

An Exploratory Study on Infrastructure Financing in India

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Abstract: *Infrastructure is one of crucial pillars of productivity in any economy. It not only attracts foreign direct investment, but also affects economic growth and reduces poverty in India. In this paper author has explained resource constraint is the critical factor for infrastructure deficit in India. This paper identifies stable exchange rate, mild inflation, clarity of taxation rules, fiscal discipline & sustainability of economic policy create investment climate in India. According to this paper, public private partnership model is the best model as infrastructure is concerned but effectiveness of this depends upon maturity of domestic bond market & infrastructure pricing policy. In addition, this paper discovers inadequate allocation of fuel to the power stations, delay in environment clearances, issues in the land acquisition, absence of credible dispute resolution mechanism are the technical barriers of investment in infrastructure. This paper suggests setting up an infrastructure development fund for those infrastructure sectors in which private participation is negligible. In addition, company act 2013 should be amended for more participation of corporate sector for infrastructure development.*

Keywords: Bond Market, Foreign Direct Investment, Infrastructure, Infrastructure Pricing, Public Private Partnership Model

1. Introduction

Development of Indian economy is unattainable without sustainable inclusive economic growth. This depends upon the quality of infrastructure, which is one of the crucial drivers of productivity of an economy. Lack of quality Infrastructure is the most problematic factor in India for doing business (The Global Competitiveness, 2014). It also acts an imperative role for attracting foreign direct investment (Sharma, Nayagam & Chung, 2012). The Organization for Economic Co-operation and Development (OECD) estimated in 2009, that total new spending for infrastructure over the period of twenty year, (2010-2030) would be US \$ 71 Trillion or about 3.5% of world GDP. The World Economic Forum's Positive Infrastructure Report found that the world faces a global infrastructure deficit of US\$ 2 trillion per year over the next 20 years. There was improved investment in physical infrastructure from a level of five per cent of GDP during the Tenth Five-year Plan to seven percent of GDP during the Eleventh Five-year Plan in India. It is estimated that investment for the Twelfth Five-year Plan will be 5.71 per cent of GDP. In Prime Minister's inaugural speech on March 23, 2010 at "Conference on Building Infrastructure" held in New Delhi, he had anticipated that investment in infrastructure would need to US \$ 1 trillion during the Twelfth Plan period (Second Report of, 2014). On the quality of infrastructure, India ranks 87 out of 144 countries (The Global Competitiveness, 2014).

According to the planning commission of India, broad definition of infrastructure includes Electricity, R&M of Power Stations, Non-Conventional Energy, Water supply and Sanitation, Telecommunications, Roads & Bridges, Ports, Inland Waterways, Airports, Railways, Irrigation, Storage & Gas Pipeline Networks.

This is an exploratory research paper briefing different sources of finance for infrastructure and suggests policy maker for formation of infrastructure policy for overcome infrastructure deficit in future. The article has six interrelated parts. The first one aims at explaining definition & importance of infrastructure, followed by overview of

literature in the 2nd part. Research problem and research questions are represented in 3rd part of this paper. Analysis is represented in 4th part of this paper, followed by findings and suggestions in 5th part. Conclusion & scope for future research are represented in the end of this paper.

2. Overview of Literature

The Government has been facilitated PPP (Public private partnership) model by setting up India Infrastructure Finance Company Ltd (IIFCL) in 2006. It provides not only refinance to eligible financial institutions against their infrastructure-lending portfolio but also long term Senior and subordinate debt through participation in lending consortium. It also effectively addressing banks' asset liability mismatches problems. As a credit enhancer, it provides partial credit guarantee to enhance the ratings of the project bond issue that helps to attract insurance companies and pension funds. This will deepen the infrastructure bond market in India. (Scheme for Financing, 2015)

Public private partnership model is the best model among alternative models for financing the infrastructure due to inflow of private capital for autonomous investment and effective delivery of services (Scheme and Guidelines, 2013).

High-level committee on financing infrastructure, planning commission, government of India in 2014 has given some of valuable suggestions to the government of India. These are

- 1) Banks should finance construction as well as the initial operation period of the infrastructure project, while insurance and pension funds refinance bank loans on a long-term basis.
- 2) Ten percent EPF (Employee Provident Fund) should be reserved for investment in infrastructure projects.
- 3) For promote more equity participation in infrastructure, "SEBI (FVCI) Regulation 2000" should be amended so that enthusiastic Foreign Venture Capital investors can invest in infrastructure through NBFCs (Non Bank Finance Companies).

