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DEVELOPMENT OF DESK-BASED CONTROL OF PUBLIC PROCUREMENT IN THE REPUBLIC OF KAZAKHSTAN IN THE CONTEXT OF DIGITALIZATION

Abstract

The article is devoted to a comprehensive assessment of the development of desk-based (cameral) control of public procurement in the Republic of Kazakhstan in the context of digitalization, aimed at enhancing transparency and the effective management of public resources. Based on an analysis of regulatory and legal acts, state electronic databases, and public procurement reports, the study identifies both positive outcomes and existing limitations in the application of digital control tools that ensure the implementation of cameral control at the stages of procurement planning, execution, and contract performance. Particular attention is paid to challenges related to the evaluation of the regulatory framework, compliance with competitive procurement procedures, data transparency, and the operational monitoring of contract execution through modern electronic platforms. The analysis demonstrates that, despite the introduction of digital cameral control instruments, discrepancies persist between the declared objectives of improving procurement efficiency and the actual practices of budgetary fund allocation. The scientific novelty of the study lies in the development of a structured digital monitoring and risk identification model integrated with public procurement digital platforms, which enhances the effectiveness of cameral control, expands analytical capabilities, and substantiates the application of a risk-oriented approach under conditions of digital transformation. The findings confirm that Kazakhstan possesses significant potential in leveraging electronic platforms to improve the transparency and effectiveness of public procurement; however, achieving this potential requires strengthened interagency coordination, institutional discipline, and analytical support for cameral control across all stages of the procurement process.

Keywords: desk-based (cameral) control; public procurement; digitalization of public procurement; efficiency and transparency of public procurement; key risks in public procurement; effectiveness of desk-based control in public procurement; assessment of the impact of digitalization.

INTRODUCTION

The development of digitalization in the field of public procurement creates unique opportunities for the automation of desk-based (cameral) control, enhancement of transparency, and reduction of financial risks associated with the use of budgetary funds. In the Republic of Kazakhstan, the public procurement process has been fully transitioned to an electronic format and is carried out through the Unified Web Portal of Public Procurement of the Republic of Kazakhstan, which ensures the implementation of procurement procedures, registration of contracts, electronic document exchange, and digital monitoring of contract performance.

Full-scale digitalization enables the integration of procurement planning, tendering, contract conclusion, and contract execution processes with the information systems of government authorities, including the verification of supplier compliance, risk assessment, and control over contractual obligations. This significantly increases procedural transparency and reduces the influence of the human factor in decision-making processes.

Under these conditions, desk-based control serves as a key instrument for the continuous analysis of procurement data, aimed at identifying discrepancies, violations, and potential abuses at various stages of procurement activities. It covers electronic data sets accumulated within the public procurement platform and allows audit bodies to assess the efficiency of budgetary expenditures without the need for on-site inspections (Enbekshi qazaq, 2025).

Scientific Significance. The study of the development of desk (cameral) control holds substantial scientific importance within the system of public financial control and audit in the following areas:

Theoretical substantiation of the evolution of control mechanisms. Research into the transformation of desk (cameral) control makes it possible to trace the transition from traditional forms of documentary inspection to digital formats of data analysis; to identify patterns in the development of remote control methods; and to formulate a modern scientific model of desk (cameral) control as an independent instrument of public audit.

This article provides a comprehensive analysis of the current state of desk-based control of public procurement in the Republic of Kazakhstan under conditions of digitalization, including a systematic examination of the regulatory framework, the practical application of digital control instruments, and existing risks. Particular attention is paid to the integration of digital monitoring processes, financial and operational risk assessment, and the identification of institutional constraints that hinder the achievement of procurement efficiency objectives.

The research is based on data from the Unified Web Portal of Public Procurement of the Republic of Kazakhstan, official amendments to regulatory legal acts in the field of public procurement, as well as reports and analytical materials reflecting the development of the digital procurement platform and the outcomes of its implementation (State Procurement of the Republic of Kazakhstan, 2026).

The purpose of this study is not only to assess the achievements resulting from digitalization but also to identify existing gaps between the declared strategic objectives of improving procurement efficiency and the actual integration of digital desk-based control mechanisms into public administration practice.

LITERATURE REVIEW

Digitalization of public procurement is examined in both international and national academic and analytical literature as a fundamental factor in improving the efficiency of budgetary expenditures, strengthening procedural transparency, and enhancing control over compliance with legal requirements. International studies emphasize that digitalization facilitates access to key data, thereby improving analytical capacity and reducing the risks of corrupt practices. In particular, research demonstrates that the implementation of electronic platforms contributes to the optimization of information flows, increased transparency, and a reduction in transaction costs associated with public procurement, while also expanding access to procurement procedures for a broader range of suppliers (Ten, 2024).

In the context of Kazakhstan, the digitalization of public procurement is promoted as a state policy priority. The Electronic Public Procurement Portal operates as a unified digital platform that supports the entire procurement cycle—from procurement planning to contract execution and payment processing. Through its integration with the information systems of government authorities, the portal enables automated verification of suppliers against qualification requirements, tax obligations, and potential risk indicators. This significantly enhances the transparency of procurement procedures and reduces the influence of the human factor in decision-making processes (Enbekshi qazaq, 2025).

