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DMIC: Addressing India's Infrastructure Woes?

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Abstract

India's largest integrated infrastructure project -- the Delhi Mumbai Industrial Corridor (DMIC) – is currently under implementation. The DMIC is expected to significantly enhance connectivity among the states it covers. It is the latest example of Indo-Japan collaboration in infrastructure development in India. This paper discusses the main features of the project and argues that while the economic benefits from the DMIC are enormous, care should be taken to ensure that its progress does not get affected by problems of land acquisition, multiple agency co-ordination and slow project implementation.

Introduction

Infrastructure has been variously identified as one of the most pressing constraints affecting the Indian economy. Poor infrastructure, particularly physical infrastructure, such as lack of adequate quality roads, highways, sea ports and airports, adversely affects both producers and consumers by increasing costs. While producers pay more due to delays in transportation and wastages during movement of goods, consumers suffer from high prices created by supply shortages resulting from late arrival of goods and also the costs passed on by producers.

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Developing transport infrastructure has been a key priority for India. A series of initiatives to improve connectivity such as National Highway Development Programme (NHDP), Bharat Nirman, Providing Urban Services in Rural Areas (PURA), Jawaharlal Nehru National Urban Renewal Mission (JNNURM), National Rail Vikas Yojana and National Maritime Development Programme (NMDP) are being implemented. Achieving quick progress, however, has not been easy. Historically, state resources have been instrumental in providing public goods in both developed and developing countries. India's ability to build infrastructure has been affected by fiscal constraints of the central and state governments. There have been efforts to involve private initiative in infrastructure-building through public-private-partnerships (PPPs). Roads have been foremost of these PPPs. Of late, the PPP projects have begun yielding results. One of the best examples is the Delhi-Noida toll bridge constructed on a build-own-operate-transfer (BOOT) principle. However, most PPP projects taken up so far have shown considerable delays in reaching financial closure and have not been particularly effective in bridging the infrastructure deficit.[2]

There is little doubt that large-scale infrastructure projects in India still need to be propelled by the state. It is also clear that fiscal hardships of the Indian state underline a role for foreign development assistance in building infrastructure. The upcoming Delhi-Mumbai Industrial Corridor (DMIC) being built in collaboration with Japan is a pertinent example.

DMIC

The DMIC primarily involves establishment of a dedicated freight corridor (DFC) of around 1,500 km between Delhi and Mumbai with terminals at Dadri in the national capital region (NCR) of Delhi and the Jawaharlal Nehru Port near Mumbai. The area around the DFC is being developed as the DMIC.[3] Seven states figure in the DMIC region. These are Delhi, Gujarat, Haryana, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh. The DMIC-influenced area covers more than 66 per cent of the combined geographical areas of the states it runs through. It will incorporate nine mega-industrial zones of about 200-250 square km each and will have a high-speed freight line, three sea-ports, six airports, a six-lane intersection-free expressway between Delhi and Mumbai, as well as a 4,000 MW power plant.[4] The DMIC seeks to 'create a strong economic base with a globally competitive environment and state-of-the-art infrastructure to activate local commerce, enhance foreign investments and attain sustainable development'.[5]

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2 An example of the delays experienced can be seen in the first privately financed water and sewerage project in Tirupur in Tamil Nadu, which was executed through a special purpose vehicle (SPV) and on a BOOT basis, and took more than 10 years to complete from conceptualisation to financial closure.

3 A corridor is actually a development axis which connects economic poles in combination with efficient traffic flow. Development takes place at those locations where there is strong and dynamic economic interaction. It focuses on balanced urbanisation and a strengthening of the open lands.

4 For further details, see the DMIC website: http://delhimumbaiindustrialcorridor.com.

5 *Ibid*.

The main objectives of the project in terms of building industrial and physical infrastructures are given in **Table 1**.

