



ENHANCING PROFITABILITY AND MITIGATING IDENTIFIED RISKS OF PUBLIC-PRIVATE PARTNERSHIP PROJECTS THROUGH ANALYSIS OF THE HYDROPOWER SECTOR IN UZBEKISTAN.

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Article history:	Abstract:
<p>Received: 20th January 2024 Accepted: 6th March 2024</p>	<p>The infrastructure gap in developing countries is caused by insufficient public funding as well as an ineffective mechanism for directing private funding towards the intended goals. To close the infrastructural deficit, the public-private partnership (PPP) method was developed. However, due to the lengthy contracts and wide range of stakeholders involved, PPP projects are frequently vulnerable to financial difficulty or, worse, termination.</p> <p>Indeed Uzbekistan, like many other countries, has substantial infrastructure needs in order to sustain economic growth and raise the standard of living for its people. Uzbekistan may contemplate executing various infrastructure projects, such as those related to transportation, energy, water management, telecommunications, and other areas.</p>

Keywords: PPP (public-private partnership), Infrastructure, Hydropower, Energy, Profitability.

INTRODUCTION

State funds have been the major source of infrastructure financing in developing countries but still cannot meet the estimated infrastructure needs. Due to fiscal constraints, governments have been turning to the private sector to build and operate public infrastructure and led to the use of partnerships between the public and the private sectors. Public-private partnership (PPP) is broadly defined as "a long-term contract between a private party and a government entity, for providing a public asset or services, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance" (World Bank 2017). PPP transforms how the public and private sectors collaborate to deliver public infrastructure and services. PPP can be an innovative policy tool to improve the performance of the public sector by reducing government budgetary constraints through accessing private capital for infrastructure investments (Jamali 2004).

This paper scrutinizes the regulatory framework governing the implementation of Public-Private Partnerships (PPPs) in Uzbekistan's hydropower sector, conducts a comprehensive project analysis, and estimates potential risks within the country's environmental context.

REGULATORI FRAMEWORK AND ALL PPP PROJECTS OF UZBEKISTAN.

The enactment of the Law of the Republic of Uzbekistan on Public-Private Partnership (PPP) in May 2019 signaled a pivotal moment in the country's infrastructure landscape. This robust regulatory framework provides the blueprint for implementing PPP projects across various sectors, emphasizing transparency, accountability, and risk mitigation. It delineates the roles and responsibilities of government agencies, private sector partners, and other stakeholders, ensuring clarity and coherence in project execution.

Since the enactment of the PPP law, Uzbekistan has witnessed a surge in PPP project initiatives aimed at modernizing infrastructure and stimulating economic growth. These projects span diverse sectors, including transportation, energy, water, telecommunications, and urban development.

The potential benefits of PPPs are many. Realizing them requires proper planning, execution, and monitoring. Well-structured PPP projects can deliver dividends over the long term, but these dividends do not materialize by themselves—they have to be drawn out. And even well-structured PPP projects can fail or require expensive restructuring because of unforeseen events or the opportunistic behavior of the contracting parties. More PPP projects will succeed if the country's macroeconomic, political, and institutional conditions as well as project-related factors that can affect project outcomes are considered (Figure 4). The figure shows

the causal relationship of these factors, which can affect one or all project partners and a project's overall progress. These are not independent of each other, and their influence on project outcomes is closely interrelated.

Augmenting Uzbekistan's PPP efforts is the establishment of the Department of Public-Private Partnership Management within the Ministry of Finance and Economy. This dedicated entity serves as a focal point for PPP coordination, policy formulation, and capacity-building initiatives. By providing strategic oversight and technical expertise, the department facilitates the efficient implementation of PPP projects, ensuring alignment with national development priorities and international best practices.