Such electronic integration serves as a starting point for the development of desk-based (cameral) control, one of the key elements of the public procurement control system. Desk-based control is defined as a form of oversight conducted remotely, without on-site inspections, based on the analysis and cross-verification of data from information systems and records of procurement activities. This approach makes it possible to detect violations at the planning, tendering, and contract execution stages at an early phase, rather than after adverse consequences have already occurred.

Recent academic research increasingly conceptualizes the digitalization of public procurement as a key instrument for strengthening desk-based (cameral) control, improving fiscal discipline, and enhancing transparency in the management of public financial resources. International studies emphasize that the transition to electronic procurement platforms expands access to structured data, enabling continuous analytical monitoring and reducing information asymmetry and corruption risks through automated control mechanisms (Mills, 2018; Panadès-Estruch, 2021). Desk-based analytical approaches are widely applied to assess regulatory compliance, procurement efficiency, and institutional performance without recourse to on-site inspections, particularly in environments characterized by large-scale digital transformation (Nugroho & Wibowo, 2025). Comparative research also highlights that the effectiveness of digital procurement control is contingent upon institutional coordination, system integration, and alignment with national development strategies, as demonstrated in studies examining Kazakhstan's public sector reforms and state-led digital initiatives (Jepson & Baldakova, 2024). Empirical evidence further suggests that while digital platforms substantially enhance transparency and process automation, they do not automatically eliminate inefficiencies or redistribution distortions in public spending,

underscoring the need for risk-oriented desk-based control models embedded within procurement information systems (Anna et al., 2023). Collectively, the literature indicates that the development of desk-based control in public procurement under conditions of digitalization requires not only technological modernization but also methodological refinement and institutional capacity-building to ensure effective oversight throughout the procurement cycle.

Legal sources of the Republic of Kazakhstan define specific rules for conducting desk-based (cameral) control, including its timing and procedural requirements. In particular, regulations stipulate that desk-based control of competitive public procurement is carried out from the moment of tender announcement through defined periods following the publication of procurement protocols, underscoring the necessity of continuous online monitoring throughout the procurement cycle (Committee of Internal State Audit of the Ministry of Finance of the Republic of Kazakhstan, 2025).

Practical evidence from Kazakhstan confirms the importance of desk-based control as a mechanism for preventing procedural violations and reducing corruption risks. Official reports indicate that numerous procurement lots were subject to desk-based control in 2025, revealing violations related to procurement methods and documentation, which highlights the control's role in ensuring legal compliance and fostering a culture of regulatory adherence among contracting authorities (Alibekova, 2023).

At the same time, studies point to institutional constraints, including limited human and analytical resources within audit bodies, which reduce the effectiveness of large-scale digital data analysis. From an academic perspective, desk-based control is considered an integral element of state audit, directly linked to the efficiency of budget expenditures and corruption prevention. International research further demonstrates that digitalization enables the use of advanced analytical tools, such as big data and artificial intelligence, to strengthen real-time monitoring and risk assessment. Overall, the literature suggests that while digitalization creates favorable conditions for enhancing desk-based control in Kazakhstan, its full effectiveness depends on strengthening institutional capacity, interagency coordination, and analytical support.

METHODOLOGY AND METHODS

This study employs a combination of general scientific and specialized research methods to comprehensively examine the practice of desk review (cameral control) in public procurement under conditions of digitalization.

The system analysis method is used to consider cameral control as an integral component of the public financial control system and to identify relationships between its key elements.

The comparative analysis method is applied to compare public procurement and cameral control practices across different countries, as well as to assess changes in key indicators before and after the implementation of digital technologies.

A formal legal method is employed to analyze the regulatory framework governing public procurement and cameral control, including relevant laws, regulations, and policy documents.

Content analysis of academic literature and analytical reports is conducted to synthesize existing approaches to evaluating the effectiveness of cameral control and to identify key directions for its improvement in the context of digitalization.

To assess the impact of digitalization on transparency and efficiency in procurement processes, statistical analysis methods are used, including the analysis of trends in key indicators such as the number of procurement procedures, level of competition, and budget savings.

The empirical base of the study includes academic publications, legal and regulatory documents, official statistical data, and analytical reports from authorized public institutions. This ensures a comprehensive and systematic approach to the analysis, enabling the identification of institutional and organizational factors affecting the effectiveness of cameral control and supporting the development of recommendations to enhance transparency and performance.

RESULTS

Desk-based control (also referred to as desk audit, ex-ante audit, documentary audit, or compliance check) is a form of documentary review of procurement procedures conducted prior to or during contract conclusion. International scholars emphasize that such ex-ante auditing enables the early identification of non-compliance with legal and procedural requirements. For instance, Maali (2024) notes that specialized bodies or supreme audit institutions carry out ex-ante reviews of public contracts by selecting those exceeding specific financial thresholds or related to priority projects (INTOSAI Journal). This approach allows audit efforts to be concentrated on the most significant and high-risk procurements without the need to screen all transactions. At the same time, auditors are required to maintain independence and avoid direct involvement in procurement decision-making in order to preserve the credibility and effectiveness of audit activities.

