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IMPACT OF PUBLIC PRIVATE PARTNERSHIP IN INFRASTRUCTURE ON INCLUSIVE GROWTH IN INDIA

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ABSTRACT

Development of an economy depends on the quantum of investment made on infrastructure. Before economic reforms infrastructure development was considered to be the domain of the government. Since economic reforms of 1991, it was realized that the government alone could not meet the financial requirements of infrastructure and that the participation of private sector is also essential. To have sustained growth, India should avoid the mistake of reducing investment in infrastructure made by many Latin American and East Asian countries in the 1990s when they faced financial crises. Reducing investment in infrastructure turned out to be a short-sighted fiscal solution, making it all the more difficult for these countries to get out of recession. India faces extraordinary challenges in achieving its ambitious medium-term infrastructure investment program, anchored in the Government of India's XI Five-Year Plan (2007-12) document. The plan has estimated that US\$492 billion is needed over the next five years in improving roads, railways, ports, power, and water. This would require almost doubling infrastructure spending from its current 5 percent of GDP. In this backdrop, an attempt was made to analyse the impact of public private partnership in infrastructure on inclusive growth in India. The findings of the study show that the increase in the number of projects in infrastructure under public private partnership could bring inclusive growth in the states. The value of the projects was not a matter to contribute to inclusive growth of the states.

INTRODUCTION

India is one of the fastest growing economies in the world. As a result of economic reforms in 1990, the economic growth in India increased from an average of 1.9 percent per annum during 1961- 1990 to 4.6 percent per annum during 1991-2007. However, the growth rate declined from an annual peak of 9.7 percent in 2006-2007 to 5.8 percent in 2008-2009. The development of an economy depends on the investment made on infrastructure. As World Bank (2009) in its report pointed out there is a direct relationship between economic growth and infrastructure. In earlier time period, infrastructure development was considered to be the duty of the government for promoting economic development. After economic reforms in 1991, it was felt that the government alone could not be a partner in investing in infrastructure. But the private sector also should participate to meet the financial requirement of infrastructure. By sustaining its commitment to investment in infrastructure, India should be able to avoid the mistakes made by many Latin American and East Asian countries in the 1990s when they faced financial crises. In Latin America, one-half of the fiscal adjustments in the 1990s came through cuts in public infrastructure spending. A similar investment shortfall during the Asian crisis led to similar decisions. For instance, Indonesia's total public investment in infrastructure dropped from about 7 percent of GDP in 1995-99 to 2 percent in 2000, and private investment fell from 2.5 percent of GDP to 0.09 percent during the same period. Reducing investment in infrastructure turned out to be a shortsighted fiscal solution, making it all the more difficult for these countries to get out of recession. By contrast, China demonstrated 10 years ago that wisely chosen infrastructure projects could create jobs while building a foundation for productivity, growth, employment generation, and poverty reduction. Of course, India faces extraordinary challenges in achieving its ambitious medium-term infrastructure investment program, anchored in the Government of India's XI Five-Year Plan (2007-12). The plan has estimated that US\$492 billion is needed over the next five years for improving roads, railways, ports, power, and water. This would require almost doubling infrastructure spending from its current 5 percent of GDP. (XI Plan document). In this backdrop, an attempt was made to analyse the impact of public private partnership on inclusive growth in India with the following specific objectives

OBJECTIVES

1. To analyse the state wise distribution of projects in infrastructure under public private partnership.
2. To assess the impact of public private partnership in infrastructure on inclusive growth.

METHODOLOGY

The study is based on secondary sources of data collected from Economic survey, 2009-2010 and Ministry of Finance, 2010. To measure the impact of public private partnership in infrastructure on inclusive growth, probit regression analysis was employed for state wise data for the period 2009-2010. The states were classified as states with presence of inclusive growth and absence of inclusive growth based on net state domestic product. If the states had net state domestic product (at constant prices) above national average, then they were assumed as states with higher development and presence of inclusive growth. The states with their net state domestic product below national average were assumed as states lacking inclusive growth. The number and value of the projects under public private partnership were assumed to determine the inclusive growth of the states. Hence these factors were taken in the probit regression analysis. Though the net domestic product was an observable and quantitative variable, the presence and absence of inclusive growth was a qualitative variable. The probit regression

analysis was identified as more suitable than the regression analysis, which would be biased in the present analysis. The equation used in the probit regression analysis was

$$G^* = \gamma Z + \varepsilon$$

where G = probability of a state with inclusive growth or absence of inclusive growth.

γ = parameter co-efficient

Z = number of projects in infrastructure under public private partnership, value of projects under public private partnership up to Rs100 crore, projects between Rs101- 250 crore, projects between Rs 251- 500 crore and projects with more than Rs 500 crore. In the process of analysis, the variable, viz, the value of projects more than Rs500 crore was excluded as this produced insignificant result. The remaining variables were retained in the analysis.

