ECONOMIC MECHANISMS FOR ENSURING COMPETITIVE NEUTRALITY BETWEEN STATE-OWNED ENTERPRISES AND THE PRIVATE SECTOR IN DIGITAL MARKETS IN UZBEKISTAN

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Abstract. *This article examines the economic mechanisms through which competitive neutrality may be preserved between state-owned enterprises (SOEs) and private firms operating in Uzbekistan's digital markets. The study focuses on a specific economic problem: ownership-related advantages can alter firms' costs, access to finance, procurement opportunities, infrastructure and data, thereby changing competitive conditions even where market conduct appears formally lawful. The research uses comparative institutional analysis, economic reasoning from industrial organisation, and a diagnostic framework for identifying potential neutrality gaps. The analysis does not treat every difference between SOEs and private firms as evidence of distortion; rather, it distinguishes legitimate compensation for public-service obligations from advantages that arise solely from state ownership or control. Particular attention is given to financing and guarantees, public procurement, access to infrastructure and data, regulatory neutrality, and separation of commercial and non-commercial activities. The article develops a structured assessment framework for Uzbekistan that combines ownership neutrality with measurable indicators and a proportionate sequence of intervention. The central argument is that competitive neutrality in digital markets is best understood as an economic condition affecting resource allocation, entry, investment and innovation, rather than solely as a legal principle. The proposed framework is intended to support evidence-based assessment of state intervention while preserving the state's ability to pursue legitimate public-service and digital-infrastructure objectives.*

Keywords: *competitive neutrality; state-owned enterprises; digital markets; state aid; public procurement; cost of capital; data access; interoperability; cross-subsidisation; Uzbekistan*

1. Introduction

Digitalisation changes the economic environment in which state-owned and privately owned firms compete. In conventional markets, an ownership-related advantage may be visible through preferential financing, taxation, procurement or regulatory treatment. In digital markets, the same advantage can have a cumulative effect because network effects, economies of scale, data accumulation and switching costs may allow a relatively small initial difference in competitive conditions to become more persistent over time. Competitive neutrality is therefore relevant not because state ownership is inherently problematic, but because ownership can influence the conditions under which firms obtain and deploy productive resources.

The OECD defines competitive neutrality as a principle under which enterprises should face a level playing field with respect to state ownership, regulation and activity in the market. Its 2024

Competitive Neutrality Toolkit treats competition law, regulation, public procurement, state support and public-service obligations as interconnected areas in which state intervention can affect competitive conditions [1]. The 2024 OECD Guidelines on Corporate Governance of State-Owned Enterprises similarly emphasise separation of the state's ownership and regulatory functions, transparent identification and funding of public-service obligations, market-consistent financing, equal access to inputs and competitive procurement [2].

For Uzbekistan, the issue is particularly relevant as competition policy increasingly addresses state aid, state participation and digital markets. The Competition Committee reports that the 2023 Law "On Competition" provides for competition assessment of draft legal acts involving state aid and gives the competent authority powers concerning the effectiveness of state support [3]. The Committee also identifies the development of competitive conditions in digital markets among its current areas of activity [4]. These developments create an institutional basis for a more systematic economic assessment of ownership-related advantages.

The research question is: which economic mechanisms are most likely to generate ownership-related competitive distortions in Uzbekistan's digital markets, and how can such distortions be identified and addressed without undermining legitimate public-service objectives? The article contributes by bringing together five economic channels—finance, procurement, access to infrastructure and data, regulatory conditions, and cost allocation—and translating them into a practical diagnostic framework for Uzbekistan. Unlike a purely legal analysis, the article evaluates neutrality in terms of its effects on costs, entry conditions, investment incentives and dynamic competition.

2. Literature Review and Research Gap

Competitive neutrality has developed at the intersection of competition policy, state ownership and public-sector economics. OECD work has emphasised that SOEs can receive advantages through financing, taxation, regulation, procurement and other forms of state support, and that these advantages can affect competition when they are not justified by public-service objectives [5]. The more recent OECD framework treats neutrality as a package of institutional and economic conditions rather than as a single remedy [1; 2].

Digital-market scholarship adds a second dimension. Competition in platform markets can be affected by network effects, economies of scale and scope, data advantages, interoperability and switching costs [6; 7]. These characteristics do not themselves establish market power or anticompetitive conduct, but they can increase the persistence of an initial cost or access advantage.

The research gap lies in the limited integration of these two strands for the Uzbek context. Competitive neutrality is commonly discussed as a legal or governance principle, while digital competition is often analysed without sufficiently distinguishing advantages arising from state ownership from advantages arising from ordinary firm efficiency. An economic framework is therefore needed that asks whether an ownership-related difference changes the cost or opportunity structure of competitive activity, whether the same public objective could be achieved through a less distortive instrument, and whether the effect is material enough to justify intervention.

