The Role of Public-Private Partnerships (PPP) in Managing Financing Risks for China-Kazakhstan Belt and Road Initiative Infrastructure

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Abstract

The Belt and Road Initiative (BRI) has reshaped Central Asia's infrastructure landscape, with Kazakhstan serving as the strategic linchpin of the Eurasian land corridor. While infrastructure investment has reached unprecedented scale, financing risks - currency volatility, political uncertainty, and demand shortfalls - have emerged as critical constraints on project sustainability. Public-Private Partnerships (PPP) have been deployed as institutional mechanisms to navigate these risks. This paper examines how PPP frameworks manage financing risks in China-Kazakhstan BRI infrastructure projects. Drawing on institutional economics, risk allocation theory, and PPP literature, the study analyzes PPP models employed along the corridor, identifies financing risks, and evaluates risk allocation mechanisms. The analysis reveals that while PPP offer theoretically sound risk distribution mechanisms - contractual risk-sharing, political risk insurance, and multilateral development bank engagement - their effectiveness depends on institutional alignment between Chinese and Kazakhstan regulatory frameworks, the maturity of dispute resolution mechanisms such as the Astana International Financial Centre (AIFC), and public sector capacity for long-term contract management. The paper concludes with policy recommendations for optimizing PPP application.

Keywords

Public-Private Partnerships, Managing financing risks, Belt and Road Initiative, Infrastructure investment, Kazakhstan

Introduction

Against the backdrop of deepening Eurasian economic integration and the strategic alignment of China's Belt and Road Initiative (BRI) with Kazakhstan's national development strategies, cross-border infrastructure has become the cornerstone of bilateral economic cooperation [1,2]. However, large-scale transnational infrastructure projects are inherently exposed to layered financing risks that cannot be fully addressed by traditional public financing or sovereign lending alone. Existing research has extensively explored BRI infrastructure investment and Public-Private Partnership (PPP) applications in general contexts. However, few studies systematically focus on the China-Kazakhstan corridor as a critical case. This gap is particularly evident in examinations of how PPP mechanisms mitigate currency mismatches, political instability, and cross-border coordination failures in real-world project delivery [3]. This gap motivates the present study to unpack the risk-governance role of PPP in this strategically important regional corridor.

Background and rationale

The Belt and Road Initiative represents the most ambitious infrastructure undertaking in modern history. Kazakhstan, sharing the longest continuous border with China among BRI participants, has emerged as the strategic heartland of Eurasian connectivity [4]. The Khorgos Gateway has evolved from a remote border crossing into a multimodal logistics hub handling over 500,000 TEU annually. Bilateral infrastructure commitments have exceeded $30 billion since 2013, spanning the Western Europe across Western China highway, the Aktau seaport expansion, and the Shymkent oil refinery modernization.

Yet this scale of investment has been matched by financing complexity. Infrastructure projects along the corridor are characterized by long gestation periods, capital intensity, and multi-currency revenue streams. Chinese policy banks - the China Development Bank and

Export-Import Bank of China - have provided the majority of debt financing. Commercial banks have participated selectively, primarily in projects with demonstrable revenue potential. Multilateral development banks, including the Asian Infrastructure Investment Bank (AIIB) and the European Bank for Reconstruction and Development (EBRD), have contributed both capital and governance oversight.

This financing architecture has revealed significant vulnerabilities. Currency risk has proven particularly salient: Projects generating revenue in Kazakhstan tenge while carrying dollar-denominated debt faced severe balance sheet pressure following the tenge's shift to a free-floating regime in 2015. Political risk manifests through regulatory uncertainty and tax policy shifts. Completion risk has afflicted several projects, compounded by cross-border coordination challenges. Demand risk has introduced fundamental uncertainty: Projected traffic volumes on railway corridors have frequently fallen short of feasibility study assumptions.

Public-Private Partnerships have been positioned as institutional solutions to these risk allocation problems. The logic is compelling: Private capital can bridge financing gaps; private partners with specialized risk management capabilities can assume risks that state-owned enterprises are ill-equipped to manage; PPP contracts can impose discipline through performance-based payments [5,6]. Kazakhstan's 2015 Law on Public-Private Partnerships established a formal legal framework, while the Astana International Financial Centre (AIFC) introduced a common law jurisdiction for dispute resolution - innovations that have substantially reduced the legal uncertainty constraining private investment.