RESULTS AND DISCUSSION

Among the projects falling under public private partnership (PPP) road projects alone accounted for 53.4 percent of the total number of projects and 46 percent by total value because of its small average size. Ports though accounted for 8 percent of the total number of projects had a larger average size of project and contributed 21 percent 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 crore in basic infrastructure PPPs, 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 (Ministry of Finance, Government of India, 2010). It was a fact that development of states depends on infrastructure. Hence an attempt was made to analyse the distribution of projects under public private partnership. The table -1 shows the distribution of projects under public private partnership across states in India in 2010.

Across states and UT, the leading users of PPPs by number of projects are Karnataka, Andhra Pradesh, and Madhya Pradesh, with 104, 96 and 86 awarded projects respectively. 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. The highest value of the projects was observed in the state of Andhra Pradesh followed by Maharashtra and Karnataka.

TABLE-1
PUBLIC PRIVATE PARTNERSHIP IN INFRASTRUCTURE IN INDIA (2009-2010)

States	Number of projects	Project value up to Rs 100 crore	Project value between Rs 101-250 crore	Project value Rs 251 – 500 crore	Project value above Rs 500 crore	Project total value
Andhra Pradesh	96	1,484.60	2,197.80	7,062.30	56,173.70	66,918.30
Assam	4	54	337.2	-	-	391.2
Bihar	6	77.6	-	769.6	1,246.70	2,093.80
Chandigarh	2	75	-	-	-	75
Chhattisgarh	4	70	304	464	-	838
Delhi	13	95	109.4	738.2	10,374.00	11,316.60
Goa	2	30	220	-	-	250
Gujarat	63	304.1	2,013.20	4,138.90	33,181.00	39,637.20
Haryana	10	125	180	270	10,588.10	11,163.10
Jammu and Kashmir	3	-	-	-	6,319.80	6,319.80
Jharkhand	9	131	550	398	625.1	1,704.10
Karnataka	104	1,080.40	1,942.60	13,136.30	28,499.60	44,658.90
Kerala	32	338.7	206.3	1,235.00	20,501.50	22,281.50
Madhya Pradesh	86	1,977.60	3,930.30	3,397.20	5,678.30	14,983.40
Maharashtra	78	742.3	2,988.40	2,433.70	39,427.60	45,592.00
Meghalaya	2	-	226.1	-	536	762.1
Orissa	27	235.1	211	1,473.00	11,430.60	13,349.70
Puducherry	2	-	-	419	2,947.80	3,366.80
Punjab	29	732.8	1,552.70	572	705	3,562.50
Rajasthan	59	633.9	783.8	1,100.80	12,508.80	15,027.30
Sikkim	24	175.6	558	2,669.00	13,708.00	17,110.60
Tamil Nadu	43	267.9	355.6	8,905.20	9,100.00	18,628.60
Uttar Pradesh	14	-	-	1,458.60	25,137.20	26,595.80
Uttarakhand	2	43	-	478	-	521
West Bengal	30	638	965.7	1,714.40	3,299.10	6,617.10
Interstate	14	160.5	195	2,474.40	6,738.00	9,567.80
Total	758	9,471.90	19,826.90	55,307.50	298,725.80	383,332.10

Source: Department of Economic Affairs, Ministry of Finance, Government of India, 2010

To measure the impact of public private partnership in infrastructure on inclusive growth, probit regression analysis was employed for state wise data for the period 2009-10. The states were classified as states with presence of inclusive growth and absence of inclusive growth based on net state domestic product. The number of projects under public private partnership and the value of the projects under public private partnership were assumed to determine the inclusive growth of the states. Hence these factors were taken in the probit regression analysis. The table-2 shows the results of probit regression analysis.

TABLE-2
IMPACT OF PUBLIC PRIVATE PARTNERSHIP IN INFRASTRUCTURE ON INCLUSIVE GROWTH IN INDIA - PROBIT REGRESSION ANALYSIS

Variables	Probit Coefficients	t-value	Significant
Constant	-2.7595	92	10% level
Number of projects under PPP	1.5988	17	5% level
Project value up to Rs 100 crore	-.3941	35	Insignificant
Project value between Rs100 crore to 250 crore	-0.0166	59	Insignificant
Project value between Rs 251 crore to 500 crore	0.5357	34	Insignificant

Source: Estimated value from the data given by the Department of Economic Affairs, Ministry of Finance, Government of India, 2010

The results show that the estimated probit model was statistically significant at 1 percent level. It could be identified from the significant chi-square value that the selected variables together were statistically significant to explain the number of projects under public private partnership was statistically significant to determine the inclusive growth of states. It had positive relationship with the increase in the number of public private partnership projects in infrastructure could be statistically insignificant and could not contribute to inclusive growth of states.

CONCLUSION

The number of projects in infrastructure under public private partnership was higher in the states such as Karnataka, Andhra Pradesh, and Madhya Pradesh. The highest value of the projects was observed in the state of Andhra Pradesh followed by Karnataka and Madhya Pradesh. The increase in the number of projects in infrastructure under public private partnership could not contribute to inclusive growth in the states. The value of the projects in infrastructure was not a significant factor to contribute to inclusive growth of the states.

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