Contemporary research also highlights the growing importance of digital technologies in enhancing transparency and efficiency in procurement auditing. Scholars point to the rapid expansion of electronic

procurement platforms and analytical tools. According to the OECD, South Korea has operated a national e-procurement system (KONEPS) since 2002, and by 2014 all OECD member states had introduced mandatory electronic procurement portals (OECD). These systems generate large, centralized databases of procurement contracts, significantly facilitating oversight and analytical review. The OECD further emphasizes the need for a data-driven approach, involving automated analysis of tender data to identify risks and irregularities in public procurement processes (Hlacs & Wells, 2025).

1. Electronic systems. The OECD emphasizes that the mandatory use of e-procurement platforms facilitates the analysis of tender documentation and minimizes paper-based workflows. Such systems inherently enhance transparency and enable the collection of procurement data in a structured digital format (OECD).

2. Data analytics and artificial intelligence. In Brazil, the Federal Court of Accounts (TCU) applies advanced analytics and artificial intelligence to automated procurement control. The LabContas platform integrates historical tender data and, through AI-based tools (ALICE, MONICA, SOFIA), performs daily screening of bids and reports to detect anomalies, illegal collusion, and repetitive procurement patterns (OECD). A similar big data-driven risk detection approach is implemented in Flanders (Belgium), where the MEDIAAN system uses historical price databases and pricing rules to identify abnormally high or low bids (OECD).

3. Robotic process automation (RPA). In Finland, the government service center Palkeet has integrated RPA solutions into procurement processes. Automated bots maintain supplier registries and verify incoming invoices by automatically populating and validating data, thereby accelerating desk-based control procedures and reducing human error (OECD).

4. Blockchain. Portugal has developed the Mercurion blockchain-based procurement platform, which records the entire procurement cycle in an immutable ledger. This ensures real-time auditability of procurement data and significantly reduces the risk of unauthorized document alterations (OECD).

5. Internet of Things (IoT). In Sweden, IoT technologies are applied in inventory management. Warehouse sensors provide real-time data on stock levels, enabling auditors and procurement officials to verify the consistency between orders and actual deliveries more efficiently (OECD).

Desk-based control is implemented by various institutions. In many cases, primary ex-ante control is performed by internal auditors within contracting authorities or specialized agencies, while supreme audit institutions conduct both ex-ante and ex-post audits. For example, the Tribunal de Contas of Portugal reviews approximately 3,000 contracts annually at the pre-contractual stage. Strategic documents highlight a strong emphasis on digitalization, as Portuguese auditors increasingly adopt data-driven risk analysis and machine learning techniques for the automated detection of irregularities (OECD). Similar trends are observed in other audit institutions, which, with the support of international organizations, are developing methodologies based on big data and predictive analytics to strengthen procurement oversight.

In addition, international experience demonstrates a wide range of practices. In Latin America, particularly in Brazil, the Federal Court of Accounts (TCU) has become one of the global leaders in applying digital technologies to public procurement auditing. Since 2014, the TCU has systematically used procurement data to support proactive anti-corruption efforts and early detection of irregularities.

Within the European Union, similar oversight technologies have been introduced in countries such as Belgium, Finland, Portugal, and Sweden. The EU also applies a so-called multi-level control model, under which beneficiary institutions conduct documentary compliance checks at the initial stage of procurement, especially for contracts financed by EU structural funds, while supreme audit institutions focus on the overall assessment of procurement procedures. International standards such as ISSAI 4000 and the guidelines of the European Court of Auditors establish common principles for conducting compliance audits of public procurement within the EU regulatory framework.

In Asia, South Korea has operated the national e-procurement platform KONEPS since 2002, integrating electronic procurement with related government information systems. Comparable platforms are used across Asia and Oceania, including GeBIZ in Singapore and the Centralized Procurement Platform in China, which significantly expand opportunities for centralized monitoring and analytical oversight. The OECD notes that such platforms form a critical foundation for the further development of digital audit and data-driven control mechanisms.

An analysis of international literature reveals several key gaps that require further attention. First, the lack of empirical evidence remains a significant limitation. As demonstrated by Schneider et al. (2025), many procurement irregularity detection methods have not been tested on real-world data, while publicly available procurement datasets are extremely limited. This constrains the validation of analytical models and hinders the scalability of digital control solutions.

Second, institutional barriers to data sharing represent a major challenge. The OECD emphasizes that limitations in procurement oversight are often driven not by technological deficiencies but by organizational and legal constraints. Case studies from Portugal indicate that restricted auditor access to data is largely shaped by interagency dynamics rather than formal regulations, highlighting the need for reforms in legal and administrative frameworks to facilitate data exchange and system interoperability.

Third, insufficient integration of information systems remains a persistent issue. Numerous studies point to the complexity of horizontally integrating fragmented government systems, including e-procurement platforms, enterprise resource planning systems, and audit databases. The OECD notes that the lack of connectivity between digital platforms impedes the transition to fully “smart” oversight, while the development of unified standards and single-window principles could enhance operational efficiency and reduce duplication of control activities (Schneider dos Santos, 2025).

DISCUSSION

Overall, international research shows that desk-based control is increasingly based on digital technologies and risk-oriented approaches. The findings support this trend and indicate a broader transformation of public financial control from reactive audit-based practices toward proactive, data-driven mechanisms embedded within digital governance systems.

