

# Relationship between PPP in India and state GDP

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## Abstract

The Public-Private Partnerships (PPP) scheme has become popular in India as an innovative approach for the expansion of infrastructure development with the involvement of the private sector. The Present paper is an attempt to study the PPP on temporal basis. To also know the status of PPP projects in India and whether there is any relationship between state GDP and PPP.

**Keywords** –Public Private Partnership (PPP), State Gross Domestic Product (SGDP), Infrastructure, Investment

## I. INTRODUCTION

*A country has to pay for its roads, whether it has them or not, it pays more for those it does not have. So, Let's have them.....*

The basic aim of any government is to provide basic infrastructure to the people of their country. A good infrastructure has a multiplier effect for the economy. But the development of infrastructure requires funding apart from all other things. Government in any developing economy has to provide a number of welfare activities including subsidies but have limited funds or resources. It was earlier a perception that development of infrastructure is only the job of government because if infrastructure development is given in the hands of private sector then firstly, they would not be interested as their main motive is earning profit and secondly, they would exploit the common people. Now, did that mean that the economy had to be in a standstill till the funds were generated? The answer was a big “No”. Then what was the way out. Given the vastness of the investment requirements and the limited accessibility of public resources for investment in physical infrastructure, it was imperative to explore avenues for increasing investment in infrastructure through a combination of Public investment, Public Private Partnerships (PPPs) and occasionally, exclusive private investment wherever feasible. The use of PPP as an instrument of procurement for creation of infrastructure assets and delivery of public services has been recognized globally. Apart from bridging the deficit in financing of public projects, PPPs also brings new and cost effective technology for creation of infrastructure assets, managerial efficiency, competency for operation and maintenance of the created assets and the contractual accountability on the private party to ensure timely and quality infrastructure service to the

end users. As a result, private investment in infrastructure has picked up in recent years (especially after the year 2000 and onwards), encouraging the government to go for a more ambitious infrastructure creation drive through greater emphasis on PPP mode of execution. The private sector is expected to contribute at least half of the over \$1 trillion investment planned in infrastructure in the XII plan (2012-17). This projected investment is about twice the investment envisaged in the XI Plan and 27 per cent of the gross domestic savings.

Infrastructure can be broadly divided into two categories- Economic and Social infrastructure. Economic infrastructure means those basic facilities and services which directly benefit the process of production and distribution in economy. Roads, irrigation, power, transport and communication are the examples of economic infrastructure. Social infrastructure means those basic activities and services which in addition to achieving certain social objectives, indirectly help various economic activities. Education, health services, sanitation, water supply etc. are the examples of social infrastructure.

Infrastructure projects are often not commercially viable on account of having substantial sunk investment and low returns. However, they continue to be economically essential. Accordingly, the Viability Gap Funding Scheme has been designed which gives financial support in the form of grants, one time or deferred, to infrastructure projects undertaken through public private partnerships with a view to make them commercially viable. The Government has additionally started India Infrastructure Finance Company Limited with the detailed mandate to play a catalytic role within the Infrastructure sector by giving long-run debt for funding infrastructure projects.

## II. DEFINITION OF PPP

The Government of India defines PPPs as, ‘A partnership between a public sector entity (sponsoring authority) and private sector entity (a legal entity) during which fifty one percent or more of equity is with the private sector for the creation and management of infrastructure for public purpose for a specific time period (concession period) on business terms and during which the private partner is procured through an open procurement and transparent system’. (Department of

Economic Affairs, Ministry of Finance, Government of India, 2007a).

The International Monetary Fund (IMF, 2004): ‘Public-private partnerships (PPPs) talk about arrangements wherever the private sector provides infrastructure assets and services that traditionally are provided by the government.’

The Asian Development Bank (ADB): ‘PPPs talk about long-run, written agreement partnerships between the public and private sector agencies, specifically targeted towards funding, designing, implementing, and in operating infrastructure facilities and services that were historically provided by the Public sector.’