As of the latest update, Uzbekistan is actively advancing 596 projects registered under the Public-

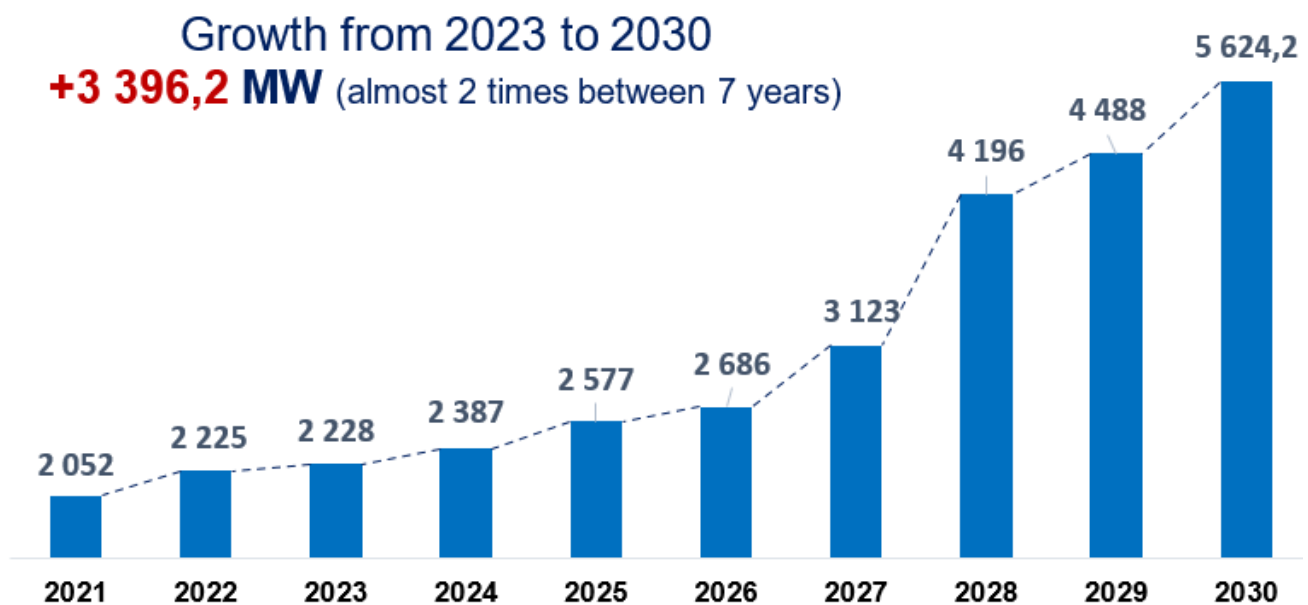
Private Partnership (PPP) framework, with a cumulative value reaching 2,802,445 million soums. These projects span various sectors and hold significant potential for driving economic growth and infrastructure development across the country.

HYDRO POWER STRATEGY OF UZBEKISTAN BY 2030.

In the hydropower sector, "Uzbekhydroenergo" JSC serves as the public entity responsible for implementing new hydroelectric power stations and overseeing the regulation of all hydropower plants (HPPs) throughout Uzbekistan.

In accordance with Presidential Decree PQ-104 "On measures to further reform the hydropower sector" issued on March 30, 2023. More than 70 prospective projects are scheduled to be implemented by 2030.

Figure 1: Hydropower Strategy by 2030 (Yearly Capacity Increase)

