



**DIGITALIZATION OF PUBLIC PROCUREMENT IN HIGHER EDUCATION
INSTITUTIONS OF THE REPUBLIC OF UZBEKISTAN: THE EFFICIENCY OF
ELECTRONIC AUCTIONS**

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Abstract

This article analyzes the efficiency of digitalizing public procurement and implementing electronic auctions in higher education institutions in Uzbekistan. The study focuses on the economic efficiency, transparency, and anti-corruption benefits of the electronic procurement system, using the examples of Tashkent State University of Economics and the Almalyk branch of Tashkent State Technical University named after Islam Karimov. It highlights how procurement through electronic auctions has contributed to the rational expenditure of public funds, strengthened the competitive environment, and reduced corruption in public procurement at these universities. The main findings of the research confirm the economic efficiency of the electronic procurement system, which has saved 26% of the total procurement cost. Additionally, the article examines the results based on international recommendations, specifically those of the OECD and the World Bank, on digitalizing public procurement and enhancing transparency.

Keywords

Public procurement, electronic auction, economic efficiency, transparency, higher education, Uzbekistan, digitalization, anti-corruption, state budget, international experience.

Introduction

The digitalization and improvement of efficiency in public procurement in the Republic of Uzbekistan are among the primary measures aimed at ensuring economic efficiency and increasing transparency within the public sector. Enhancing transparency and strengthening anti-corruption efforts through the digitalization of public procurement processes remains a core



direction of ongoing reforms in the country. The adoption of the Law of the Republic of Uzbekistan “On Public Procurement” (No. LRU-684, dated April 22, 2021) established a solid legal foundation for the effective organization of public procurement and the prudent management of public funds. This law aims to make the public procurement process open and competitive, thereby expanding the potential for effective allocation of economic resources.

The economic efficiency and transparency achieved through electronic public procurement are recognized internationally as well. According to the OECD’s “Government at a Glance 2019” report, the digitalization of public procurement is acknowledged as an effective tool for reducing human involvement in government orders and optimizing costs (OECD, 2019). Similarly, the World Bank's “Benchmarking Public Procurement 2018” study confirms that the use of electronic systems in public procurement is essential for increasing competition, reducing costs, and ensuring transparency. These international practices and recommendations can also be applied to enhance the efficiency of digital public procurement in Uzbekistan's higher education institutions.

Higher education institutions have a significant demand for public procurement to develop their infrastructure and improve the quality of education. The studies by Muminov and Zakhirova (2020) explored methods of achieving economic efficiency and ensuring transparency through digitalized public procurement, a model that is also highly relevant to Uzbekistan’s higher education institutions. Implementing electronic auctions for procurement in the higher education sector is expected to yield notable results in regulating relationships between public purchasers and suppliers and saving economic resources. This article is focused on analyzing the process and effectiveness of conducting public procurement through electronic auctions in higher education institutions in Uzbekistan. Based on methods recommended by international organizations, including the OECD and the World Bank, the study provides an in-depth analysis of how digitalization of public procurement in higher education can lead to increased transparency and stronger anti-corruption measures.



Methodology

This study aims to evaluate the efficiency of conducting public procurement through electronic auctions in higher education institutions, employing legal, economic, and comparative analysis methods. The primary legal foundation of the research is the Law of the Republic of Uzbekistan “On Public Procurement”(No. LRU-684, dated April 22, 2021) and related normative-legal documents. Additionally, recommendations on digitalizing public procurement and enhancing transparency provided by international organizations, such as the OECD and the World Bank, were analyzed. Data collection involved using local and international scientific articles, along with international experiences in increasing the effectiveness of electronic auctions in higher education institutions. Based on these sources, legal and economic approaches were integrated to analyze the economic efficiency, level of transparency, and anti-corruption impact of electronic auctions.

Results

In the third quarter of 2023, significant economic gains were achieved through initiatives aimed at increasing the efficiency of procurements conducted via electronic auctions at the Almalyk Branch of Tashkent State Technical University named after Islam Karimov and Tashkent State University of Economics. Both higher education institutions placed particular emphasis on the prudent allocation of public funds and ensuring transparency in procurement processes through electronic purchases. These efforts expanded opportunities for efficient public procurement and cost-effective use of funds.



