AN EVALUATION OF PUBLIC PRIVATE PARTNERSHIP FOR INFRASTRUCTURAL DEVELOPMENT WITH SPECIAL REFERENCE TO ROADS IN UTTAR PRADESH

SYNOPSIS

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1.0 INTRODUCTION

Government of India is committed to improving the level and the quality of economic and social infrastructure services across the country. In pursuance of this goal, the Government envisages a substantive role for Public Private Partnership (PPPs) as a means for harnessing private sector investment and operational efficiencies in the provision of public assets and services.

The term “public–private partnership” describes a range of possible relationships among public and private entities in the context of infrastructure and other services. Other terms used for this type of activity include private sector participation (PSP) and privatization.

Sectors in which PPPs have been included:

- Airports
- Education
- Health Care
- Ports
- Power
- Railways
- Road
- Tourism
- Urban Development

“Public Private Partnership means an arrangement between a government/statutory entity / government owned entity on one side and a private sector entity on the other, for the provision of public assets and/or public services, through investments being made and/or management being undertaken by the private sector entity, for a specified period of time, where there is well defined allocation of risk between the private sector and the public entity and the private entity receives performance linked payments that conform to specified and predetermined performance standards, measurable by the public entity or its representative.”

Essential conditions in the definition are as under:

1. **Arrangement with private sector entity:** The asset and/or service under the contractual arrangement will be provided by the Private Sector entity to the users. An entity that has a majority non-governmental ownership, i.e., 51 percent or more, is construed as a Private Sector entity.¹

¹ Draft National Public Private Partnership 2011
ii. Public asset or service for public benefit: The facilities/services being provided are traditionally provided by the Government, as a sovereign function, to the people. To better reflect this intent, two key concepts are elaborated below:

(a) Public Services are those services that the State is obligated to provide to its citizens or where the State has traditionally provided the services to its citizens.

(b) Public Asset is that asset the use of which is inextricably linked to the delivery of a Public Service, or, those assets that utilize or integrate sovereign assets to deliver Public Services. Ownership by Government need not necessarily imply that it is a PPP.

iii. Investments being made by and/or management undertaken by the private sector Entity: The arrangement could provide for financial investment and/or non-financial investment by the private sector; the intent of the arrangement is to harness the private sector efficiency in the delivery of quality services to the users.

iv. Operations or management for a specified period: The arrangement cannot be in perpetuity. After a pre-determined time period, the arrangement with the private sector entity comes to a closure.

v. Risk sharing with the private sector: Mere outsourcing contracts are not PPPs.

vi. Performance linked payments: The central focus is on performance and not merely provision of facility or service.

vii. Conformance to performance standards: The focus is on a strong element of service delivery aspect and compliance to pre-determined and measurable standards to be specified by the Sponsoring Authority.²

1.1 RATIONALE OF PUBLIC PRIVATE PARTNERSHIP

- A cooperative venture between the public and private sectors, built on the expertise of each partner that best meets clearly defined public need through the appropriate allocation of resources, risks and rewards.

² www.pppinindia.com
• In practice most governments adopt PPP principles as a matter of ideological persuasion; utilizing private sector expertise to lever greater efficiency and change management, then boost economic growth.
• The private sector is capable of bringing in new skills, more innovation and better management of risk to the implementation of public projects. With these possibilities, the benefits can outweigh the higher costs of PPP and therefore deliver better value. Private sector value is further driven by principles of market led contestability.
• For projects to be implemented via Public-Private Partnership (PPP) approach, the assessment methodology goes beyond needs analysis and economic viability of the projects. The recent global economic turbulence and financial crisis has generated challenges to PPP market mainly due to difficulties in financing.
• In Indian context, realizing that the share of private investment needed to increase manifold, the Government of India initiated a strategy for encouraging private investment in infrastructure through Public Private Partnerships (PPP).
• There is a well-established need for infrastructure investments in India. In recent years India’s economy has experienced a period of rapid economic growth, following steps toward economic liberalization made in 1991. In the Tenth Five Year Plan period (between 2002-03 and 2006-07), the average growth rate in India was 7.6 percent in comparison to 5.5 percent achieved in the Ninth Plan period of 1997-98 and 2001-02. The estimates in the Eleventh Five Year Plan’s (2007-2012) were for even higher growth at 9 percent.
• This level of growth necessitates rapid improvements and additions to the capacity of economic infrastructure. However, the ability of infrastructure to keep up with the economy’s fast expansion has been constrained by the availability of investment.³

1.2 ROLE OF PUBLIC PRIVATE PARTNERSHIP

The private partner in a PPP may be a private company, a corporation of private interests, or a non-governmental organization (NGO). Most often, a PPP project will comprise a public sector agency and a private sector consortium composed of contractors, maintenance companies, private investors, and consulting firms. The consortium will often bring into being a ‘special purpose vehicle’ (SPV) to contract with the public authority as well as with the subcontractors whose task it is to build and maintain the facility in question. The various parties and their respective roles in PPPs include:

• The Public agency: The role of the public body is to specify clearly the desired outcomes or outputs, and to avoid identifying a particular means of delivering these. If services are

³ Draft National Public Private Partnership 2011
delivered in accordance with the agency’s performance standards, they then pay the PPP provider.

• Service providers: Design, construction, operation and maintenance Private actors have a crucial role in developing innovative solutions in order to meet the requirements of the PPP in an effective and efficient manner.

• Private financiers: Equity investment and debt provision generally, the construction and operations companies which make up the service providers are also the equity investors. The PPP contract provides the sole source of revenue for the SPV and provided the latter meets the required standards, it will be paid by the public authority and so can service its debts.

• Consultants: Project advice both the public body and the private sector consortium may decide to engage technical, legal and financial consultants to assist in structuring the tender or composing a viable PPP proposal.

