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A Study on Public-Private Partnerships with Reference to Indian Infrastructural Projects

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ABSTRACT: *Infrastructure is a fundamental sector that every country needs to develop in order to achieve overall development, but governments in developing countries have limited resources for it. This has also been the case with India due to the sluggish pace of Indian economic growth. To overcome this challenge, the Government of India has been striving hard to mobilise investments for infrastructure in order to double its GDP from 3.986% to almost 9%. This implies that nearly $450bn will be the requirement to develop Indian infrastructure in the next 5 years (2012-2017). However, considering the government's limitation to raise such finances on its own, it has resorted to an innovative practice known as Public-Private Partnership (PPP) in various sectors. PPP refers to a form of a contract between the public and the private sector for a specific duration in order to facilitate projects that require a huge capital outlay.This research article is a conceptual study with explorative methodology. The study examines various types of partnership projects at work for Infrastructural development in India. The paper aims at providing an insight about PPP in Indian infrastructural projects while the second part of the study evaluates the positive or negative impact of the present Infrastructural projects on the Overall development of the nation in order to suggest an efficient PPP Policy.*

KEYWORDS: *Infrastructure, Public-Private Partnerships, Transportation, Economic Growth, Business Ventures.*

I. INTRODUCTION

Definition of Public–Private Partnership (PPP)

A **public–private partnership** (**PPP**) is a government service or private business venture which is funded and operated through a partnership of government and one or more private sector companies. These schemes are sometimes referred to as PPP, P3 or P^3. Thus PPP refers to a long-term contractual partnership between the public and private sectoragencies, specifically targeted towards financing, designing, implementing and operating infrastructure facilities andservices in the State. These PPPs aim to achieve the twin objectives of high growth and equity on a sustainable basis.

Origin of PPP : Pressure to change the standard model of public procurement arose initially from concerns about the level of public debt, which grew rapidly during the macroeconomic dislocation of the 1970s and 1980s. In a competitive global environment, governments around the world were focusing on new ways to finance projects, build infrastructure and deliver services. Initially, most public–private partnerships were negotiated individually, as one-off deals, and much of this activity began in the early 1990s. In 1992, the Conservative government of John Major in the UK introduced the private finance initiative (PFI), the first systematic programme aimed at encouraging public–private partnerships.

PPP in India : The Government of India defines a P3 as "a partnership between a public sector entity (sponsoring authority) and a private sector entity (a legal entity in which 51% or more of equity is with the private partner/s) for the creation and/or management of infrastructure for public purpose for a specified period of time (concession period) on commercial terms and in which the private partner has been procured through a transparent and open procurement system. The union government has estimated an investment of $320 billion in the infrastructure in the 10th plan. The major infrastructure development projects in the Indian state of Maharashtra (more than 50%) are based on the P3 model. In the 2000s, other states such Karnataka, Madhya Pradesh, Gujrat, Tamil Nadu also adopted this model.

