

Growth Empirics of Public Private Partnership Model in Infrastructural Development of Roads in Uttar Pradesh

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Abstract

The present locale of infrastructural development in India is primarily dominated by roads, ports, airports, power, water, railways, urban facilities or even telecommunication. The existing spectrum of development paradox of India is likely to attain the sustainable double digit GDP growth in future. Therefore, the Indian government have initiated some serious efforts to strengthen the policy and regulatory framework for the core infrastructure sectors. Throughout the last decade, private investment in infrastructure has remained below the targeted 2% of GDP. It has been observed that Substantial investment in infrastructure leads to employment generation, reduction in cost of doing business, increased production efficiency, and improved Quality of life. The present study is an attempt to know the status of PPP projects with special reference to the roads in Uttar Pradesh and also to analyse their impact on the state GDP.

Keywords: Indian Infrastructure Finance Company Limited (IIFCL), Public Private Partnership (PPP), State Gross Domestic Product (SGDP), Viability Gap Funding (VGF)

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1. Introduction

A Quality Infrastructure is a primary component of steady growth in any developing economy of the world, which requires the huge funds apart from natural resources. By considering the requirements of huge investment and the limited availability of public resources, the government perceived the greater role of private sector in context of accelerating the momentum of revenue generation through an increase in infrastructural investment.

However, a lesser emphasis was placed upon the motive of earning profit. As a resultant of this policy shift, partnership between a public sector entity and private sector entity for the construction and management of infrastructure for a specific time period was initiated as a nascent approach of infrastructural development, popularly known as the Public Private Partnership. Public Private Partnership includes 51 % percent or more of equity of private sector. The axiom of Public Private Partnership ascend from financing of public projects and helps to bring a new and cost effective technology for creation of infrastructural assets. The PPP Model creates greater competency for operational and managerial efficiency. The maintenance of the created assets stands as the contractual accountability on the part of pri-

ivate party to ensure timely and quality infrastructural services to the all the stakeholders and end users.

As a result, the consequents of Public Private Partnership model are recently observed, as an increase in private investment in infrastructural development of India, particularly in year 2000 and onward. Thus, it appears that the PPP model has encouraged government to go for a more ambitious infrastructure creation, through greater emphasis on PPP model. The futuristic prospect of PPP model is likely to dominate the canvas of infrastructural development in India. It is expected that the private sector is likely to contribute as high as dollar 1 trillion or more, during the XII plan. This projected investment is almost more than twice of the investment made during the XI Plan and 27 per cent of the gross domestic savings in India

In order to increase the commercial viability of PPP projects, a new scheme of Viability Gap Funding (VGF) was introduced for the infrastructure projects of PPPs with a view to make them commercially viable and to give financial support. The Indian Government has additionally started an Indian Infrastructure Finance Company Limited (IIFCL), with a view to play an important role in the development of Infrastructure sector, through the long-term debt for funding the infrastructure projects in India

2. Review of Studies

Samta Singh (April, 2017)¹ analysed the relationship between PPP in India and state GDP. He revealed the high degree of positive correlation between PPP and a progressive growth in India.

Vikas K M and T. Manjunatha (2016)² has studied the innovations of Infrastructure Management in Indian context and revealed that the increasing investments in the PPPs will help to get the right technology, latest techniques, high-end equipment's thinking, modern resources as well the opportunity to get sufficient returns on their investments. The Prime Minister of India is heavily promoting the private player's participation and also stressed on the Smart City and Make in India campaign for increasing the exports and reducing the imports and also promotes the people to become entrepreneurs and helps to increase in the growth of the country.

V.V. N. Reddy and S. M. Reddy (2015)³ has analysed the sector-wise infrastructure developments, status of public private partnerships and its contribution to the economic growth of India. They revealed an unequal positive growth in investment in PPP infrastructure projects. The Investment in PPP infrastructure projects also showed the positive but insignificant impact on economic growth.

Nataraj Geethanjali(2014)⁴ observed that in order to make PPPs a success, state governments should place a greater emphasis on the creation of standalone department for PPP. Which should be responsible for developing the core competencies, policy framework and public discourse. A rigorous assessment of costs and benefits of the large projects, would also be critical for achieving broader public support to ensure the completion of projects.

