reflect the opposite of the global academic communion efforts.

Transparency and Data Utilization

An important difference in how higher institutions operate is visibly revealed in the way they employ and present the performance data on student outcomes. TSTU and TIIAME NRU illustrate open tracing of graduation and employment rates through the method that follows the requests for improvement of data management in higher education ratings (Bridgestock, 2021).^[6] Nevertheless, the absence of systematic data generation and reporting from other institutions implies an unwillingness to be transparent and show that this system is not developed there.

Addressing Research Challenges

An important difference in how higher institutions operate is visibly revealed in the way it employs and present the performance data on student outcomes. TSTU and TIIAME NRU illustrate open tracing of graduation and employment rates through the method which is by the requests for improvement of data management in higher education ratings (Bridgestock, 2021).^[6] Based on the data of alumni feedback, the use of TIIAME NRU can have an impact on rankings too since it follows the idea applied in best practices for continual program enhancement (Crammond,2019).^[7] Nevertheless, the absence of systematic data generation and reporting from other institutions implies an unwillingness to be transparent.

5.3 Practical Implications for Policymakers and Higher Education Institutions

Strategic Internationalization

Uzbekistan's higher education internationalization strategy should encompass multidimensional initiatives beyond student mobility. It should prioritize curriculum development, research partnerships, and faculty exchange programs. Building a global mindset among students and staff is imperative, integrating international education standards and fostering an academic culture valuing diversity and global citizenship. Establishing international offices to handle collaborations with foreign institutes, research projects abroad, and cultural events is essential. Creating joint degree programs with foreign institutions enhances graduate employability and elevates Uzbekistan's global academic reputation (Jeptoo, 2012).^[13]

Enhanced Research Culture

Developing a robust research culture in Uzbek universities requires innovation support, interdisciplinary collaboration, and recognition for outstanding student performance. Establishing research teams and centers of excellence addressing critical national and global issues amplifies research significance and scope. Providing researchers with modern equipment, financial support, global networking opportunities, and mentorship fosters competitive abilities. Workshops on academic writing and grant applications further enhance researchers' global competitiveness. Exploring open-access publications increases research visibility and impact, crucial for global university performance assessment (Li, 2022).^[20]

Industry-Academia Synergy

Close collaboration between academia and industry aligns education with evolving labour market demands. Uzbek universities should engage industry partners in curriculum development, emphasizing practical skills and problem-solving. Establishing industry advisory boards and internship programs enhances students' real-world experience. Encouraging lecturers to conduct industry-supported research fosters innovation and economic growth. Strengthened industry ties ensure graduates possess in-demand skills, enhancing employability and university reputation (Kinash, 2016).^[17]

Inclusivity and Diversity

Uzbek universities must move beyond mere policy statements to enact concrete projects fostering community among diverse members. This entails recruiting students and staff from varied backgrounds, providing financial aid to marginalized groups, and organizing cultural events showcasing institutional diversity. Mandatory cultural responsiveness and anti-discrimination training for all staff create a supportive environment. Diverse student demographics enhance the teaching-learning process, preparing students for a globalized world (Moreu, 2021).^[26]

Transparent Quality Assurance

Uzbek universities must prioritize transparency in quality assurance to build trust in educational offerings. Timely dissemination of student performance, teacher competencies, and research outcomes fosters accountability. External accreditation serves as a quality benchmark, supplemented by student and alumni feedback for continuous improvement. Implementing self-assessment and accountability mechanisms enhances teaching, research, and governance practices, elevating institutions' quality, and rankings (Beerkens, 2017).^[4]

Enhancing Sustainability in Higher Education

Sustainability should guide Uzbekistan's higher education development. Universities should integrate sustainability into curriculum, research, and campus operations. This includes developing academic programs in environmental studies, conducting sustainability-focused research projects, and adopting green campus practices like energy conservation and waste reduction. Engaging with neighbouring communities spreads the message of sustainable development. Aligning with UN Sustainable Development Goals and sustainability rankings enhances institutional environmental features and global recognition (United Nations, 2023).^[34]

6. Conclusion

The exploratory study delved into the factors shaping higher education institution rankings in Uzbekistan. Interviews with university representatives, local experts, and insights from the QS consulting team revealed the multifaceted nature of rankings. Key factors include academic reputation, research output, internationalization, faculty development, and industry collaboration. These areas serve as competitive advantages for Uzbek universities globally.

This study enhances understanding of higher education rankings in Uzbekistan, contributing a nuanced perspective to the academic literature. By examining strategies employed by Uzbek universities, it elucidates the complexities of global ranking systems. Providing detailed insights and solutions aids in achieving international recognition and excellence.

6.1 Limitations and Suggestions for Future Research

Though this research represents an initial step in understanding and enhancing Uzbekistan's global academic reputation, it aims to inform policymakers and university leaders, contributing to the nation's academic and economic advancement.

While the report offers new perspectives, it relies heavily on qualitative data from a limited number of institutions and expert consultants. Future research could adopt a mixed methods approach to provide a more comprehensive understanding. Quantitative data can complement qualitative insights, enhancing the study's validity.

Exploring the influence of cultural elements on ranking strategies and conducting longitudinal research to track institutional progress over time are potential avenues for further investigation. These approaches offer a more nuanced understanding of Uzbekistan's higher education landscape.

