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The Financial Mechanism of Public Procurement in Industrial Enterprises: A Conceptual Framework and Institutional Evidence from Uzbekistan

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Abstract: Public procurement converts a substantial share of public expenditure into goods, works and services, yet its financial dimension — planning, pricing, settlement, control and incentives — is rarely treated as an integrated mechanism, particularly in transition economies. This paper develops a five-block conceptual framework of the financial mechanism of public procurement by synthesizing public finance, transaction cost, incentive and auction theories, and validates its institutional relevance through a documentary analysis of Uzbekistan's procurement reform of 2018–2026. The analysis of the regulatory architecture — the two-tier classification of contracting entities, method-specific value thresholds, the closed-loop clearing settlement model with a 3 per cent bid deposit and a 0.15 per cent operator fee, and the ten-day payment rule — demonstrates that procurement outcomes of industrial enterprises are shaped predominantly by financial design choices rather than by procedural rules alone. Four testable propositions are derived linking procurement method choice, advance financing, payment discipline and inter-block consistency to procurement efficiency. The framework provides a foundation for subsequent econometric research on aggregated panel data of industrial enterprises and informs the ongoing reform agenda of Uzbekistan's procurement system.

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1. Introduction

Public procurement accounts for approximately 12–13 per cent of GDP across OECD countries and close to one third of general government expenditure [1]. In emerging and transition economies the fiscal weight of procurement is comparable or higher, while institutional capacity to manage its financial risks is typically weaker. Every inefficiency embedded in the financial design of procurement — an unsubstantiated initial price, an excessive deposit requirement, a delayed payment — either translates directly into budget losses or is priced back into bids by suppliers as a risk premium. The efficiency of public procurement is therefore, at its core, a question of financial system design rather than of procedural compliance alone.

Uzbekistan offers an instructive setting for studying this proposition. Since 2018 the country has implemented one of the most rapid procurement digitalization programmes among transition economies. The new edition of the Law on Public Procurement consolidated procurement methods, mandated a unified electronic information portal

and introduced a two-tier classification of contracting entities — budget-funded entities and corporate entities with a state ownership share of 50 per cent or more [2]. Presidential Decree No. ПФ-259 of December 2025 set further targets for competition, transparency and green procurement [3]. Industrial enterprises occupy a special position in this architecture: they act simultaneously as corporate contracting entities procuring inputs at scale and as suppliers executing state orders, and they are characterized by large contract values, long production cycles and high demand for advance financing.

Despite this policy salience, the financial dimension of procurement in Uzbekistan remains undertheorized. The existing literature either addresses the general theory of the financial mechanism at the level of national finance or focuses on legal-procedural aspects of procurement regulation. This paper addresses that gap. Its contribution is threefold: (i) it develops an integrated five-block conceptual framework of the financial mechanism of public procurement; (ii) it provides a structured institutional analysis of the financial architecture of Uzbekistan's procurement system based on primary regulatory sources; and (iii) it formulates four testable propositions that link financial design parameters to procurement outcomes of industrial enterprises, thereby setting the agenda for subsequent empirical work.

The remainder of the paper is organized as follows. Section II describes the materials and the two-stage qualitative method. Section III presents the results: the five-block framework, the institutional analysis of Uzbekistan's procurement architecture and the testable propositions. Section IV discusses policy implications, the two-sided position of industrial enterprises and the limitations of the study, and Section V concludes with the research and reform agenda.

Four strands of literature inform the study. The public finance tradition treats procurement as the material execution of budget expenditure. Musgrave's classic treatment of the allocation branch frames government purchasing as the financing form of public goods provision [4], while Stiglitz emphasizes the efficiency conditions under which public spending corrects market failures [5]. In this tradition procurement efficiency is measured by the ratio of social value delivered to budget resources consumed.

Transaction cost economics reinterprets procurement as a governance problem. Williamson's analysis of contracting under bounded rationality and opportunism explains why the design of procurement procedures, guarantees and dispute resolution mechanisms carries first-order efficiency consequences [6]. Auction theory examines the price formation side: McAfee and McMillan systematize the conditions under which competitive bidding minimizes procurement cost [7], and Klemperer demonstrates how design details — reserve prices, bid increments, entry conditions — determine auction performance in practice [8].

The incentive literature models procurement as a principal–agent relationship under asymmetric information. Laffont and Tirole derive optimal procurement contracts that trade off rent extraction against cost-reduction incentives [9], and Tadelis draws lessons from private-sector purchasing for the design of public contracts, emphasizing the role of contract flexibility and supplier relationships [10]. Applied research synthesized in the Handbook of Procurement connects these theoretical results to operational procurement design [11], while Thai's re-examination of public procurement identifies the multiplicity of policy goals — economy, quality, transparency, social objectives — that distinguish public from private purchasing [12].