Nagesha G and K Gayithri (2013)⁵ analysed the patterns and trends of infrastructure PPPs at global, national and sub-national levels. This study revealed the dominance of PPPs was more in state infrastructure sectors than in the central infrastructure sector of an economy. The primary reason behind this difference at state and central level was due to deference in degree of support by governments, the execution and monitoring of PPP model, degree of assurance of returns to the private concessionaires on their investment, availability of capital grant (VGF) and incentives in the form of tax exemptions. Whereas it was also observed that apart from these primary factors there were some other factors also like, availability of land, clearances from various government departments and support from the general public etc, responsible for the uneven distribution of PPPs across states and regions in the country.

Singh Karunendra Pratap (Sept 2011)⁶ has discussed the government's efforts for promotion of PPP in India. He found that most of the PPPs have been restricted to the roads sector

and state wise also there is lot of variation. There are only profit motive private players in the market.

3. Objectives of the study

The objectives of the research paper are as follows:

- 1) To study the year wise progress and the status of PPPs road projects in Uttar Pradesh.
- 2) To analyses the contribution of PPPs in road projects to the State Gross Domestic Product of Uttar Pradesh.

3.1 Hypothesis of the study

State Gross Domestic Product and total investment in PPP road Projects in Uttar Pradesh are independent to each other.

3.2 Methodology

The research is based on secondary data taken from government websites i.e. www.pppinindia.gov.in. Researcher has compiled and interpreted the data as per the requirements. The Graphical representation, Correlation and regression techniques have been used to show the status of PPPs in U.P. and the relationship between PPPs and state GDP in U.P. respectively. Table 1 is showing the summary of total road projects in Uttar Pradesh which has also been represented in the graphical form in the figure no. 1. Similarly, in table and figure 2, the status of the entire road projects have also been shown in the tabular form as well as in graphical form respectively. Further, in table 3, the summary of state GDP and PPPs have been shown in table 3. Thereafter, results of correlation and regression analyses have been shown in table 4 respectively.

3.3 Data Analysis

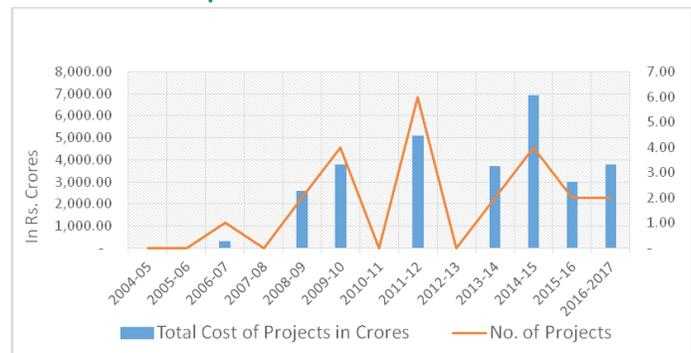


Table 1 and Figure 1 reveals the layout of infrastructural development projects for the development of roads in Uttar Pradesh during the period 2006-2007 to 2016-2017. It was observed that the highest investment of Rs.6944 crore was made during the

Table 1. Year Wise Summary of PPPs road projects in U.P

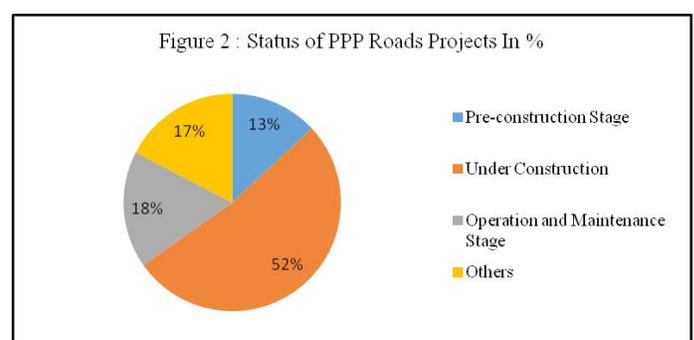
FINANCIAL YEAR	No. Of projects	YEAR OF COMMENCEMENT	STATUS AS ON SEPT 2017	COST (in Cr.)
2006-07	1	19-Dec-2006	Under Construction	294.00
2007-08	-	-	-	
2008-09	2	30-Apr-2008	Under Construction	1,325.30
		04-Aug-2008	Under Construction	1,251.42
2009-10	4	09-Jul-2009	Under Construction	1,046.00
		27-Jul-2009	Operation and Maintenance Stage	1,484.93
		10-Feb-2010	-	723.25
		10-Feb-2010	Under Construction	538.88
2011-12	6	19-Apr-2011	Under Construction	505.00
		20-Jun-2011	Pre-construction Stage	1,013.00
		14-Sep-2011	Under Construction	1,573.00
		14-Sep-2011	Operation and Maintenance Stage	635.90
		14-Sep-2011	Under Construction	790.00
		17-Feb-2012	Operation and Maintenance Stage	569.36
2013-14	2	27-Feb-2014	Operation and Maintenance Stage	1,954.29
		27-Feb-2014	Under Construction	1,778.00
2014-15	4	31-Jul-2014	Under Construction	1,276.00
		27-Nov-2014	Pre-construction Stage	2,356.16
		23-Dec-2014	-	1,661.60
		18-Feb-2015	Under Construction	1,650.20
2015-16	2	02-Feb-2016	Under Construction	1,638.44
		02-Feb-2016	Under Construction	1,376.51
2016-17	2	28-Oct-2016	Pre-construction Stage	2,064.99
		14-Feb-2017	Yet to be started	1,735.20
			Total Amount	29241.43