### III. REVIEW OF LITERATURE

Singh Karunendra Pratap (Sept 2011) has discussed the government’s efforts for promotion of PPP in India. The various efforts at the central government and state level along with technical assistance and eligibility have been highlighted. India Infrastructure Project Development Fund (IIPDF) set up by the central government and its eligibility and role has been discussed in detail. Total number of PPP Projects (State Wise) and sector wise have been discussed. In the study it was found that most of the PPPs have been restricted to the roads sector and state wise also there is lot of variation. The study also shows domestic versus foreign private players participation in PPP projects. The private players are there in the market only for profit motive. PPP project

contributions, risk & revenue sharing along with PPP project process have been discussed.

Nataraj Geethanjali (2014) in her paper has highlighted that to make PPPs a success, state governments need to establish full-fledged PPP departments mandated with developing the core competencies, policy framework and public discourse. Rigorous assessment of the costs and benefits of the large projects would also be critical for achieving broader public support for the completion of projects to show results in both the Centre and the State sectors.

### IV. OBJECTIVES

The objectives of the research paper are as follows:

- 1) To study the year wise progress of PPP in India
- 2) Status of PPP projects in India
- 3) Relationship between State Gross Domestic Product and Total Investment in PPP Projects State-Wise

### V. RESEARCH METHODOLOGY

The research is based on secondary data taken from reliable government websites and the data is compiled by the researcher and interpreted as per the requirement.

### VI. METHOD OF DATA ANALYSIS

Correlation and regression analysis is used for finding the relationship between SGDP and PPP. SPSS 21 was used for analysing the data. Diagrams (bar and pie) were made to present the data in an effective manner and percentages were calculated to see the status of PPP projects in India.

## VII. PPP INFRASTRUCTURE PROJECTS IN INDIA-YEAR WISE

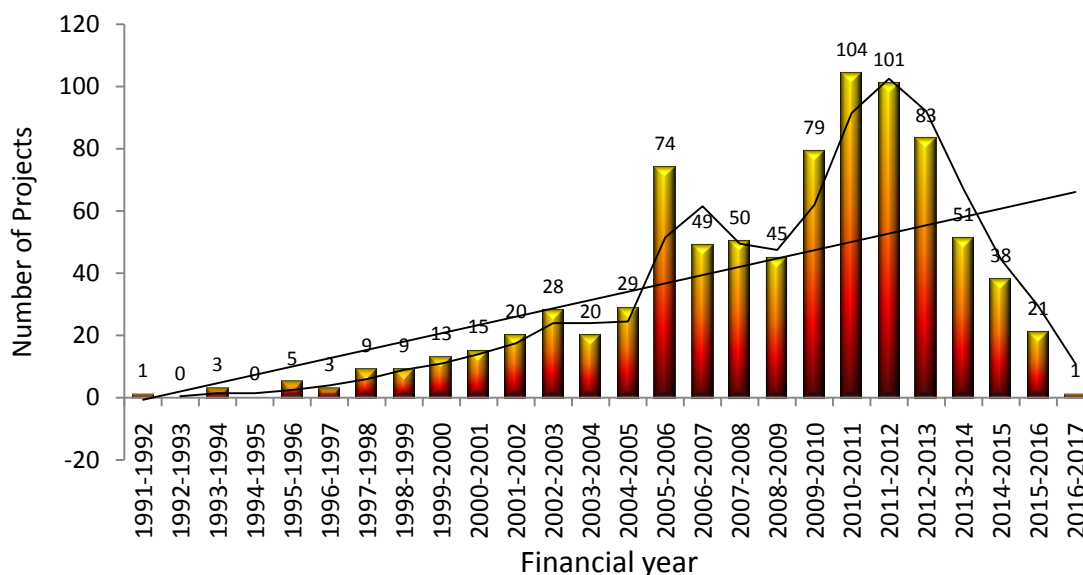
Table 1: Year Wise Summary Report - Infrastructure Projects

Sl No	Financial year	Number of Projects	Total Project Cost (in Rscore)
1	1991-1992	1	1,629.84
2	1992-1993	0	0
3	1993-1994	3	610.21
4	1994-1995	0	0
5	1995-1996	5	1,612.68
6	1996-1997	3	46.24
7	1997-1998	9	2,268.59
8	1998-1999	9	3,834.40
9	1999-2000	13	1,715.97
10	2000-2001	15	1,045.96
11	2001-2002	20	6,942.70
12	2002-2003	28	24,288.00
13	2003-2004	20	4,444.19
14	2004-2005	29	14,445.37
15	2005-2006	74	21,343.23