Classification of PPP- Sector wise

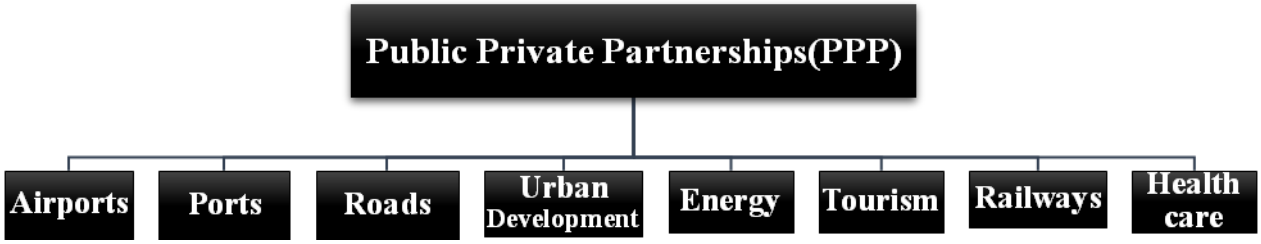

Table 1: Indian State Wise Project Details

State	Total Number of Projects	Based on 100 crore	Between 100 to 250 crore	Between 251 to 500 crore	More than 500 crore	Value of Contracts
Andhra Pradesh	96	1,484.6	2,197.8	7,062.3	56,173.7	66,918.3
Assam	4	54.0	337.2	-	-	391.2
Bihar	6	77.6	-	769.6	1,246.7	2,093.8
Chandigarh	2	75.0	-	-	-	75.0
Chhattisgarh	4	70.0	304.0	464.0	-	838.0
Delhi	13	95.0	109.4	738.2	10,374.0	11,316.6
Goa	2	30.0	220.0	-	-	250.0
Gujarat	63	304.1	2,013.2	4,138.9	33,181.0	39,637.2
Haryana	10	125.0	180.0	270.0	10,588.1	11,163.1
Jammu and Kashmir	3	-	-	-	6,319.8	6,319.8
Jharkhand	9	131.0	550.0	398.0	625.1	1,704.1
Karnataka	104	1,080.4	1,942.6	13,136.3	28,499.6	44,658.9
Kerala	32	338.7	206.3	1,235.0	20,501.5	22,281.5
Madhya Pradesh	86	1,977.6	3,930.3	3,397.2	5,678.3	14,983.4
Maharashtra	78	742.3	2,988.4	2,433.7	39,427.6	45,592.0
Meghalaya	2	-	226.1	-	536.0	762.1
Orissa	27	235.1	211.0	1,473.0	11,430.6	13,349.7
Puducherry	2	-	-	419.0	2,947.8	3,366.8
Punjab	29	732.8	1,552.7	572.0	705.0	3,562.5
Rajasthan	59	633.9	783.8	1,100.8	12,508.8	15,027.3
Sikkim	24	175.6	558.0	2,669.0	13,708.0	17,110.6
Tamil Nadu	43	267.9	355.6	8,905.2	9,100.0	18,628.6
Uttar Pradesh	14	-	-	1,458.6	25,137.2	26,595.8
Uttarakhand	2	43.0	-	478.0	-	521.0
West Bengal	30	638.0	965.7	1,714.4	3,299.1	6,617.1

PPP in Indian Infrastructure: The state of Indian Infrastructure has been a concern for Indian and Foreign investors who are interested in Investing in Indian Infrastructural projects. Perception about Indian Infrastructure is reflected through Infrastructural rating comparisons drawn with Brazil and China which indicates India has a long way to go before it reaches its peers in Infrastructure.

Table 2: EIU Infrastructure Development Ratings

Ranking/Rating	Brazil	India	China
2001-05 Rating(Out of 10)	**5.4**	**3.1**	**4.5**
2001-05 Ranking	**47**	**75**	**55**
2006-10 Rating(Out of 10)	**5.9**	**4.1**	**5.4**
2006-10 Ranking	**49**	**75**	**54**

For a country like India a sustained and Feasible Growth rate of 8-9 Percent is required to maintain global Competitiveness. The union government has estimated an investment of $320 billion in the infrastructure in the 10th plan to meet this Goal.

OBJECTIVES

[1] To study Public-Private Partnership and its importance.
[2] To study the impact of PPP on Indian Infrastructural projects.
[3] To study Advantages and Disadvantages of PPP in India.

II. LITERATURE REVIEW

Public Private Partnership: PPPs are not new to India, the Great Indian Peninsular Railway Company operating between Bombay (now Mumbai) and Thana (now Thane) (1853) was one of the first private ventures, the Bombay Tramway Company running tramway services in Bombay (1874), The Great Indian Peninsular Railway Company and the Power Generation and Distribution companies in Bombay and Calcutta (now Kolkata) in the early 20th century are some of the earliest examples of PPP in India. Since the opening of the economy in 1991 there have been several cautious and tentative attempts to bring investments through PPPs in India. However, most PPPs have been restricted to the roads sector.

In general, public authorities can consider PPP arrangements in any of the following circumstances. When:

- The project cannot be provided with the financial resources or expertise of the public sector alone.
- A private partner would increase the quality or level of service over that provided by the public sector on its own.
- A private partner would allow the project to be implemented sooner than if only the public sector Were involved.
- There is support from users for the involvement of a private partner.
- There is an opportunity for competition among prospective private partners.
- There are no regulatory or legislative prohibitions to involving a private partner in the provision of a project.
- The cost of the project can be recovered through the implementation of user fees.
- The project provides an opportunity for innovation.
- There is a track record of partnerships between government and the private sector.
- There are opportunities to foster economic development.

Table 3: SECTOR WISE PROJECT DETAILS

Sector-wise	No.Of.Projects	Based on 100 Crore	Between 100 to 250 crore	Between 251 to 500 crore	More than 500 crore	Value of Contracts
Airports	5	-	-	303.0	18,808.0	19,111.0
Education	17	424.2	365.5	460.0	600.0	1,849.7
Energy	56	337.6	934.0	3,083.0	62,890.0	67,244.6
Health Care	8	315.0	343.0	275.0	900.0	1,833.0
Ports	61	86.0	1,745.3	4,304.8	74,902.1	81,038.2
Railways	4	-	102.2	873.0	594.3	1,569.6
Roads	405	4,364.6	11,696.5	38,520.5	122,143.3	176,724.9
Tourism	50	1,132.6	1,503.5	800.0	1,050.0	4,486.1
Urban Development	152	2,812.0	3,136.9	6,688.2	16,838.0	29,475.0
Total	**758**	**9,471.9**	**19,826.9**	**55,307.5**	**298,725.8**	**383,332.1**

We see that road projects account for 53.4% of the total number of projects and 46% by total value because of the small average size of projects. Ports though account for 8% of the total number of projects have a larger average size of project and contribute 21% in terms of total value. It is noteworthy that if ports and central road projects are excluded from the total, there is in fact a relatively small value of deal flow, at only Rs 125,568.93 Crores in basic infrastructure PPPs to date, suggesting a significant potential upside for PPP projects across sectors where states and municipalities have primary responsibility. It is observed that the potential use of PPPs in e-governance and health and education sectors remains largely untapped across India as a whole, though off-late there have been some activities shaping in these sectors.