In this context, desk-based control can be viewed not only as a tool for detecting violations but also as an instrument of preventive regulation, enabling continuous monitoring and early risk identification. This shift is largely driven by reduced transaction costs in data processing and improved interoperability of state information systems.

In Kazakhstan, the development of desk-based control has followed an evolutionary path shaped by institutional reforms in tax administration and state audit, as well as broader digitalization processes in public administration. The chronological analysis of legislation suggests a transition from formal compliance verification to a more flexible risk-based control model, accompanied by increasing reliance on analytical tools.

However, the results also highlight several limitations. The effectiveness of digital control mechanisms depends heavily on data quality, accessibility, and analytical capacity. Thus, the adoption of digital tools alone does not automatically lead to higher control efficiency without corresponding institutional and analytical development.

Overall, digitalization has led to qualitative changes in public financial oversight, but its effects remain mixed and context-dependent. This underlines the need for further empirical research on how risk-based and automated control mechanisms influence compliance outcomes and the efficiency of public resource management.

Table 1. Chronology of the Development of Legal Regulation of Desk-Based Control in the Republic of Kazakhstan

Period (Year)	Legal and Regulatory Act	Content of Changes	Purpose of Changes / Practical Significance
1995	Tax Code of the Republic of Kazakhstan	Desk-based control was not identified as an independent institution; control was mainly implemented through documentary and on-site inspections.	Formation of the basic tax administration system; dominance of a fiscal and enforcement-oriented approach.
2001	Tax Code of the Republic of Kazakhstan	Elements of off-site verification of tax reporting were introduced without detailed regulation of desk-based control procedures.	Creation of prerequisites for the development of remote control mechanisms and analytical methods.
2008	Tax Code of the Republic of Kazakhstan	Desk-based control was formally established as an independent form of tax control; the mechanism of desk-based notifications was introduced.	Transition from a punitive model to preventive control; reduction of the administrative burden on taxpayers.
2011–2013	Subordinate legal acts of the State Revenue Committee of the Ministry of Finance of the RK	Procedures and timelines for issuing desk-based notifications and taxpayer response mechanisms were clarified.	Harmonization of enforcement practices and enhancement of legal certainty in control procedures.
2015	Law of the Republic of Kazakhstan “On State Audit and Financial Control”	Introduction of a risk-based approach; strengthening of the analytical and preventive focus of control activities.	Improvement of the effectiveness of state financial control and concentration of resources on high-risk areas.
2017	Tax Code of the Republic of Kazakhstan (new edition)	Expansion of information sources used for desk-based control; enhancement of interagency data integration.	Improvement of analytical quality and accuracy in identifying potential violations.

2018–2020	State Programs	Digitalization	Automation of desk-based control processes; implementation of information systems and electronic invoices.	Reduction of the human factor, acceleration of control procedures, and increased transparency.
2021–2022	Amendments and Additions to the Tax Code of the Republic of Kazakhstan		Clarification of taxpayers' rights and obligations in desk-based control; expansion of electronic communication channels.	Ensuring a balance between state and business interests and increasing trust in the control system.
2023–2025	Conceptual Approaches to the New Tax Code		Differentiation of desk-based notifications by risk level and nature of violations.	Optimization of the control burden and focus on significant financial risks.
2026 (planned)	New Tax Code of the Republic of Kazakhstan		Revision of desk-based control mechanisms; separation of notifications into informational and mandatory types.	Enhancement of transparency, predictability, and the preventive nature of tax administration.

Note: Compiled by the authors.

A chronological analysis of the legislation of the Republic of Kazakhstan on desk-based (cameral) control demonstrates the gradual and consistent development of this institution, evolving from fragmented elements of documentary verification to an independent, digitalized, and risk-oriented control mechanism. In its modern form, desk-based control functions not only as a tool for detecting violations but also as a preventive instrument aimed at enhancing voluntary compliance with legal requirements and improving the effectiveness of public administration. Further legislative development is focused on achieving a balance between the fiscal interests of the state and the protection of taxpayers' rights.

A comparative analysis of desk-based control in public procurement, taking into account the implementation of digital technologies, makes it possible to assess the effectiveness of remote monitoring, the detection of violations, and compliance with legal requirements. Digitalization enables the automation of procurement checks, accelerates control procedures, and reduces the influence of the human factor. Such a comparison allows for the identification of key changes in the quality and transparency of desk-based control, as well as the determination of priority directions for further improvement of the system.

Table 2. Comparative Analysis of Public Procurement in the Pre-Digital and Digital Periods

Criterion	Before Digitalization (prior to 2011)	After Digitalization (2011–present)
Regulatory framework	Fragmented regulation with frequent exceptions	Unified Law "On Public Procurement" with regular updates
Procedural format	Paper-based procedures, in-person participation	Electronic procedures conducted through a web portal
Supplier access	Limited access with territorial constraints	Open access and expanded competition
Transparency	Low level of transparency and limited public disclosure	High transparency including publication of plans, notices, and protocols
Human factor	High degree of human involvement	Significantly reduced
Control mechanisms	Predominantly ex-post control	Desk-based and automated control
Procedural timelines	Lengthy and inefficient	Shortened and regulated
Corruption risks	High	Reduced, though not fully eliminated

Note: Compiled by the authors.