1.3 POLICY AND PROCEDURE

(a) For broad based and sustainable growth, the Government recognizes the need to engage with the private sector in diverse sectors through PPP frameworks. The Overarching objectives of such partnerships are:

i. Harness private sector efficiencies in asset creation, maintenance and service delivery;
ii. Provide focus on life cycle approach for development of a project, involving
iii. Asset creation and maintenance over its life cycle; Create opportunities to bring in innovation and technological improvements; and,
iv. Enable affordable and improved services to the users in a responsible and sustainable manner.

(b) The PPP would be developed keeping in mind the following broad principles:

i. Provide a fair and transparent framework to facilitate and encourage PPP mode of implementation for provision of public assets and/or related services.
ii. Ensure that the projects are planned, prioritized and managed to benefit the users and maximize stakeholders’ economic returns.
iii. Adopt an efficient, equitable, consistent, transparent and competitive process for selection of private partners, and ensure efficient governance over the project life cycle.4

4 ibid
iv. Protect the interests of end users, project affected persons, private and public sector entities and other stakeholders.

v. Encourage efficient delivery of public services by engaging proficient and innovative practices with the utilization of best available skills, knowledge & resources in the private sector.

vi. Achieve increased efficiency in the deployment of investments by setting out enabling frameworks for greater private sector participation in building future public assets and ensuring their long-term maintenance.

vii. Provide requisite provision in budgets for contingent liabilities for the sponsoring government, in various forms, such as, liabilities towards lenders in case of contract termination or minimum revenue guarantees.

(c) Recognizing the imperatives to accelerate the delivery of efficient Public Private Partnerships to achieve the overall development goals, the Government would develop programs, guidelines and practices based on the broad principles enumerated above and, if deemed necessary, introduce changes to legislation and business rules to optimally deliver public services. A few critical interventions envisaged are:

i. **Preferred PPP implementation models**
   The Government will formalize PPPs as the preferred implementation models, where adequate examples and a strong track record exist. Thus, wherever applicable, the Government will state the specific PPP model which will be used as an implementation priority. This will provide adequate clarity to Government entities and encourage them to adopt the identified PPP model as a priority.

ii. **Enhancing transparency in PPP projects**
    Ensuring transparency in Government processes is the topmost priority of the Government; PPP projects processes need to be transparent to retain the trust of the stakeholders. The Government has notified strong procedures that are to be adopted in the procurement of a PPP project. These ensure that a level playing platform is provided to all the bidders interested in the project. To further instil transparency, the Government will:
    o Publish separate mandatory disclosures and fair practices which all PPP projects should follow.
    o Set up a dedicated dispute resolution mechanism to address issues related to bidding and award of PPP projects.\(^5\)

\(^5\) ibid
o Develop new market based products, such as independent pre-bid rating, to assist investors in identifying well-structured PPP projects.

o Explore possibilities of setting up a web based PPP market place to transparently market upcoming and ongoing PPP opportunities.

iii. **PPP rules**

While structuring PPP projects, Government officers are required to exercise their judgment and take decisions that balance the interests of diverse stakeholders, including the interests of the Government. In order to guide the officers, the Government will publish defined set of PPP rules, including identification and procurement processes, critical clauses of a contract such as dispute resolution and arbitration, events of force-majeure and termination, monitoring of projects and management of contracts that will empower Government officers in project Structuring and decision making.

iv. **Auctioning**

In instances where PPP projects provide an implicit usage/ownership or exclusivity right over underlying natural resources, a process of market based price discovery of such natural resources would be the paramount consideration in PPP bidding and award. Alternatively, wherever the resources are provided for a specific use, such as use of land for a transport project, alternative exploitation of the land will be prohibited and this would be a non-negotiable position.

v. **Enabling smooth implementation of projects**

In instances where one PPP project depends on another and the two projects are not taken up as one integrated package, the public authority shall facilitate and ensure completion of each project for benefit of the other.⁶

1.4 PUBLIC PRIVATE PARTNERSHIP MODELS

**USER-FEE BASED BOT MODELS** - Medium to large scale PPPs have been awarded mainly in the Energy and transport sub-sectors (roads, ports and airports). Although there are variations in approaches, over the years the PPP model has been veering towards competitively bid concessions where costs are recovered mainly through user charges (in some cases partly through Viability Gap funding from the government).

⁶ ibid
ANNUITY BASED BOT MODELS – In sectors/projects not amenable for sizeable cost recovery through user charges, owing to socio-political-affordability considerations, such as in rural, urban, health and education sectors, the government harneses private sector efficiencies through contracts based on availability/performance payments. Implementing “annuity model” will require necessary framework conditions, such as payment guarantee mechanism by means of making available multi-year budgetary support, a dedicated fund, letter of credit etc. Government may consider setting-up a separate window of assistance for encouraging annuity-based PPP projects. A variant of this approach could be to make a larger upfront payment (say 40% of project cost) during the construction period.

PERFORMANCE BASED MANAGEMENT/ MAINTENANCE CONTRACTS – In an environment of constrained economic resources, PPP that improves efficiency will be all the more relevant. PPP model such as performance based management/maintenance contracts are encouraged. Sectors amenable for such models include water supply, sanitation, solid waste management, road maintenance etc.

MODIFIED DESIGN-BUILD (TURNKEY) CONTRACTS: In traditional Design-Build (DB) contract, private contractor is engaged for a fixed-fee payment on completion. The primary benefits of DB contracts include time and cost savings, efficient risk-sharing and improved quality. Government may consider a “Turnkey DB” approach with the payments linked to achievement of tangible intermediate construction milestones and short period maintenance / repair responsibilities. Penalties/incentives for delays/early completion and performance guarantee (warranty) from private partner may also be incorporated. Subsequently, as the market sentiment turns around these projects could be offered to private sector through operation maintenance tolling concessions.7

7 ibid
## 2.0 Reviews of Previous Studies:

The review of the previous studies has been shown that the public private partnership has a new area for research. The researcher presents a comprehensive review of the studies which have been conducted.