Across states and central agencies, the leading users of PPPs by number of projects have been Karnataka, Andhra Pradesh, and Madhya Pradesh, with 104, 96 and 86 awarded projects respectively and the National Highways Authority of India (NHAI), with about 155 projects. In terms of main types of PPP contracts, almost all contracts have been of the BOT/BOOT type (either toll or annuity payment models) or close variants.

III. RESEARCH METHODOLOGY

This is a conceptual Research with explorative methodology. The secondary data was collected from different sources like text books, research papers, articles, newspapers, internet etc. This study was made to have an insight of Public private partnerships with reference to Infrastructural projects and to analyse pros and cons of it.

V . AJOR INDIAN INFRASTRUCTURAL PROJECTS UNDER PUBLIC PRIVATE PARTNERSHIPS

Airports

SL No.	Project Name	State	Cost(Cr)	Status
1	Hyderabad International Airport	Andhra Pradesh	2478	Under operations
2	Modernisation of Delhi Airport	NCR	8600	Construction
3	Cochin International Airport	Kerala	303	Construction
4	Modernisation of Mumbai Airport	Maharashtra	5800	Construction
5	Bangalore International Airport	Karnataka	12690	Under Operations

Ports

SL No.	Project Name	State	Cost(Cr)	Status
1	Container Terminal at Visakhapatnam Port	Andhra Pradesh	108	Construction
2	Development of Berth no.7 for handling bulk cargo at Mormugao Port	Goa	252	Under Implementation
3	Multi- purpose cargo berths at Kandla Port	Gujarat	756	Construction
4	Mechanized Iron Ore Handling Facilities at New Mangalore Port	Karnataka	277	Under Implementation
5	Chennai Container Terminal	Tamil Nadu	400	Construction

Roads

SL No.	Project Name	State	Cost(Cr)	Status
1	Four Laning of Bangalore - Nelamangala on NH-4 with NH-48	Karnataka	441	Completed
2	MP/Maharashtra border to Nagpur	Maharashtra	1171	Under Implementation
3	Chennai Tada	Tamil nadu	353	Construction
4	Ghaziabad-Aligarh	Uttar pradesh	1141	Construction
5	Delhi-Gurgaon Highway	NCR	710	Completed

Railway

SL No.	Project Name	State	Cost(Cr)	Status
1	Gandhidham-Palanpur Railway Project	Gujarat	500	Under operation
2	Madhepura Electric Loco Factory		750	Under Implementation
3	Marhowra Diesel Loco Factory		750	Under Implementation
4	Port Connectivity & other RVNL projects		830	Under Implementation
5	Investment in Rolling Stock by Container Operators		2387	Under Implementation

Urban development

SL No.	Project Name	State	Cost(Cr)	Status
1	Theme Park Project, Hyderabad.	Andhra Pradesh	18	Completed
2	Hyderabad Metro Rail Project, Hyderabad.	Andhra Pradesh	12132	Bidding
3	Automated Parking-cum-commercial complex, Kamla Nagar, Delhi	NCR	109	Completed
4	Bidadi Integrated Township	Karnataka	40000	Construction
5	Tirupur Water Supply	Tamil nadu	1023	Under Operations

Tourism

SL No.	Project Name	State	Cost(Cr)	Status
1	Development of International Convention Centre at Devanahalli	Karnataka	1040	Completed
2	5 Star Hotel at Guwahati	Assam	505	Construction
3	Airstrip and Civil Aviation Training 33.087 hect	MP	8.21	Construction
4	Conversion of IMS Vikrant in to a Museum, Mumbai	Maharashtra	320	Completed
5	Development of A New Bridge Connecting Mattancherry and Willingdon Island at Cochin	Kerala	27	Completed

Energy

SL No.	Project Name	State	Cost(Cr)	Status
1	1000-1320 MW Coal based power plant	Karnataka	1500	Completed
2	GIPCL Vadodara &Surat	Gujarat	2000	Under operations
3	Paguthan Expansion Project	Gujarat	2000	Under Operations
4	60 MW thermal Power Project	Assam	235	Construction
5	Prayagraj Power Project at Bara, Allahabad	UP	10000	Construction

