

A COMPARATIVE EMPIRICAL STUDY OF PUBLIC - PRIVATE PARTNERSHIP APPROACHES TO ECONOMIC INFRASTRUCTURE DEVELOPMENT

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Abstract: *This article examines the development of public–private partnership (PPP) projects in the Republic of Uzbekistan and their role in modernising the country’s infrastructure. It highlights cooperation with international financial institutions such as the Asian Development Bank, the International Finance Corporation and the World Bank, and reviews the aims of PPP projects, including improving project quality, ensuring sustainability and creating opportunities for efficient investment. Particular attention is paid to contractor selection, competition within the procurement process and risk management. Drawing on the comparative empirical literature, the paper assesses private-sector participation in infrastructure and how such projects are financed in developing countries.*

Keywords: *public–private partnership (PPP), infrastructure modernisation, contractor selection, international financial institutions, investment, competition and risk management, procurement process, economic efficiency, private-sector participation, finance and infrastructure projects.*

Uzbekistan is implementing public-private partnership (PPP) projects as part of a broader strategy to attract foreign investment, modernise infrastructure and improve the delivery of public services. Since the adoption of the Law “On Public–Private Partnership” in 2019,

projects have been launched across transport, energy, education, healthcare and other sectors. These projects are being delivered in cooperation with international financial institutions such as the Asian Development Bank, the International Finance Corporation, the Islamic Development Bank, the European Bank for Reconstruction and Development and the World Bank. Their purpose is to raise the quality and attractiveness of projects, ensure their sustainability, and expand opportunities for investing in infrastructure efficiently and economically.

Public–private partnership is an important instrument for delivering infrastructure. In the transport sector, the principal sponsors have, over recent decades, been construction companies that have become powerful international players. A conceptual game-theoretic model grounded in four institutional rationalities (economic, legal, political and scientific) shows that the main growth strategies open to them are learning, acquisition and exit: the first is less effective for a single project than the other two, while the last two point to a risk of “inefficient investment” affecting infrastructure quality and social welfare. All three lead to market concentration [1].

By drawing on the experience and resources of the private sector, the government is accelerating the delivery of essential infrastructure and services while sharing risks and creating new opportunities for growth. Well-known projects delivered or under way through competitive tenders include the Tashkent–Samarkand toll road, the modernisation of Tashkent’s heating-supply system, and the national haemodialysis-services PPP [2].

The theoretical rationale for contractor selection in infrastructure projects rests on standard auction theory. Estache and others compare contractor selection through competitive bidding with direct negotiation,

the latter involving an element of subjectivity in award criteria. Auction theory indicates that competitive bidding is superior to direct negotiation: it is more efficient because bidders are induced to reveal their true costs and economic rents are eliminated [3].

Turning to contract renegotiation, the trade-off between its benefits and costs is especially relevant in highly complex, risky and therefore incomplete long-term contracts. Renegotiation is beneficial when circumstances change, new information emerges or design errors are discovered, but costly both in transaction terms and through its adverse effect on the incentives of the government and the contractor. This raises the empirical question of net benefit - how PPP procurement performs relative to traditional public procurement.

The first category attempts to compare construction costs and risks between PPP and traditionally procured projects. Raisbeck and others compared construction cost and time on a sample of 21 PPP and 33 traditionally procured projects in Australia, concluding that PPPs perform better on both dimensions, with the advantage increasing with project size and complexity [4]. Blanc-Brude and Makovsek reviewed evidence of cost overruns in traditional procurement accumulated since the early 2000s and found it systematic and potentially very large; construction risk, however, is managed effectively under infrastructure project finance, as demonstrated on a global sample of 75 projects from 1993–2010, where the average difference between pre-construction financial cost and post-completion construction cost was 3.3% while the median was zero [5]. Hoppe and others analysed whether incentives to make cost-saving investments are stronger under PPPs than under traditional procurement, using a behavioural experiment with 176 subjects, and, in a further experiment on sub-contracting, concluded that

the complexity introduced by sub-contracting relationships makes PPPs less attractive from a social-welfare standpoint [6].

The second category comprises broad reviews of the evidence on the appropriateness of PPP procurement. Hodge and others surveyed empirical work on PPPs in economics and thirteen other disciplines; their summary tables usefully underline the prevalence of case studies and the scarcity of systematic quantitative analysis [7]. For developing countries, Estache and Philippe examined private-sector participation in infrastructure (including PPP-type arrangements, full privatisation and other forms of cooperation). The 1990s showed some efficiency gains, but these were not systematic, and success depended on the appropriateness of regulatory and fiscal regimes and on the strength of institutional and governance structures [8]. This points to the limited scale of private participation in developing-country infrastructure and to the gap between expected “value for money” and actual results. Preparing and procuring PPP projects often generates excess costs; most PPP-type projects are financed not by private investors but by governments, state banks and multilateral development institutions; and in developing countries PPP procurement is sometimes used to bypass weak public procurement systems, with predictable consequences.

The third category consists of policy-oriented analysis. The European Court of Auditors audited twelve EU co-financed PPP projects at different stages of their life cycle - three transport projects in Greece, two in Spain, four ICT projects in France, and one transport and two ICT projects in Ireland. It found that the audited projects, especially in Greece and Spain, experienced significant delays in procurement and construction and cost overruns, alongside insufficient demand, a lack of concessions, and inappropriate risk allocation; most had not undergone a

value-for-money assessment. On the positive side, projects whose construction was already complete were operating at a good level of service and maintenance [9]. The Public Accounts Committee of the UK House of Commons likewise published a general report on the use of Private Finance Initiatives (2018). Its conclusions included that, more than 25 years on, it is unacceptable that the Treasury lacks data showing whether the PFI model delivers value for money; some private investors earned large returns from PFI; deals suggest that departments overpaid to transfer project risks to the private sector, one of the model's supposed advantages; and the Treasury's wish to exclude PF2 projects from public-debt statistics created a risk to taxpayer value for money.

Economic-theoretical research on the choice between traditional public procurement and PPP has produced clear conceptual insights. The role of incomplete or asymmetric information in shaping the fundamental trade-off between allocative efficiency (service quality) and productive efficiency (life-cycle cost) is now well understood. The circumstances in which bundling an infrastructure asset under private control raises welfare are conceptually clear, as are the principles governing the optimal allocation of exogenous risks and the optimal contract terms for managing endogenous ones. Nonetheless, the number and complexity of risks in long-term contracting suggest scope to extend the analysis of risk allocation and management.

Turning to the empirical evidence, how PPP projects actually perform relative to traditionally procured ones is far from clear. Although this question will never have a simple answer, the empirical evidence base remains too delicate and mixed to support firm conclusions.

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