The comparative analysis demonstrates that the digitalization of public procurement in the Republic of Kazakhstan has become a key factor in enhancing the transparency and manageability of procurement processes. In contrast to the pre-digital period, the current system is characterized by the automation of procedures, expanded competition, and the development of desk-based and risk-oriented control mechanisms.

At the same time, digitalization transforms but does not fully eliminate procurement-related risks. The highest concentration of critical and high-level risks has shifted to the planning and contract execution stages, where

automation cannot substitute for sound managerial decision-making. This underscores the need to strengthen the analytical role of state audit and to apply preventive control measures.

Overall, digitalization has created institutional prerequisites for improving the efficiency of public procurement; however, achieving sustainable outcomes is possible only through the parallel development of risk-oriented approaches, advanced analytical tools, and increased accountability of contracting authorities.

The risk heat map illustrates the levels of impact of key public procurement risks in the post-digitalization environment.

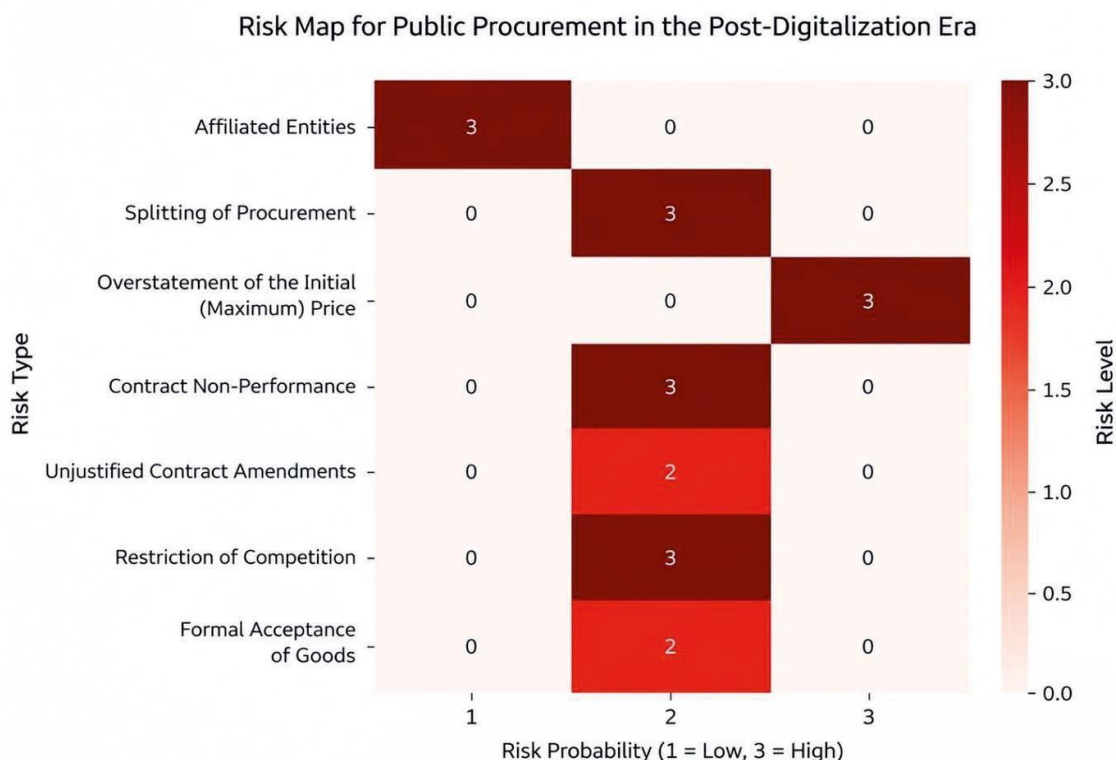


Figure 1. Map of key risks in public procurement in Kazakhstan

Note: Compiled based on data from gz.mcfr.kz

The analysis reveals that the most significant risks, indicated by dark red cells in the heat map, are associated with the overestimation of the initial maximum contract price, procurement splitting, restriction of competition, and non-performance of contracts. These risks require priority attention from state audit bodies and desk-based control authorities. Risks such as formal rejection of bids and unjustified contract amendments demonstrate a medium level of impact, indicating the need for systematic monitoring and automated verification procedures. A low probability of supplier affiliation is observed; however, given its potentially high impact on budgetary funds, this risk remains significant and requires in-depth interagency analysis.

The practical value of the heat map lies in its ability to visually identify areas of risk concentration and to support the efficient allocation of audit and control resources by focusing on the most critical procurement areas.

The following section presents a comparative statistical analysis of public procurement in the Republic of Kazakhstan for the period 2020–2024, with an emphasis on pre- and post-digitalization stages, as well as additional indicators by procurement type, incorporating elements of desk-based control. The analysis is based on data from the official Public Procurement Web Portal of the Republic of Kazakhstan (<https://www.goszakup.gov.kz/>) and external sources, including the Open Contracting Partnership.