Research question and objectives

This study addresses the following overarching research question: How do Public-Private Partnership frameworks contribute to the management of financing risks in China-Kazakhstan Belt and Road Initiative infrastructure projects?

The research objectives are: (1) Identifying PPP models employed in major corridor projects. (2) Assessing the spectrum of financing risks characterizing cross-border infrastructure development. (3) Evaluating mechanisms through which PPP frameworks allocate and mitigate these risks. (4) Identifying institutional conditions that enable or constrain PPP effectiveness.

Scope and methodology

The scope encompasses infrastructure projects developed under China-Kazakhstan bilateral cooperation within the BRI framework between 2013 and 2025. The geographical scope covers the Khorgos-Almaty transport axis, the Western Europe across Western China highway corridor, and Caspian Sea port facilities. Project types include transport infrastructure, energy infrastructure, and logistics facilities [7].

The methodological approach is qualitative, grounded in case study analysis and document-based research. Primary sources include PPP contracts, feasibility studies, government policy documents, and multilateral development bank reports. Secondary sources encompass academic literature on infrastructure finance, PPP theory, and BRI studies.

Literature review

Theoretical frameworks of PPP

Transaction cost economics provides the most influential analytical lens for understanding PPP. Williamson's framework positions PPP as hybrid governance forms between market transactions and hierarchical coordination [8]. Where complex infrastructure projects are characterized by asset specificity and uncertainty, PPP contracts can internalize transaction costs more efficiently than fully public ownership or purely market-based procurement.

Zhang et al. argue that PPP contracts are inevitably incomplete - they cannot specify all future contingencies - and that PPP value lies in governance mechanisms enabling adaptation to unforeseen circumstances [9]. This has profound implications for risk management: Effectiveness depends not merely on ex ante risk allocation but on institutional capacity to renegotiate contractual terms.

A second theoretical strand emphasizes institutional complementarities between public and private sector capabilities. Mazher et al. frame this as value-for-money: PPP are justified when private sector risk management capacity outweighs the higher cost of private capital [10]. Biygautane et al. caution against treating PPP as monolithic, emphasizing the importance of contextual factors including legal traditions and bureaucratic capacity [11].

The risk allocation literature, synthesized by Jiang et al.,

holds that risks should be allocated to the party best positioned to manage them [12]. Construction risk should reside with contractors who can influence project delivery; demand risk should be borne by private partners who can invest in service quality; political risk should be retained by the public sector.

Financing risks in infrastructure projects

Currency risk occupies a central position in cross-border infrastructure finance. When projects generate revenue in local currency but carry hard currency debt, exchange rate fluctuations can undermine viability. Bisbey et al. examine mechanisms for managing currency risk, including indexed tariffs, currency hedging, and multilateral guarantee facilities [13].

Political risk encompasses expropriation, breach of contract, currency inconvertibility, and regulatory instability. Cannizzaro emphasizes that political risk is fundamentally a function of institutional quality, with stable regulatory frameworks reducing arbitrary state action [14].

Completion risk, cost overruns and delays are pervasive. Flyvbjerg's research reveals systematic optimism bias in feasibility studies, with cost overruns averaging 50.0% for rail projects [15]. Cross-border projects face additional coordination challenges across sovereign jurisdictions.

Demand risk, uncertainty surrounding future usage has generated extensive debate. Empirical literature suggests demand forecasts for transport infrastructure are systematically overoptimistic.

The belt and road initiative and cross-border infrastructure financing

BRI literature has grown exponentially. Early assessments by Zhang raised concerns about debt sustainability [16]. Subsequent research by Mobley emphasizes heterogeneity in Chinese lending terms [17]. Humphrey & Michaelowa argue Chinese lending practices are more complex than either "debt trap" or "win-win" narratives suggest [18].

A distinct strand examines BRI governance arrangements. Zhou et al. argue that the absence of standardized contracting frameworks increases transaction costs [19]. Chu and Muneeza examine the PPP adoption in BRI transport projects, finding PPP more common in countries with well-established legal frameworks globally [20]. Andrić et al. focus on risk allocation in BRI PPP, identifying currency and political risks as primary obstacles [21].

As of 2025, China and Kazakhstan have jointly promoted over 220 investment projects with a total potential investment scale of over $66 billion, covering transportation, energy, logistics and other key fields. The following figure shows the investment scale of several landmark cross-border infrastructure projects.