Health Care

SL No.	Project Name	State	Cost(Cr)	Status
1	Greenfield Super Specialty Hospital at Bathinda	Punjab	99	Construction
2	Greenfield Super Specialty Hospital at Mohali	Punjab	118	Construction
3	Punjab Institute of Medical Sciences	Punjab	225	Construction
4	Indra Gandhi Government Medical College (IGGMC) Complex	Maharashtra	275	Bidding
5	Setting up and Running Trauma Centre and Hospital at Yerwada, Pune	Maharashtra	1.5	Construction

VI. ADVANTAGES AND DISADVANTAGES OF PPP WITH REFERENCE TO INDIAN INFRASTRUCTURAL PROJECTS

Advantages

[1] Value for Money: The important advantage of PPP is the creation of value for money. This means delivering a project with the superior quality for same amount of money.
[2] Risk Transfer: Risk will be transferred to third party who is best able to manage risk at least cost.
[3] Private sector management skills: This allows the project to be delivered well ahead of time. By using PPP Government will have access to new skills.
[4] Competition: Generally competition is associated with private sector, like lower prices, Innovative Practices, Increased Investment, Better services etc.
[5] Cost Efficiencies: PPP leads to cost efficiencies which are as a result of increased competition, increased proportion of risk transfer, and closer integration of various aspects.
[6] Time to Delivery savings: PPP projects can be delivered quicker than under conventional procurement because of better project management, better management of project risks and because the service provider is not paid until the project is completed.
[7] Reduction on the public Treasury: PPP helps reduce the capital demands on the public treasury for infrastructure development.
[8] Broad support: PPP are broadly supported by central, state and local bodies.
[9] Others: Innovation, Private sector project development skills, Transparency of process, Involvement of third party financiers etc.

Disadvantages

[1] Higher transaction cost: PPP's try to reduce total project cost, however trending costs and developing costs are generally higher.
[2] Lack of coordination: As there are two or more parties involved in PPP there are chances of misunderstandings.
[3] Inefficiencies: PPP can lead to Inefficiency due to lack of contestability and competition.
[4] Culture Gap: There exists a culture gap between public and private sector which may result in loss of confidence in each other.
[5] Different Objectives: The private sectors motive to take part in PPP is to mainly make profits but the motive of public sector is service oriented.
[6] Corruption: PPP projects are always behind the risk of corruption as there are too many people and processes involved in the completion of the project.
[7] Political and Legal Problems: Changing Governments and major changes in law has sometimes a very bad impact on PPP projects.

VII. FINDINGS AND RECOMMENDATIONS

[1] In order to make PPP projects successful in India, risk should only be transferred to those parties who are best in managing it, because transferring risk will result in a huge impact.
[2] Over-specification and miss-specification of project result can cause huge damage. Hence, the government will have to define its goals, desires, principles and requirements as clearly as possible.
[3] The total number of bidders should be enough to have effective competition, but should be limited in order to have control over transaction cost, quality of bids and probability of success.
[4] It is always better to have standardized contracts in order to avoid transaction cost, delays and uncertainties.
[5] In terms of contract award method, the international competitive bidding yielded 35% of total investment in India followed by domestic competitive bidding of 26%.
[6] An independent institutional structure for handling PPP programs in India has to be set up to act as a nodal agency with the responsibility of creation of PPP database, best practices and model documents for all sectors.
[7] There is a need for effective distribution of responsibility, costs and risks between the public and private sector to fulfil their responsibilities successfully such as land acquisition, environmental clearance, state support, etc.
[8] There are a good number of projects under Transportation, Airports, and Ports sectors, but there is a huge under-explored market in sectors like Energy, Urban Development and Railways.
[9] There is an acute need for PPP projects in India to grow at a pace of 8-9% to match countries like Japan and China in terms of infrastructural development.

VIII. CONCLUSION

Considering India's infrastructural needs, PPPs are not just an option, but a necessity. It has been seen that PPP has many merits such as large investment in public (both urban and rural) infrastructure, efficient service delivery, cost-effectiveness, contracts that are performance-based, sharing of risks, effective use of assets and opportunities of long-term investment. Though a mixed economic approach is followed by India, which is reliant on public private involvement in economic activities, Public Private Partnership in infrastructure is now more than a decade old. It seems to create considerable value to the Indian Government and its citizens with respect to enhancement in time efficiency, greater convenience, increased reliability and saving costs along witheasy availability of information. However, there are many issues which need to be identified, addressed and resolved in order to facilitate a better understanding on making use of PPP in a better way to develop Indian infrastructure effectively.Our President Mr.Pranab Mukherjee has rightly said that "with effective use of PPP, we can achieve the desired level of growth". Considering the above statement, we can conclude that mere PPP is not sufficient for India, but an effective PPP is required.

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