Table 1: Results of Public Procurements Conducted through Electronic Auctions by Higher Education Institutions up to Q3 2023

University	Number of Contracts	Initial Price (UZS)	Contract Amount (UZS)	Saved Amount (UZS)	Savings Percentage (%)
Tashkent State University of Economics	132	4 744 980 550	3 049 669 291	1 695 311 259	35.72
Almalyk Branch of Tashkent State Technical University named after Islam Karimov	8	39 445 000	26 170 100	13 274 900	33.65
Total	140	4 784 425 550	3 075 839 391	1 708 586 159	35.71

Source: Prepared by the researcher based on data from procurements conducted through electronic auctions by universities (Q3 2023).

As shown in the table, a total of 132 contracts executed by Tashkent State University of Economics had an initial procurement value of 4,744,980,550 UZS. As a result of electronic auctions, the contract amount was reduced to 3,049,669,291 UZS, achieving a total savings of 1,695,311,259 UZS, which represents 35.72% of the initial procurement value. The university primarily procured computer equipment, paper products, and plastic items. The reduction in procurement costs allowed the university to reallocate funds to other needs.

At the Almalyk Branch of Tashkent State Technical University named after Islam Karimov, the initial value of 8 contracts totaled 39,445,000 UZS. Following these procurements, the branch signed contracts amounting to 26,170,100 UZS, reducing the initial value by 13,274,900 UZS. This constitutes a savings of 33.65% of the initial procurement value.



The branch primarily acquired electrical equipment, chemicals, metal, and textile items, and such savings allowed the institution to manage funds effectively and direct them toward other developmental projects.

Across both higher education institutions, a total of 140 procurements through electronic auctions resulted in initial procurement values amounting to 4,784,425,550 UZS. These were revised, and contracts totaling 3,075,839,391 UZS were concluded. Consequently, a total savings of 1,708,586,159 UZS was achieved, with an average savings rate of 35.71%.

Procurements conducted through electronic auctions demonstrate that the efficient allocation and expenditure of public funds can increase the economic effectiveness of state finances. Expanding the implementation of this process is an essential tool for ensuring the financial stability of higher education institutions. Additionally, this system, which aligns with international procurement practices, enhances the transparency and efficiency of public fund management and plays a significant role in meeting Uzbekistan's obligations to the international community.

Discussion

The process of digitalizing public procurement in Uzbekistan serves as a crucial step toward ensuring the efficient use of public funds and strengthening the country's economic stability. In particular, implementing electronic auctions for public procurement in the higher education sector is vital for saving public funds, enhancing transparency in procurement processes, and combating corruption. The effectiveness of electronic procurement has been thoroughly examined through the examples of Tashkent State University of Economics and the Almalyk Branch of Tashkent State Technical University named after Islam Karimov. The following factors allow for a deeper analysis of the significance of electronic auctions in the higher education sector up to the third quarter of 2023.



1. **Economic Efficiency Achieved through Electronic Auctions**

Up to the third quarter of 2023, Tashkent State University of Economics conducted a total of 132 procurements with an initial estimated value of 4,744,980,550 UZS. Through electronic auctions, the contract amount was reduced to 3,049,669,291 UZS, resulting in a savings of 1,695,311,259 UZS, with an overall savings rate of 35.72%. Similarly, the Almalyk Branch of Tashkent State Technical University saved 13,274,900 UZS through 8 procurements. The branch's initial procurement value of 39,445,000 UZS was lowered to a contract amount of 26,170,100 UZS, achieving a 33.65% savings rate. These savings provide additional financial resources for higher education institutions to meet other needs.