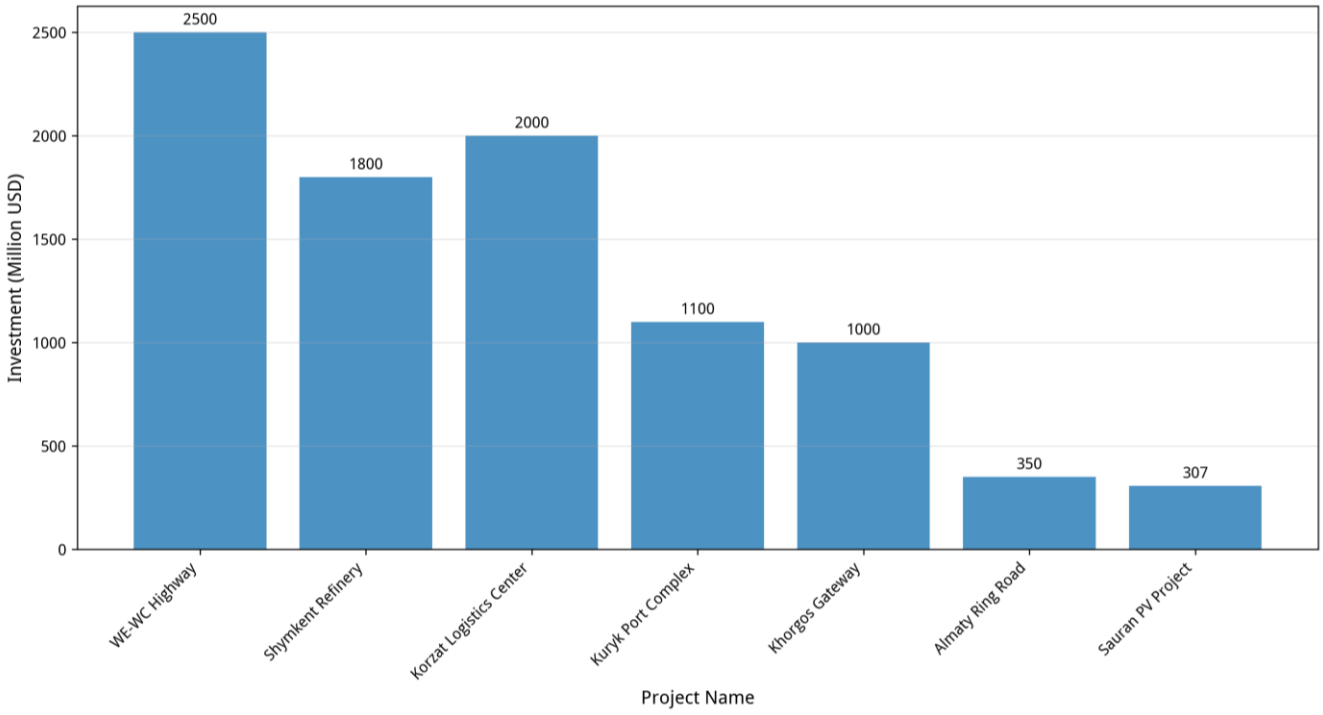

Figure 1. Investment scale of major China-Kazakhstan cross-border infrastructure projects (Unit: million USD).

Among these projects, the Khorgos Gateway, as the core hub of the corridor, has achieved rapid growth in logistics capacity. The following Figure 2 reflects the annual container throughput growth of the dry port, which directly reflects the current development status of the cross-border logistics corridor.