Table 3. Key Dynamic Indicators of Public Procurement Before (2020–2021) and After Full Digitalization (2022–2024)

Indicator	2020–2021 (Before Full Digitalization)	2022–2024 (After Digitalization)	Notes
Procurement regime	Partially electronic procedures	Fully electronic public procurement portal	The electronic portal was implemented and expanded to cover procurement planning, publication, contract execution, and monitoring stages (Public Procurement of the Republic of Kazakhstan).
Competitive procurement (share by value)	~42% (2021)	~74% (2024)	Significant increase in the share of competitive procedures in public procurement (Open Contracting Partnership).
Average number of suppliers per procurement	~8.0 (2021)	~10.0 (2024)	Growth in supplier participation indicates increased competition (Open Contracting Partnership).
Average number of bids per lot	~3.16 (2021)	~4.2 (2024)	A higher number of bids reflects improved supplier access to procurement procedures (Open Contracting Partnership).
Share of single-bid procurements	14% (2021)	18% (2024)	Changes in single-bid procurement share reflect improvements in planning and competitive conditions (Open Contracting Partnership).
Total value of concluded contracts (aggregate)	Annual data not aggregated	Available through the portal's reporting module	Data can be obtained from the BI reporting tools of the portal and are available in analytical report format (portal.goszakup.gov.kz).

Note: Compiled by the authors.

Following the implementation of full digitalization in public procurement, the observed increase in the share of competitive procedures and supplier activity may indicate reduced entry barriers and greater trust in the system. This aligns with the principles promoted by Open Contracting Partnership, where digital tools are seen as a key driver of transparency and accountability.

The growth in competitive procedures can also be explained by the automation of procurement processes and the reduction of transaction costs for participants, making participation more accessible, particularly for small and medium-sized enterprises. At the same time, differences across procurement methods suggest a continuing trade-off between efficiency and administrative burden: while more competitive procedures tend to improve the efficient use of public funds, they often require greater time and organizational resources.

Thus, the observed shifts in the structure of procurement procedures may reflect not only the effects of digitalization but also broader institutional reforms aimed at enhancing transparency. However, a comprehensive assessment should also consider factors such as the quality of competition, the extent of price reductions, and the risk of formal compliance without genuine competitive pressure.

Table 4. Dynamics of Public Procurement Methods in the Republic of Kazakhstan, 2020–2024

Procurement Method	Before Digitalization (Indicative Trends)	After Digitalization (Trends 2022–2024)	Data Source
Competitive tenders	Primary procurement method, but with limited automation	Increase in the share of competitive lots to approximately 74%	Open Contracting Partnership
Request for price quotations	Used on a limited basis	Increased frequency of price quotation requests	FinProm
Single-source procurement	Significant share	Decline due to digital rules and automated requirements	Indirectly confirmed by changes in the share of competitive procurement (see above)

Note: Compiled by the authors.

The strengthening of competitive procurement methods following digitalization, as reflected in Table 4, suggests that digital reforms have contributed to reducing informational asymmetries and improving market access. This trend is consistent with international practices promoted by Open Contracting Partnership, where digital platforms are used to enhance transparency and facilitate broader supplier participation, particularly among small and medium-sized enterprises and new market entrants.

The introduction of desk-based control functionalities since 2025 represents an important institutional development. Integration with the information systems of the State Revenue Committee enables real-time verification of supplier tax compliance and registration status, which likely reduces the risks associated with non-compliant or unreliable suppliers. More importantly, these tools shift the focus of control mechanisms from ex post audits to continuous, risk-oriented monitoring embedded within the procurement process itself.

The observed increase in the share of competitive procedures—from approximately 42% in 2021 to 74% in 2024—can therefore be interpreted not only as a formal procedural change but also as an outcome of reduced administrative discretion and increased procedural standardization. Similarly, the growth in the average number of bids per lot indicates a more accessible and potentially more competitive procurement environment. However, this increase in participation does not necessarily imply improved competition quality, as it may also involve nominal or weakly competitive bids.

The decline in single-source procurement further supports the argument that digitalization constrains discretionary practices and encourages more transparent allocation mechanisms. At the same time, it may also increase administrative complexity for contracting authorities, potentially leading to trade-offs between procedural compliance and efficiency.

The integration of automated desk-based control enhances early detection of inconsistencies in procurement documentation, thereby reducing the likelihood of violations at later stages of contract execution. This shift toward preventive control mechanisms is particularly important in strengthening overall system integrity and reducing enforcement costs.

Overall, the findings suggest that digitalization in Kazakhstan's public procurement system has had a positive impact on transparency, competitiveness, and participation. Nevertheless, several limitations remain. In particular, the lack of detailed and disaggregated annual data on procurement methods and contract performance constrains a deeper evaluation of reform outcomes. Future development of a dedicated analytical module within the BI reporting system of the public procurement portal could significantly enhance monitoring, evaluation, and evidence-based policymaking.

CONCLUSION

The analysis demonstrates several positive outcomes of the digital transformation of public procurement. First, the automation of procedures reduces subjectivity and human error, while procurement data become accessible for subsequent analysis and desk-based control. Second, digitalization expands the analytical base for assessing the efficiency of public expenditure and strengthens the evidence base for audit and oversight activities.

