

FORMING A DIVERSIFIED FINANCING MODEL FOR PUBLIC-PRIVATE PARTNERSHIP PROJECTS IN UZBEKISTAN

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Abstract. Public-private partnerships (PPPs) serve as a critical tool for advancing infrastructure modernization, enhancing social services, and fostering economic growth in Uzbekistan. Despite progress, existing financing mechanisms predominantly depend on state budgets, external debts, and limited commercial banking channels, which constrain project scalability, sustainability, and resilience amid global challenges like the COVID-19 pandemic and economic uncertainties. This article investigates the development of a diversified financing model for PPP projects in Uzbekistan, incorporating innovative approaches such as state-guaranteed bank credits, capital market instruments (e.g., bonds and investment funds), involvement of international financial institutions, Islamic finance tools, project finance structures, risk management and insurance mechanisms, institutional investor engagement, and green/social financing. Drawing on comparative analyses of international best practices from countries like Canada, the UK, Malaysia, and regional examples from Asia, the study outlines key model components, including risk diversification and regulatory enhancements. The model aligns with Uzbekistan's strategic objectives, such as attracting \$30 billion in PPP investments by 2030, as per the national Development Strategy. Results indicate that hybrid financing strategies can mitigate fiscal pressures on the state, boost private sector involvement, and promote long-term economic stability, particularly in sectors like infrastructure, healthcare, education, and energy.

Keywords. Public-private partnership, diversified financing, Uzbekistan, infrastructure development, investment models, risk diversification, Islamic finance, institutional investors, green bonds, project finance, state guarantees, capital markets.

INTRODUCTION

Over the past decade, Uzbekistan has prioritized public-private partnerships (PPPs) to drive national development, focusing on infrastructure upgrades, social service improvements, and economic diversification. The Uzbekistan Development Strategy for 2022-2026, along with key legislative acts such as the 2019 Law on Public-Private Partnership and Presidential Decrees (e.g., PF-60 of 2022 and PQ-5138 of 2021), underscores the role of PPPs in attracting private resources for projects in agriculture, education, healthcare, and energy. Ambitious targets include mobilizing \$30 billion in PPP investments by 2030 to support sustainable growth and reduce poverty, in line with the UN Sustainable Development Goals (SDGs).

However, current PPP financing in Uzbekistan is largely undiversified, relying on state budgets, external loans from organizations like the World Bank and Asian Development Bank (ADB), and commercial bank credits. This approach creates bottlenecks, including high fiscal burdens, limited project volumes, and vulnerability to economic shocks, as highlighted during the COVID-19 crisis. Globally, diversified PPP financing models have proven effective in mitigating these issues by incorporating multiple sources and instruments, such as hybrid funding in emerging markets. For instance, post-pandemic recovery in countries like India and Turkey has emphasized innovative tools to enhance private sector appeal.

This article addresses the urgent need to form a diversified financing model tailored to Uzbekistan's context, adapting foreign experiences while considering local regulatory, cultural, and economic factors. By analyzing international practices and proposing a comprehensive framework, the study aims to enhance PPP efficiency, reduce state dependencies, and foster a robust investment environment.

LITERATURE REVIEW

The conceptual framework for PPP financing revolves around efficient risk allocation, value-for-money assessments, and diversified resource mobilization. Delmon (2010) examines private sector investments in infrastructure, emphasizing project finance and PPP frameworks in developing countries. Yescombe (2015) provides foundational principles, advocating for policy-driven finance models that incorporate guarantees and hybrid structures to attract investors in volatile economies.

In emerging markets, Ashuri et al. (2011) discuss risk-neutral pricing for build-operate-transfer (BOT) projects, including government minimum revenue guarantees. Ullah et al. (2016) review critical factors in concession periods, highlighting the need for balanced risk-sharing. Regionally, ADB (2025) analyzes renewable energy PPPs in Uzbekistan, recommending blended financing with grants and private equity. IMF (2025) offers country-specific lessons, stressing diversification to improve public investment efficiency.

Uzbekistan-focused studies reveal gaps in current mechanisms. Berkino et al. (2019) explore infrastructure PPP investments, noting overreliance on state funds and the potential for diversification. Toyirov (2024) discusses PPP project financing in the green economy context, while Yakubova (2023) focuses on education sector improvements through refined models. Shavkatov (2021) examines financial relations in PPP practices, advocating for perfected mechanisms.

International literature from CIS and Russian sources, such as Varnavskaya (2012) on PPP definitions and Milshina (2013) on management in unstable conditions, is relevant to Uzbekistan's transitional economy. Litoska (2014) evaluates PPP efficiency for regional socio-economic development, and Zhukova (2012) addresses regulatory aspects. Global works like Boyer and Scheller (2018) on state-level PPP adoption and Erhardt (2004) on macroeconomic drivers provide comparative insights. Additional references include Buffet and Eimicke (2018) on

social value investing and Friedman (1970) on corporate social responsibility, which inform sustainable PPP approaches.

UN-Habitat (2011) and Hoek-Smit (2009) discuss housing finance subsidies, applicable to Uzbekistan's urban PPPs. Wojewnik-Filipkowska and Trojanowski (2013) analyze Polish PPP financing principles, offering lessons for regulatory reforms.