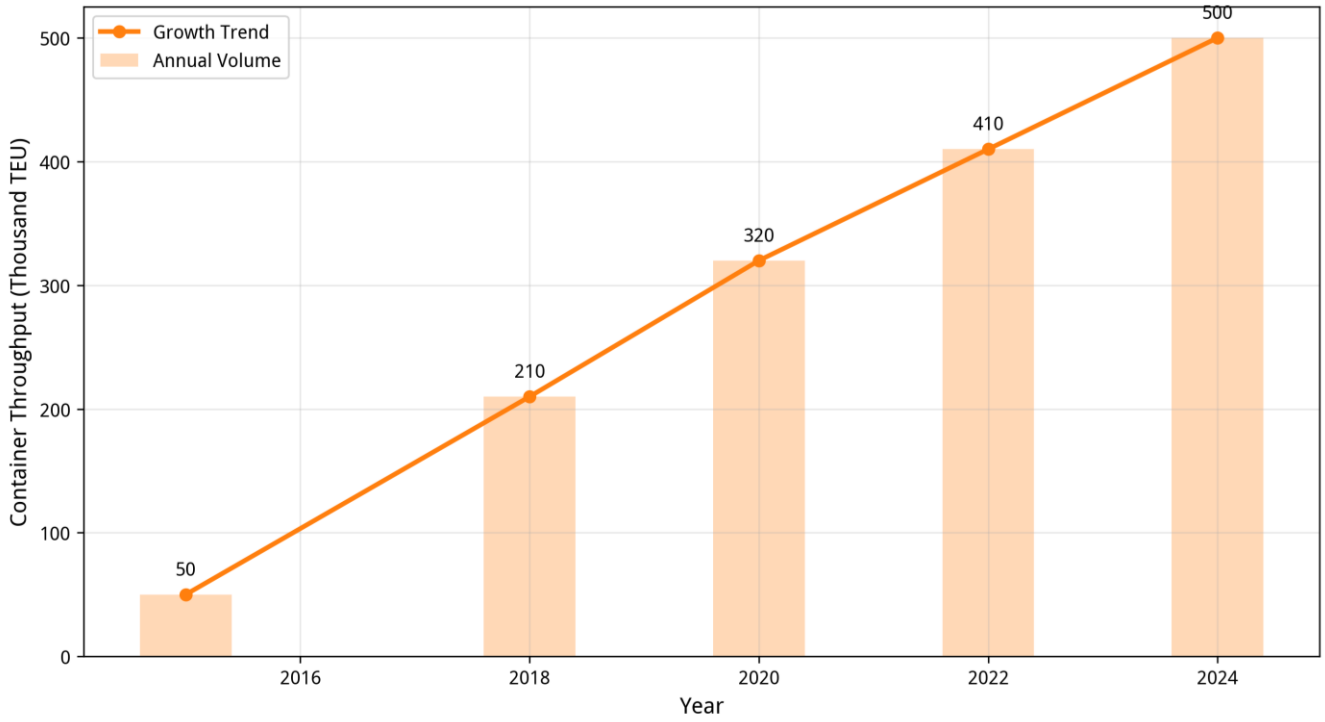

Figure 2. 2015-2024 Annual container throughput growth of Khorgos Gateway (Status Chart, Unit: thousand TEU).

Analysis of PPPs in China-Kazakhstan BRI infrastructure projects

PPP models and structures

Three ideal-typical PPP models can be identified along the corridor. The concession model has been employed in transport projects. The Western Europe across Western China highway involves concession arrangements for corridor segments, with private operators responsible for maintenance and toll collection. However, financing remains heavily reliant on public sources.

From the perspective of capital sources, the current financing structure of cross-border projects presents a pattern of "policy banks as the mainstay, multilateral institutions as the supplement, and commercial capital as the auxiliary". The following Figure 3 shows the specific proportion of financing sources.

Chinese policy banks account for the largest share at 60.0%, underscoring the dominant role of state-led financing in the corridor's infrastructure development. Multilateral development banks and commercial banks contribute 25.0% and 10.0% respectively, while private/enterprise equity holds a mere 5.0%, indicating limited private capital participation despite the PPP framework.

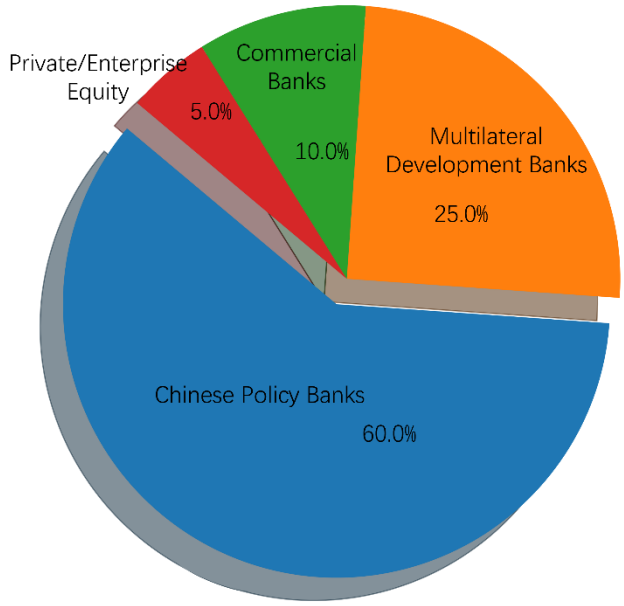

Figure 3. Financing source structure of China-Kazakhstan infrastructure projects.