Table 1: DMIC's Objectives

Industrial Infrastructure	Physical Infrastructure
1. Developing new industrial clusters 2. Upgrading existing industrial estates/clusters 3. Developing modern integrated agro-processing zones with allied infrastructure 4. Developing information technology (IT)/IT-enabled services (ITeS) hubs and allied infrastructure such as knowledge parks and high-tech service centres 5. Providing efficient logistics chain with multi-modal hubs 6. Building primary and secondary schools, colleges, polytechnics, centres of excellence in various disciplines, management and engineering institutes and multi-techno institutes 7. Augmenting water supply facilities by identifying and developing new sewerage and drainage projects	1. Developing 'Knowledge Hubs' with integrated approach 2. Feeder road/rail connectivity to sea ports, hinterlands and markets 3. Developing existing port infrastructure and green-field sea ports with dedicated jetties for efficient cargo movement 4. Upgrading/ modernising airports and establishing green-field airports and airstrips 5. Setting up power generation plants with transmission facilities for augmenting power supplies in the region 6. Ensuring effective environment protection mechanisms such as green office complexes, water recycling and re-use, and use of solar energy 7. Developing integrated townships with residential zones and green buildings

An apex body, headed by the finance minister and including other central ministers and chief ministers of the respective DMIC states, is providing overall guidance, planning and approvals for the project. The Delhi Mumbai Industrial Corridor Development Corporation (DMICDC) has been established as a special-purpose vehicle (SPV) to coordinate project development, finance and implementation. A state-level entity/nodal agency is coordinating between the DMICDC, different state government entities and project implementing agencies/other SPVs belonging to the state governments, the central government and their agencies.

The DMICDC has representation from the central government, state governments and financial institutions. The central government owns 49 per cent of the equity in DMICDC, while the Infrastructure Leasing and Finance Corporation (IL&FS) and the Industrial Development Finance Corporation (IDFC) own 41 per cent and 10 per cent, respectively.

There are, however, plans to recast the ownership structure by transferring 51 per cent of the equity with IL&FS and IDFC to government financial institutions.[6]

The development strategy for the DMIC is based on the competitiveness of each of the DMIC states and identification of high impact/market driven nodes along the DMIC. Each node is envisaged as a self-sustained region with quality infrastructure and good connectivity to the freight corridor, ports and hinterlands. In order to fully utilise potential economic benefits of the corridor, the DMIC proposes to link under-developed regions along the corridor to more developed ones. This is expected to create effective forward and backward linkages between more and less developed areas as well as enhance business and employment prospects. The market-driven nodes are proposed to be in two categories: investment regions (with an approximate minimum area of 200 sq km) and industrial areas (with an approximate minimum area of 100 sq km). Twenty four nodes, including 11 investment regions and 13 industrial areas, have been identified in consultation with state governments.

Indo-Japan Collaboration

The project is the latest example of Japanese involvement in infrastructure building in India. Japan has been an active partner in India's development for several years as the largest bilateral provider of overseas development assistance (ODA). Japanese business interests in India have been growing steadily and India is identified by Japanese corporations as the most promising country for long-term investment[7] Japan's role in upgrading and expanding India's infrastructure is evident from the several projects in India that it is involved with in electricity (electricity distribution and upgrading project in Bangalore, transmission modernisation system in Hyderabad), road (Delhi Mass Rapid Transport System) and sea-port (Visakhapatnam port expansion project).

Japan has provided long-term financial assistance for funding the western DFC. Beginning from an involvement in the planning and feasibility study stages, Japan has been providing concessional financing to the DMIC through its government-to-government (G2G) programmes along with technical assistance. Japan's decision to partner the DMIC was taken during Indian Prime Minister Manmohan Singh's visit to Tokyo in December 2006. The Japanese contribution of US$75 million is in the form of a commercial loan from the Japan

6 Shruti Choudhury and Deepshikha Sikarwar, 'Delhi-Mumbai industrial corridor proposal to get Cabinet's nod this week: DMIC special purpose vehicle structure recast soon,' *The Economic Times* (09 August 2011), http://articles.economictimes.indiatimes.com/2011-08-09/news/29867191_1_industrial-corridor-trunk-infrastructure-dmic-project. Accessed on 19 August 2011.

7 Report on Overseas Business Operations of Japanese Manufacturers, FY2010 (the 22nd) Survey on Foreign Direct Investment by Japan Bank for International Cooperation (JBIC). http://www.jbic.go.jp/en/about/press/2010/1203-01/index.html. Accessed on 19 August 2011.

Bank for International Cooperation (JBIC). The DMIC is being built along the lines of the successfully operating Tokyo-Osaka industrial corridor in Japan.[8]

The Indo-Japan collaboration in the DMIC also pertains to collaboration in developing eco-cities in the DMIC region and establishing a project development fund (PDF) to undertake activities such as master planning, feasibility studies, preparation of detailed project reports, obtaining necessary approvals and bid process management for projects to be taken up in the DMIC region. The fund will be set up with equal contributions from the governments of Japan and India.