- 4) Infrastructure is price inelastic nature. Its operating leverage is very high. Either central government or state government agencies regulate infrastructure pricing. Infrastructure pricing policy adopts cost plus tariff model, which rewards to inefficiency.
- 5) Shortage of fuel to the power stations, interruption in environment clearances, troubles in the land acquisition, unwillingness in bank lending and delay in the process of decision-making are the principal causes of decline in investment in infrastructure in India. Committee has recommended that amendment of the land acquisition act .
- 6) Deficiency of credible dispute resolution mechanism, lack of institutional arbitration and delay in court proceedings damage investment climate in India. So regain confidence among investors, committee has recommended that Introduction of a legislative enactment for creation of an arbitral architecture dedicated to resolution of disputes of all public contracts dealing with infrastructure projects.
- 7) The Government and The Reserve Bank of India setting up infrastructure debt funds (IDFs) to undertake refinancing of projects loans.
- 8) For encouraging investment in infrastructure, government reduced withholding tax & providing tax shield in infrastructure bonds.

For financing renewable energy projects, Yes Bank successfully issued India's raising an amount of Rs.10 billion first Green Infrastructure Bond on 16 February 2015(YES BANK successfully,2015) .

For financing the roads and railways, central government announced in his union budget 2015 tax-free infrastructure bond for roads and railways. For the development of the rural infrastructure government also proposed to set up rural infrastructure fund. It also estimates to construct 100000 km rural road within 2015-16. For encourage the infrastructure, government announced Rs. 200 billion-infrastructure debt fund.

3. Research Problem

Suffering from the Asian Financial Crises & Subprime Crises, banks in India have more cautious in lending infrastructure projects. These types of projects have large initial cost and low operating cost. Gestation period for such projects is often longer. Public sector Commercial banks are currently leading source of debt capital to the infrastructure sector in India. Banks are not willing to invest in long duration infrastructure projects in India due to maturity mismatch created by short-term liabilities. (Financing Infrastructure, 2009)

Infrastructure projects are generally executed through special purpose vehicles (SPV). They have neither credit history nor strong balance sheet. (Financing infrastructure, 2009). Issuance of debt instruments by SPVs needs a well-developed debt market. Raising funds from the Indian financial market through the issuance of bond has become a challenging task due to underdeveloped bond market (Lam, Chiang & Chan, 2011).

Traditionally, government funding was key source of financing for large infrastructure projects. Sole reliance on government financing is not an affordable way at present due to fiscal constraint. The target for infrastructure investment in India was Rs.7479760 million in 2012-13 out of which only sixty-six percent was achieved. For successful of any PPP model infrastructure pricing plays a crucial role. Infrastructure pricing is a major challenge for Indian economy. 'Cost plus' tariff setting in infrastructure penalize efficiencies and reward to incompetence. Consumer resistance and political consideration prevent regulators from increasing tariffs to Economic levels. Regulated market is the major hindrance of private participation in infrastructure sector (Second report of, 2014).

Foreign direct investment is the long-term solution of the infrastructure deficit in India. Deficiency in investment climate creates hindrance of funds inflow into India.

Research questions:

- 1) How FDI inflow is enhanced?
- 2) What should be infrastructure-pricing policy?
- 3) What are the steps taken for development of bond market?

4. Results & Discussions

Five important constraints restrict FDI to invest into infrastructure.

1) Inconsistency of Economic Policy Formation & Implementation

Inconsistency of economic policies of India is major barrier for FDI inflow in the infrastructure sector. The policy of the government is changing according to the ruling party. There is no clarity of vision among the political parties. Lack of transparency in the process of policy implementation is a major reason for FDI inflow in India. Cancellation of 2G spectrum distribution spreads negative message to international community as a result FDI inflow is substantially reduced in this sector.

2) Lack of Clarity of Taxation rules

Lack of clarity of taxation rules in Indian taxation system creates taxation arbitrage which is a hindrance of FDI inflow in infrastructure sector. There was a case between Vodaphone & government of India relating to the taxation. Taxation laws should be simple so that it is easier for interpretation.