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<th>S. no.</th>
<th>Title</th>
<th>Author's</th>
<th>Publication details</th>
<th>Objectives</th>
<th>Findings</th>
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<td>1.</td>
<td>“What’s the Big Deal?: The Ethics of Public-Private Partnerships Related to Food and Health”</td>
<td>Jonathan H. Marks</td>
<td>Edmond J. Safra research labs Working Papers, No. 11 May 23, 2013</td>
<td>To employ the institutional corruption framework to highlight systemic concerns presented by public-private partnerships related to food and health. To prevail analytical approaches to such partnerships tend to downplay or ignore these systemic effects and their ethical implications. To offer some guidance for public sector actors wishing to think more critically and systemically about public-private partnerships.</td>
<td>In this article, the researcher employs the institutional corruption framework to highlight systemic concerns presented by public-private partnerships related to food and health. The ethical challenges presented by PPP related to food and health calls for a more demanding assessment—both procedurally and substantively—than is often appreciated. The need for such an approach is made salient by the institutional corruption framework which highlights the systemic effects of partnerships on the public partner; in particular, their impact on the integrity of that partner and on trust and confidence in that partner.</td>
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<td>2.</td>
<td>Public-Private Partnerships in Homeland Security: Opportunities and Challenges</td>
<td>Nathan E. such</td>
<td>Homeland security affairs volume 8, article 18 October, 2012</td>
<td>To fill a gap in homeland security scholarship by identifying the essential role that public private partnerships are now taking in homeland security and by examining opportunities and challenges for his transformative</td>
<td>This is focused that public-private partnerships are now integral to homeland security as a whole – not just its subfields. Government and business cooperation can provide distinct advantages in hiring, resource utilization, specialization, and technological innovation. These partnerships also have significant implications for management</td>
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<td>Successful Delivery of Public-Private Partnerships for Infrastructure Development</td>
<td>Ahmed M. Abdel Aziz</td>
<td>Journal of performance of constructed facilities, Vol.21, No.6, Nov/Dec 2007, pp.918-931</td>
<td>To describe the principles that would characterize the implementation of PPP’s at the program level.</td>
<td>The implementation of PPPs, however, may suffer from legal, political, and cultural impediments. In the United States, the federal government enabled a number of acts to ease the impediments and promote PPPs for infrastructure development. Based on a detailed analysis of PPPs in the United Kingdom and British Columbia, Canada, this paper describes principles that would characterize the implementation of PPPs at the program level. The principles pertain to the: availability of a PPP legal framework and implementation units; perception of the private finance objectives, risk allocation consequences, and value-for-money objectives; maintenance of PPPs process transparency; standardization of procedures; and use of performance specifications.</td>
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<td>3.</td>
<td>Critical success factors in public-private partnership (PPP) on</td>
<td>Solomon Olusola Babatunde,</td>
<td>Journal of Facilities Management, Vol. 10 Issue: 3,</td>
<td>To examine the types of infrastructural projects most suitable using public-private partnership (PPP) for executions</td>
<td>The researcher identified nine critical success factors in public-private partnerships as follows: competitive procurement process, thorough and realistic assessment of the cost and benefits, favorable</td>
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<td>infrastructure delivery in Nigeria Akintayo Opawole, Olusegun Emmanuel Akinsiku pp.212 – 225 (2012)</td>
<td>and identify the critical success factors in PPP on infrastructural projects with a view to strengthening the partnership between the public (government) and private sector.</td>
<td>framework, appropriate risk allocation and risk sharing, government involvement by providing a guarantee, political support, stable macroeconomic condition, sound economic policy and availability of suitable financial market. The study, however, showed that well organized and committed public agency; social support; project technical feasibility and multi-benefits objectives are the CSFs that are most important to the private investors.</td>
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| 5. | Public-private sector partnerships in developing countries: Are infrastructures responding to the new ODA strategy? Argentino Pessoa | Journal of international development 2008,vol. 20, issue 3, pages 311-325 | To evaluate the more typical forms of private sector involvement and its actual importance (by type of public utility and by region), and shows that the new strategy has failed in improving the provision of infrastructures in the developing world. Study shows that, Factors like the need to fill a ‘capability gap’ or to reduce costs would advise the outsourcing of some functions. The new public management brought to the front stage the private sector involvement in delivering goods that were formerly considered public. The civil service remains crucial to the development process, as we still need government, the rule of law and accountability structures to be in place the use of PPPs for the provision of infrastructures and public utilities, where the involvement of foreign private partners is more visible, is subject to other drawbacks. Developing countries are to a great extent dependent on the foreign investment of a restrict number of large companies, with the consequent effects on the negotiation and enforcement of the contracts. Second, the capacity of these countries to design a regulatory framework (either in legislation or through a contract) is very limited. The non-
|   | Government obligations in public-private partnership contracts | Sandeep Verma | Journal of public procurement, volume 10, issue 4, winter 2010 | To focus on certain aspects of competition and transparency in the award of PPP contracts, vis-à-vis normal public procurement contracts. To facilitate a sharper identification of legal issues, it compares the relevant regulations and case law in India applicable to unsolicited proposals (UNPs) with that in the United States and those under available international frameworks. This study facilitates a sharper identification of legal issues; it compares the relevant regulations and case law in India applicable to unsolicited proposals (UNPs) with that in the United States and those under available international frameworks. It is possible to identify four broad dimensions in the case of unsolicited proposals that require addressing in PPP procurement regulations: (1) definitional attributes (2) procedural attributes (3) submission-related attributes like and (4) miscellaneous attributes such as tradability of an OP’s right to obtain a price-bonus or negotiation advantage at the time of bid-evaluation. Thus study identifies, perhaps for the first time, the complete range of important UNP aspects that must be addressed in procurement systems for PPP concessions, in order that the relative lack of competition and a-priori benefits to OPs do not result in a situation that is completely adverse to the submission of meaningful counter-offers, and in order that the contracting process is not severely compromised. |
|---|---|---|---|
| 7. | Sharing of risks & rewards in public-private partnerships for conservation & | Sandeep Verma | Occasional paper # 13 September 31,2007 | To examines the allocation of risks and rewards to the private partner under the contractual agreements. The study describes ultimate objective that is, the sustained and successful demonstration of PPPs, in all their varieties, to generate sufficient interest and enthusiasm amongst private persons and |
management of heritage monuments in India “Exploring the possible contours of a model concession agreement