Based on the empirical analysis of existing projects, we have identified four core financing risks, and their distribution and impact weights are shown in the following Figure 4.

Currency risk emerges as the most prominent challenge, accounting for 35.0% of total financing risk, closely

followed by political risk at 28.0%, reflecting the heightened sensitivity of cross-border projects to exchange rate fluctuations and regulatory instability. Completion risk and demand risk account for 22.0% and 15.0% respectively, indicating that construction delays and underutilized operational capacity also pose material threats to the financial viability of infrastructure investments along the corridor.

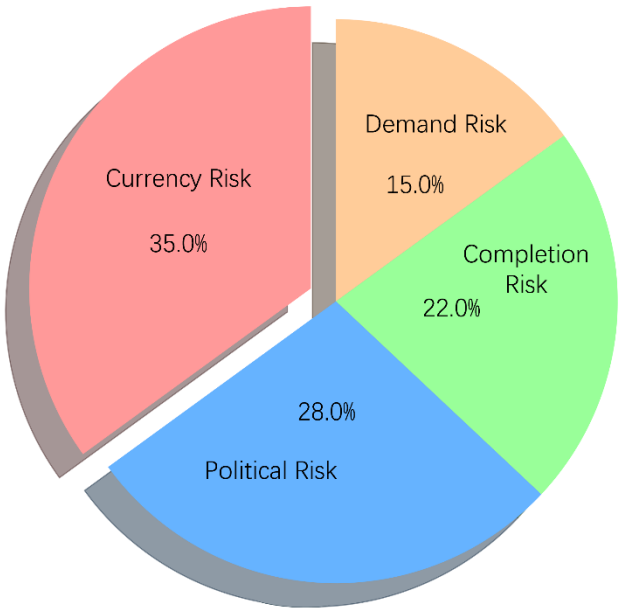

Figure 4. Distribution of financing risks in cross-border infrastructure projects

The Build-Operate-Transfer (BOT) model has been employed for energy projects. The Shymkent oil refinery modernization involved a Chinese consortium financing the upgrade in exchange for operational rights and revenue share over a defined period. This structure reflects a pragmatic division of roles: The consortium brings technical expertise and financing; the Kazakhstani state provides the asset and regulatory approval.

The infrastructure-as-service model has emerged in logistics facilities, particularly at Khorgos Gateway. The dry port operates under a joint venture involving Chinese and Kazakhstani state-owned enterprises - China Ocean Shipping (Group) Company (COSCO) and Kazakhstan Railways - with operational management outsourced to private firms. Its financing structure combines equity contributions from state partners with debt financing provided by multilateral development banks.

These models share common characteristics: Private participants are predominantly Chinese state-owned enterprises rather than conventional private firms; financing includes substantial concessional loans from Chinese policy banks with procurement requirements favoring Chinese contractors; PPP arrangements are embedded in bilateral governmental frameworks.

To address the aforementioned complex cross-border financing risks, the PPP framework has formed a highly targeted risk allocation and mitigation mechanism, with different risks being borne by the most capable relevant participating parties. The specific operational mechanism is summarized in the following table.

Table 1. Risk allocation and mitigation mechanisms in PPP projects.

Risk type	Responsible party	Core mitigation mechanisms
Currency risk	Public-private shared	Tariff indexation, tenge-denominated financing, RMB pricing mechanism, cross-border RMB settlement
Political risk	Public sector + MDBs	Stabilization clauses, Political risk insurance, AIFC international arbitration, MIGA guarantees
Completion risk	Private contractor + SOEs	EPC turnkey contracting, Intergovernmental coordination, Government completion guarantees
Demand risk	Hybrid public-private Sharing	Traffic volume guarantees, tiered subsidy mechanism, long-term off-take agreements

Identification and assessment of financing risks

Currency risk has proven the most pervasive challenge. The tenge's 2015 devaluation produced a 30.0% immediate decline against the dollar. Projects carrying dollar-denominated debt faced severe balance sheet pressure. The Khorgos Gateway required capital injections from state-owned partners to maintain solvency. Mitigation has included revenue-sharing mechanisms adjusting tariffs to exchange rate movements and, increasingly, tenge-denominated financing from Chinese lenders.

