Risk Management in PPP Project at Construction Companies in India

Nihit Chandra Srivastava
M. Tech Scholar
Department of Civil Engineering
Sam Higginbottom Institute of Agriculture, Technology & Sciences Allahabad, India

Alvin Harison
Assistant Professor
Department of Civil Engineering
Sam Higginbottom Institute of Agriculture, Technology & Sciences Allahabad, India

Abstract

Construction projects are experiencing several problems, these are related to non-standard demonstrate financing in country. During and after modulation period, unexploited duration, insufficient but before all obsolete public private partnership project in India became an requisite problem for further development of main economic resources like as (transportation resources, agriculture resources, mining resources, tourism resources etc.). The Public project partnership network is requirement for the development of different sphere (gumption, agriculture area, industry and commerce etc.). The risk analysis of potential elements, throughout the processes from command to operational public private partnership projects, is one of the most important elements to expand profit and functionality in Indian industries or firms, and the educated country infrastructure construction and public private partnership, while solving potential problems that may create. Much of the risk of a PPP project creates from the complexity of financing, taxation, law regulative, acquired technical certification and construction process involved in a major construction venture. Main risks, their study and management on public private partnership projects are elaborate in this paper. After risk analysis, risk management model are represent for solving risks on PPP projects in India. To investigate critical risks associated with Build Operate Transfer projects in India is main purpose of this paper.

Keywords: Public private partnership, Management system, Project financing

I. INTRODUCTION

In its public/private partnership (PPP) may be distinguish as “a semi-permanent relationship between private sphere and public sphere that has the aim of producing public sector services and its construction infrastructure”. Public/private partnerships add public sectors and private sectors together in long term contracts system. PPPs (public/private partnership) embrace voluntary concord and understandings, the service-level agreements techniques, outsourcing and private finance initiative methods. A Public Private Partnership projects therefore usually include the deliverance of a traditional public sector service and can embrace a wide range of steps. General we make idea of that concept is to marshal to proper use private sector capital to generate economic development plan, and to segment value for money to the public sector concept, and the higher amount costs of private sector financing system and the level of returns value demanded by the private sector investors must be outweighed by the help of lower whole-life costs method and increased risk transfer system. One of the important goals is to be established construction infrastructure projects including roads construction project, hospitals construction project and schools project, without the response to the use limited capital of the public sector and exercising superior cash money and the project management capacity for the private sector. As the growth in infrastructure has great wallop on the development of whole economic condition of the country, the main cause for the delayed development of Indian economy is many delayed projects and unfinished infrastructure construction projects.

II. LITERATURE REVIEW

In this association the following literature has been reviewed, Merna and Smith, Songer et al, Shou Qing Wang and Yongjian Ke [1] has centralized on how risks should be appraised and allocated for Public Private Partnership (PPP) projects in India in his paper titled, risk management in Public-Private Partnership Projects at construction firms in India. It also attends in risk response planning and control for future PPP project in India, Tam and Leung, Salzmann and Mohamed Salzmann and Mohamed. Has centralized on study of build-operate-transfer (BOT) project financing system strategies from the position of project sponsors in his paper titled, and the Alternate Financing Strategies way for Build-Operate-Transfer Projects. This paper shows the construction financing strategy for a BOT project and also includes the selection of the pertinent mix of equity and debt financing system, and the identification of advantageous financing.

Ghosh and Jintanapakanont, Dr. Pimplikar.S.S [3] has centralized on the parameter investment value will be day by day increased when treatment is approximate done on risk. his paper has to be appraise and also calculated the determine of the identified risk towards the project feasibility. Also, risks that overshadow and hidden work of the construction project have to be calculated as an influential factor towards the failure of a project. This paper looks into to know the feasibility of project
investment way by calculating the risk factors and also its treatment. The author used to Risk probability matrix method to obtain the risk priority and segment, which then continued with construction financial analysis for the feasibility bailiwick and also sensitivity analysis. Sachs et al, V. Carr. Has centralized on a limited methodology for construction project

III. OBJECTIVE

The objectives of this paper are as following points:
- To identify and evaluate the risks in BOT construction projects.
- To examine the critical risks associated with India’s BOT construction projects at firms.

IV. PICTORIAL REPRESENTATION OF RISK MANAGEMENT SYSTEM

The process of risk management is broken down into the risk management system in figure 1, which shows the sequence for dealing with risk. Naturally, the risk management system must be applied to each option under consideration. Generally, the stages are:

Fig. 1: Risk Management System analysis

V. METHOD

The methodology developed for this study includes (1) a comprehensive literature review together with some case studies to identify initial lists of risks associated with BOT projects in different infrastructural sectors and generally available mitigating measures for these risks; (2) unstructured interviews and discussions to filter the risks and measures identified in Step 1; and (3) an international survey to evaluate the criticality of these risks and the effectiveness of corresponding mitigating measures.