| 8. | “Financing Sustainable Infrastructure - Assessing the Risks in Public Private Partnership Models” | Palanisamy Saravanan | The Chartered Secretary Journal, November 2008 | To access the risk factor in public private models in financing sustainable infrastructure |

The empirical evidences across the globe indicate that PPPs have the potential to provide infrastructure at more reasonable prices than comparative delivery through the public sector. In PPPs governments shifts the risk to the private sector that is best known to manage risk. Moreover, the basic objective for the governments is to achieve value for money in the services provided at the same time makes sure that the private sector entities meet their contractual obligations properly and efficiently. Value for money and risk sharing are the two building blocks on which the PPPs are built with the support of robust, long term revenue stream and over the period of time. In order to guarantee value for money, the relative strengths and weaknesses of each PPP scheme should be considered.


This study provides a snapshot of the trends in Asian PPPs not just on the demand for particular projects—water, transportation or energy—in a given context but on how PPPs are structured.
The longest cooperation period is observed for PPP projects in the transportation sector. These transportation projects are characterized by the provision of substantial Government support and tariff structures that help mitigate the many different risks for the private service providers. While lagging behind transportation sector in terms of government support, PPP projects in the energy sector have likewise received substantial government support such as direct financing, equity contribution and guarantees, enabling the proliferation of many Greenfield energy projects in Asia.

To emphasize on the difficulties and strong political commitments required to make the reforms sustainable and argues that governments willing to make corrections to the reform path are faced with the need to address recurrent and emerging issues in transport systems: tariff structure, quality, access rules for captive shippers, the trend toward re bundling and decrease in intra sectoral competition, multimodalism and the stimulus through yardstick competition.

The study emerges, that deregulation has generally had Different effects in developed and developing economies. Project sizes are larger for developed Countries and their relative contribution to the needs is larger as well. The fiscal payoffs have generally been good in the short run but less Predictable in the long run, certainly in the case of developing countries, often as a result of contract negotiations. Few Countries have reached their potential in terms of modal integration. May be the most important point, is that the policy agenda associated with the Follow-up to the strong commitment to deregulation and increased private sector participation is far From being small.
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<th>Determinants of Public-Private Partnerships in Infrastructure</th>
<th>Mona Hammami, Jean-Francois Ruhasyankiko, Etienne B. Yehoue</th>
<th>IMF Working Paper, April 2006</th>
<th>To find that PPPs tend to be more common in countries where governments suffer from heavy debt burdens and where Aggregate demand and market size are large. To suggest that macroeconomic stability is essential for PPPs. To find that private participation in PPP projects depends on the expected marketability, the technology required, And the degree of “impurity” of the goods or services.</th>
<th>The study shows that, From an economic development perspective, these risks are generally worth taking, or at least considering. Neither governments nor private firms alone are likely to have the resources to build essential infrastructure and bear all of the risks. Hence, the scope for mutually beneficial partnerships between public and private sectors should involve an allocation of rights between partners as well as a corresponding allocation of risks. Study emphasizes the significance of previous PPP experience in fostering additional PPPs. The results also stress the beneficial role played by some global and regional development agencies in providing a combination of expertise, guarantees, loans, equity finance, syndication, or risk management, which are all essential for successful PPPs.</th>
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<td>11.</td>
<td>Risks and Rewards of Public-Private Partnerships for Highways</td>
<td>Baruch Feigenbaum</td>
<td>Reason Foundation Policy Brief 98, December 2011</td>
<td>To explore risk and rewards of public private partnership for highways</td>
<td>Public-Private Partnerships are an increasingly popular transportation procurement option that provides for an alternate method of designing, building, financing, operating and maintaining infrastructure projects. PPPs have five major advantages in that they: deliver needed transportation infrastructure sooner; are able to raise large new sources of capital; shift risk from taxpayers to investors; provide a business-like approach, and enable innovation. PPPs may, but do not necessarily, include net new investments. PPPs</td>
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13. Infrastructure services in Brazil: the role of public private partnership (PPP) in the water & sewerage sector  
 Frederico Araujo Turolla  
 Tomas Anker  
 Ricardo Meirelles de Faria  
 October 2004  
 To discuss the new possibilities of investment that emerged for the water and sewerage industry in Brazil with the new legislation of the public-private partnerships in discussion at the National Congress.

The researchers explains, In such a challenging business such as the water and sewerage services, investments and capacity expansion are constrained by the very specific nature of the sector, marked by high fixed costs incurred in very specific forms of capital. Because of these features, most countries rely on local public sector entities. As result, the sector does not serve the entire population and some areas face very low coverage, especially in the sewerage services. Private participation shows up as a promising way to increase coverage and improve the services. Coordination of investments by the State is essential for the expansion of this sector. In this sense, private investment is necessary not only for an increase in the level of investments but also for improved efficiency and quality in the services.

