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DIGITAL TRANSFORMATION, ECONOMIC EFFICIENCY, AND LOCALIZATION POLICY OF THE PUBLIC PROCUREMENT SYSTEM

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Abstract: This article analyzes the digital transformation of the public procurement system in Uzbekistan, its economic efficiency, and localization policy within the context of Presidential Decrees DP–259 and DP–17. The purpose of the study is to identify the institutional and economic significance of competition, transparency, electronic control, artificial intelligence-based price monitoring, e-scoring, TCO-based evaluation, and mechanisms for supporting local producers in public procurement. The research was conducted based on *нормативно*-legal analysis, a comparative institutional approach, and a synthesis of scientific literature. The findings demonstrate that DP–259 strengthens digital control and integrity in public procurement, while DP–17 links public procurement with local production development, industrial cooperation, the institution of professional procurement specialists, and the total cost of ownership (TCO) principle. The article argues that the effectiveness of digital instruments depends on data quality, algorithmic transparency, human oversight, audit systems, and complaint mechanisms. In conclusion, the study emphasizes that the public procurement system in Uzbekistan is evolving not only as a mechanism for spending budget funds, but also as a strategic management instrument aimed at increasing economic efficiency, reducing corruption risks, and developing the potential of domestic industry.

Keywords: public procurement, digital transformation, artificial intelligence, e-scoring, TCO, localization, industrial cooperation, transparency, economic efficiency.

Annotatsiya: Ushbu maqolada O'zbekistonda davlat xaridlari tizimining raqamli transformatsiyasi, iqtisodiy samaradorligi va mahalliy lashtirish siyosati PF–259-son va PF–17-son Prezident Farmonlari kontekstida tahlil qilinadi. Tadqiqotning maqsadi davlat xaridlarida raqobat, shaffoflik, elektron nazorat, sun'iy intellekt asosidagi narx monitoringi, elektron-skoring, TCO asosida baholash hamda mahalliy ishlab chiqaruvchilarni qo'llab-quvvatlash mexanizmlarining institutsional va iqtisodiy ahamiyatini aniqlashdan iborat. Tadqiqot normativ-huquqiy tahlil, qiyosiy institutsional yondashuv va ilmiy adabiyotlar sintezi asosida amalga oshirildi. Natijalar shuni ko'rsatadiki, PF–259 davlat xaridlarida raqamli nazorat va integritetni kuchaytirishga xizmat qilsa, PF–17 davlat xaridlarini mahalliy ishlab chiqarish, sanoat kooperatsiyasi, professional xaridor instituti va umumiy egalik qiymati tamoyili bilan bog'laydi. Maqolada raqamli instrumentlarning samaradorligi ma'lumotlar sifati, algoritmik shaffoflik, insoniy nazorat, audit va shikoyat mexanizmlarining mavjudligiga bog'liqligi asoslanadi. Xulosa sifatida, davlat xaridlari tizimi O'zbekistonda nafaqat byudjet mablag'larini sarflash tartibi, balki iqtisodiy samaradorlikni oshirish, korrupsion xavflarni kamaytirish va mahalliy sanoat salohiyatini rivojlantirishga xizmat qiluvchi strategik boshqaruv instrumenti sifatida shakllanayotgani ta'kidlanadi.

Kalit so'zlar: davlat xaridlari, raqamli transformatsiya, sun'iy intellekt, elektron-skoring, TCO, mahalliy lashtirish, sanoat kooperatsiyasi, shaffoflik, iqtisodiy samaradorlik.

Аннотация: В данной статье анализируются цифровая трансформация системы государственных закупок Узбекистана, её экономическая эффективность и политика локализации в контексте Президентских указов УП–259 и УП–17. Цель исследования заключается в определении институционального и экономического значения механизмов конкуренции, прозрачности, электронного контроля, мониторинга цен на основе искусственного интеллекта, электронного скоринга, оценки на основе совокупной стоимости владения (TCO), а также поддержки местных производителей в системе государственных закупок. Исследование выполнено на основе нормативно-правового анализа, сравнительного институционального подхода и синтеза научной литературы. Результаты показывают, что УП–259 способствует усилению цифрового контроля и обеспечению добросовестности в государственных закупках, тогда как УП–17 связывает систему государственных закупок с развитием

местного производства, промышленной кооперации, института профессионального закупщика и принципа совокупной стоимости владения. В статье обосновывается, что эффективность цифровых инструментов зависит от качества данных, алгоритмической прозрачности, человеческого контроля, аудита и наличия механизмов обжалования. В качестве вывода подчёркивается, что система государственных закупок в Узбекистане формируется не только как механизм расходования бюджетных средств, но и как стратегический инструмент управления, направленный на повышение экономической эффективности, снижение коррупционных рисков и развитие потенциала местной промышленности.