Political risk, manifests through regulatory instability. The 2022 unrest in Kazakhstan illustrated potential for disruption, though infrastructure impacts were contained.

More consequential has been contractual repudiation risk. The AIFC's establishment in 2018 introduced a common law framework with British judges for commercial dispute resolution - substantially reducing jurisdictional uncertainty.

Completion risk has affected several projects. The Khorgos Gateway experienced delays in commissioning customs facilities on the Chinese side, limiting cross-border traffic processing. These delays reflect coordination challenges across two sovereign jurisdictions.

Demand risk varies by project type. Transport infrastructure has generally underperformed initial projections. Energy projects have faced less demand risk, with pipelines operating at contracted utilization rates. Logistics facilities have benefited from e-commerce growth.

Risk allocation and mitigation strategies

Currency risk allocation has been addressed through revenue indexing: Several PPP contracts adjust tariffs or service fees in proportion to exchange rate movements. While effective in principle, tariff adjustments require regulatory approval. An alternative has been tenge-denominated financing tranches from Chinese lenders, facilitated by multilateral development banks.

Political risk mitigation has pursued multiple channels. Stabilization clauses protect investors against adverse changes in law. The AIFC provides enforcement channels independent of Kazakhstan's domestic judiciary. Multilateral political risk insurance from MIGA and the Asian Development Bank has increased, though remaining underutilized relative to investment scale.

Completion risk allocation reflects distinctive capabilities. Under standard PPP contracts, construction risk is allocated to private partners. However, primary contractors are Chinese State-Owned Enterprises (SOEs) with government backing, reducing default risk but also reducing cost discipline incentives. Intergovernmental coordination mechanisms address cross-border coordination failures.

Demand risk management employs hybrid structures: Private partners bear a portion of demand risk, while public sector provides guarantees or subsidies covering gaps between actual and projected demand. This reflects recognition that demand for cross-border infrastructure is influenced by factors beyond private operator control.

The role of key stakeholders

Chinese state-owned enterprises, occupy a central position. They bring substantial resources and expertise. Their status as state-owned entities introduce distinctive incentives: Profit maximization is balanced against strategic objectives, including advancing Chinese foreign policy interests. This hybrid orientation affects risk management - SOE may accept higher risks than commercial firms would tolerate.

Kazakhstan public sector institutions, serve as project sponsors, regulators, and contracting partners. Effectiveness in PPP risk management has been variable, reflecting differences in technical capacity and political influence. Capacity-building efforts supported by multilateral banks have strengthened expertise, though personnel turnover remains challenging.

Multilateral development banks, EBRD, AIIB, World Bank, play critical risk management roles. Their due diligence ensures international standards; their co-financing reduces exposure of any single lender; their presence provides political insurance.

International financial institutions have played growing roles. Chinese export credit agencies provide insurance. Commercial banks participate in syndicated facilities. Institutional investors represent potential long-term capital sources but remain limited by absence of investment-grade infrastructure bonds.

Challenges and opportunities for optimized PPP application

Key challenges

Institutional fragmentation represents the most fundamental challenge. The corridor involves two sovereign jurisdictions with distinct legal systems and regulatory frameworks. Coordinating PPP contracts across this divide requires choice of law provisions, dispute resolution forums, and intergovernmental committees - adding complexity and transaction costs.

Regulatory uncertainty compounds fragmentation. Kazakhstan's PPP legal framework has evolved rapidly, with successive reforms modifying procurement procedures. While the trajectory has been toward international standards, the pace of change introduces uncertainty. The AIFC provides a stable anchor, but its jurisdiction must be explicitly incorporated - a step many sponsors have been reluctant to take.

Financing constraints, limiting private capital mobilization. The scale of investment exceeds commercial capacity. Chinese policy banks have filled gaps, but their involvement comes with conditions - procurement preferences for Chinese contractors - that reduce scope for genuine public-private partnerships.

Capacity constraints affect both public and private participants. Kazakhstan public sector capacity for negotiating and monitoring PPP contracts remains uneven. Domestic private firms with infrastructure PPP experience are limited, while international firms may be deterred by project complexity.

Opportunities for enhancement

Standardization of PPP frameworks offers a pathway to reduce transaction costs. Model PPP contract templates tailored to cross-border infrastructure - incorporating standardized provisions for risk allocation, dispute resolution, and regulatory adjustment - could reduce bespoke negotiations. AIFC provides a platform for developing such templates.