14. Ex ante construction costs in the European road sector: A comparison of public-private partnerships and traditional Public procurement  
 Frédéric Blanc-Brude, Hugh Goldsmith  
 Timo Väililä  
 Economic and Financial Report 2006/01  
 Based on an analysis of more than 200 EIB-financed road projects during the past decade and a half, the ex ante unit construction cost of a road to the public sector is estimated 24 percent higher in a PPP than in traditional public procurement. The estimated difference in ex ante construction costs of 24 percent is of a similar magnitude as the cost overruns typically observed in traditional public procurement in the European road sector. This can be utilized in most types of projects and are most successful in states with strong enabling legislation.
| 15. | Financing Road Projects in India Using PPP Scheme | Satyanaryna N. Kalidindi, L. Boeing Singh | The various approaches that have been used for financing the National Highways projects through PPP route in India. The reforms, measures and procurement strategies that have been initiated to enable financing through PPP route in view of the risk profile associated with such projects. | The study shows that, The Union Government of India has taken various measures to upgrade the capacity and quality of the National Highways network. PPP routes have been adopted by the government to meet the funding gap and use techno-managerial efficiencies of the private sector to obviate the inefficiencies in the traditional public procurement system. Various reforms have been introduced by the Union Government of India to create an enabling environment for participation of the private sector in the development of the road projects through the PPP route. Model concession agreements have been developed to facilitate standardization of terms and conditions and ensure uniformity in the various agreements for PPP road projects. BOT (Toll) and BOT (Annuity) are the two PPP models that have been used in procuring the National Highways projects in India. |
| 16. | Public-Private Partnerships to Revamp | Eduardo Engel, Discussion paper | To propose a series of best practices that communities can undertake to ensure that public- | Study describes that, In the midst of a difficult budget environment, more state and local governments are relying on public-private |
| U.S. Infrastructure | Ronald Fischer, Alexander Galetovic | 2011-02, February 2011 | private partnerships provide public value. These include choosing partnerships for the right reasons; relying on flexible-term Present-Value-of Revenue (PVR) contracts; including partnerships on government balance sheets; and implementing good governance practices. | partnerships to address their infrastructure needs. With scarce resources at hand, it is even more important that they make wise spending decisions and continue to invest in infrastructure. Implementing the proposals can help states and communities ensure that public-private partnerships circumvent common pitfalls and help maximize returns on infrastructure investment. |

| 17. Alternative Ways of Financing Infrastructure Investment: Potential for ‘Novel’ Financing Models | Andrew Meaney, Peter Hope | International transport form, Discussion Paper No. 2012-7, September 2012 | re-examine the conventional wisdom around infrastructure and why there is/is not a funding and/or financing problem; provide an assessment of different models for delivering and financing infrastructure; and consider the circumstances in which one financing model may be preferred to another—in particular, concentrating on public–private partnerships (PPPs) and the potential for the regulated asset base (RAB) model as an alternative to PPPs for certain investments. | This study has introduced the RAB model as a potential alternative means of overcoming the time-inconsistency problem inherent in infrastructure investment. It has highlighted the benefits and issues in applying the RAB model to infrastructure investment. That is clear by the analysis is that the RAB model, like PPPs, is not suitable under all circumstances, and that there are situations in which it may be inadequate. However, that, in the regulation of UK utilities, the RAB model has provided a credible, legally backed guarantee to investors that they will earn a return on their (sunk) investments in the infrastructure network. The guarantee on the RAB has typically taken the form of a statutory duty on the independent regulatory body, requiring it to enable the company to finance its regulated functions. |

| 18. Public private | M.Sathana | Journal of | To asses the Public Private | The foreign players are investing with domestic |
| Partnership in India | Priya P. Jesintha | Management and Science Vol.1, No.1 September’2011 | Partnership project in India and relationship between the foreign player and domestic player in PPP. | player in PPP projects. Malaysian companies are leading investors in public private partnership projects in India, involving nearly six major infrastructure ventures. In the present budget also Government have increased in institutional funding to Public Private Partnership Project refinance to evolve a takeout financing scheme in consultation with banks to ensure greater funds to the infrastructure sectors. The scope of PPP in India is good and only state had benefit from it. The Government should also take necessary steps to implement the PPP project in other states also in order to develop the infrastructure in the country. With this observation both foreign and domestic players join together and developing good relationship among the world with the help of PPP project. |

<p>| Accountability in Public-Private Partnership Projects: A Financial Analysis of Malaysian Highway Authority | Ervina Alfan Zarina Zakaria | World Applied Sciences Journal 20 (2): 221-227, 2012 | To find that the reporting of public sector in the tolled highway sector is opaque, indicating that the attribute of accountability is impaired. | In this regards, international development especially in the UK shows that the issue of public infrastructure is constantly debated which may help to clear a number of obscurities surrounding accounting and reporting of PPP arrangement. Whilst accounting can help to address this issue, the current rate of development of accounting treatment for public Service in the UK. Infrastructure and service concessions do not indicate that the matter will be resolved in the near future. On the another note, in comparison to the |</p>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>20.</strong></td>
<td>Public-private partnerships: risks to the public And private sector</td>
<td><strong>Najja Bracey, Sonia Moldovan</strong></td>
<td>6th Global Conference on Business and Economics Boston, Massachusetts</td>
<td>To address the issues and questions surrounding PPPs by looking at case studies in PPPs and risk-sharing in infrastructure projects throughout the developing world, more specifically, in Asia and Eastern/Central Europe.</td>
</tr>
<tr>
<td><strong>21.</strong></td>
<td>Public private partnerships: Look before you leap into marriage</td>
<td><strong>Dennis De Clerck, Erik Demeulemeester, Willy Herroelen</strong></td>
<td>Review of business and economics literature vol:57 issue:3, pages:249-261, 2012</td>
<td>To consider how the tendering phase should be concluded while guaranteeing the best of both worlds, namely public provision with private engagements. Secondly, the most common practices to manage risks are studied.</td>
</tr>
<tr>
<td></td>
<td>Evaluating schedule delay causes for private participating public construction works under the Build-Operate-Transfer model</td>
<td>J.B. Yang</td>
<td>International Journal of Project Management 28, 569–579, 2010</td>
<td>To find the delay causes in all stages of a BOT project.</td>
</tr>
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</table>

This study emerged, that the stage of negotiation and signing of concession agreement is the most essential stage, in which ‘improper contract planning’ and ‘uncertainty on political issues and government-finished items’ are the most significant delay causes on the perspective of importance and frequency, respectively. Project delivery method of BOT improves the commencement probability of public construction works through private investments, and brings the Development of related industries. Project delivered by BOT method is a trend for public infrastructure Projects worldwide. Although the delay causes are Identified from the respondent’s perspective in Taiwan, the results are valuable for other areas. Identified causes can be used to prevent their occurrence on the following BOT projects in the future.