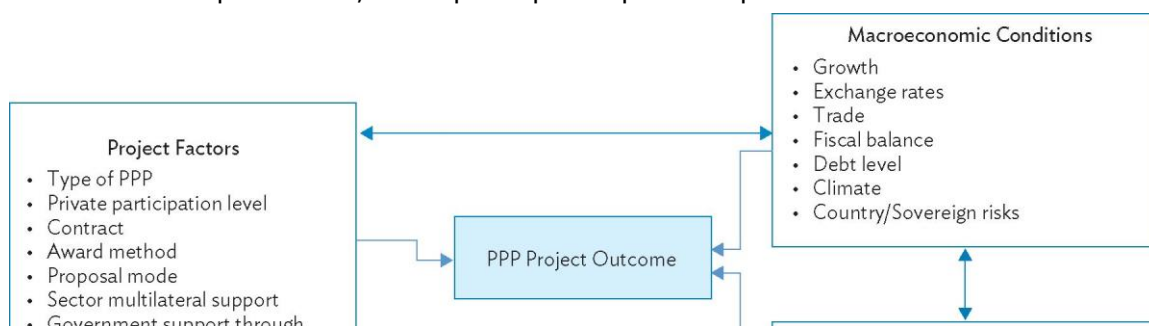


Risk Factors in Public-Private Partnership Project Implementation in the environment of Uzbekistan in hydropower sector

Implementing PPP projects in the hydropower sector involves various risks that need to be carefully assessed and managed to ensure project success. Some of the key risk factors associated with PPP projects in the hydropower sector include Political and Regulatory Risks, Environmental and Social Risks, Technical Risks, Financial Risks, Market Risks, Operational Risks, Legal and Contractual Risks, Community Relations Risks, Technology Risks.

Figure 2: Factors Affecting PPP Project Outcomes

MDB = multilateral development bank, PPP = public-private partnership. Source: Authors.





RECOMMENDATIONS FOR THE SUCCESS OF UZBEKISTAN'S PPP PROJECTS IN HYDROPOWER PROJECTS.

In the hydro power sector, the selling tariff in Uzbekistan is 501 so'm or 3.9 US cents for 1 kWh, which is significantly lower compared to the average global tariff of 11.8 US cents. This low selling price has a negative impact on project returns. Metrics such as Internal Rate of Return (IRR), Net Present Value (NPV), and Payback Periods indicate to investors that the returns on investment will be minimal. Therefore, I recommend that Uzbekistan establish a free market for energy to allow for more competitive pricing.

Furthermore, Uzbekistan could implement green tariffs, where consumers voluntarily pay more to support renewable energy initiatives. This could increase the volume of renewable energy produced in the country. Additionally, Uzbekhydroenergo has established a green certification program under Presidential Decree PD-104. In PPP projects, it should be mandated that investors have the opportunity to generate revenue not only by selling electricity but also by selling green certifications.

REFERENCES

1. Adejumo, Adebawale O., and A. Oshioke Ahmadu. 2016. "A Study of the Slope of Cox Proportional Hazard and Weibull Models: Simulated and Real Life Data Approach." *Science World Journal* 11 (3): 31-35.
2. AECOM Consult. 2007. *User Guidebook on Implementing Public-Private Partnerships for Transportation Infrastructure Projects in the United States*. Arlington, Virginia: Federal Highway Administration.
3. Ahmad, Ehtisham, Amar Bhattacharya, Annalisa Vinella, and Kezhou Xiao. 2014. "Involving the Private Sector and PPPs in Financing Public Investments. Some Opportunities and Challenges." Asia Research Centre Working Paper Vol. 67.
4. Alano, Emmanuel, and Minsoo Lee. 2016. "Natural Disaster Shocks and Macroeconomic Growth in Asia." ADB Economics Working Paper Series No. 503. <https://www.adb.org/sites/default/files/publication/218461/ewp-503.pdf>.
5. Albalade, Daniel, Germa Bel, and Richard R. Geddes. 2015. "Do Public-Private Partnership Enabling Laws Increase Private Investment in Infrastructure?" <http://www.econ.pitt.edu/sites/default/files/Geddes.PPPlaws.pdf>.
6. Allport, Roger, Richard Brown, Stephen Glaister, and Tony Travers. 2008. "Success and Failure in Urban Transport Infrastructure Projects." <https://www.imperial.ac.uk/media/imperial-college/research-centres-and-groups/centre-for-transport-studies/Success-and-Failure-in-Urban-Transport-Infrastructure-Projects.pdf>.
7. Asian Development Bank (ADB). 2008. *Public-Private Partnership Handbook*. Manila.
8. ---. 2017. *Meeting Asia's Infrastructure Needs*. Manila.
9. Bhattacharyay, Biswa Nath. 2010. "Financing Asia's Infrastructure: Modes of Development and Integration of Asian Financial Markets." ADBI Working Paper Series No. 229. Tokyo: Asian Development Bank Institute.
10. Carrillo, Patricia, Herbert Robinson, Peter Foale, Chimay Anumba, and Dino Bouchlaghem. 2008. "Participation, Barriers and Opportunities in PFI: The United Kingdom Experience." *Journal of Management in Engineering* 24 (3): 138-45.
11. Checherita, Cristina D. 2009. "A Macroeconomic Analysis of Investment under Public-Private Partnerships and Its Policy Implications - The Case of Developing Countries." PhD dissertation, George Mason University.
12. Chen Chuan, and Hemanta Doloi. 2008. "BOT Application in China: Driving and Impeding Factors." *International Journal of Project Management* 26 (4): 388-98.
13. De Clerck, Dennis, and Erik Demeulemeester. 2014. "Towards a More Competitive PPP Procurement"
 - a. Market: A Game-Theoretical Analysis." FEB Research report KBI 1408. Leuben, Germany: KU
 - b. Leuven--Faculty of Economics and



