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- Risk Management in Infrastructure
Financing involving Public Private

## ABSTRACT

Partnerships [PPPs]

Industrial development has predominantly been an issue of strategic importance to the economies of the developing and under-developed countries. Therefore, infrastructure projects are crucial to the developing countries. There has been increasing trend of involving PPPs in various infrastructure sectors like energy and power, communication, transport and water sectors that were earlier in the domain of public sector.

PPP infrastructure project typically comprises development, construction and operation phases and in each phase faces several risks throughout the project period. Further, PPP infrastructure projects need large sunk funds, which take long period to recoup. Therefore, effective risk management is the primary concern for both the public and private sector partners in setting up any PPP infrastructure project.

The major objectives of this research are to assess the present models and options of PPPs in infrastructure project financing practiced in India, examine current organizational practices and strategies for risk management in infrastructure project financing involving PPPs and identify the parameters for structuring the sustainable PPP arrangements in infrastructure projects. This research also endeavors to explore an effective risk management approach to optimize infrastructure project financing involving PPPs.

The sample universe for the study comprised of the senior executives from the banks and financial corporations in India engaged in PPP infrastructure project financing. The sample size was fixed as 192 and research study was conducted in India. To further develop a robust opinion, Kendall's concordance analysis was conducted to measure the agreement of different respondents. ANOVA and Cluster Analysis were conducted to analyze the risk perception of the PPP financing institutions. Quantitative and qualitative data were analyzed using SYSTAT 12.0 and UNISTAT 6.0 windows version.

The survey results reveal the general practices and strategies adopted by the banks and financial institutions for risk management in infrastructure project financing involving PPPs. The major findings of the research work are:

- The enhancement of private participation in infrastructure project financing contributes to reduction in the resource gap between infrastructure requirement and available financial resources.
- The banks and financial institutions in India are using modern tools & techniques of risk management in infrastructure project financing.
- The risk perception in PPP infrastructure project financing varies across public sector lenders and private sector lenders.
- Integrated risk management approach can enhance the effectiveness of risk management programs in PPP infrastructure project financing.
- Audits, physical inspection and Past organizational experience are frequently used for identifying risks.
- PPP model is successful in PPP infrastructure project financing.

Based on the research findings, the study attempts to develop an optimal approach for structuring the sustainable PPP arrangements. A risk matrix has been suggested for effective risk management mechanism, in order to achieve a successful PPP infrastructure project financing. Further insights into the problem of risk management can be built if the perception of the borrowers is also analysed.

To conclude, the thesis is organized into twelve chapters. The list of chapters include: Introduction, PPP Structures and Models, Viability and Feasibility Assessment of PPP Infrastructure Projects, PPP Infrastructure Project Finance Sources, Role and Support of Government in PPP Infrastructure Projects, The Role of PPPs in Meeting India's Infrastructure Challenges, Risk Management Framework in PPP Infrastructure Project Financing, Literature Review, PPP Case Studies, Research Methodology, PPP Project Financiers' Risk Perception Analysis; and Suggestive Risk Matrix and Conclusions.