METHODS AND PROCEDURES

This study aims to analyze international experiences in PPP financing and adapt them to formulate a diversified model for Uzbekistan. Employing a mixed-methods approach, it includes comparative analysis of case studies from reports by IMF, ADB, EBRD, and UNDP (up to 2025), alongside logical deduction from Uzbekistan's legal framework (e.g., PPP Law and Cabinet Resolutions like 509 of 2021 and 720 of 2024). Scientific abstraction is used to synthesize model elements, while induction generalizes successful foreign practices (e.g., from Canada and Malaysia) and deduction applies them to local challenges, such as limited capital markets and high risks.

DISCUSSION AND RESULTS

Uzbekistan's PPP landscape has expanded rapidly since the 2019 PPP Law, with projects in infrastructure, healthcare, education, and energy attracting investments estimated at \$28-31 billion by early 2025. Key initiatives include modern greenhouse farms (PQ-5138, 2021) and student housing subsidies (Cabinet Resolution 239, 2022). However, financing remains constrained, primarily through state budgets, external loans, and commercial banks, leading to inefficiencies, high risks, and limited scalability. The COVID-19 pandemic amplified these issues, underscoring the need for diversification to enhance resilience and private sector engagement.

A diversified financing model shifts from singular sources to multiple, innovative channels, reducing risks and broadening investor participation. Drawing from global practices, such as Canada's institutional investments and Malaysia's Islamic finance, the proposed model for Uzbekistan includes the following core elements:

State-guaranteed bank credits - government guarantees for targeted projects to stimulate commercial bank involvement. This mirrors EBRD's PPP facility (2024), where guarantees lower borrowing costs and mitigate default risks. In Uzbekistan, this could support infrastructure like toll roads (Highways.today, 2024), with legal frameworks ensuring fair risk allocation.

Capital Market Financing - Developing special-purpose bonds, investment funds, and local bond markets. Emulating the UK's project bonds, Uzbekistan can issue "project obligations" to attract domestic and international capital. IFC's assistance (2019) in PPP structuring highlights potential, especially for long-term projects, reducing state fiscal loads.

International financial institutions' funds - integrating credits, grants, and technical aid from the World Bank, ADB, Islamic Development Bank, and EBRD.

ADB's hybrid renewable energy models (2025) blend public grants with private equity, aligning with SDGs and attracting \$ billions in Uzbekistan's energy sector.

Islamic finance instruments - utilizing sharia-compliant tools like sukuk (Islamic bonds), murabaha (cost-plus financing), and ijara (leasing). Given Uzbekistan's cultural context, these appeal to conservative investors, as per Toyirov (2024). Examples from Malaysia demonstrate how sukuk can finance infrastructure without interest, diversifying beyond conventional banking.

Project finance - basing funding on project-generated revenues and assets, independent of sponsors' balance sheets. This approach, inspired by Delmon (2010), ensures viability through cash flow projections, suitable for Uzbekistan's BOT models in transportation and utilities.

Insurance and risk management tools - employing local and international insurance to hedge risks, including political, currency, and operational. Mechanisms like Viability Gap Funding (VGF) bridge revenue shortfalls, as recommended by IMF (2025), fostering investor confidence.

Institutional investors - engaging pension funds, insurance companies, and asset managers for long-term capital. Uzbekistan's pension system holds untapped potential; regulatory reforms, such as tax incentives and dedicated frameworks, could emulate Canada's Pension Plan Investment Board (Delmon, 2010). Challenges like inadequate legislation and risk assessment must be addressed through capacity building.

Green and social finance - issuing green bonds and social impact bonds for environmentally and socially beneficial projects. ADB's renewable initiatives (2025) show how these attract ESG investors, supporting Uzbekistan's sustainability goals in agriculture and urban development.

Implementation requires comprehensive reforms: perfecting legislation for risk-sharing (e.g., updating Cabinet Resolution 509, 2021), developing financial market infrastructure, and creating supportive institutions like a PPP support fund. Benefits include reduced state budget strain (potentially freeing up resources for other priorities), heightened private investor activity through minimized risks, and economic multipliers like job creation and technology transfer. Pilot applications in renewables could unlock \$14 billion by 2026 (Beyond Investments Group, 2023), with diversified models enhancing overall PPP efficiency by 20-30% based on international benchmarks (Ashuri et al., 2011).

CONCLUSION

Establishing a diversified financing model for PPP projects in Uzbekistan is imperative to overcome existing limitations, align with national strategies, and ensure sustainable development. By adapting proven international practices—such as risk-sharing from the UK, institutional engagements from Canada, Islamic tools from Malaysia, and hybrid blends from ADB projects—the model promotes fiscal efficiency, private sector dynamism, and resilience against global uncertainties. Key recommendations encompass legislative enhancements (e.g., clearer guarantees and incentives), institutional capacity building (e.g., training via Synergy Academy, 2024), market development (e.g., bond issuance), and pilot implementations in

priority sectors. This approach not only supports the \$30 billion investment target by 2030 but also contributes to broader SDGs. Future research should monitor model efficacy through empirical evaluations, refining it for evolving economic conditions and ensuring inclusive growth.

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