16	2006-2007	49	35,206.86
17	2007-2008	50	84,455.85
18	2008-2009	45	28,163.29
19	2009-2010	79	64,047.36
20	2010-2011	104	79,715.43
21	2011-2012	101	53,177.31
22	2012-2013	83	30,003.03
23	2013-2014	51	22,111.20
24	2014-2015	38	20,516.39
25	2015-2016	21	31,556.12
26	2016-2017	1	1,412.76
27	Others / Not Available	381	185,672.20
	<b>Total</b>	<b>1232</b>	<b>720,265.18</b>

Source: InfrastructureIndia.gov.in

Figure 1: Year-wise PPP Projects in India



Source: InfrastructureIndia.gov.in, Prepared by research scholar

Table 1 and figure 1 shows that the PPP took off from the year 2000 onwards. It went to its peak in the year 2010-11 and after that the decline started. There were various reasons for such a downfall in the number of projects under PPP. The important ones were the difficulties faced in land acquisition, cost overrun, delay in dispute resolution (Swati Mathur).

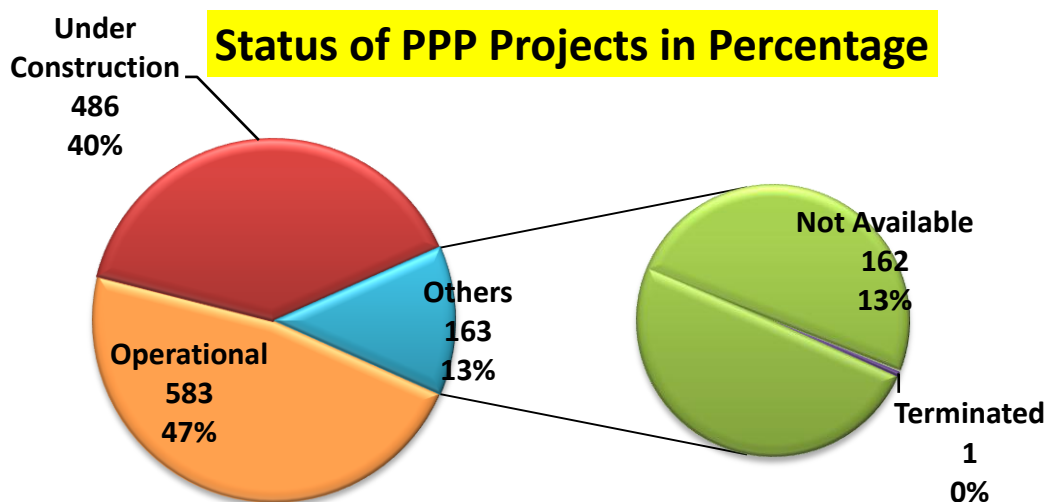
### VIII. STATUS OF PPP PROJECTS IN INDIA

Table 2: Status Wise Report - Infrastructure Projects (PPP), May 31, 2016

Sl No	Status	Number of Projects	Total Project Cost (in RsCrore)
1	Operational	583	228,253.64
2	Under Construction	486	355,003.93
3	Terminated	1	359
4	Not Available	162	136,648.61
	<b>Total</b>	<b>1232</b>	<b>720,265.18</b>

Source: InfrastructureIndia.gov.in

Figure 2: Status of PPP projects in percentage, as on May 31, 2016



Source: InfrastructureIndia.gov.in, prepared by research scholar

From the table 2 and figure 2 we can say that the projects operational under PPP as on May 2016 are 583 (47%), the ones under construction are 486 (40%), others including where data is not available (13%) and only 1 project terminated. This shows that the PPP is on a progressive path in India and the present government (in 2016-17) under the able guidance of our Prime Minister Sh. Narendra Modi is very keen in taking infrastructure development through PPP to greater heights. They are taking all necessary measures to solve the obstacles and for this Vijay Kelkar committee has also submitted its report (in 2016) for the necessary changes that needs to be undertaken to take PPP forward.