3. Theoretical Framework

In economic terms, competitive neutrality can be understood as a condition in which comparable firms are not systematically exposed to different competitive constraints solely because one firm is state-owned or state-controlled. Let c_i denote the relevant cost of a competitive activity for firm i. A neutrality concern arises where the difference between an SOE's effective cost and the

comparable private firm's cost is attributable to ownership-related treatment rather than productivity, scale, risk or another legitimate commercial factor.

The relevant cost is broader than accounting cost. It may include the cost of capital, expected tax liabilities, compliance costs, procurement opportunities, access fees, delays in obtaining approvals, and the cost of obtaining data or technical connectivity. This broader perspective is particularly important in digital markets because non-price inputs can materially influence user acquisition and service quality.

The framework distinguishes public-service compensation from commercial advantage. If an SOE is required to provide a service that would not be supplied on commercial terms, compensation for the verified net cost of that obligation need not represent a competitive distortion. The neutrality problem arises when compensation is not transparent, exceeds the net cost of the obligation, or is used to support activities that compete with private firms. The OECD Guidelines call for transparent identification and attribution of public-service costs and revenues and caution against cross-subsidisation [2].

4. Methodology

The study applies a qualitative and analytical mixed-method approach. First, comparative institutional analysis is used to examine internationally recognised competitive-neutrality principles and their relevance to Uzbekistan. Second, economic reasoning from industrial organisation is used to identify the channels through which ownership-related advantages can affect market outcomes. Third, a diagnostic framework is developed to translate those channels into indicators that can be tested with administrative and market data when such data are available.

The article does not claim to estimate a national competitive-neutrality index or to provide firm-level causal estimates. No unsupported numerical score is assigned to individual sectors or ownership groups. The proposed indicators are instead presented as an empirical measurement framework for subsequent application. A difference in tax rates, borrowing costs, procurement outcomes or access times can have multiple explanations; an indicator should therefore trigger investigation rather than automatically establish preferential treatment.

The documentary base includes OECD competitive-neutrality and SOE governance standards and publicly available information from Uzbekistan's Competition Committee concerning state aid and competition assessment [1–4]. The framework is designed so that, at the empirical stage, it can be populated with financial statements, state-aid records, procurement data, tax-expenditure information, access logs, service-level data and regulatory-processing records.

5. Economic Channels of Competitive-Neutrality Distortion

5.1 Financing and implicit guarantees

The cost of capital is one of the clearest economic channels through which state ownership may affect competition. A state guarantee, preferential loan, below-market equity injection or access to directed financing can reduce the financing constraint faced by an SOE. The relevant economic question is not whether an SOE has access to finance, but whether its financing conditions differ from those available to a comparable private firm under market conditions and whether the difference is attributable to state ownership.

5.2 Public procurement and demand-side advantages

Public procurement affects competition not only through the allocation of contracts but also through the creation of scale, reputation and reference customers. In digital industries, a large public contract may generate data, technical experience and user visibility that improve a supplier's position

in later markets. Neutral procurement therefore requires objective qualification criteria, transparent evaluation, meaningful opportunities for private suppliers and, where feasible, modular contracting and interoperable standards.

5.3 Infrastructure and data access

Digital competition often depends on inputs that are difficult to reproduce, including payment infrastructure, identification systems, connectivity, cloud infrastructure, registries and certain datasets. Where an SOE controls or receives privileged access to such an input, the competitive issue may arise through price, quality, timing or technical conditions rather than through an explicit subsidy. Relevant indicators include access fees, service-level conditions, latency, downtime, onboarding time and API availability.

5.4 Taxation and regulatory neutrality

Differences in effective tax or regulatory burdens can alter competitive conditions even when firms face identical statutory rules on paper. The appropriate economic measure is therefore the effective burden associated with comparable activities, not simply the statutory rate. Regulatory neutrality does not require identical treatment where firms perform genuinely different functions; differences should be connected to objective criteria and proportionate to the public purpose.

5.5 Cross-subsidisation and separation of accounts

Cross-subsidisation becomes a central concern when one enterprise performs both public-service and competitive activities. Without separate accounts and transparent cost-allocation rules, public-service costs may be assigned disproportionately to the protected activity while the competitive unit appears artificially efficient. A robust mechanism therefore requires separate accounting, documented allocation keys for common costs, transparent transfer pricing and independent audit where material risks exist.