At the same time, the results reveal several persistent risks and structural limitations that qualify the overall positive effects of digitalization. First, the gap between publicly available data and analytical indicators suggests that transparency at the transactional level does not automatically translate into analytical transparency. While detailed procurement data are accessible, the lack of user-friendly aggregated statistics by procurement method constrains systematic evaluation. This indicates that digitalization has primarily focused on data generation rather than on data interpretability, limiting its usefulness for evidence-based decision-making.

Second, the persistence of formal procedural violations, particularly bid rejections due to technical or documentary errors, highlights an important paradox of digitalization. While automation reduces discretion and standardizes procedures, it simultaneously increases procedural rigidity. As a result, even minor technical inconsistencies may lead to exclusion, disproportionately affecting less experienced suppliers. This suggests that digital systems, while enhancing formal compliance, may inadvertently create new barriers to effective competition unless accompanied by adequate user support and adaptive regulatory frameworks.

Third, the observed shift toward price quotation requests and the relative decline of open competitive tenders point to a potential unintended consequence of digital reform. Simpler and faster procurement methods become more attractive in a highly automated environment, especially when contracting authorities face administrative or time constraints. However, this shift may weaken the qualitative dimension of competition, as price-based selection mechanisms tend to prioritize cost over value, potentially affecting long-term procurement outcomes. Therefore, the increase in formal competition indicators may not fully capture changes in procurement quality.

These findings suggest that the effects of digitalization are not unidirectional but involve trade-offs between transparency, efficiency, and competition quality. The increase in the number of bidders per lot and the reduction in unsuccessful tenders can be explained by lower entry barriers and improved access to information. At the same time, these improvements may coexist with formalized participation and strategic behavior by suppliers, which limits the depth of actual competition.

Overall, digitalization in the Republic of Kazakhstan has significantly improved procedural transparency and expanded access to public procurement. However, its impact on procurement effectiveness depends on complementary institutional factors, including the design of procurement methods, the flexibility of regulatory frameworks, and the availability of analytical tools. Strengthening analytical platforms and integrating advanced monitoring tools at the procurement planning stage would help address these limitations and ensure that increased transparency translates into higher-quality procurement outcomes.

Open data generated by the electronic procurement system create favorable conditions for strengthening desk-based and risk-oriented control by public authorities and audit institutions. However, the lack of aggregated statistics by procurement method continues to limit a comprehensive evaluation of system effectiveness. To further develop desk-based control, it is necessary to introduce aggregated reporting by procurement type—such as competitive tenders, price quotation requests, and single-source procurement—linked to key performance and competitiveness indicators. In addition, the development of advanced analytical modules and BI reporting tools is required to enable automated risk assessment and anomaly detection within procurement procedures.

Furthermore, improving the integration of procurement data with desk-based and financial control systems would enhance audit effectiveness and allow risks to be identified and forecast at the procurement planning stage. Creating conditions for the regular publication and updating of aggregated indicators reflecting procedural dynamics and levels of supplier participation would further support transparency and evidence-based oversight.

Prospects for Further Research. In the context of the digital transformation of public administration, further research on desk (cameral) control in the field of public procurement is becoming increasingly relevant. Scientific interest is shifting toward improving the methodology of remote control, strengthening the analytical component, and integrating modern information technologies into control procedures.

A promising research direction involves the development of automated models for detecting violations in procurement procedures based on the analysis of large data sets. The application of artificial intelligence technologies and a risk-oriented approach would enable the creation of an early warning system for identifying irregularities and minimizing corruption risks at the stages of planning, conducting, and executing public procurement.

Particular importance should be given to the further methodological substantiation of performance criteria for desk control, as well as the establishment of unified standards for remote verification of procurement documentation. From a scientific perspective, the relationship between desk control and subsequent performance audit, their complementarity, and institutional integration also remains a relevant research issue.

Another important direction for further research lies in the comparative analysis of international experience in the digital oversight of public procurement, with the aim of identifying transferable institutional and technological solutions. Such comparative approaches would allow not only the adaptation of best practices, but also the refinement of theoretical models of public financial control under conditions of digital transformation.

In this context, the study contributes to the emerging body of research on the digitalization of public governance by demonstrating that the introduction of desk (cameral) control mechanisms transforms the nature of oversight from reactive audit practices to continuous, data-driven monitoring. This finding has broader theoretical implications, as it supports the shift from traditional principal–agent control models toward hybrid frameworks combining automation, risk-based regulation, and real-time verification.

Future research on desk control in public procurement should therefore focus on the development of advanced analytical tools, the integration of big data methodologies, and the improvement of regulatory and methodological frameworks. Particular attention should be given to measuring not only procedural compliance, but also the quality of competition and long-term procurement outcomes.

Overall, the digitalization of public procurement in Kazakhstan demonstrates that technological reforms can generate significant improvements in procedural transparency, market access, and competitive intensity. At the same time, the results highlight that digitalization alone is insufficient to ensure optimal procurement performance. Its effectiveness depends on the interaction between technological infrastructure, institutional design, and analytical capacity.

From a scientific perspective, this study extends the understanding of how digital tools reshape public financial control systems by revealing both their enabling effects (enhanced transparency and participation) and their structural limitations (data fragmentation and formalization of compliance). The findings thus provide a basis for developing more comprehensive models of digital governance that integrate transparency, efficiency, and quality of outcomes within a unified analytical framework.