Integration of multilateral risk mitigation instruments could expand private participation. Existing mechanisms - MIGA political risk insurance, EBRD project preparation facilities - have been underutilized. Systematic integration into PPP structures could reduce investor risk exposure.

Harmonization of cross-border regulatory frameworks could address institutional fragmentation. Targeted agreements on customs procedures, vehicle standards, and professional qualifications could reduce coordination costs. Existing bilateral agreements provide a foundation for extension to PPP-specific issues.

Building capacity for public sector oversight could improve contract quality. Sustained investment in training, retention, and institutional support for PPP units would enable better negotiation, monitoring, and enforcement. Multilateral banks could expand their capacity-building role.

Conclusion

Summary of findings

PPP arrangements along the China-Kazakhstan corridor are hybrid structures blending concession contracts, BOT models, and infrastructure-as-service joint ventures. These reflect the distinctive institutional landscape of cross-border infrastructure, Chinese infrastructure finance characteristics, and Kazakhstan's evolving PPP framework. Chinese SOE involvement blurs public-private boundaries but provides access to financing and expertise.

Financing risks - currency, political, completion, demand - have been managed through contractual provisions, financial instruments, and institutional innovations. Currency risk has been addressed through revenue indexing and local currency financing. Political risk has been mitigated through stabilization clauses, AIFC mechanisms, and political risk insurance. Completion risk has been managed through SOE involvement and intergovernmental coordination. Demand risk has been addressed through hybrid public-private sharing.

PPP effectiveness depends critically on institutional factors extending beyond individual contracts. Kazakhstan's PPP legal framework development, AIFC establishment, and multilateral bank involvement have substantially improved the enabling environment. Persistent challenges include institutional fragmentation, regulatory uncertainty, financing constraints, and capacity limitations.

The corridor experience suggests PPP can contribute to financing risk management even without textbook conditions - robust domestic capital markets, experienced private partners, stable regulatory frameworks. Pragmatic adaptation to specific institutional contexts has enabled infrastructure development that would otherwise have been infeasible.

Policy recommendations

For the Government of Kazakhstan, strengthening institutional framework, by establishing a dedicated unit for cross-border PPP with responsibility for developing standardized contract templates and maintaining project documentation. Expanding AIFC utilization by requiring cross-border PPP contracts is subject to AIFC jurisdiction, providing technical assistance on AIFC procedures to reduce political risk and financing costs. Invest in public sector capacity through sustained training programs, competitive compensation, and retention incentives to reduce personnel turnover. Developing bankable project pipelines with standardized documentation, pre-feasibility studies, and streamlined approval processes to attract broader investor participation.

For Chinese Stakeholders, Integrating PPP principles into SOE practices by developing internal guidelines for

risk allocation, contracting management, and stakeholder engagement reflecting international standards. Expanding local currency financing for BRI projects, drawing on Chinese policy bank capacity to extend tenge-denominated loans and reduce currency mismatch. Engaging systematically with multilateral banks as co-financiers and risk management partners from earliest project stages to improve project quality.

For Multilateral Development Banks, Expanding advisory support for PPP development in Kazakhstan, with particular focus on cross-border projects, deploying expertise in project preparation and capacity building. Developing specialized risk mitigation products for cross-border infrastructure, including currency hedging facilities and political risk insurance tailored to cross-border contexts. Facilitating knowledge sharing between Kazakhstan and other countries with cross-border PPP experience to provide valuable lessons.

For All Stakeholders, Establishing permanent PPP coordination forum to address institutional fragmentation, develop standardized documentation, coordinate regulatory approaches, and resolve disputes. Developing phased risk transfer framework that aligns risk allocation with project evolution from construction through operation to long-term maturity. Commit to transparency through publication of contract summaries, performance data, and evaluation reports to reduce information asymmetries. Integrating environmental and social risk management into PPP frameworks, recognizing that environmental and social performance affects regulatory stability. Developing long-term corridor vision enabling portfolio aggregation that supports sophisticated financing structures and reduces transaction costs.

The China-Kazakhstan infrastructure corridor represents a laboratory for cross-border PPP development. Pragmatic adaptation to the specific institutional context has enabled capital mobilization and risk management. Building on this foundation, the recommendations advanced seek to strengthen institutional frameworks, expand private participation, and embed PPP more deeply into governance structures shaping the corridor's future development.