6. Why Digital Markets Require Additional Neutrality Safeguards

The economic significance of neutrality is heightened by the structure of digital markets. Network effects mean that the value of a service may increase as more users or merchants join it. Data accumulation can improve matching, targeting and service quality. Switching costs can make users reluctant to move between platforms. Economies of scale can reduce average costs as transaction volumes grow. These characteristics can make an initial advantage self-reinforcing.

This does not mean that every successful digital SOE has achieved its position through preferential treatment. Higher adoption may reflect service quality, trust, network coverage or legitimate scale economies. The analytical task is therefore to separate performance-based advantages from ownership-based advantages.

Two additional issues deserve attention. First, interoperability can become a competitive variable when a dominant infrastructure or platform controls an interface on which downstream firms depend. Second, algorithmic self-preferencing can become relevant where a platform controls both the interface through which rivals reach users and a downstream service that competes with those rivals. These issues should be assessed through evidence concerning access conditions, ranking criteria, technical performance and actual competitive effects rather than through ownership status alone [6; 7].

7. Uzbekistan’s Institutional Context

Uzbekistan has established several institutional elements relevant to competitive neutrality. The 2023 Law “On Competition” provides for state-aid assessment and identifies forms of support that can confer advantages, including tax and customs benefits, subsidies, grants, guarantees and

concessional loans. The Competition Committee states that draft legal acts providing state aid are subject to competition-impact assessment and that the Committee has powers relating to the effectiveness of state aid [3].

The institutional framework also extends beyond state aid. The Competition Committee identifies competition development in product, financial and digital markets, competition-impact assessment of legal acts, bidding control and control over state participation among its functions [4]. This creates a foundation for integrating economic neutrality assessment into existing competition-policy instruments rather than establishing an entirely separate regulatory system.

The remaining challenge is operational. A formal prohibition of discriminatory support is not sufficient if regulators cannot identify the economic value of implicit guarantees, separate public-service costs, compare access conditions or determine whether a procurement structure unnecessarily limits entry. The proposed framework therefore focuses on measurement, documentation and proportionality.

8. Proposed Economic Assessment Framework

A practical assessment can be organised around six dimensions: financial neutrality, procurement neutrality, tax and regulatory neutrality, infrastructure-access neutrality, data and interoperability neutrality, and accounting separation. The dimensions should be assessed comparatively and over time. No single indicator should be treated as conclusive.

Dimension	Potential indicator	Economic question	Possible response
Financial	Borrowing-cost differential; guarantees; equity terms	Does state backing reduce effective cost of capital?	Market benchmarks; guarantee fees; ring-fencing
Procurement	Bidder participation; single-bid rate; contract bundling	Does procurement design unnecessarily reduce contestability?	Modular lots; objective criteria; open standards
Tax/regulation	Effective burden; compliance time; exemptions	Are comparable activities subject to materially different burdens?	Impact assessment; transparent exemptions
Infrastructure	Access fee; service quality; onboarding time	Do rivals receive equivalent access to essential inputs?	Non-discrimination; SLA monitoring
Data/interoperability	API access; data portability; technical conditions	Does control of data/interfaces favour an affiliated activity?	Interoperability; access logs
Accounting	Cost allocation; transfer prices; public-service compensation	Are public-service costs separated from commercial activity?	Separate accounts; audited allocation rules

The framework should operate as a diagnostic rather than an automatic scoring system. A material difference should lead to a second-stage inquiry into causation: is it explained by productivity, risk, scale, a legitimate public-service obligation, or an ownership-related advantage? The third stage should examine proportionality and alternative instruments. Where the public

objective can be achieved through an open tender, explicit compensation or technology-neutral subsidy, these mechanisms may reduce the need for an ownership-specific advantage.

A four-stage implementation sequence is proposed: (1) identify markets in which SOEs and private firms compete and map possible ownership-related advantages; (2) quantify material differences in financing, procurement, access, regulation and cost allocation; (3) assess the public-policy justification and less-distortive alternatives; and (4) establish monitoring and review requirements. This sequencing is consistent with the OECD Toolkit's emphasis on identifying state interventions, assessing competitive effects and considering less-distortive alternatives [1].

9. Policy Mechanisms for Uzbekistan

First, material state support should be recorded transparently, including its legal basis, beneficiary, objective, duration and fiscal value. Where support compensates for a public-service obligation, the net cost should be documented separately from competitive activities.

Second, SOE financing should be assessed against market-consistent benchmarks. Where an explicit or implicit state guarantee exists, its economic value should be identified. The objective is not necessarily to eliminate all guarantees, but to make their competitive effect observable and, where appropriate, introduce market-consistent fees or ring-fencing.

Third, digital procurement should use functional requirements and interoperable standards where feasible. Modular contracting can allow specialised firms to enter individual layers of a digital solution while maintaining appropriate cybersecurity and performance requirements.