India signed its third bilateral comprehensive economic partnership agreement (CEPA) with Japan on 16 February 2011[9]. The CEPA came into force from 1 August 2011. Barely a month after signing the CEPA, the two countries unveiled a plan to launch 24 green cities along the DMIC. Preparatory work has begun on pilot projects in seven green cities. These cities will have optimised energy supplies, 24-hour potable water supply, bicycle and walking paths, and waste-recycling systems. Leading Japanese companies such as Hitachi, Mitsubishi, and Toshiba are expected to participate in the design and construction of the cities.

Japan is also weighing the feasibility of running high-speed bullet trains along the corridor. A feasibility study – sponsored by the Ministry of Economic Trade and Industry (METI) of Japan - will explore the possibility of trains running at maximum speeds of 200 km per hour along the corridor, which will be much higher than 130 km per hour speed at which India's fastest trains, Rajdhani and Shatabdi Expresses, run.[10] If introduced successfully, these high-speed trains would significantly reduce the journey time between Delhi and Mumbai.

Upsides and Downsides

In several ways, the DMIC is the shot-in-the-arm that India's infrastructure needs. This is not only because it can significantly improve connectivity and bring down production costs, it can also generate virtuous multiplier effects by augmenting employment, industrial production and exports. The scales of these benefits are significant given that the project will cover states that account for sizeable economic output and transactions in India. These states account for almost 54 per cent of India's gross industrial output, 60 per cent of total exports and nearly half of total foreign direct investment (FDI) inflows into India during the last decade. The states also cover large parts of India's road and rail networks. Major ports

8 The corridor is along the 515-km Tokaido-Shinkasen high speed railway built in 1964. The network spans about 2,000 km and connects the industrial areas of Tokyo, Osaka and Nagoya, apart from providing efficient port connectivity for these areas.

9 The other two are with Singapore and South Korea.

10 Himanshu Kaushik, '200kmph train for DMIC?', *The Times of India* (19 July 2011), http://articles.timesofindia.indiatimes.com/2011-07-19/ahmedabad/29789975_1_semi-high-speed-rail-development-speed-trains-bullet-train. Accessed on 19 August 2011.

coming under the ambit of the corridor cover roughly a third of total cargo handled across the country. The DMIC states are also home to big chunks of India's mineral resources.

Potential investors – both foreign and domestic – will keenly watch the progress on the project. As connectivity improves and the proposed investment regions and industrial areasare being developed, new opportunities are expected to appear in several industries within the DMIC region. These include gems and jewellery, engineering, chemicals and petrochemicals, oil and gas, textiles and apparel, food processing, IT/ITES, cars, ship repairing/building, tourism and other knowledge-based industries.

While the potential economic gains from the project are enormous, there are unavoidable challenges facing it during implementation. The sheer size of the project requires it to be implemented in phases to ensure sustainability. Involvement of multiple agencies from central and state governments portends a major challenge for co-ordination. The issues of co-ordination are not limited to those among Indian agencies only. For the country's largest foreign-funded project, there is need to ensure effective co-ordination between foreign and domestic agencies too. This would be no less challenging given the imperatives of managing tricky aspects such as differences in work culture and approaches to project management.

Other than co-ordination, there are typical systemic domestic inefficiencies to be overcome. Foremost among these is land acquisition. Avoiding land acquisition crises such as those faced during implementation of special economic zones (SEZs) will be a major challenge for the project. The success in this respect will depend on the ability of private developers and state governments to negotiate with landowners to reach mutually satisfactory outcomes.

The overall rate of progress on the project will depend critically upon the capabilities of the DMIC states to proceed on their individual targets. Gaps are already visible in this regard with Gujarat appearing to be a better performer than the others in implementing the 'early bird' projects.[11] States such as Uttar Pradesh and Madhya Pradesh do not have particularly distinguished track records in project implementation. Even more industrially advanced states such as Maharashtra and Haryana have experienced delays in implementing projects which, again, are partly on account of difficulties arising from problems of co-ordination and land acquisition, in addition to other procedural and administrative problems. Different phases of the project might take much longer than expected to finish given the uneven paces of project implementation among the states. This would be unfortunate since a project of such an ambitious vision, scale and scope does not deserve to get afflicted by India's systemic traditional drawbacks.

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[11] 'Gujarat tops in DMIC Project Execution: Amitabh Kant', *Business Standard* (23 July 2010), http://www.business-standard.com/india/news/gujarat-tops-in-dmic-project-execution-amitabh-kant/102604/on. Accessed on 19 August 2011.