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Appendices

Appendix 1 – Analysis of Case 1: University Representatives

Question 1: In your opinion, what are the main factors that impact the rating of higher educational institutions in Uzbekistan?

TSUE:

"The main factors influencing the rating are scientific potential, scientific research works, projects, professional development of professors and teachers abroad, involvement of foreign teachers in classes, the level of satisfaction of employers and quality of personnel, and participation of students in international Olympiads."

TSTU:

"Government Rankings:

National Ranking by the Ministry of Higher and Secondary Specialized Education: This ranking considers factors like:

- Educational Quality: Faculty qualifications, student performance, graduation rates, and curriculum relevance.
- Research Activity: Research funding, publications, patents, research collaborations.
- Infrastructure and Facilities: Modernization of buildings, libraries, laboratories, and technology resources.
- Internationalization: Exchange programs, collaborations with foreign universities, and student mobility.
- Social Impact: University's contribution to the community, and social responsibility initiatives.
- International Rankings:
- QS World University Rankings: Considers factors like academic reputation, employer reputation, faculty-student ratio, research citations per faculty, and international-student ratio.
- THE World University Rankings: Like QS, but also includes research income, teaching reputation, and international outlook.

Additional Factors:

• Accreditation: Accreditation by national and international bodies ensures quality standards.

- Alumni Network: Successful alumni can boost their reputation and attract talent.
- Industry Partnerships: Collaboration with businesses enhances the employability of graduates.
- Student Satisfaction: Positive student experiences and feedback can influence rankings."

THAME NRU:

"Improving the quality of education in HEIs.

- Inclusive education, improvement of conditions created for students with disabilities, allocation of various scholarships.
- Increasing the quality and weight of the work carried out in harmony with the goals of sustainable development of the UN.
- Creation of necessary infrastructure for carrying out scientific research, provision of scientific laboratories and centers with modern equipment and facilities.
- Increasing the quality, number, and effectiveness of scientific research.
- Increasing the scientific potential.
- *Expansion and strengthening of international cooperative relations.*
- Increasing the number of foreign students.
- Increasing the number of foreign professors and teachers.
- Increasing international grants, projects and investments.
- Increasing international exchange and joint programs.
- Emergence of leaders and personalities in the field of science from the university.
- Expansion and strengthening of cooperative relations with industry, stakeholders and employers.
- Increasing employment rate of graduates.
- Development of infrastructure related to modern educational buildings, library, sports complexes, health care, dormitories and catering.
- Greening the university.
- Creation of conditions for the use of clean energy, and a friendly attitude toward the environment on the territory of the university.
- Implementation of active social events, etc."

Question 2: What strategies does your institution employ to allocate resources and enhance its ranking?

TSUE:

"The level of training of teachers abroad has been increased."

TSTU:

"Prioritization:

- Strategic Planning: Tashkent State Technical University likely has a strategic plan outlining its vision and goals, including improvement in rankings. This plan would prioritize key areas based on their potential impact on rankings and alignment with the university's overall mission.
- Data Analysis: The university likely analyzes data from various sources, including government rankings, international rankings, student surveys, and alumni feedback, to identify areas needing improvement.
- Strengths and Weaknesses: Based on the data analysis, the university identifies its strengths and weaknesses compared to competitor universities. Resources are then prioritized towards addressing weaknesses with the highest potential for improvement in rankings.
- External Benchmarking: The university might benchmark itself against other leading universities in Uzbekistan and internationally to identify best practices and areas for improvement.

Resource Allocation:

- Faculty Development: Investing in faculty training, research opportunities, and international collaborations can improve academic reputation and research output, contributing to rankings.
- Infrastructure and Facilities: Upgrading laboratories, libraries, and technology resources can create a more attractive learning environment, potentially improving student satisfaction and employability.
- Internationalization: Increasing international student exchange programs and faculty collaborations can boost the university's international outlook, reflected in rankings.

- Student Support Services: Investing in career counseling, scholarships, and mental health resources can improve student satisfaction and graduation rates, both factors considered in rankings.
- Marketing and Communication: Effectively communicating the university's achievements and strengths to relevant stakeholders can raise its profile and attract talented students, potentially impacting rankings."

THAME NRU:

"Our university is focusing on almost all the criteria mentioned above. This includes improving conditions for scientific activities and research by modernizing existing laboratories, establishing modern labs, purchasing necessary equipment, and recruiting top researchers, professors, and teaching staff. We also aim to create favorable conditions for them and reward the most active researchers. Other efforts include upgrading the library, improving conditions for inclusive education, strengthening international cooperation, attracting large investments, and promoting environmental sustainability within the university etc."

Question 3: Do you think the current ranking system in Uzbekistan effectively reflects the quality of higher education?

TSUE:

"No response was provided."

TSTU:

"Strengths of the ranking system:

- Provides a framework for comparison: Rankings offer a standardized way to compare universities based on specific criteria, which can be helpful for students, parents, and policymakers.
- Highlights areas for improvement: By identifying strengths and weaknesses, rankings can encourage universities to focus on areas needing improvement.
- Promotes competition and innovation: Ranking systems can incentivize universities to strive for excellence and adopt innovative practices.