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Conflict of Interest

The author declares no conflict of interest.

References

[1] Pantin, V. I. (2022) The ideological foundations of Eurasian economic integration. *Vestnik RUDN. International Relations*, 22(1), 17-29.

[2] Svetlana, G. (2020) China-Kazakhstan economic cooperation and one belt one road construction. *Science Review*, 3(30), 42-49.

[3] Zabielska, I. (2020) Cooperation, partnership and integration in the cross-border area: the role of borders and cross-border cooperation. *Ekonomia i Prawo. Economics and Law*, 19(3), 569-583.

[4] Yermekbayev, A., Sarybayev, M., Suriguga, C. (2022) China-Kazakhstan strategic partnership and bilateral economic cooperation. *Journal of Central Asian Studies*, 85(1), 18-27.

[5] Hrytsenko, L., Boiarko, I., Tverezovska, O., Polcyn, J., Miskiewicz, R. (2021) Risk-management of public-private partnership innovation projects. *Marketing and Management of Innovations*, (2), 155-165.

[6] Li, H., Su, L., Zuo, J., Zhao, X., Chang, R., Wang, F. (2022) Incentive mechanism for performance-based payment of infrastructure PPP projects: Coupling of reputation and ratchet effects. *International Journal of Strategic Property Management*, 26(1), 35-55.

[7] Kembayev, Z. (2020) Development of China-Kazakhstan cooperation: Building the silk road of the twenty-first century? *Problems of Post-Communism*, 67(3), 204-216.

[8] Dewulf, G., Garvin, M. J. (2020) Responsive governance in PPP projects to manage uncertainty. *Construction Management and Economics*, 38(4), 383-397.

[9] Zhang, Y., Tsai, C. H., Liao, P. C. (2020) Rethinking risk propagation mechanism in public-private partnership projects: Network perspective. *Journal of Infrastructure Systems*, 26(2), 04020011.

[10] Mazher, K. M., Chan, A. P., Choudhry, R. M., Zahoor, H., Edwards, D. J., Ghaithan, A. M., Mohammed, A., Aziz, M. (2022) Identifying measures of effective risk management for public-private partnership infrastructure projects in developing countries. *Sustainability*, 14(21), 14149.

[11] Biygautane, M., Clegg, S., Al-Yahya, K. (2020) Institutional work and infrastructure public-private partnerships (PPPs): the roles of religious symbolic work and power in implementing PPP projects. *Accounting, Auditing & Accountability Journal*, 33(5), 1077-1112.

[12] Jiang, W., Jiang, J., Martek, I., Jiang, W. (2025) Critical risk management strategies for the operation of public-private partnerships: a vulnerability perspective of infrastructure projects. *Engineering, Construction and Architectural Management*, 32(7), 4771-4795.

[13] Bisbey, J., Li, L., Gu, Q., Chu, C. Y. (2020) Attracting private financing in cross-border infrastructure investments. *Journal of Infrastructure, Policy and Development*, 4(2), 180-216.

[14] Cannizzaro, A. P. (2020) Social influence and MNE strategic response to political risk. *Journal of International Business Studies*, 51(5), 829-850.

[15] Flyvbjerg, B. (2014) What you should know about megaprojects and why: an overview. *Project Management Journal*, *45*(2), 6-19.

[16] Zhang, H., Jiang, Y., Hou, C. (2024) How does the “Belt and Road” initiative affect debt sustainability? *Sustainability*, 16(23), 10512.

[17] Mobley, T. (2019) The belt and road initiative. *Strategic Studies Quarterly*, 13(3), 52-72.

[18] Humphrey, C., Michaelowa, K. (2019) China in Africa: competition for traditional development finance institutions? *World Development*, 120, 15-28.

[19] Zhou, S., Wang, Y., Luo, P. (2023) Does the Belt and Road Initiative (BRI) improve environmental quality of BRI countries? Evidence from a quasi-natural experiment. *Applied Economics*, 55(60), 7094-7110.

[20] Chu, J., Muneeza, A. (2019) Belt and road initiative and Islamic financing: the case in public private partnership infrastructure financing. *International Journal of Management and Applied Research*, 6(1), 24-40.

[21] Andrić, J. M., Wang, J., Zou, P. X., Zhang, J., Zhong, R. (2019) Fuzzy logic-based method for risk assessment of belt and road infrastructure projects. *Journal of Construction Engineering and Management*, 145(12), 04019082.