#### IX. RELATIONSHIP BETWEEN STATE GROSS DOMESTIC PRODUCT AND TOTAL INVESTMENT IN PPP PROJECTS STATE-WISE

Table 3: State Gross Domestic Product (SGDP), PPP projects and costs in Indian states(2015-16)

SI No	STATE	GDP OF STATES (IN RS CRORE)	TOTAL NO OF PPP PROJECTS	TOTAL PROJECT COSTS (IN RS CRORE)
1	Andhra Pradesh	264521	68	33,229.41
2	Arunachal Pradesh	6321	1	900
3	Assam	92432	8	1,175.95
4	Bihar	189789	18	12,027.99
5	Chhattisgarh	100842	9	4,844.94
6	Delhi (UT)	238026	17	4,650.98
7	Goa	30,345	6	2,183.15
8	Gujarat	452,625	97	67,868.66
9	Haryana	215146	25	36,266.68
10	Himachal Pradesh	47,255	38	11,872.23
11	Jammu & Kashmir	45126	7	25,854.76
12	Jharkhand	118743	13	5,363.71
13	Karnataka	344106	134	57,628.36
14	Kerala	226,208	29	22,016.62
15	Madhya Pradesh	253533	159	33,044.43
16	Maharashtra	947550	200	101,765.91
17	Manipur	8,330	0	0
18	Meghalaya	14561	2	762.11
19	Mizoram	5,608	0	0
20	Nagaland	12140	0	0
21	Odisha	148576	29	30,275.72
22	Punjab	183298	37	6,354.30

23	Rajasthan	272227	88	18,490.10
24	Sikkim	6,152	17	4,903.34
25	Tamil Nadu	515458	69	38,030.17
26	Telangana	217432	16	20,450.09
27	Tripura	18,732	0	0
28	Uttar Pradesh	492384	47	112,952.61
29	Uttarakhand	77552	16	1,002.92
30	West Bengal	398387	34	15,683.91

Source: InfrastructureIndia.gov.in, statisticstimes.com/economy/gdp-of-indian-states.php

To understand the relationship between State Gross Domestic Product and total PPP projects state-wise, Regression and Correlation Analysis was carried out and null hypothesis framed was as follows:

H<sub>0</sub>: There is no relationship between State Gross Domestic Product and total investment in PPP projects state-wise.

**Table 4: Regression analysis between State Gross Domestic Product and total investment in PPP Projects State-wise**

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.839 <sup>a</sup>	.704	.693	16113.504	
a. Predictors: (Constant), SGDP					
ANOVA <sup>a</sup>					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	17292335948.567	1	17292335948.567	66.600	.000 <sup>b</sup>
Residual	7270060611.849	28	259645021.852		
Total	24562396560.416	29			
a. Dependent Variable: total investment in PPP projects					
b. Predictors: (Constant), SGDP					
Coefficients <sup>a</sup>					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-917.967	4094.262		-.224	.82
SGDP	.117	.014	.839	8.161	.00
a. Dependent Variable: total investment in PPP projects					

From the above data we can say that there is a very high degree of positive correlation (+0.839) between State Gross Domestic Product and total investment in PPP projects state-wise which means as GDP of a state is increasing, it is investing more and more in the PPP infrastructure projects. Also, we can say that the 11.7% of State Gross Domestic Product goes as investment in PPP projects.

The Regression Equation derived is:

$$\text{Investment in PPP projects} = -917.967 + 0.117 * \text{SGDP}$$

Looking at the P-value which is much below the 0.05, we can safely reject our null hypothesis and accept the alternate hypothesis that there is a relationship between State Gross Domestic Product and total investment in PPP projects state-wise.

**X. CONCLUSION**

Indeed, for many years, service provisions to the citizens have been dominated by government but the increasing call for more services coupled with sparse resources and dwindling quality of services, alternative approaches were sought by government in

order to acquire funds and deliver quality services to the public. As a way-out, therefore, the concept of public-private partnership came into being as an alternative way of reducing funding deficits and providing improvement in the quality of public services being delivered. The results of the research

paper also conclude that PPP over the years has shown a progressive growth and its correlation with SGDP is very high.

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