Ключевые слова: государственные закупки, цифровая трансформация, искусственный интеллект, электронный скоринг, ТСО, локализация, промышленная кооперация, прозрачность, экономическая эффективность.

INTRODUCTION

Public procurement is considered one of the key institutional mechanisms in the modern economic governance system for ensuring the efficient use of budget funds, improving the quality of public services, supporting market competition, and reducing corruption risks. According to OECD data, in 2023 public procurement expenditures accounted for an average of 12.7% of GDP and 29.9% of total government expenditures across OECD countries¹. This indicator demonstrates that public procurement is a strategic sphere directly connected not only with fiscal policy, but also with economic efficiency, innovative development, and the quality of public administration.

In Uzbekistan, the legal foundations of the public procurement system are defined by the Law of the Republic of Uzbekistan No. LRU-684² “*On public procurement*,” which establishes such principles as openness, transparency, competition, impartiality, cost-effectiveness, efficiency, and the prevention of corruption. Recent reforms have further complemented this legal framework with new institutional and technological instruments. In particular, Presidential Decree No. DP-259 is aimed at strengthening the competitive environment and transparency in public procurement, digitalizing procurement processes, and improving control mechanisms, while Presidential Decree No. DP-17 links public procurement with the development of local production, industrial cooperation, and value-added chains.

The purpose of this article is to provide a concise scientific analysis of the interrelationship between the digital transformation of the public procurement system, economic efficiency, and localization policy in Uzbekistan based on Presidential Decrees DP-259³ dated 26.12.2025 “*On further measures to ensure a competitive environment and transparency in the public procurement system*” and DP-17⁴ dated 04.02.2026 “*On priority measures to develop local production and industrial cooperation based on a new system*”. For this purpose, the scope of the article is clearly limited, with primary attention focused on three areas: digital control instruments, procurement efficiency, and mechanisms for supporting local producers. Such an approach makes it possible to reduce the volume of the article, minimize repetitive descriptions, and present the research findings in a logical sequence consistent with IMRAD requirements.

REVIEW OF LITERATURE ON THE SUBJECT

In international scientific and regulatory approaches, public procurement is interpreted not merely as an administrative procedure, but as a governance ecosystem that integrates transparency, competition, integrity, efficiency, and accountability. The OECD identifies transparency, integrity, open access, e-procurement, risk management, and professional capacity as the core principles of public procurement⁵. The World Bank, in turn, defines the central objective of public procurement as achieving “value for money with integrity,” meaning the attainment of maximum economic value under conditions of honesty and integrity⁶. In the approaches of UNCITRAL and MAPS, competition, impartiality, the right to complaint, electronic procurement, and professionalization are also regarded as integral elements of a modern procurement system^{7,8}.

Empirical literature emphasizes that the digitalization of public procurement can generate positive outcomes; however, this impact is not automatic and depends on the quality of the institutional environment, the reliability of data, and the effectiveness of control mechanisms. Jiménez and co-authors demonstrate that e-procurement

1 OECD. (2025). *Government at a glance 2025*. Paris, France: OECD Publishing.

2 <https://lex.uz/ru/docs/6121273>

3 <https://lex.uz/ru/docs/7965643>

4 <https://lex.uz/en/docs/8041471>

5 OECD. (2015). *Recommendation of the Council on Public Procurement*. Paris, France: OECD.

6 World Bank. (2025). *Procurement regulations for IDP borrowers* (7th ed.). Washington, DC: World Bank.

7 UNCITRAL. (2011). *UNCITRAL Model Law on Public Procurement*. Vienna, Austria: United Nations Commission on International Trade Law.

8 MAPS Initiative. (2025). *Methodology for Assessing Procurement Systems*. <https://www.mapsinitiative.org>

systems can reduce firm-level corrupt practices, whereas Dávid-Barrett and Fazekas note that reforms aimed at strengthening competition may shift corrupt behavior to other procedures if adequate monitoring mechanisms are absent⁹¹⁰. Studies on artificial intelligence also argue that AI can support procurement processes, but it should not replace legal responsibility in decision-making. Instead, it must operate alongside human oversight, algorithmic explainability, and complaint mechanisms.