Weaknesses of the ranking system:

- Oversimplification: Rankings often use a limited set of metrics, which can fail to capture the full picture of the university's quality, such as teaching quality, student support, and community engagement.
- Methodological biases: Different ranking systems have different methodologies and weightings, which can lead to biased results depending on the chosen criteria.
- Focus on prestige: Rankings can create an unhealthy obsession with prestige and attract students based on reputation rather than individual needs and fit."

THAME NRU:

"Yes, indeed. In my opinion, the QS and THE rating systems are not exclusive to Uzbekistan but rather encompass rating systems that incorporate the requirements of all countries for their higher education institutions and consolidate them into a unified system."

Question 4: How does your institution track and measure student outcomes, such as graduation and employment rates?

TSUE:

"Monitoring is carried out according to directions."

TSTU:

"Measuring and Tracking Student Outcomes: Employment Rates:

- Graduate Surveys: TSTU likely conducts surveys of graduating students after a specific period (e.g., 6 months, 1 year) to track their employment status, job titles, and salaries.
- Employer Partnerships: Collaboration with companies hiring TSTU graduates can provide data on employment rates in specific industries and fields.
- Government Data: National statistics might track graduate employment rates across different universities, offering a broader comparison. Graduation Rates:
- Internal Records: TSTU likely maintains records of student enrollment, progress, and grad-

uation rates by program and cohort.

- Ministry of HE Data: The Uzbekistan Ministry of Higher and Secondary Specialized Education might collect and publish graduation rate data for all universities.
- National Reports: National reports on HE may include national and university-specific graduation rate data."

THAME NRU:

"TIIAME NRU conducts monitoring of student placements from the previous academic year at the outset of each new academic year (September to November). This task falls under the purview of the Department of Marketing and practice of students, with university staff actively participating and studies conducted across various regions. A dedicated report, also referred to as a reference, is compiled for each student, consolidating the employment outcomes of university graduates. Moreover, the university is conducting surveys of graduates to gather data on their employment status, job satisfaction, and career paths annually. The university is focusing on the establishment of alumni networks to stay connected with graduates and track their career trajectories."

Question 5: How does your university use rankings to appeal to prospective students and faculty?

TSUE:

"No response was provided."

TSTU:

"Prospective Students:

- Highlighting Strong Rankings: TSTU's website and promotional materials might emphasize its position in national and international rankings, particularly if it performs well in areas relevant to prospective students' interests (e.g., specific programs, research output).
- Targeted Marketing: Rankings data can be used to create targeted marketing campaigns reaching students interested in universities with specific strengths, aligning TSTU's offerings with their preferences.
- Showcasing Success Stories: Featuring stories of successful alumni who benefited from their

TSTU education and achieved good employment outcomes can resonate with prospective students.

• Open House Events: Highlighting ranking achievements during campus tours and open house events can impress prospective students and their families.

Faculty Members:

- Advertising Strong Research Environment: If TSTU ranks well for research output or faculty collaborations, it can promote these aspects to attract top researchers interested in contributing to a productive environment.
- Competitive Salary and Benefits: Offering competitive salaries and benefits packages based on the university's ranking and reputation can attract qualified faculty.
- Research Funding Opportunities: Highlighting access to research funding and grants available at TSTU, potentially linked to ranking-related achievements, can entice faculty to seek support for their research endeavors.
- Professional Development Opportunities: Showcasing opportunities for faculty development and career advancement, potentially influenced by ranking-driven initiatives, can attract ambitious academics."

THAME NRU:

"The university actively engages in diverse educational events and exhibitions to showcase its achievements and attract both students and professors. Notably, our participation in the QS summit held in Malaysia in November 2023 resulted in the establishment of several collaborative relationships, with several international individuals expressing interest in studying and working at our institution."

Question 6: What measures is your institution taking to enhance its future ranking?

TSUE:

"Efforts are being made to enter the 1000." **TSTU:**

• "Research: Invest in research infrastructure, attract renowned researchers, encourage fac-

ulty publications in high-impact journals, and pursue collaborations with leading international institutions.

- Teaching: Enhance classroom experiences with innovative pedagogies, hire experienced professors, and offer diverse learning opportunities like internships and study abroad programs.
- Student Services: Improve career support services, mental health resources, and academicadvising to ensure student success and satisfaction. Boost Internationalization:
- Attract International Students: Offer scholarships, English-language programs, and culturally diverse events to attract students from abroad.
- Collaborate with International Universities: Engage in joint research projects, faculty exchange programs, and student mobility initiatives.

Improve Infrastructure and Facilities:

- Modernize Libraries and Laboratories: Upgrade technology and equipment to provide students with cutting-edge learning resources.
- Invest in Sustainable Practices: Implement green initiatives to reduce environmental impact and attract environmentally conscious students and faculty.
- Develop Modern Campuses: Improve dormitory facilities, sports complexes, and other amenities to create a more attractive learning environment.

Emphasize Transparency and Accountability:

- Publish Data and Reports: Make student outcomes like graduation rates and employment data readily available, demonstrating a commitment to transparency.
- Conduct Self-Evaluations: Regularly assess strengths and weaknesses using internal and external benchmarks to identify areas for improvement.
- Address Feedback: Implement feedback from students, faculty, and alumni to continuously enhance the university experience."