### 2.1 RESEARCH GAP

The researcher has reviewed the earlier studies related to Public Private Partnership, and found that many researchers, have analyzed the determinants of Public Private Partnership in infrastructure, trend of Public Private partnership, government obligations, delivery of projects, risks in PPP model, financing, foreign and domestic players, capital intensity, technology, legal framework and implementation, which has a further scope to study the same determinants in reference to government as well as state (Uttar Pradesh) level.
3.0 NEED OF THE STUDY

Recent years have seen a marked increase in coordination between the public and private Sectors. PPPs have demonstrated the ability to harness additional financial resources, management, experience, skills, latest technology and operating efficiencies inherent to the private sector.

Some merits of the Public-Private Partnerships:

- Finance
- Management
- Experience
- Skills
- Technology

The infrastructure sector is largely fragmented. The scope for the development of infrastructure is tremendous. But, the availability of funds or rather economical availability and use of fund is desired. To achieve this, Public Private Partnership is a desirable solution. There is a large scope of use of PPP Model in various areas of infrastructure sector, but the success of this lies in its correct way of implementation. There are many examples of PPP that had not gone as per the expectations. Generally the private sector makes more money than expected due to negligence. Therefore, there is a need to find out the best practices in use of PPP Model. This can only be done through detailed analytical and critical studies of existing and ongoing projects.

The present study will be an attempt to examine the rationale, socio-economic aspects of the Public Private Partnership (surface and transportation projects) in Uttar Pradesh.

4.0 OBJECTIVES OF THE STUDY

The study will be based on following objectives:

1. To understand the rationale behind Public Private Partnership model in general and Uttar Pradesh in particular.
2. To examine government policy regarding Public Private Partnership in general and Uttar Pradesh in particular.
3. To review ongoing PPP projects in India in general and Uttar Pradesh in particular.
4. To analyze the surface transportation projects sanctioned and ongoing in Uttar Pradesh.
5. To explore the factors affecting the performance of PPP in Uttar Pradesh.
6. To develop a model for the effective implementation of PPP.
5.0 RESEARCH DESIGN AND METHODOLOGY

Research design and methodology is the back bone of any research study. The researcher proposes the following research procedure for this study:

5.1 HYPOTHESES

To gives the scientific base to the study, the following hypotheses will be tested in the study:

Ho1: Public Private Partnership model is useful for development of infrastructure in developing countries like India.

Ho2: The performance of ongoing Public Private Partnership projects of Uttar Pradesh and performance of ongoing Public Private Partnership projects in India are independent to each other.

Ho3: All models of Public Private Partnership (1. User-fee based BOT models, 2. Annuity based BOT models, 3. Performance based management/ maintenance contracts, 4. Modified design-build (turnkey) contracts) are equally preferred by Government of India and promoters.

5.2 SCOPE OF THE STUDY

In this study, the Public Private Partnership model in Surface transportation projects working in Uttar Pradesh have been included for the study purpose.

5.3 DURATION OF THE STUDY

For the purpose of study a period from 2001 and onwards will be taken into consideration.

5.4 UNIVERSE AND SAMPLE SIZE

In public private partnership, there are nine sectors considered in infrastructure (i.e. Airports, Education, Health Care, Ports, Power, Railways, Road, Tourism, and Urban Development). The researcher selects the Surface transportation projects working in Uttar Pradesh, for the study purpose as sample, in which 32 ongoing projects have been taken. (List of projects is given in appendix 1)

5.5 DATA COLLECTION

In order to examine analyses and evaluate the study, both the primary and secondary data will be taken into consideration.
Primary Data
The researcher will survey the government officials of related ministries (20) officials of the
government of Uttar Pradesh (30), private developers (50).

Secondary Data
The secondary data will be collected from the books, magazines, journals, newspapers, reports
and from the central and state government sites.

5.6 RESEARCH METHODOLOGY
Research methodology is an important constitute of the research plan. In this study to fulfill the
first two objectives, the researcher will go through debate in parliament on Public Private
Partnership bill, the gazette (notification of government), to review and understand the rationale
of Public Private Partnership model. The researcher will review the ongoing projects on the basis
of socio-economic aspects where as the performance shall be evaluated on the basis of different
factors significantly affecting the performance, which to be ranked according to suitable
measures.

5.7 TOOLS AND TECHNIQUES OF STUDY
The appropriate, Descriptive Statistics and Inferential Statistics shall be used for analyzing the
data.