The project survey rating of risk cruciality and mitigation quantify effectiveness the steps of the criticality of risk are a more complex subject concealed in incertitude and vagueness. The obscure terms are unavoidable because it is very easy way for project managers to access the risks in qualitative linguistic terms. To improve the precision and reliability of survey best replies, a six-degree rating analysis system for the criticality of risk and the potency of mitigation absorbs have been adopted. (Six Degree of rating analysis system is a concept used by observer Dan Armstrong in his article “Six Degrees of Project Management system”) as shown in Table 1.

<table>
<thead>
<tr>
<th>Ratings</th>
<th>Risk criticality</th>
<th>Mitigation measure effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>N.A</td>
<td>N.A</td>
</tr>
<tr>
<td>B</td>
<td>Not at all critical</td>
<td>Not at all effective</td>
</tr>
<tr>
<td>C</td>
<td>Only slightly critical</td>
<td>Only slightly effective</td>
</tr>
<tr>
<td>D</td>
<td>Critical</td>
<td>Effective</td>
</tr>
<tr>
<td>E</td>
<td>Very critical</td>
<td>Very effective</td>
</tr>
<tr>
<td>F</td>
<td>Very much critical</td>
<td>Very much effective</td>
</tr>
</tbody>
</table>

Data collection the project Survey is mainly centralized on construction Infrastructure sector of India and it focused following industries.

A. Toll Road Projects Type:

The answer, who was asked various types questions referring to various risks they faced during project running to commissioning steps of construction Infrastructure projects.

1) Risk Management Framework for Bot Infrastructure

A risk management framework for investing in India’s future BOT construction projects can be projected as follows.
1) Step 1: List all risks associated with the projected BOT construction project and then analyze these risks in special order of segment. The more critical type of the risk, the more attention should be paid to it easily.

2) Step 2: For considering each risk, list corresponding mitigation counts as more as possible, and then evaluate the availability of mitigating determines in sequence based on their strength. The more effective they consider, the higher the priority for adoption. Sometimes, a good combination of several mitigating observes is needed to be adopted.

3) Step 3: For each risk factors and its mitigating measures, bargaining with Indian government and germane entities to corporate and incorporate the risk mitigation measures, and fine tune the yielding agreement and other agreements as much as possible to secure that all of these risks are passably covered.

4) Step 4: apportion risks to linked parties according to the principle that risk should be obtained by the party most able of controlling it. An optimum allocation of risks depends on the relative negotiating power of the same parties and the capability of reward for taking the risks

5) Step 5: Adopt the critical risk allocation and its security structure and enter into big financing process for the construction project.

VI. CONCLUSION

The risk management model projected by this construction project will be very easier to apply than others. It unified the searching from this research and provides step-by-step rule of thumb for foreign companies who signify to invest in India’s infrastructure construction projects in the future. It also has the expected to help national, state, and city government also to consider their approach to and services in support of BOT construction infrastructure projects. It suggests that mechanisms techniques be reviewed to improve the communication system and good coordination connection between different levels of government, that thought be given to growing mechanisms techniques to coordinate actions by different type government agencies.

VII. FUTURE SCOPE

1) The present work is done on Public Private Partnership in infrastructure construction sectors of toll road project, industries construction project. Furthermore, it can be used in various departments of construction sectors of Indian Government like thermal Power plants, Aviation of industry, Telecommunication system, Social Infrastructure construction projects like Sewage treatment plant, refining Drinking water etc.

2) the overall Study carried out in this project work on the basis of using six degree rating system methodology does not deals with the conflict and arbitration in construction projects, but this method will not be simple it will be more effective and comprehensive if conflict and arbitration is taken into account system.

ACKNOWLEDGEMENT

I wish to express my thanks to assistant Professor ALVIN HARRISON (Advisor), for the input he has given his precious time during the preparation of this project work. I wish to express my sincerely thanks to Dr. V.C.AGARWAL, Civil Engineering, Head, Sam Higginsbottom agricultural university, ALLAHABAD, who contributed with segment supervision in thesis preparation and for helping me to do this dissertation work. I acknowledge with thanks to faculty, college teaching and non-teaching staff of the civil engineering department, Central library and Colleagues.

REFERENCES