THAME NRU:

"In addition to recognizing the achievements

highlighted by QS and THE, our university conducts thorough assessments of any shortcomings identified. These aspects are carefully examined and addressed within the university's development programs. Particularly, there is a strong emphasis on enhancing the recruitment of foreign students and professors."

Question 7: What, in your opinion, are the most essential elements that determine the university rankings in Uzbekistan?

TSUE:

"No response was provided."

TSTU:

"Enhanced Research Output and Reputation:

- Collaboration with leading international universities: Partnering on research projects with prestigious institutions can lead to higher quality research, increased publications in high-impact journals, and improved citation rates, all of which are major factors in most ranking systems.
- Attracting international researchers: Bringing in renowned researchers from abroad can boost the university's research expertise, attract funding, and contribute to a more diverse and vibrant research environment.
- Increased international recognition: Participation in international research networks and conferences can raise the university's profile and reputation globally, potentially leading to higher rankings in international systems.

Improved Student Learning Experience:

- International student exchange programs: Exposing domestic students to diverse perspectives and cultural experiences can broaden their horizons, improve communication skills, and prepare them for a globalized workforce.
- Joint degree programs: Collaborating with foreign universities on joint degree programs can offer students internationally recognized qualifications and open doors to global career opportunities.
- Modernized curricula and pedagogy: Partnerships with international institutions can facili-

tate the exchange of best practices in teaching and learning, leading to more innovative and effective curricula.

Enhanced Faculty Development and Recruitment:

- Faculty exchange programs: Allowing faculty to participate in research and teaching opportunities at international universities can enhance their skills, knowledge, and research networks.
- Attracting international faculty: Recruiting talented faculty from abroad can bring diverse expertise and perspectives, enriching the teaching and research environment.
- Professional development opportunities: Collaborations with international institutions can offer workshops, conferences, and other training opportunities for faculty, contributing to their professional development."

THAME NRU:

"By strengthening internationalization and collaborations, the university can attract talented students and staff, enhance global visibility, attract more investments, improve academic and employer reputation, increase joint research activities, enhance entering the global education market and secure international grants and projects, among other benefits."

Question 8: How does the institution ensure the quality of research endeavours?

TSUE:

"It is improved every year based on the strategic plans of the university and the department."

TSTU:

"Academic Programs:

- Internal Quality Assurance:
- Curriculum development and review processes: Regular review and updates of program curricula based on industry trends, student feedback, and faculty expertise.
- Internal evaluations: Periodic self-assessments by faculty and administrators to identify strengths and weaknesses in programs.
- Student feedback surveys: Collecting feedback from students on course content, teaching ef-

fectiveness, and program structure,

- External Quality Assurance:
- National accreditation: Accreditation by a national body verifies that programs meet established quality standards.
- International accreditation: Some programs might seek additional accreditation from international bodies for global recognition.
- External peer review: Independent experts outside the university review programs and provide feedback for improvement.

Research Activities:

- Ethical guidelines: Adherence to established ethical guidelines for research conduct, ensuring integrity and responsible research practices.
- Peer review: Research proposals and publications undergo rigorous peer review by experts in the field.
- Data management and analysis: Implementing procedures for responsible data collection, storage, and analysis to ensure research accuracy and reliability.
- Internal review boards: For research involving human subjects or sensitive topics, internal review boards ensure ethical approval and compliance with regulations.
- Research funding guidelines: Following best practices for managing research funds transparently and ensuring efficient use of resources."

THAME NRU:

"The university ensures quality assurance by following methods.

- Accreditation at the national level by the Ministry of HE, Science, and Innovation.
- International accreditation of the specialties by the international accreditation agencies. For example: the Accreditation Agency for Study Programmes in Engineering, Informatics, Natural Sciences and Mathematics (ASIIN).
- External evaluation of the academic programs, learning materials and courses done by the employers, stakeholders, universities, and industry.
- Internal quality assurance is done by the Department of Education Quality Control with

the organization of different surveys among the students and teachers.

• Organization of continuous training and internships for staff at the university and abroad etc."

Question 9: What is the significance of research output in university rankings, and how does your institution promote and finance research?

TSUE:

"It serves to increase the scientific pedagogical potential; it is taken into account when raising the rating of teachers in the Key Performance Indicator system."

TSTU:

"Impact of Research Output on Rankings:

- Significance: Research output, measured by publications in high-impact journals, citations, patents, and grants received, is a major factor influencing university rankings in most systems.
- Quality over Quantity: Rankings consider the quality and impact of research, not just the number of publications. Publications in prestigious journals with high citation rates carry more weight.
- Field-Specific Variations: 4"The importance of' research output can vary across disciplines. In fields like science and engineering, it might hold more weight compared to humanities or social sciences.

The Ways Universities Encourage Research:

- Funding: Providing internal grants, competitive funding opportunities, and support for external grant applications, facilitating research projects and attracting talent.
- Infrastructure: Investing in modern laboratories, libraries, and technology resources essential for conducting high-quality research.
- Faculty Development: Supporting faculty research through travel grants, conference attendance, collaborations with international institutions, and training workshops.
- Research Clusters and Centers: Establishing interdisciplinary research centers focusing on

specific themes, fostering collaboration and expertise sharing.