2. **Role in Enhancing Transparency and Combating Corruption**

Conducting public procurement through electronic auctions reduces human involvement in procurement processes, which is crucial for combating corruption. This method encourages competition and creates equal opportunities for all participants. Uzbekistan's Law "On Public Procurement" and its implementation ensure that public procurements are conducted openly and fairly. By legally implementing electronic auctions, this law helps control transparency in public procurement and ensures the prudent use of funds. According to the data studied, electronic procurements conducted by Tashkent State University of Economics and the Almalyk Branch have enabled the effective allocation of budgetary funds by ensuring transparency and fairness in state procurement.

3. **Adapting International Practices to Local Context**

Recommendations from the OECD and the World Bank on digitalizing public procurement emphasize the importance of electronic auctions in fighting corruption and improving economic efficiency in procurement. OECD's "Government at a Glance 2019" and the World Bank's "Benchmarking Public Procurement 2018" studies demonstrate the economic benefits of conducting public procurement electronically. These recommendations serve as an essential basis for creating competitive and transparent procurement processes. Implementing electronic auctions in Uzbekistan's higher education institutions, based on these international standards, has proven to be an effective method for increasing savings and transparency in public



procurement. The alignment of electronic procurement practices at Tashkent State University of Economics and the Almalyk Branch with international standards has ensured the proper use of funds allocated from the state budget.

4. Efficient Use of the State Budget and Support for Higher Education Institutions

The funds saved through electronic auctions can be redirected to other important projects, such as improving infrastructure and enhancing the quality of education. By increasing the efficiency of public procurement, Uzbekistan's higher education institutions have been able to save funds and utilize them for areas such as improving education quality and supporting research. These measures have enabled the efficient allocation and management of resources in the higher education sector. The total amount saved constitutes 35.71% of the initial procurement value, clearly demonstrating the positive outcomes of conducting public procurement electronically.

5. Long-Term Economic Impact of the Digitalization Process

The experience of conducting public procurement electronically in Uzbekistan's higher education institutions contributes to savings in state budget allocations and increased transparency. The efficiency of electronic auctions brings not only short-term economic benefits but also serves to improve the financial stability and efficiency of the public sector in the long term. This process allows higher education institutions to utilize new technologies and methods and lays the foundation for the broader digitalization of public procurement in the future.

Procurements conducted through electronic auctions by Tashkent State University of Economics and the Almalyk Branch of Tashkent State Technical University named after Islam Karimov up to the third quarter of 2023 have shown substantial results in the effective management of public funds, transparency, and anti-corruption efforts. These outcomes indicate that the implementation of electronic procurement in Uzbekistan's higher education institutions contributes to effective public procurement and financial stability. Therefore, the further expansion of electronic auctions is an essential step in enhancing the economic efficiency and competitiveness of the public sector.



Conclusion

This study evaluated the effectiveness of implementing public procurement through electronic auctions in Uzbekistan's higher education institutions, specifically through the cases of Tashkent State University of Economics and the Almalyk Branch of Tashkent State Technical University named after Islam Karimov. Digitalizing procurement processes through electronic auctions facilitates the cost-effective use of funds allocated from the state budget, enhances transparency, and offers an effective means of combating corruption. The findings reveal that procurement via electronic auctions provided substantial financial savings for universities, achieving an average savings rate of 35.71% of the total procurement cost up to the third quarter of 2023. These saved funds can be redirected to essential goals such as improving the quality of education, supporting scientific research, and enhancing infrastructure, thereby enabling higher education institutions to meet their needs more effectively.

The implementation of an electronic procurement system not only increases economic efficiency but also ensures transparency in public procurement. This is a vital step toward the prudent use of budgetary funds, economic stability in the public sector, and alignment of Uzbekistan's higher education system with international practices. The successes of electronic auctions affirm Uzbekistan's commitment to creating a more competitive and fair procurement system that incorporates international recommendations in public procurement.

Continuing and expanding the digitalization of public procurement processes offers greater efficiency and cost-saving potential in Uzbekistan's higher education sector. Electronic auctions serve not only financial benefits but also play a crucial role in increasing trust in public procurement, strengthening anti-corruption measures, and enhancing educational quality. Therefore, further adoption of this system is a valuable tool for the sustainable development of the country's higher education sector.



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