Source : www.pppinindia.gov.in

year 2014-15 with 4 road projects, while the lowest investment was made during the year 2006-07 with one road project only.

Table 2. Status of Roads Projects in Uttar Pradesh as on September 2017

S. N.	Status	No. of Projects	Total Project Cost (in Rs Crore)
1.	Pre-Construction Stage	3	4926.15
2.	Under- Construction Stage	12	14537.75
3.	Operation and Maintenance Stage	4	4644.48
4.	Others	4	5133.05
	Total	23	29241.43



The summative reflections of data in table 2 and figure 2, reveals that most of the projects i.e. 52% of total projects were at under construction stage, while 18% and 13% were at operational

Table 3. State Gross Domestic Product (SGDP) and PPP road projects in U. P.

Financial Year	GDP in Uttar Pradesh	Total No. of PPP Road Projects in U.P.	Total Project Cost (in RsCrore)
2004-05	2,75,510.26	-	-
2005-06	3,09,659.56	-	-
2006-07	3,55,231.14	1	294.00
2007-08	4,04,566.76	-	-
2008-09	4,69,693.80	2	2,576.72
2009-10	5,52,829.71	4	3,793.06
2010-11	6,34,045.61	-	-
2011-12	7,24,048.55	6	5,086.26
2012-13	8,22,902.99	-	-
2013-14	9,44,145.72	2	3,732.29
2014-15	10,43,371.15	4	6,943.96
2015-16	11,53,794.59	2	3,014.95

Source: www.rbi.org.in and www.pppinindia.gov.in.

Table 4. Correlation and Regression Analysis

Correlation				
Model	R	R-Square	Adjusted R-Square	Std. Error of Estimates
1	0.64	0.41	0.35	240810
Regression SGDP = 474636 + 78.38* investment in roads projects				
	Coefficients	Standard Error	t Stat	P-value
Constant	474636.947	94271.9	5.034766	0.000510537
Total Investment in roads projects	78.38283336	30.03476	2.609737	0.026052539
Dependent Variable: Gross Domestic Products in U.P.				

Source: Computation by Researcher

and maintenance stage and at Pre-Construction stage particularly up to September 2017.

In the above table, correlation analysis has shown a moderate degree of positive correlation (0.64) between GDP and roads projects in U.P, which means that as the investment in the road projects in U.P. is increasing; the GDP will rise by 41%. Furthermore, regression analysis has shown the value of coefficient of total investment in roads for the GDP U.P. which shown a positive and significant impact on GDP of U.P. i.e. 78.38% of variation in GDP by roads project PPP infrastructure projects only. As per the P value of regression analysis, researcher has rejected the null hypothesis of no relationship between GDP and road projects of U.P.

4. Conclusion

This study has been carried out to evaluate the current status of road projects under PPP model in Uttar Pradesh and their impact on state GDP from 2004-05 onwards. This study shows that the PPP is on a progressive path in UP and analysis reveals that GDP

will rise by 41%. The present state government during the year 2016-17 under able guidance of Prime Minister Mr. Narendra Modi, who is very keen for infrastructural development through PPP for achieving greater heights of sustainable development in India. The present Central Government, is taking all necessary measures to solve the obstacles in the way of PPP model and for this Vijay Kelkar committee has also submitted its report in the year 2016, for the necessary changes that needs to be undertaken to take PPP forward. During, the study period the Indian government has introduced many innovative concepts like- Make in India, Skill Development and Smart City as well. Thus, it can be concluded that the essence of growth and development can be achieved through a greater emphasis upon PPP model for the infrastructure development and sustained economic growth.

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Annexure-I

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Conflict of Interest:

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