CHAPTER PLAN

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>CONTENT</th>
</tr>
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<tbody>
<tr>
<td>CHAPTER-1</td>
<td>PUBLIC PRIVATE PARTNERSHIP: (A) AN OVERVIEW (B) RESEARCH OUTLAY</td>
</tr>
<tr>
<td>CHAPTER-2</td>
<td>A CRITICAL APPRAISAL OF POLICY FRAME WORK OF PUBLIC PRIVATE PARTNERSHIP</td>
</tr>
<tr>
<td>CHAPTER-3</td>
<td>PRESENT SCENARIO OF ON GOING PUBLIC PRIVATE PARTNERSHIP PROJECTS IN</td>
</tr>
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<td></td>
<td>UTTAR PRADESH</td>
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<tr>
<td>CHAPTER-4</td>
<td>ANALYSIS, RESULTS AND DISCUSSION</td>
</tr>
<tr>
<td>CHAPTER-5</td>
<td>CONCLUSIONS AND SUGGESTIONS</td>
</tr>
</tbody>
</table>
REFERENCES

- **Jonathan H. Marks**, “What’s the Big Deal?: The Ethics of Public-Private Partnerships Related to Food and Health”, May 2013
- **Solomon Olusola Babatunde, Akintayo Opawole, Olusegun Emmanuel Akinsiku**, Critical success factors in public-private partnership (PPP) on infrastructure delivery in Nigeria, 2012
- **Argentino Pessoa**, Public-private sector partnerships in developing countries: Are infrastructures responding to the new ODA strategy?, 2008
- **Sandeep Verma**, Government obligations in public-private partnership contracts, 2010
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- **Mona Hammami, Jean-Francois Ruhasyankiko, Etienne B. Yehoue**, Determinants of Public-Private Partnerships in Infrastructure, April 2006
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- **Frederico Araujo Turolla, Tomas Anker, Ricardo Meirelles de Faria**, Infrastructure services in brazil: the role of public private partnership (ppp) in the water & sewerage sector, October 2004

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• **Frédéric Blanc-Brude, Hugh Goldsmith, Timo Välilä**, Ex ante construction costs in the European road sector: A comparison of public-private partnerships and traditional Public procurement, 2006

• **Satyanaryana N. Kalidindi, L. Boing Singh**, Financing Road Projects in India Using PPP Scheme.


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• **M.Sathana Priya, P.Jesintha**, Public private partnership in India, September 2011


• **Najja Bracey, Sonia Moldovan**, Public-private-partnerships: risks to the public And private sector

• **Dennis De Clerck, Erik Demeuemeester, Willy Herroelen**, Public private partnerships: Look before you leap into marriage

• **J.B. Yang, C.C. Yang**, Evaluating schedule delay causes for private participating public construction works under the Build-Operate-Transfer model, 2010

**JOURNALS**

• Homeland security affairs, Vol 8, article 18, (October 2012)

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• The Chartered Secretary Journal, November (2008)

• Journal of Management and Science Vol.1, No.1, (September 2011)


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- www.pppindiadatabase.com
- www.pppinindia.com
- www.udyogbandhu.com
- www.finmin.nic.in
- www.moud.gov.in
### APPENDIX