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ЦИФРЛАНДЫРУ ЖАҒДАЙЫНДА ҚАЗАҚСТАН РЕСПУБЛИКАСЫНДА МЕМЛЕКЕТТІК САТЫП АЛУДЫ КАМЕРАЛДЫҚ БАҚЫЛАУДЫ ДАМУЫ

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Аңдатпа

Мақала ашықтықты арттыруға және мемлекеттік ресурстарды тиімді басқаруға бағытталған цифрландыру жағдайында Қазақстан Республикасында мемлекеттік сатып алуларды камералдық бақылаудың дамуын жан-жақты бағалауға арналған. Нормативтік-құқықтық актілерді, мемлекеттік электрондық дерекқорларды, мемлекеттік сатып алулар туралы есептерді талдау негізінде зерттеу сатып алуды жоспарлау, орындау кезеңдерінде камералдық бақылауды жүзеге асыруды қамтамасыз ететін цифрлық бақылау құралдарын қолданудағы оң нәтижелерді де, бар шектеулерді де анықтайды, және келісімшарттың орындалуы. Нормативтік-құқықтық базаны бағалауға, конкурстық сатып алу рәсімдерінің сақталуына, деректердің ашықтығына, заманауи электронды платформалар арқылы келісімшарттардың орындалуын жедел бақылауға байланысты мәселелерге ерекше назар аударылады. Талдау көрсеткендей, камералдық бақылаудың цифрлық құралдары енгізілуіне қарамастан, сатып алудың тиімділігін арттырудың мәлімделген мақсаттары мен бюджеттік қаражатты бөлудің нақты тәжірибесі арасында сәйкессіздіктер сақталуда. Зерттеудің ғылыми жаңалығы камералдық бақылаудың тиімділігін арттыратын, аналитикалық мүмкіндіктерді кеңейтетін және цифрлық трансформация жағдайында тәуекелге бағдарланған тәсілді қолдануды негіздейтін мемлекеттік сатып алудың цифрлық платформаларымен біріктірілген құрылымдық цифрлық мониторинг пен тәуекелдерді сәйкестендіру моделін әзірлеуде жатыр.. Нәтижелер Қазақстанның мемлекеттік сатып алулардың ашықтығы мен тиімділігін арттыру үшін электрондық платформаларды пайдалануда айтарлықтай әлеуетке ие екенін растайды; алайда, бұл әлеуетке қол жеткізу үшін ведомствоаралық үйлестіруді, институционалдық тәртіпті және сатып алу процесінің барлық кезеңдерінде камералдық бақылауды аналитикалық қолдауды күшейту қажет.

Түйінді сөздер: қашықтықтан (камералдық) бақылау; мемлекеттік сатып алу; мемлекеттік сатып алуды цифрландыру; мемлекеттік сатып алудың тиімділігі мен ашықтығы; мемлекеттік сатып алу саласындағы негізгі тәуекелдер; мемлекеттік сатып алу саласындағы камералдық бақылаудың тиімділігі; цифрландырудың әсерін бағалау.

**РАЗВИТИЕ КАМЕРАЛЬНОГО КОНТРОЛЯ ГОСУДАРСТВЕННЫХ ЗАКУПОК
В РЕСПУБЛИКЕ КАЗАХСТАН В КОНТЕКСТЕ ЦИФРОВИЗАЦИИ****Жахметова А.***

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Статья посвящена комплексной оценке развития камерального контроля государственных закупок в Республике Казахстан в контексте цифровизации для поддержания прозрачности и эффективного управления государственными ресурсами. На основе анализа нормативно-правовых актов, государственных электронных баз и отчетов государственных закупок определены положительные результаты и существующие ограничения в применении цифровых средств контроля, обеспечивающих проведение камерального контроля государственных закупок на этапах подготовки, осуществления и исполнения. Особое внимание уделено проблемам оценки нормативно-правовых документов, соблюдения конкурсных процедур, прозрачности данных и оперативного мониторинга исполнения контрактов с использованием современных электронных платформ. Анализ показал, что даже при внедрении цифровых инструментов камерального контроля сохраняются несоответствия между заявленными целями повышения эффективности закупок и реальной перераспределительной практикой бюджетных средств. Научная новизна исследования камерального контроля состоит в разработке структурированной модели цифрового мониторинга и идентификации рисков, интегрированной с цифровыми платформами государственных закупок, что обеспечивает повышение результативности камерального контроля, расширение аналитических возможностей и обоснование применения риск-ориентированного подхода в условиях цифровизации. Результаты подтверждают, что Казахстан обладает значительным потенциалом электронных платформ для повышения прозрачности и результативности государственных закупок, однако для этого необходимо усиление межведомственной координации, институциональной дисциплины и аналитической поддержки камерального контроля на всех этапах закупочного процесса.

Ключевые слова: дистанционный (камеральный) контроль; государственные закупки; цифровизация государственных закупок; эффективность и прозрачность государственных закупок; ключевые риски в сфере государственных закупок; эффективность камерального контроля в сфере государственных закупок; оценка влияния цифровизации.