- Incentives and Recognition: Rewarding faculty for high-quality research output through promotion, awards, and salary increases, incentivizing research contributions.
- Research Partnerships: Collaborating with industry partners, government agencies, and other universities on joint research projects, leveraging diverse funding sources and expertise.
- Open Access Initiatives: Encouraging faculty to publish open access, making their research accessible to a wider audience and potentially increasing citations."

THAME NRU:

"Research output plays a significant role in university rankings as it reflects the institution's academic impact, reputation, and contribution to knowledge creation. That is why "TIIAME" NRU continuously supports the research activities at the university by providing well-equipped laboratories; providing funding and resources to support the research projects, grants, conferences, seminars etc.; organizing continuous seminars and workshops focused on research skills improvement, academic writing, preparation of research project proposals etc.; rewarding the most active researchers annually. Moreover, there is a system of providing incentives to authors who published articles in Q1, and Q2 journals and paying the funds spent on obtaining international patents."

Question 10: In what ways does the university foster inclusivity and diversity within its campus environment, and what implications does this have for its reputation?

TSUE:

"No response was provided."

TSTU:

"Promoting Diversity and Inclusivity:

• Recruitment: Proactively reaching out to diverse student populations through targeted outreach programs, partnerships with community organizations, and scholarships.

- Curriculum and Pedagogy: Integrating diverse perspectives and experiences into the curriculum, using inclusive teaching methods, and promoting critical thinking about social justice issues.
- Campus Climate: Creating a welcoming and supportive environment for all students through initiatives like cultural events, diversity training, and support groups.
- Faculty and Staff: Hiring diverse faculty and staff to reflect the wider community and ensure their voices are heard in decision-making processes.
- Accessibility: Ensuring physical and academic accessibility for students with disabilities.

Impact on Ranking:

While difficult to quantify directly, promoting diversity and inclusivity can positively impact rankings in several ways:

- Improved Student Satisfaction: Studies show diverse and inclusive campuses can lead to higher student satisfaction and retention; factors considered in some rankings.
- Enhanced Reputation: A reputation for diversity and inclusivity can attract top students, faculty, and research funding, all contributing to higher rankings.
- Innovation and Creativity: Diverse perspectives can foster innovation and creativity in research and teaching, leading to higher research output and international collaborations, both valued by rankings.
- Ethical Considerations: Some rankings incorporate ethical factors like social responsibility and commitment to diversity, potentially giving diverse and inclusive universities an edge.

Challenges and Considerations:

- Measuring Impact: Quantifying the impact of diversity and inclusion initiatives on rankings can be challenging due to complex and inter-connected factors.
- Beyond Rankings: While rankings can be a motivator, universities should strive for genuine diversity and inclusivity, not just for ranking

benefits.

• Addressing Systemic Issues: Addressing systemic barriers to access and inclusion requires ongoing efforts beyond superficial measures."

THAME NRU:

"There is a criterion related to diversity and inclusivity in the international rankings. The university has support services and resources to address the needs of diverse student populations, including counselling services, disability accommodations, and cultural and affinity groups. In recent years, the university has been focusing on improving inclusive education."

Question 11: How does the institution interact with businesses and industry partners to ensure that its graduates have relevant expertise and skills?

TSUE:

"Organization of career days, organization of lectures and master classes on current problems of the enterprise, participation in MD and BMI commissions, cooperation in the development of qualification requirements."

TSTU:

"Engagement Strategies:

- Industry Advisory Boards: Establishing boards with industry representatives to provide feedback on curriculum, skills development, and industry needs.
- Internships and Co-ops: Offering students opportunities to gain practical experience and develop industry-specific skills through internships and cooperative placements.
- Guest Lectures and Workshops: Inviting industry professionals to deliver guest lectures, workshops, and seminars to share their expertise and trends.
- Joint Research Projects: Collaborating with companies on research projects that address industry challenges and provide students with real-world research experience.
- Career Fairs and Networking Events: Organizing career fairs and networking events to

connect students with potential employers and explore career opportunities.

- Skills-Based Curriculum Development: Working with industry partners to identify and integrate relevant skills, such as communication, collaboration, and problem-solving, into the curriculum.
- Industry Certifications and Credentials: Offering opportunities for students to earn industry-recognized certifications or credentials, enhancing their employability.

Benefits of Industry Engagement:

- Relevant Skills and Knowledge: Equip graduates with the skills and knowledge sought by employers through practical experience and industry feedback.
- Increased Employability: Enhance graduates' job prospects by connecting them with potential employers and showcasing their industry-relevant skills.
- Funding and Resources: Attract additional funding and resources from industry partners for equipment, research, and scholarships.
- Innovation and Entrepreneurship: Foster a culture of innovation and entrepreneurship by exposing students to industry challenges and opportunities.

Challenges and Considerations:

- Finding Relevant Partners: Identifying and engaging industry partners allgned with the university's programs and student career aspirations can be challenging.
- Balancing Needs: Balancing the needs of industry partners with the university's academic mission and pedagogical approach requires careful planning and communication.
- Sustainability: Maintaining long-term, mutually beneficial partnerships with industry requires constant engagement and effort."