A fourth, more recent strand develops measurement tools. The OECD Recommendation on Public Procurement codifies twelve principles for assessing procurement systems [13], the World Bank–OECD MAPS methodology operationalizes them for country assessments [14], and Fazekas and Kocsis construct objective corruption-risk indicators — notably the incidence of single bidding — from transaction-level procurement data [15]. Evaluations of the Korean KONEPS system document the

financial gains from full-cycle digitalization of procurement [16], and the EU procurement directives illustrate the regulatory codification of framework agreements and centralized purchasing [17]. The UNCITRAL Model Law provides the international template against which national systems, including Uzbekistan's, can be benchmarked [18].

What is absent from all four strands is an integrated treatment of the financial flows, financial instruments and financial institutions of procurement as a single mechanism operating at the level of the contracting enterprise. This paper addresses that lacuna.

2. Materials and Methods

The study employs a two-stage qualitative design. At the first stage, a conceptual framework is constructed through theoretical synthesis: the categories of the financial mechanism developed in the public finance literature are mapped onto the procurement cycle, and the resulting blocks are cross-validated against the theoretical results of transaction cost, incentive and auction theory reviewed in the Introduction. At the second stage, the framework is applied to the institutional material of Uzbekistan through documentary analysis of primary regulatory sources: the Law on Public Procurement (ЎПҚ-684) [2], Cabinet of Ministers Resolution No. 276 of 20 May 2022 on procurement procedures, Presidential Decree No. ПФ-259 [3], and the operating regulations of the special information portal administered by the Uzbek Republican Commodity Exchange. Regulatory parameters — entity classifications, method thresholds, deposit and fee rates, settlement rules — are extracted and organized according to the five blocks of the framework. On this basis, testable propositions are formulated for subsequent econometric verification on aggregated panel data of industrial enterprises. The study deliberately refrains from reporting enterprise-level quantitative results at this stage; data collection through standardized reporting forms distributed to large industrial enterprises is ongoing.

3. Results

3.1 A Five-Block Framework of the Financial Mechanism

We define the financial mechanism of public procurement as the interconnected system of financial methods, instruments and levers — together with their legal, regulatory and informational support — that ensures the efficient formation, allocation and use of budget and equivalent funds in the procurement of goods, works and services for public needs. The mechanism comprises five blocks. (1) Financial planning aligns procurement plans with budget parameters and cash-flow schedules; its instruments are procurement plans, expenditure limits and financing schedules. (2) Price formation covers the substantiation of initial contract prices and the competitive mechanics of price reduction; its instruments are market price monitoring, electronic catalogues and auction design parameters. (3) Settlement and payment organizes the movement of funds between the contracting entity, the settlement infrastructure and the supplier; its instruments are advance payments, deposit (bid security) requirements, performance guarantees and payment deadlines. (4) Financial control encompasses treasury or clearing-based execution control, monitoring and audit. (5) Incentives comprise preferences for domestic producers and small businesses and the emerging green procurement criteria.

The defining property of the mechanism is inter-block consistency. An error in planning (an unrealistic budget estimate) propagates to price formation (an unsubstantiated initial price), inflates settlement costs (renegotiation, disputes) and ultimately materializes as budget losses; the control block provides feedback across the entire cycle. Efficiency is therefore a property of the system, not of any single block — a proposition with direct implications for measurement, developed below.

3.2 The Financial Architecture of Uzbekistan's Procurement System

Applying the framework to Uzbekistan's regulatory material yields the following institutional facts. First, the two-tier classification of contracting entities creates two distinct financial regimes: budget entities settle through special treasury accounts of the Ministry of Economy and Finance, whereas corporate entities — including the large industrial companies with state participation that motivate this study — settle through a secondary account with the Settlement Clearing House of the commodity exchange. Second, procurement methods are bounded by value thresholds: e-shop purchases of goods are available to corporate entities up to 250 base calculation units per transaction within an annual ceiling, while electronic auctions serve purchases up to 5,000 base calculation units; larger contracts proceed through selection or tender procedures. Third, participation is financially collateralized: both parties place a deposit of 3 per cent of the initial lot price, and the portal operator charges a commission of 0.15 per cent; for the corporate segment these funds are immobilized in the clearing circuit from announcement to delivery acceptance. Fourth, the settlement model is a closed loop: the contracting entity transfers 100 per cent of the contract value to the clearing account within ten days of contract signature, the funds are released to the supplier only upon confirmed acceptance, and the deposit is automatically returned thereafter. Fifth, auction mechanics embed financial safeguards: bids reduce the price in steps of at least 2 per cent, and a bid undercutting the standing price by 15 per cent or more triggers an additional deposit requirement, discouraging unrealistic offers.

