

India's PPP journey and the road ahead



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As infrastructure spending accelerates, public-private partnerships will drive growth and jobs only if risks are allocated and managed prudently

INFRASTRUCTURE INVESTMENTS ARE not only a prime driver of future GDP growth, but also generators of significant rural employment. A recent Morgan Stanley report estimates a total investment of around \$1.5 trillion (₹130 lakh crores) in the infrastructure space over 2024-2029. Prime Minister Narendra Modi has also reiterated the criticality of a strong infrastructure backbone towards the realisation of our *Viksit Bharat 2047* goal. During the last decade or so, there has been a significant thrust in using the Public Private Partnership (PPP) business model in the infrastructure space as it eases fiscal constraints that governments face while also delivering the private sector's managerial efficiency and customer service.

However, ill-designed infrastructure investments are a recipe for future crisis. Below, we outline a set of recent policy reforms that have sought to mitigate many of these risks by facilitating optimal risk allocation, improving administrative efficacy, fostering greater capital formation for infrastructure investments and effectively leveraging technology.

Acquisition of land and obtaining environmental clearances are challenging in the Indian ecosystem where interests of diverse stakeholders must be delicately balanced. However, recent modifications in model PPP concession agreements place the onus of obtaining these approvals on the government, the entity most suited for managing this approval risk. As these approvals are specified as conditions precedent, the private sponsor is shielded from this risk.

Uncertainty in demand for infrastructure services creates another challenge. Bidders often overestimate demand and

bid aggressively leading to unsustainable high debt levels. Conversely, underestimating demand leads to windfall gains for the concessionaire, which raises doubts about the propriety of the bidding process. This leads to popular demands for ex-post renegotiation, which deters high-quality sponsors from bidding for future projects. In either case, society bears the cost.

Several contractual innovations have been developed to overcome these challenges. For example, the BOT-Annuity model assigns the responsibility of financing, development and operations of the project with the private sponsor in return for fixed annuity payments. The govern-

ment collects the revenues from the users, shielding the sponsor from demand risk. The annuity structure acts as a lever for ensuring quality of operations and maintenance activities by the sponsor. The hybrid annuity model (HAM) reduces the financial burden on the sponsor as the development cost is shared with the government (typically 60:40). An additional contractual feature is to adjust the concession period based on traffic realisation. Specifically, if actual traffic exceeds expectations, the concession period is reduced and vice versa. Similarly, in the airports space, user-tariffs are periodically revised upward or downward based on past revenue realisations.

Another policy reform adopted is the refinement of the bidding process for airports, where the parameter has been modified from revenue share percentage to

premium per passenger. This arrangement mitigates ex-post disputes between the regulator and the concessionaire, as monitoring revenue is complex whereas passenger data is fully transparent. This encourages greater participation by high quality sponsors who might have been deterred by the regulatory risk associated with potential ambiguity in interpretation of realised revenue, subject to accounting discretion.

Advances in technology have also enabled greater transparency in the development and operation of infrastructure projects. FASTag adoption provides better estimates of traffic at toll-roads. Installa-

tion of 48 million smart meters has improved billing efficiency and reduced electricity theft. Usage of technology-based dashboards, satellite imagery, and drone-based surveillance has improved real-time monitoring, resulting in fewer delays and cost-

overruns. This reduced information asymmetry has enhanced the bankability of infrastructure projects.

Alongside, creation of Infrastructure Investment Trusts (InvITs) has expanded the capital pool. For sponsors, InvITs mitigate the financing challenge as they free up capital for future investments through sale of steady cashflow generating projects to an InvIT. For investors, InvITs provide a structured way for generating stable, predictable returns. A recent Knight Frank study highlights that InvITs in India have generated 16.5% returns for investors and expect the total assets under man-

agement for InvITs to increase from \$73 billion in 2025 to \$258 billion by 2030.

PM GatiShakti seeks to reduce red-tape through timely approvals, early detection of conflicts, and improved overall coordination. For example, in the Joghghopa Multimodal Logistic Park project in Assam, this initiative brought together waterways, railways, roads, logistics, and state agencies onto a single digital planning platform, reducing frictions in project execution.

However, a fair bit of ground still needs to be covered—a key area being dispute resolution. Given the long-term nature of infrastructure projects, disagreements are inevitable. Therefore, a time-bound and effective dispute resolution mechanism becomes critical. Further, the viability of setting up specialised courts for resolving disputes related to infrastructure projects like the Technology and Construction Court in the UK can be considered.

Another aspect that limits capital formation in infrastructure is regulatory uncertainty faced by investors due to the risk of ex-post invalidation of contractual terms due to an adverse or favourable shock. A feasible solution is to borrow from finance literature to incorporate ex-ante option-like features in contracts, so that the effects of such extreme events are transparently shared among parties. Innovative use of technology such as smart pricing of infrastructure services based on real-time usage data can enhance contracting clarity. While contract design can provide some flexibility for renegotiation, maintaining contractual sanctity gives greater confidence to investors, driving greater ex-ante participation.

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