

# Study of Issues Related to Infrastructure Development and Regulatory Framework in India

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**Abstract**— India is the fourth largest economy in the world but the shape of infrastructure in India has been a source of concern for the global as well as the investors within the nation in tapping its potential as a business destination. The factors that are obstructing its growth and development is mainly due to the lack of world class infrastructure itself. Unlike other sectors, wherein market forces alone are enough for development, infrastructure sector need much more regulatory, clarity and frameworks for both private and public investments. Projects in the sector typically involve many partners with the state playing a crucial role. As such appropriate contractual arrangements, credit enhancement and other forms of financial support from the state, and non-distortionary subsidies became crucial to the growth of infrastructure. With the increasing role of the private sector, the need for appropriate forms of public private partnerships and especially private finance initiatives cannot be overemphasized. Similarly, appropriate regulatory modes and market creating efforts are necessary in many sectors. The source of information has been secondary for this research. In this paper, we are focusing on the major challenges and impediments to infrastructure development in the country. The paper concludes that fiscal support will continue to be dominant for infrastructure development but equally important are enabling policies that could lead to streamlining of procedures and protection of interests of both investors and consumers.

**Keywords**— Fiscal support, Infrastructure, Policy, Regulatory framework.

## I. INTRODUCTION

Fast growth of the Indian economy in recent years has placed increasing stress on physical infrastructure, such as electricity, railways, roads, ports, airports, irrigation, water supply, and sanitation systems, all of which already suffer from a substantial deficit. Physical infrastructure has a direct impact on the growth and overall development of an economy. The goals of inclusive

growth and 9 per cent growth in GDP can be achieved only if India's infrastructure deficit is overcome. Infrastructure development will also help create a better investment climate in India. To develop infrastructure in the country, the government is expected to review issues of budgetary allocation, tariff policy, fiscal incentives, private sector participation, and public-private partnerships. There are many issues that need to be addressed in different infrastructural fields. To begin with, the gap between electricity production and demand is affecting both manufacturing and overall growth. Another concern is the transport sector; while road transport is the backbone of the Indian transport infrastructure, it is inadequate in terms of quality, quantity, and connectivity. However, the resources needed are much larger than what the public sector can provide. This paper explains in detail a few important sources of infrastructure financing in the country and elucidates public-private partnerships in India. The major challenges and barriers to infrastructure development in the country are presented point wise and last section provides concluding remarks.

## II. RESEARCH METHODOLOGY

Information has been gathered from various academic bodies such as newspapers research publications. The sources have been of full support to make up the research at its best shape. The total investment in infrastructure, which includes roads, railways, ports, electricity and telecommunication, oil and gas pipelines, and irrigation, is estimated to have increased from 5.7 percent of GDP in the base year of the Eleventh Plan to around 8 percent in the last year of the Plan. The pace of investment has been particularly buoyant in some sectors, notably telecommunication and oil and gas pipelines, while falling short of targets in electricity, railways, roads, and ports. Efforts to attract private investment in infrastructure through the PPP route have met with considerable success, not only at the level of the Central government, but also at the level of states individually. A

large number of PPP's have taken off, and many of them are currently operational at both the Centre and in the states. The Twelfth Plan intends to continue increasing the pace of investment in infrastructure as this is critical for sustaining and accelerating growth. The Planning Commission in its Twelfth Five Year Plan Document (2012-17) expects investments in infrastructure projects to be worth US\$ 1 trillion over the five years of the Plan. Total investment as a percentage of GDP is expected to be in the range of 7-9 percent. While public investments in infrastructure have been the dominant form of infrastructure financing in India, investment from the private sector is expected to increase in the coming years. It will be necessary to review the factors which may be constraining private investment, and steps will need to be taken to rectify them. PPPs, with appropriate regulation and concern for equity, need to be encouraged in social sectors such as health and education. Several state governments are already taking steps in this direction. Public investment is still largely expected to finance infrastructure needs in backward and remote areas for improving connectivity and expanding much-needed public services. Since resource constraints will continue to limit public investment in infrastructure in other areas, public private partnership based development needs to be encouraged wherever feasible. The above chart shows the percentage component of public and private investment in infrastructure in the Eleventh Five-Year Plan. As per the Twelfth Plan, the Planning Commission has set targets to achieve 50 percent private and PPP funding in total infrastructure investments, compared to a little more than 30 percent in the Eleventh Plan. It is evident that there is a greater emphasis on initiating PPP projects in the 12th Plan. In terms of types and numbers, roads and highway projects are emerging as favored projects for PPP, while telecom and electricity lead in private investments. Currently there are 758 projects in the pipeline. More than 53 percent of these are in the roads sector, followed by 20 per cent in the urban development sector.