Within the literature on the strategic function of public procurement, particular importance is attached to supporting small and medium-sized enterprises (SMEs), local producers, and innovative products. In the studies of Flynn and Loader, the complexity of tender documentation, large procurement lots, and high qualification requirements are identified as the main barriers preventing SME participation in public procurement¹¹¹². Meanwhile, Uyarra and co-authors emphasize that public procurement can be used as an instrument of innovation and industrial policy, although such an approach requires strong institutional capacity, fair evaluation criteria, and effective monitoring systems¹³.

RESEARCH METHODOLOGY

This study examines the digital transformation, economic efficiency, and localization policy of the public procurement system through normative-legal, comparative institutional, and documentary analysis approaches. The main sources of the research include the Law of the Republic of Uzbekistan No. LRU-684 “On Public Procurement,” Presidential Decrees No. DP-259 and DP-17 of the Republic of Uzbekistan, as well as international public procurement principles established in the methodologies of the OECD, the World Bank, UNCITRAL, and MAPS. This approach made it possible to evaluate national reforms based on the criteria of transparency, competition, integrity, value for money, e-procurement, professionalization, and accountability.

Through a review of scientific literature, the study systematized existing academic perspectives on e-procurement, artificial intelligence, the participation of small and medium-sized enterprises in public procurement, innovative procurement practices, and anti-corruption institutional mechanisms. The potential economic and institutional impacts of the AI price module, electronic scoring, TCO-based evaluation, the professional procurement officer institution, preferences for local producers, and industrial cooperation mechanisms envisaged in Presidential Decrees DP-259 and DP-17 were assessed on a comparative-analytical basis. The article was developed not as an empirical or econometric study, but rather as a scientific-analytical study grounded in normative-legal and institutional analysis.

ANALYSIS AND RESULTS

The results of the analysis indicate that Presidential Decrees DP-259 and DP-17 are transforming the public procurement system of Uzbekistan in two main directions. First, DP-259 strengthens mechanisms aimed at increasing competition, transparency, digital control, and reducing corruption risks in public procurement. Second, DP-17 connects public procurement with local production, industrial cooperation, value-added chains, and professional procurement practices. In this respect, these decrees serve to transform public procurement from a simple administrative purchasing process into a strategic governance instrument integrating economic efficiency, industrial policy, and institutional reforms.

Within the framework of DP-259, the introduction of mechanisms such as the AI-based price module, the “Control in Public Procurement” page, the “Procurement KPI” rating system, public discussions, and disclosure of procurement outcomes increases the traceability of procurement processes. This approach strengthens the creation of a “digital footprint” in public procurement, enabling the monitoring of procurement decisions, the identification of price deviations, and the early detection of risky situations. However, such digital instruments should not be interpreted as mechanisms replacing final decision-making, but rather as tools supporting the decision-making process. Therefore, AI price modules and e-scoring systems must operate alongside human oversight, complaint procedures, data quality assurance, and algorithmic explainability mechanisms.

DP-17, in turn, strengthens the strategic economic function of public procurement. The decree introduces mechanisms such as division into lots, evaluation based on TCO (Total Cost of Ownership), the professional

9 Jiménez, A., Hanoteau, J., & Barkemeyer, R. (2022). E-procurement and firm corruption to secure public contracts. *Journal of Business Research*.

10 Dávid-Barrett, E., & Fazekas, M. (2020). Anti-corruption in aid-funded procurement: Is corruption reduced or merely displaced? *World Development*.

11 Flynn, A. (2025). Research on SME involvement in public procurement: A review, critique and conceptual framework. *Journal of Purchasing and Supply Management*.

12 Loader, K. (2015). SME access to public procurement: An analysis of the experiences of SMEs supplying the publicly funded UK heritage sector. *Journal of Purchasing and Supply Management*.

13 Uyarra, E., Ribeiro, B., & Dale-Clough, L. (2020). Public procurement, innovation and industrial policy: Rationales, roles, capabilities and implementation. *Research Policy*.

procurement officer institution, electronic scoring systems, price preferences for local producers, and support for industrial cooperation. This approach demonstrates that procurement efficiency should be assessed not solely by the lowest price, but also by the entire life cycle of the product, local added value, supplier reliability, and contribution to industrial development. At the same time, preferences granted to local producers should remain transparent, criteria-based, time-limited, and subject to periodic review based on performance outcomes (Table 1).