THAME NRU:

"The university has established ongoing cooperative relationships with industry partners and employers. As part of the 5+1 program, students engage in educational activities for five days at the university and spend one day honing their skills at production enterprises. Additionally, educational programs and course offerings are determined in collaboration with employers."

Question 12: How does the university use student and alumni feedback to improve its academic programs and services, and how does this affect its ranking?

TSUE:

"By organizing surveys among students, the university graduates."

TSTU:

"Gathering and Analyzing Feedback:

- Student Surveys: Conduct regular surveys of students across different semesters and programs to gauge their satisfaction with courses, faculty, facilities, and overall experience.
- Alumni Surveys: Reaching out to alumni through surveys or online platforms to understand their career experiences, skills used in the workplace, and how their TSTU education prepared them.
- Focus Groups and Open Forums: Organizing focus groups and open forums with both students and alumni to delve deeper into specific aspects of their experiences and gather qualitative feedback.
- Social Media Monitoring: Tracking mentions of TSTU on social media platforms to gain insights into student and alumni opinions, addressing both positive and negative feedback.

Using Feedback for Improvement:

- Curriculum Development: Analyzing feedback to identify areas where the curriculum needs revision, updating courses to reflect industry trends and student needs.
- Faculty Development: Providing feedback to faculty on teaching methods, clarity, and engagement based on student input, leading to improved teaching practices.
- Support Services Enhancement: Utilizing feedback to identify areas where student support services, such as career counseling or mental

health resources, need improvement.

• Infrastructure and Facilities Upgrades: Addressing feedback on facilities like libraries, laboratories, or dormitories to create a more conducive learning environment.

Impact on Rankings:

- Improved Student Satisfaction: Addressing student concerns through feedback can lead to higher student satisfaction, a factor considered in some university rankings.
- Enhanced Reputation: A university actively addressing student and alumni feedback demonstrates a commitment to improvement, potentially enhancing its reputation and attracting talent.
- Relevant Curriculum and Skills: Aligning curriculum and skills development with industry needs based on alumni feedback can contribute to higher graduate employability, another factor influencing rankings.
- Transparency and Accountability: Openly incorporating feedback demonstrates transparency and accountability, factors valued by some ranking systems."

THAME NRU:

"TIIAME NRU conducts an annual analysis of feedback from both current students and alumni through survey questionnaires tailored to each group. These surveys are openly accessible on the university's website."

Question 13: Are there any obstacles or limitations that hinder the progress of your institution in the rankings of HE institutions in Uzbekistan? If so, kindly describe them.

TSUE:

"International student and faculty shortage".

TSTU:

"Competition:

- National Competition: Other Uzbek universities might be actively pursuing strategies to improve their rankings, creating strong competition for top positions.
- International Competition: Universities in other

countries, particularly regional contenders, may offer similar programs and attract international students, making it challenging for TSTU to stand out.

Resource Constraints:

- Funding: Limited funding may restrict investments in research infrastructure, faculty recruitment, and internationalization initiatives, factors heavily weighted in QS rankings.
- Technology and Facilities: Outdated technology, libraries, or laboratories might hinder research capabilities and student learning experiences, impacting ranking scores.

Faculty and Research:

- Faculty Recruitment and Retention: Attracting and retaining top faculty can be challenging, especially its salaries or research opportunities aren't competitive with international institutions.
- Research Output: Increasing high-quality research publications in internationally recognized journals, a significant ranking factor, might require additional support and collaboration opportunities.

Internationalization:

- Limited Student Exchange: A lower number of international students participating in exchange programs can hinder the university's international outlook, a consideration in QS rankings.
- Collaborations with International Universities: Fewer partnerships with prestigious international universities might limit research opportunities and global recognition.

Data and Transparency:

- Data Availability: Incomplete or inconsistent data on key metrics like student outcomes, faculty qualifications, or research funding can lead to inaccurate or unfavorable rankings.
- Transparency in Reporting: Lack of transparency regarding data collection and methodology might raise questions about the reliability of the university's self-reported data."

TIIAME NRU:

"There are no restrictions or difficulties in the

country or university. On the contrary, an appropriate state program has been developed with measures aimed at ensuring that the Republic's 10 most advanced universities enter the ranks of the Top 1000 universities in the world."

Appendix 2 – Analysis of Case 2: Expert's View on Other Uzbek Universities

Case 2. Expert's View (Local Consultant for TDPU, NUUz and JizPI)

Question 1: In your opinion, what are the main factors that impact the rating of higher educational institutions in Uzbekistan?

- "Open policies: open administration and available information.
- Research collaboration.
- Student exchange
- Official web page of the universities: full and properly filled information.
- Increase PhD candidates."

Question 2: What strategies does your institution employ to allocate resources and enhance its ranking?

"Every year the government allocates a signification amount of money to universities to improve their ranking. Still, most of them do not know how to allocate in the right way or where they should be allocated."

Question 3: Do you think the current ranking system in Uzbekistan effectively reflects the quality of HE?

"Unfortunately, the current ranking system does not meet the quality of education. Most of the things done by universities most of the time done for the sake of being ranked only. There is no part in the ranking determinants which shows the percentage of quality or anything about accreditation."