Business (p. 59).

14. Di Lodovico, Amadeo. 1998. "Privatization and Investment under Weak Regulatory Commitment." PhD dissertation, University of California, Berkeley, CA.
15. Economist Intelligence Unit (EIU). 2015. "Evaluating the Environment for Public-Private Partnerships in Asia-Pacific: The 2014 Infrascopes." <http://www.adb.org/publications/evaluating-environmentppp-asia-pacific-2014-infrascopes>.
16. Galilea, Patricia, and Francesca Medda. 2010. "Does the Political and Economic Context Influence the Success of a Transport Project? An Analysis of Transport Public-Private Partnerships." *Research in Transportation Economics* 30 (1): 102-109.
17. Hammami, Mona, Jean-Francois Ruhashyankiko, and Etienne B. Yehoue. 2006. "Determinants of Public-Private Partnerships in Infrastructure." IMF Working Paper No. 06/99. Washington, DC: International Monetary Fund.
18. Harris, Clive. 2003. "Private Participation in Infrastructure in Developing Countries: Trends, Impacts, and Policy Lessons." World Bank Working Paper 5. Washington, DC: World Bank.
19. Ismail, Suhaiza, and Fatimah A. Harris. 2014. "Challenges in Implementing Public-Private Partnership (PPP) in Malaysia." *Procedia - Social and Behavioral Sciences* 164: 5-10. <http://doi.org/10.1016/j.sbspro.2014.11.044>.
20. Jamali, Dima. 2004. "Success and Failure Mechanisms of Public-Private Partnerships PPPs in Developing Countries: Insights from the Lebanese Context." *International Journal of Public Sector Management* 17 (5): 414-30.
21. Jandhyala, Srividya. 2016. "International Organizations and Political Risk - The Case of Multilateral Development Banks in Infrastructure Projects." <https://ppi.worldbank.org/~media/GIAWB/PPI/Documents/Misc/The-case-of-multilateral-development-banks-by-Jandhyala2016.pdf>.
22. Li, Bing, Akintola Akintoye, Peter J. Edwards, and Cliff Hardcastle. 2005. "The Allocation of Risk in PPP/PFI Construction Projects in the UK." *International Journal of Project Management* 23 (1): 25-35.
23. Li, Jie, and Patrick Zou. 2008. "Risk Identification and Assessment in PPP Infrastructure Projects Using Fuzzy Analytical Hierarchy Process and Life-Cycle Methodology." <http://www.learning-analytics.info/journals/index.php/AJCEB/article/view/2996>.