Fourth, where an SOE controls a bottleneck input, access conditions should be documented and comparable across affiliated and non-affiliated firms. Technical indicators such as onboarding time, API availability, service quality and downtime can make discrimination observable.

Fifth, public-service and commercial activities should be separately accounted for where they coexist. Clear allocation rules and auditability can reduce the risk that public resources indirectly finance competitive expansion.

Sixth, competition-impact review should be periodic. Digital markets evolve quickly, so assessment should be revisited when market structure, state support or the scope of an SOE's commercial activities materially changes.

10. Discussion

Competitive neutrality should be understood as an economic discipline on state intervention rather than a requirement to remove the state from markets. State ownership can remain justified where it serves clearly defined public objectives. The neutrality question arises when public ownership changes the competitive conditions of a commercial activity without a transparent and proportionate justification.

The digital setting strengthens the case for early detection. A financing advantage, preferential procurement opportunity or better access to a technical interface may initially appear small. In a market characterised by network effects, however, the advantage can affect user acquisition, data accumulation and scale, potentially raising entry barriers. This is why accounting separation, access monitoring and procurement design should be treated as competition-policy instruments rather than merely administrative procedures.

At the same time, neutrality policy should avoid penalising SOEs merely for being efficient. A private firm may have higher financing costs because it is riskier; an SOE may have lower operating costs because it has achieved genuine economies of scale; and a public platform may have more users because consumers value its service. None of these facts alone establishes a neutrality problem. The

relevant question is whether the observed advantage is causally connected to state ownership or control.

For Uzbekistan, the practical implication is that existing state-aid and competition-impact institutions can provide the starting point for a broader economic neutrality framework. The priority is to improve the quality of information available to regulators: the value of support, cost of public-service obligations, conditions of infrastructure access, procurement participation and relevant market outcomes should be recorded in a form that permits comparison over time.

11. Limitations and Directions for Further Research

The principal limitation is the availability of sufficiently granular firm-level and transaction-level data. Public information may not reveal the economic value of implicit guarantees, the allocation of common costs or the technical quality of access to digital infrastructure. Observed differences between SOEs and private firms may also reflect efficiency or risk rather than preferential treatment. The proposed indicators should therefore be used as screening tools rather than automatic evidence of infringement.

Further research should apply the framework to firm-level panel data and specific digital sectors in Uzbekistan. Future studies could estimate the cost-of-capital effect of state guarantees, compare procurement participation before and after procurement reforms, examine access conditions to specific digital infrastructure, and evaluate the effects of accounting separation on pricing and investment.

12. Scientific Novelty and Practical Significance

The scientific novelty consists of three contributions. First, competitive neutrality in digital markets is conceptualised as an economic condition affecting the relative cost and opportunity structure of SOEs and private firms, rather than solely as a legal requirement. Second, financing, procurement, infrastructure and data access, regulatory conditions and accounting separation are integrated into a single diagnostic framework tailored to Uzbekistan. Third, a sequenced assessment mechanism is proposed that distinguishes legitimate public-service compensation from ownership-related competitive advantages and links identified gaps to proportionate corrective instruments.

The practical significance lies in the possible use of the framework in competition-impact assessment, state-aid review, procurement design, SOE governance and monitoring of digital infrastructure access. The indicators are intended to improve the evidence base for regulatory decisions without creating a composite score that could obscure differences between sectors.

13. Conclusion

Competitive neutrality in Uzbekistan’s digital markets is fundamentally an economic question about how state ownership affects the allocation of capital, procurement opportunities, infrastructure, data and regulatory obligations. The analysis demonstrates that the principal risks do not arise simply from the existence of SOEs. They arise where ownership is accompanied by conditions that alter the effective cost, access or risk faced by competing firms and where those differences cannot be justified by a clearly defined public-service objective.

The proposed framework focuses on financing and guarantees, procurement, taxation and regulation, infrastructure and data access, and separation of public-service and commercial accounts. Its central methodological principle is comparison: regulators should identify a material difference, investigate its cause, assess its competitive effect and consider whether the same public objective can be achieved through a less-distortive instrument. This approach allows legitimate state intervention

while reducing the risk that public resources or regulatory authority are converted into hidden commercial advantages.

For Uzbekistan, existing competition and state-aid institutions provide a foundation on which such an economic framework can be developed. The next step is to strengthen the evidence base through systematic data collection, transparent accounting of public-service obligations, market-consistent financing benchmarks, competitive procurement design and measurable access conditions for digital infrastructure. Competitive neutrality can thereby become not only a principle of equal treatment, but a practical instrument for protecting contestability, investment and innovation in the country's digital economy.

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