Question 4: How does your institution track and measure student outcomes, such as graduation and employment rates?

"The marketing department in the university

works to track employment-related things, but it is hard to control. Mostly, local universities do not know where their graduates are working, or they know but it is done just because of bureaucracy not because they care about it. Universities do not get feedback from their Alumni."

Question 5: How does your university use rankings to appeal to prospective students and faculty?

"Each ranked university has a separate page for information about their rankings on their official websites. Sometimes, they try to show it on the very first online page to acknowledge and emphasize it more."

Question 6: What measures is your institution taking to enhance its future ranking?

"The universities have their milestones which they establish according to the university's strategies."

Question 7: What, in your opinion, are the most essential factors that determine the university rankings in Uzbekistan?

"Local collaboration is significantly low and even lower than international collaboration. Universities mention that it is hard to collaborate and work together with local universities compared to international ones. Thus, it directly hinders the potential of the university to be ranked higher. For example, in Kazakhstan local universities support each other whereas in Uzbekistan the universities view themselves as a competitor to each other."

Question 8: How does the institution ensure the quality of research endeavours?

"There is no real influence and universities do not put a lot of emphasis on it."

Question 9: What is the significance of research output in university rankings, and how does your institution promote and finance research?

"Most universities might state that they encourage research, but when students apply to international grants or intend to do research there will be weak support from the university side. It might be due to different reasons like too many obstacles or the wrong division of research grant funding due to corruption from the administration side. The administration has too much workload that it does not have time to support research and applying to international grants."

Question 10: In what ways does the university foster inclusivity and diversity within its campus environment, and what implications does this have for its reputation?

"There is no policy regarding diversity in local universities and that is why there is no specific information on it taking into consideration the official web page of universities. Where each university should have a policy document. However, there is no big influence on inclusivity, and it does not impact international ranking but is linked more with sustainability and impact rankings. Moreover, if we check local universities, we can hardly find inclusivity there and only one of the universities where it is present is Central Asian University in Tashkent. In the local universities, the infrastructure is old and there are no special conditions for disabled people".

Question 11: How does the institution interact with businesses and industry partners to ensure that its graduates have relevant expertise and skills?

"In local universities there are no career centres and universities do not care about the future of the students. There is some improvement made recently and this responsibility is now partially linked with the marketing department that announces free vacancies on the university's pages."

Question 12: How does the university use student and alumni feedback to improve its academic programmes and services, and how does this affect its ranking?

"The university asks for feedback from students regarding their academic programs but not on the services. No alumni stories or feedback are coming from them." Question 13: Are there any obstacles or limitations that hinder the progress of your institution in the rankings of HE institutions in Uzbekistan? If so, kindly describe them.

"There are a lot of things that limit the ability of the university to be ranked or increase the rankings. The theory does not meet the practice and there is a thing which is referred to as a crossroad in HE which consists of four things: policy, education, practice and research that need to be balanced for the institution to improve."

Appendix Case: 3. QS Consulting Team Analysis of Interviews with QS Representatives

Question 1: Could you kindly explain how QS ranks universities throughout Central Asia, including Uzbekistan?

"QS offers several rankings, including its flagship World University Rankings. These rankings are used worldwide to evaluate institutions. The Asia rankings now include Uzbekistan, Kazakhstan, Kyrgyzstan, and Tajikistan. Chemistry, performing arts, and management have specialised ranks. University rankings by QS include research, research and discovery, employability, global participation, and learning experience. Research production, impact, and academic reputation are evaluated. Scopus data comprises internationally renowned research from journals, publications, and conferences. Scopus rates regions by work citations and the National University of Uzbekistan has 4000.

Academic reputation is vital in all rankings. QS generates a big database of academics and professionals from various global businesses each year. QS will ask institutions to participate in a poll to propose up to 30 universities in their country and 30 throughout the world after they provide their contact information.

QS evaluates universities based on research production, impact, and reputation. The rankings help assess Uzbekistan and Central Asian universities. The QS Rankings evaluate universities worldwide in various fields, including cultural anthropology. Facts and scholarly opinions of graduates inform the rankings. Universities must disclose professors, students, international students, and sustainability practices. The QS Hub platform collects this data annually, with over 100,000 academic responses and much fewer employer responses.

Universities need to register and encourage academics and employers to collect data properly. The rankings consider foreign academics, students, and research networks. All universities want to be in the flagship World University Rankings. Universities that conduct research and collaborate internationally need this.

The rankings consider faculty-student ratio, student-faculty ratio, and Ph.D.-holding personnel. Many universities compete for the flagship World University Rankings. Since there are no Uzbek institutions worldwide, this sector can improve.

Uzbek universities have improved in Asia rankings, with 14 highlighted this year. This publicly available data can help identify top cultural anthropology research and teaching universities."

Question 2: How do university rankings influence the HE industry in Uzbekistan?

"For visibility and openness, universities are increasingly interested in worldwide rankings. This has increased university interest in new relationships, information, and research collaborations. Universities are also assessing current cooperation to strengthen them and pursue new strategic partnerships.