Table 1. Functional Directions of Public Procurement Reforms Based on Presidential Decrees DP-259 and DP-17¹⁴

Analysis Area	Mechanisms within DP-259	Mechanisms within DP-17	Scientific and Practical Assessment
Transparency and Control	Disclosure of procurement results, public discussions, "Control in Public Procurement" page	Electronic registries and portal integration	Increases the traceability of procurement processes
Digitalization	AI price module, KPI rating, e-anticor integration	E-scoring and electronic data exchange	Data quality and algorithmic explainability are critically important
Competitive Environment	"Request for proposal," prior announcements, open discussions	Division into lots, participation of brokers and dealers	Expands access opportunities for SMEs and new participants
Economic Efficiency	Identification of price deviations, detection of risky procurements	TCO-based evaluation, consideration of added value	Facilitates the transition from the "lowest price" principle to the "best value" principle
Localization	Informing local producers about procurement plans	Price preferences, guaranteed procurement, industrial cooperation	Stimulates local production and industrial value chains
Professionalization	Improvement of procurement staff qualifications	Professional procurement certification and electronic registry	Serves as an institutional factor enhancing the quality of procurement decisions
Risks	Single-participant procedures, algorithmic errors	Proportionality of preferences, complexity of TCO calculations	Requires stronger audit, complaint, and monitoring mechanisms

As shown in the table, DP-259 primarily focuses on regulating processes related to transparency, digital control, and the competitive environment in public procurement. DP-17, meanwhile, connects this system with industrial policy, local production, and the professional procurement institution. Thus, the two decrees complement each other: DP-259 strengthens integrity and oversight within procurement processes, whereas DP-17 expands the strategic economic function of procurement in supporting economic development. In particular, the introduction of TCO-based evaluation and the professional procurement officer institution represents a qualitatively new stage in the public procurement system. The TCO approach makes it possible to evaluate procurement objects not only based on the initial purchase price, but also according to usage, maintenance, operational costs, and long-term economic efficiency. The professional procurement officer institution, in turn, strengthens the role of specialists possessing specialized knowledge, legal literacy, and economic evaluation skills within procurement processes.

At the same time, the analysis also demonstrates the existence of certain institutional risks in the processes of digitalization and localization of public procurement. If the recognition of single-participant procurement procedures as valid, the provision of preferences to local producers, and the introduction of algorithmic evaluation mechanisms are not accompanied by strong audit systems, clear methodologies, and effective complaint mechanisms, they may negatively affect competition. Therefore, the data sources, evaluation criteria, risk indicators, and review procedures related to AI price modules, e-scoring systems, and TCO methodologies should be clearly defined within the normative-legal framework. In general, Presidential Decrees DP-259 and DP-17 are shaping a new institutional model in Uzbekistan that links the public procurement system with digital governance, economic efficiency, and support for local production. The practical effectiveness of this model will depend on three factors: first, the quality and openness of public procurement data; second, the professional capacity of personnel involved in procurement processes; and third, the actual functioning of audit, complaint,

14 Source: Developed by the author based on Presidential Decrees DP-259 and DP-17, international public procurement standards, and scientific literature.

and monitoring mechanisms over digital instruments.

CONCLUSIONS AND SUGGESTIONS

The findings of the study indicate that Presidential Decrees DP–259 and DP–17 are bringing the public procurement system of Uzbekistan to a new institutional stage. While DP–259 is aimed at strengthening transparency, competition, digital control, risk management, and public oversight in public procurement, DP–17 connects public procurement with local production, industrial cooperation, value-added chains, and the professional procurement institution. In this respect, these decrees are transforming public procurement from a simple procurement procedure into a strategic governance instrument integrating fiscal discipline, economic efficiency, and industrial policy.

The analysis shows that mechanisms such as the AI price module, electronic scoring, the “Control in Public Procurement” page, the “Procurement KPI” rating system, public discussions, and disclosure of procurement outcomes make it possible to create digital footprints and enhance traceability in public procurement. However, such digital tools should not be applied as mechanisms that fully automate final decision-making; rather, they should function as supportive instruments for substantiating decisions, identifying risks in advance, and improving the quality of oversight. Therefore, strengthening algorithmic transparency, data quality, human oversight, complaint procedures, and audit mechanisms constitutes an essential condition for ensuring the sustainability of these reforms.

Within the framework of DP–17, the introduction of TCO-based evaluation, professional procurement certification, price preferences for local producers, and industrial cooperation mechanisms enables a transition in public procurement from the principle of the “lowest price” to the principle of the “most economically advantageous value.” Nevertheless, for these mechanisms to operate effectively, sector-specific TCO methodologies should be developed, local preferences should be applied on the basis of clearly defined criteria and periodic review procedures, and the professional procurement institution should gradually be implemented across all major contracting authorities. In the future, in order to evaluate the real effectiveness of these reforms, it would be appropriate to conduct empirical analyses based on public procurement portal data, contract-level datasets, procurement duration, budget savings, the number of participants, and the share of local products.

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