For an industrial enterprise this architecture implies a specific working-capital profile: procurement participation immobilizes liquidity (deposits, full prepayment into clearing) for the duration of production and delivery cycles that, in heavy industry, routinely exceed the payment horizon assumed by the regulation. The financial burden of procurement is thus not limited to contract prices; it includes the opportunity cost of immobilized funds, guarantee commissions and the risk premium associated with payment discipline.

Table 1. Financial regimes of the two tiers of contracting entities in uzbekistan (compiled by the author from and portal regulations)

Parameter	Budget entities	Corporate entities (state share $\geq$ 50%)
Settlement channel	Special treasury account (Ministry of Economy and Finance)	Secondary account, Settlement Clearing House of the exchange
E-shop threshold (goods, per transaction)	up to 25 base calculation units	up to 250 base calculation units (annual ceiling 2,500)
E-auction threshold (per contract)	up to 2,500 base calculation units	up to 5,000 base calculation units
Bid deposit / operator fee	3% of initial price / 0.15%	3% of initial price / 0.15%
Payment rule	Transfer within 10 days of contract to treasury-held account; release upon acceptance	Transfer within 10 days of contract to clearing account; release upon acceptance
Working-capital implication	Funds committed within budget execution	Own liquidity immobilized for the full delivery cycle

Table I highlights the asymmetry that motivates the enterprise-level perspective of this study: for corporate entities the financial burden of procurement falls on the enterprise's own balance sheet rather than on the budget, so the efficiency of the financial mechanism directly conditions their liquidity, indebtedness and, ultimately, the prices they offer and accept in public markets.

3.3 Testable Propositions

The framework and the institutional analysis jointly yield four propositions. P1: procurement methods differ systematically in realized price reduction, and the difference is conditional on the number of bidders; at the enterprise level, the method mix is therefore a financial policy variable. P2: higher advance financing (or faster release of funds from the clearing circuit) is associated with lower bid prices of industrial suppliers, because it reduces the risk premium embedded in bids. P3: delays in payment increase subsequent bid prices and reduce participation, offsetting nominal procurement savings. P4: composite indicators of the financial mechanism — capturing planning accuracy, price reduction, settlement discipline and control coverage jointly — explain procurement outcomes better than any single metric, reflecting the inter-block consistency property.

4. Discussion

Three points merit discussion. First, the analysis reframes procurement reform priorities. Uzbekistan's reform to date has concentrated on the price formation and control blocks — digitalization, transparency, competition — where measurable progress is evident. The framework suggests that the binding constraint for industrial enterprises has shifted to the settlement block: the closed-loop clearing model, while effective against non-payment risk, concentrates liquidity costs on the buyer side and, through P2–P3, feeds back into prices. Instruments familiar from international practice — framework agreements for repetitive industrial purchases, phased payments tied to milestones, and guarantee instruments substituting for cash deposits — are the natural next stage of reform, consistent with the direction set by Decree ПФ-259.

Second, the two-sided position of industrial enterprises (buyer and supplier) implies that financial design parameters act on them twice: deposits and prepayment immobilize working capital when they buy, while payment discipline of public buyers determines their receivables when they sell. Single-sided evaluations of procurement efficiency systematically understate these costs; the enterprise-level, two-sided perspective adopted here is, to our knowledge, novel in the literature on transition economies.

A further implication concerns the incentive block. The green procurement targets set for 2025–2027 and the localization preferences embedded in the current regulation operate through price adjustments and eligibility rules; their fiscal cost and their effect on competition intensity are, at present, unmeasured. The framework developed here locates these instruments within the incentive block and implies that their evaluation must be joint with the price formation block: a preference that narrows the bidder pool raises expected contract prices through the competition channel documented in the auction literature partially offsetting its industrial policy benefits. Quantifying this trade-off for the industrial sector is a priority for the empirical stage of this research.

Third, limitations. The present paper is conceptual and institutional; its propositions await econometric verification. The planned empirical stage will use aggregated annual panel data (2021–2026) collected from large industrial enterprises through standardized reporting forms covering procurement volumes by method, price reduction, single-bidding incidence, clearing balances and payment discipline. Aggregation avoids the confidentiality and reporting-burden constraints of transaction-level data while preserving identification of method-level effects (P1) and financial-design effects (P2–P4) in a panel setting. The single-bidding share, following, will serve as the competition-risk control.

5. Conclusion

The paper has developed a five-block conceptual framework of the financial mechanism of public procurement, documented the financial architecture of Uzbekistan's

procurement system on the basis of primary regulatory sources, and derived four testable propositions linking financial design to procurement outcomes of industrial enterprises. The framework reframes procurement efficiency as a problem of financial system design and identifies the settlement block — deposits, prepayment, clearing immobilization, payment discipline — as the current binding constraint for industrial enterprises in Uzbekistan. The findings inform both the research agenda (an enterprise-level panel study currently in progress) and the policy agenda of the ongoing reform, including the implementation of Presidential Decree No. ПФ-259.

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