Universities must improve English-speaking teachers, professors, facilities, dorms, and infrastructure to attract international students. Rankins advises universities to take internationalisation seriously and holistically. This technique raises Uzbekistan's higher education profile by including more institutions in subject rankings.

There are obstacles to this process. Some universities may neglect overseas students in favour of rankings, resulting in hardened academics who lack resources and assistance. Student unhappiness may result. For visibility and accessibility, universities are increasingly interested in worldwide rankings.

There are other obstacles. Some universities harden academics, attract international students, or provide poor amenities. Universities must recognise and resolve these issues to succeed globally. Universities can boost worldwide visibility and success by focusing on internationalisation and partnerships."

Question 3: What are the most important factors influencing university rankings in Uzbekistan?

"Uzbek universities are gaining recognition from peers in Uzbekistan and neighbouring nations. This is largely due to internationalisation and universities' stronger contacts with researchers and institutions. Many universities lack good alumni monitoring and employer communication, therefore employer reputation is still developing.

Regional issues like Uzbekistan's absence of workplace email addresses hurt employer reputations. The faculty-student ratio in Pakistan is not ideal, but there are enough teachers. Some universities are gaining international students and faculty. Most Uzbek universities score approximately one out of 100 in international research.

Finally, most Uzbek universities' strongest or fastest-growing metric is academic reputation, followed by faculty-student ratio. Internationalisation and research, especially faculty and research, still need attention."

Question 4: To enhance its ranking, how does an institution prioritise or allocate resources?

"The question of university internationalization is complex, but from discussions on the ranking side, it is evident that universities invest heavily in research and academic partnerships. Some universities prioritize academic partnerships more, focusing on human resources and attention. However, this alignment is not always evident in all internationalisation efforts. Research requires significant resources, including money, equipment, labs, and human resources. It takes time for research to develop and become international-level, published, and captured by databases like Scopus and QS. Infrastructure is another area where universities invest heavily, with some working on it but not necessarily reflected in rankings. Sustainability is a new topic for most universities, and some are dedicating resources to it. However, this is at the beginning stages.

Resources are not just about money funding, but also about human attention and administrative resources. University leadership prioritizes faculty members, researchers, and administrative faculty, and this area will likely see more development in the coming years. However, not all universities are diverting resources towards this area."

Question 5: In your perspective, does the current ranking system accurately reflect the genuine nature of HE excellence in Uzbekistan? Why, or why not?

"The QS rankings show their different goals. University students from Uzbekistan are treated fairly. This audience prefers national rankings. The OS rankings were designed for international students considering studying abroad and understanding. Top student city rankings were not discussed. See that ranking and decide, students. Which city is best for students? London or New York are options. They might find an answer there. Governments and other entities probably started utilising QS rankings. Consider partnerships by researchers considering migrating to a university after being offered a job. Uzbek universities' internationalisation and intranational significance reflect what's happening. I hope to see Uzbek universities, especially the top ones, in the World University rankings soon. I anticipate success. Time will tell. I understand their workload. Many connections are made. Many fronts are being worked. Their arrival is assured. Asia rankings show they're just not there yet, which is fair and extreme. Positive progress since Asia is competing with universities from China, India, Singapore, Japan, and South Korea and 14 of the 850 ranked Asian universities are from Uzbekistan. Compared to China and India's high education sectors and sizes, this is good.

Uzbek institutions recently internationalised again. They had overseas alliances before, but

significant activity began several years ago for socio-political and economic reasons.

The Soviet era isolated the CIS countries in research, thus they had to start from scratch with the Internet, international cooperation, research, and academics. In recent decades.

Regionally, it pretty well reflects the international outlook. Again as. University Uzbekistan expanded. I hope some rankings will be higher Internationally it is a fair representation".

Question 6 : How does a university use ranking systems to effectively appeal to prospective students and faculty members?

"Universities in Uzbekistan are increasingly ranked in international rankings, which can attract international students. This is a challenge as Uzbekistan has not been a traditional destination for international students. To attract more international students, the Ministry of Education and other government organizations must work together to make Uzbekistan a desirable standard. Rankings provide credibility, as it gives people a sense of worth paying attention to a university. Universities that have been ranked also often receive calls and emails from other institutions, indicating their quality in a particular field. This external evaluation confirms a university's reputation, making it more attractive to international students."

Question 7: Are there any obstacles or limits to the university getting a higher rating in the QS rankings for HE in Uzbekistan? So, what are they?

"Studying or working in Uzbekistan is difficult due to its limited recognition. However, some institutions are enhancing their HE systems, facilities, and foreign student support in Uzbekistan. This involves procedures that help international students integrate into the university, enough English support, and staff that speak strong English to teach and communicate with them. Uzbek universities also struggle with research. International rankings place Uzbek universities below China, South Korea, and Eastern Europe. Some scientists conduct international-quality research, but their faculty is small. Their study must be published in English in high-impact journals to be seen worldwide. This move is difficult for university employees who have published in Russian or Uzbek for decades.

Central Asian and CIS universities should promote their research effectively. Building trust and alliances takes time and is not unique. Due to their isolation, universities in the former Soviet Union have struggled to internationalise. This initiative began earlier or later in several countries. In conclusion, Uzbekistan struggles to attract international academics and promote research."