### **III. BARRIERS TO INFRASTRUCTURE DEVELOPMENT**

Due to various reasons, infrastructure development is sourced predominantly from the public sector. The reasons for this include the public benefit of infrastructure services which imply non-excludability, elements of natural monopoly in the sectors, and the need for long-term investments before commercially viable returns can accrue given the highly capital-intensive nature of the sector. However, change in the policy regime in the early 1990s led to a change in the strategies for infrastructure development. Private sector participation in infrastructure development was actively pursued, first in the electricity

and telecommunications sectors. However, infrastructure financing remains an underdeveloped sector in India. The Government of India has encouraged private sector investment, both domestic and foreign, in almost all infrastructure units through the PPP mode. Today, the debate is no longer focused on the conflict between public and private sectors, but rather on the most efficient way of sharing risks, joint financing, and achieving a balanced partnership. An essential aspect of the sustained development of infrastructure is financing arrangements for development. As per the Twelfth Five Year Plan document, as much as 50 per cent of the new investments in infrastructure are expected to be from the private sector. While private sector investors would look for the commercial viability of investments, public investments would have to look for the overall economic growth outcome of the investments to make new investments sustainable. Conserving fiscal resources for infrastructure development is essential for maintaining the momentum of such development. The crucial role infrastructure development plays in easing supply side constraints to economic growth has been well recognized. According to the Twelfth Plan, as much as \$1 trillion is required for investment in infrastructure. This is not a small figure and much has to be done, including capital market reforms that will facilitate easier borrowings. The corporate bond market in India is still in its infancy. There is an increasing reliance on private sector for developing and maintaining infrastructure; however, such projects are largely capital intensive and have a high gestation period. Most large developers have over-leveraged their balance sheets to raise debt and their cash flows do not permit them to raise fresh capital to fund new projects. It is because of this that we are witnessing delay in achieving financial closure.

Land is a prerequisite for any infrastructure project, and land acquisition is one of the single largest road-blocks for development of infrastructure. Resistance from local communities has proven to be a potent force and has led to delays in infrastructure projects. There is generally a huge difference between the registered value offered and the actual market value, which results in disputes and litigation. Moreover, valuations are conducted on the basis of the current status of land, and the system does not capture the appreciation after the construction of the project. Moreover, local communities feel cheated out from the path of development, which leads to distrust and disputes. In addition, rehabilitation packages are not planned meticulously and execution is inefficient. Lack of proper dispute resolution mechanism adds to the delays. Taking possession of land for large projects is both a contentious and time-consuming issue. There were weaknesses in the laws governing land acquisition and,

right now, a process of securing political consensus on the amendment to existing legislation is in progress. There is a need to reduce the time needed for land acquisition while recognizing the competing demands on scarce resource. Infrastructure projects require an efficient process of land acquisition to be in place with adequate checks and balances for considerations of equity and justice.

#### IV. REGULATORY FRAMEWORK

Most of the infrastructure projects in India suffer from delays in completion. This is mainly due to an inadequate regulatory framework and inefficiency in the approval process. Infrastructure projects require multiple sequential clearances at various levels of government. Moreover, most of the large projects involve dealing with various ministries. There are various categories of approvals required at every stage of the project cycle, from pre-tendering to post-construction. While it is important to have a rigorous procedure that ensures transparency and quality, bureaucratic complexities and the protracted procedure for securing approvals are often considered serious disincentives for developers and contractors. Environmental safeguards and guidelines have proven to be one of the major reasons for delay in infrastructure projects, especially in the power sector. While new projects need to comply with these regulations, even a project under construction may need to comply with revised standards midway through the execution stage.

Fallbacks of the regulatory framework naturally extend to the implementation of infrastructure projects. These lead to time and cost overruns, and delay in financial closure of projects. In terms of cost to the economy, delays in implementing power projects are arguably the most serious. Taking possession of land for large projects is both contentious and time consuming. Land and environment-related issues often lead to delays caused by legal procedures initiated by various stakeholders. Among the infrastructure sectors, railway projects account for among the highest cost overruns caused by dragged-out projects. Shortage in trained manpower in vocational skills has been highlighted in more than one context. The situation is true even in the case of infrastructure projects. Imparting improved project management skills and techniques within the implementing agencies is another area that can fetch results in the short term. Removal of weaknesses in the long-standing law and setting up additional manufacturing capacity will require more time. Infrastructure projects are affected by governance-related constraints in several ways. The process of awarding projects has to be transparent. The experience of contract award process in telecom should help improve the process in the other sectors. Given the wide rural-urban divide in

the infrastructure services, the general budgetary support in the form of measures such as tax incentives, viability gap funding or direct allocations to make infrastructure services more widely available may be necessary over the long term. Recent developments in the global economy suggest that accelerated growth of the Indian economy would benefit not only large disadvantaged sections of the country's population but would also be necessary for sustained global growth. There is an unequivocal link between problems of attracting private investment in infrastructure and price fixation of infrastructure services.

#### V. CONCLUSION

While strategies to accelerate economic growth did anticipate the need for faster development of infrastructure as well, the fast growth of the Indian economy in recent years has placed increasing stress on physical infrastructure. The private sector has responded to the government's attempts to encourage private sector-led growth and investment for meeting infrastructure deficit. The suggestion for independent regulatory bodies in core infrastructure sectors such as the transport sector is a welcome proposal for future reforms and measures need to be taken to make existing regulatory agencies in the power sector more effective. To make public private partnerships a success, state governments also need to establish full-fledged 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 these projects in both central and state sectors. In sum, infrastructure development in India will continue to be mainly demand led and, therefore, efficient use of existing infrastructure and efficient construction of new assets will be critical in the pursuit of higher economic growth. Fiscal support will continue to be dominant for infrastructure development but equally important are enabling policies that could lead to streamlining of procedures and protection of interests of both investors and consumers.

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