3) Currency Exposure

4) India adopts the floating exchange rate system. In this system, market determines the exchange rate between the two currencies. Stable currency is one of a central factor, which provides investment climate in a country. Presence of high currency exposure always discourages the FDI inflow in India.

5) Rate of Inflation

Consistency in running inflation is hindrance of FDI inflow. In the short run, It leads to wage inflation in the manufacturing sector and also due to increase in the raw material prices Inflation will depreciate the local currency in the long run, which reduces not only the return on investment but also total valuation of the assets in the consolidated balance sheet of foreign company.

6) Fiscal Discipline

Fiscal discipline is an important indicator of financial health of any economy. High fiscal deficit degrades sovereign rating, which discourages FDI inflow in India in infrastructure sector.

These five are the fundamental barriers of investment climate, which discourages investment in infrastructure sector.

Shortage of fuel to the power stations, hindrance in environment clearances, issues in the land acquisition, absence of credible dispute resolution mechanism are the technical barriers of FDI inflow in India.

Pricing of Infrastructure:

Infrastructure pricing is a major challenge for Indian economy. Every one consumes Infrastructure in a society. It is price inelastic in nature. Its operating leverage is very high. Infrastructure pricing is regulated either by central government agencies or by state government agencies. Regulated market is hindrance of private participation in infrastructure sector. On the other hand, deregulated prices of infrastructure may create collusive oligopoly, which exploits consumers. Pricing of infrastructure is based upon the cost plus tariff model, which penalizes efficiency. Peak load pricing or competitive pricing should be more appropriate for the case of infrastructure, because in this way there is optimum utilization of financial resources.

Infrastructure Bond Market:

Bond market is the essence of investment climate of any nation. Mature bond market provides sources of fund at less rate of interest. India has underdeveloped bond market. Scarcity of Liquidity & high cost of debt are the two important features of Indian bond market. Government should adopt investor friendly climate so that deepen of the bond market will be possible.

Findings & Suggestion:

Stable economic policy, simplification of taxation rules, stable currency, mild inflation, fiscal discipline & mature bond market are the six pillars, which develops the investment climate for foreign investors as a result FDI inflow increases in India. Infrastructure pricing should be deregulated, which attract private participation in investment in infrastructure.

Innovative Infrastructure development fund should be set up. Financial resources are collected for this fund through imposition of infrastructure Cess. It is disbursed for those infrastructure projects in which private participation is negligible or hardly any marginal efficiency of capital.

There should be an amendment of the company act 2013, in which there must be a provision that every company must invest one percent of their net profit for the development of the infrastructure sector.

5. Conclusion

“Make in India” will be dream if there is lack of proper infrastructure. However, if we want to convert into reality, we must focus huge investment in infrastructure. Therefore,

investment climate is focused for growth of an economy. It also increases the competitive advantage in an economy. An essential criterion for any country lies on its own financial market. Without maturity of the financial market investment in infrastructure is difficult to achieve. Future researchers may examine the “Role of Infrastructure Pricing in Private Participation” & “Role of Financial Market in Infrastructure Development”.

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Author Profile



Swarupa Ranjan Panigrahi has more than eight years of teaching experiences in the different B - schools. He has completed M.A. in Economics from Department of Economics, Berhampur University in 2002 with specialization in Econometrics and Mathematical Economics. He has also completed MBA from the department of Business Administration, Utkal University in 2007 with dual specialization, Finance (Major) and Marketing (Minor). Now he is working as Asst. Professor (Finance & Economics) in Astha School of Management. Prior to that, he was a faculty member of “Srusti Academy of Management”, “Global Institute of Management” & “Sikhya O Anusandhan University”. His academic area of interest is Managerial Economics, Research

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Dhananjay Beura has more than 12 years of corporate and teaching experiences in the different corporate and B -schools .he has completed B.Pharma from Utkal University in 2000. He has also completed PGDM from one of the premier B School Jaipuria Institute of Management with dual specialization, Marketing and Finance. Now he is working as Asst. Professor in Global Institute of Management, Bhubaneswar. Prior to that, he was working with ICICI Bank Ltd as a manager, International Trade finance. His academic area of interest is banking and finance, currency derivatives and brand management. He is currently pusuing his PhD. With Centurion University, Bhubaneswar in the area of Brand Management.