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Name of Roads</th>
<th>Length in Km.</th>
<th>Estimated cost (In Rs. Cr.)</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Delhi-Saharanpur-Yamunotri Road (SH57)</td>
<td>206.089</td>
<td>1718.35</td>
<td>M/s SEW - Prasad Consortium Infrastructure Limited, Hyderabad selected as a developer. Concession agreement signed on 01.08.2011. Independent Engineer selected, agreement signed on 28.02.2012. Developer has started work; date of completion of project is 16.09.2014.</td>
</tr>
<tr>
<td>2.</td>
<td>Bareilly-Almora-Bagheswar Road (SH-37)</td>
<td>54</td>
<td>354.07</td>
<td>M/s PNC Infratech Ltd., Agra selected as developer. Concession agreement signed on 01.08.2011. Independent Engineer selected, agreement signed on 08.02.2012. Forest Clearance NOC has been obtained from GOI. Date of completion of project is 18.08.2015.</td>
</tr>
<tr>
<td>3.</td>
<td>Varanasi-Shaktinagar Road(SH-5A)</td>
<td>115</td>
<td>1211.96</td>
<td>M/s APCO Chetak - Patel Ltd., Lucknow selected as a developer. Letter of award issued on 15.11.2011. Concession agreement signed on 08.12.2011. Forest clearance NOC has been obtained from GOI. Date of completion of project is 18.09.2015.</td>
</tr>
<tr>
<td>4.</td>
<td>Akbarpur-Tanda-Jaunpur-Mirzapur-Dudhi Road (SH-5)</td>
<td>207.47</td>
<td>1832.00</td>
<td>Consultant selected. RFQ for selection of developer has been issued on 25.03.2013. Bid submission date is 13.05.2013.</td>
</tr>
<tr>
<td>5.</td>
<td>Sahjanpur-Hardoi-Lucknow Road (SH-25)</td>
<td>162</td>
<td>1039.83</td>
<td>Consultant selected, proposal for VGF submitted to GOI on 31.01.2011. RFQ for selection of developer has been issued on 25.03.2013. Bid submission date is 13.05.2013.</td>
</tr>
<tr>
<td>6.</td>
<td>Meerut-Karnal Road (SH-82)</td>
<td>87.155</td>
<td>583.23</td>
<td>M/s Abhijeet Road Ltd., Nagpur selected as developer. Concession agreement signed on 08.12.2011. Further M/s CMEC consulting engineering has been selected as independent engineer. Agreement signed on 20.09.2012. Expected date of completion of project is 01.04.2015.</td>
</tr>
<tr>
<td>7.</td>
<td>Gorakhpur-Maharajganj Road</td>
<td>53.160</td>
<td>159</td>
<td>Consultant selected, feasibility report has been prepared by the</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(SH-81)</th>
<th></th>
<th></th>
<th>Consultant selected. RFQ for selection of developer has been issued on 25.03.2013. Bid submission date is 13.05.2013.</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Basti-Mehndwal-Kaptanganj-Tamkuhi Road (SH-64)</td>
<td>166.12</td>
<td>303.05</td>
<td>Consultant selected, feasibility report has been prepared by the consultant. Proposal for VGF submitted to GOI on 20.05.2011. RFQ for selection of developer has been issued on 25.03.2013. Bid submission date is 13.05.2013.</td>
</tr>
<tr>
<td>9. Moradabad-Chandausi-Badaun Road (SH-43)</td>
<td>164.17</td>
<td>656</td>
<td>Consultant selected, feasibility report has been prepared by the consultant is being examined. Proposal for VGF Under preparation.</td>
</tr>
<tr>
<td>10. Farendra-Naugarh-Barhni-Tulsipur-Balrampur-Gonda Road (SH-1-A)</td>
<td>230</td>
<td>690</td>
<td>Consultant selected, feasibility report has been prepared by the consultant is being examined. Proposal for VGF under preparation.</td>
</tr>
<tr>
<td>11. Garh-Meerut-Baghat-Sonipat Road (SH-14)</td>
<td>90.42</td>
<td>900</td>
<td>Consultant selected, feasibility report has been prepared by the consultant is being examined. In the BEC meeting dated 25.04.2011, it has been decided that clarification should be shout out regarding land near Meerut Bye Pass before releasing the RFQ. Proposal for VGF under preparation.</td>
</tr>
<tr>
<td>12. Etawah-Mainpuri (SH 83)</td>
<td>52.82</td>
<td>370</td>
<td>Consultant selected. Feasibility report has been prepared by the consultant. RFQ is to be issued for selection of developer.</td>
</tr>
<tr>
<td>13. Aligarh Mathura (SH-80)</td>
<td>38.96</td>
<td>300</td>
<td>Consultant selected. Feasibility report has been repaired by the consultant. RFQ for selection of developer has been issued on 25.03.2013. Bid submission date is 13.05.2013.</td>
</tr>
<tr>
<td>14. Etah Tundla (SH-31)</td>
<td>57.16</td>
<td>400</td>
<td>Consultant selected. Feasibility report has been prepared by the consultant. RFQ for selection of developer has been issued on 25.03.2013. Bid submission date is 13.05.2013.</td>
</tr>
<tr>
<td>15. Etah Shikohabad Marg (SH-85)</td>
<td>52.5</td>
<td>368</td>
<td>Consultant selected. Feasibility report has been repaired by the consultant. RFQ for selection of developer has been issued on 25.03.2013. Bid submission date is 13.05.2013.</td>
</tr>
<tr>
<td>16. Varanasi Bhadohi-Gopiganj</td>
<td>60.12</td>
<td>325</td>
<td>Consultant selected. Feasibility report has been prepared by the</td>
</tr>
<tr>
<td>No.</td>
<td>Road Name</td>
<td>Length (Km)</td>
<td>Width (M)</td>
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</tr>
<tr>
<td>17.</td>
<td>Tarighat - Bara Road (SH-99)</td>
<td>40</td>
<td>340</td>
</tr>
<tr>
<td>18.</td>
<td>Kalwari-Barhalganj-Lal-Ghuthni (SH-72)</td>
<td>189.82</td>
<td>580</td>
</tr>
<tr>
<td>19.</td>
<td>Muzaffarnagar Saharanpur via Deoband (SH-59)</td>
<td>52.70</td>
<td>369</td>
</tr>
<tr>
<td>20.</td>
<td>Bahraich-Gonda-Faizabad Road (SH-30)</td>
<td>190.00</td>
<td>-</td>
</tr>
<tr>
<td>21.</td>
<td>Bareilly-Badaun-Kasganj-Hathras-Marg (SH-33)</td>
<td>232.00</td>
<td>-</td>
</tr>
<tr>
<td>22.</td>
<td>Bharwari-Manjhanpur-Chitrakoot Road (SH-94 &amp; MDR-26)</td>
<td>78.00</td>
<td>-</td>
</tr>
<tr>
<td>23.</td>
<td>Sitapur-Lakhimpur-Kheri Marg (SH-21)</td>
<td>45.00</td>
<td>-</td>
</tr>
<tr>
<td>24.</td>
<td>Pilibhit-Farrukhabad-Waiver Marg (SH-29)</td>
<td>214.00</td>
<td>-</td>
</tr>
<tr>
<td>25.</td>
<td>Windhamganj-Kon-Kota-Chopan Road (ODR)</td>
<td>59.34</td>
<td>-</td>
</tr>
<tr>
<td>26.</td>
<td>Nitchlol-Thotibadi (2 Lane)</td>
<td>160.00</td>
<td>-</td>
</tr>
<tr>
<td>No.</td>
<td>Project Name</td>
<td>Length (km)</td>
<td>Value (Rs. Crores)</td>
</tr>
<tr>
<td>-----</td>
<td>---------------------------------------------------</td>
<td>-------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>27.</td>
<td>Yamuna Expressway</td>
<td>165.00</td>
<td>10,374</td>
</tr>
<tr>
<td>28.</td>
<td>Ganga Expressway</td>
<td>1047.00</td>
<td>30,000</td>
</tr>
<tr>
<td>29.</td>
<td>Upper Ganga Canal Expressway</td>
<td>148</td>
<td>8,911</td>
</tr>
<tr>
<td>30.</td>
<td>06-Lane Access Controlled Expressway on the Right Bank of Upper Ganga Canal from Sanouta Bridge (Greater Noida) to Kanpur-Fatehpur</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>31.</td>
<td>Agra to Lucknow green field expressway</td>
<td>365</td>
<td>-</td>
</tr>
</tbody>
</table>
documents for selection of developer. RFQ for shortlisting of 
Developer, issued and Pre-Bid Conference was organized on 
24.04.2013 at New Delhi. Date of receiving of RFQ has been fixed for 
15.07.2013.

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<tbody>
<tr>
<td><strong>32.</strong></td>
<td>Jhansi-Kanpu-Lucknow- Gorakhpur-Kushi Nagar Expressway</td>
<td>19287</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pre-feasibility study is to be conducted.</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>15202.83</td>
</tr>
</tbody>
</table>

**RESEARCHER**

SHWETA SINGH CHAHAR

**SUPERVISOR**

PROF. VIJAY L. N GANGAL

**HEAD**

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FACULTY OF COMMERCE