

## Discussion Paper

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# FINANCING URBAN INFRASTRUCTURE IN INDIA AN OVERVIEW OF POLICY LESSONS

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## Discussion Paper

Macroeconomic Policy and Financing for Development Division

# Financing Urban Infrastructure in India: an Overview of Policy Lessons

By

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March 2016

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### Abstract

Development of urban infrastructure is vital for the economic growth of a country where urbanization is growing at a higher *rate* and concentrating in large cities. Given the current rate of growth of infrastructure, the deficit in infrastructure is not only large but growing. The trends in expenditure on infrastructure indicate that the overall spending is much lower than the desired level. Also, investing in urban infrastructure has been a public sector activity. Consequently the time is ripe to take care of the backlog in urban infrastructure. It is estimated that the requisite investment for urban infrastructure for the 20-year period is Rs. 39.2 lakh Crore at 2009-10 prices. India has 4,143 Urban Local Bodies (ULBs). Their state of finances is very poor and suffer from vertical as well as horizontal imbalances. To take care of this, various new initiatives have been taken in recent years. These include: Smart City Mission, Atal Mission for Rejuvenation and Urban Transformation (AMRUT), and National Heritage City Development and Augmentation Yojana (HRIDAY). However, it is suggested that we should further use the new instruments such as Infrastructure Debt Fund and Tax-Free Bonds. We should also encourage Public-Private Partnership (PPP). We should consider setting up a National Local Body Financing Authority (NLBFA) at the national level and a State Local Body Financing Authority (SLBFA) at the state level.

**Keywords:** Infrastructure, urban, India, urban local bodies, financing, innovative initiatives, municipal bonds.

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## **Financing Urban Infrastructure in India**

### **An Overview of Policy Lessons**

“...the urban situation in India is one of deep crisis and calls for measures analogous to those used when a house is on fire, or there is a city wide epidemic”

*National Commission on Urbanization, 1988.Vol. I*

#### **I. Introduction**

Development of *urban infrastructure*<sup>1</sup> is vital for the economic growth of a country. *It is central to all economic activities and facilitates efficiency in key economic services, improves competitiveness in the overall economy, and supports strong economic growth. At the same time, inadequate urban infrastructure results in reduced economic output and translates into additional cost in terms of time, effort, and money for accessing essential services.*

*These issues are more crucial in India where urbanisation is growing at a high rate. Data from the Census of India indicate that while the total population grew five-fold from 1901 to 2011 the growth in urban population was seventeen-fold. In this time span of 110 years, urban population grew from 10.8 percent of the total population to 31.2 percent. The rate of growth of the urban population was twice as fast as the growth of rural population, and the urban population quadrupled from about 5 crores in 1947 to over 20 crores in 1988. According to the Twelfth Five Year Plan<sup>2</sup>, while in 2011 only 377 million people (31 percent of the total population) lived in urban areas, nearly 600 million people may reside in urban areas by 2031, an increase of over 200 million in just 20 years.*

The trend in urbanization in India indicates that not only is the urban population growing at an alarmingly high rate but also that this population is concentrating in large cities and existing urban agglomerations. As per Census 2011, about 43 percent of urban population live in over 53 million cities. Class-I cities with population over 0.3 million account for about 56 percent of the urban population and class-II cities with a population of 0.1 million to 0.3 million account for another 14 percent.

In addition to high concentration of urban population in large cities, there is some evidence that other urban growth nodes are emerging<sup>3</sup>. According to Census 2011, the number of towns in India increased from 5,161 in 2001 to 7,935 in 2011. Almost all of this increase was due to the

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<sup>1</sup> The term ‘infrastructure’ is sometimes used loosely and includes tradable items such as steel, cement, fertilizer and petroleum products. These being importable should not be a physical constraint on the expansion of the economy. Therefore, in this note we exclude all such items from the definition of ‘infrastructure’.

<sup>2</sup> Government of India, 2013. *Twelfth Five Year Plan (2012-17)*, Planning Commission, New Delhi, p. 318.

<sup>3</sup> *Ibid*, p.319.

growth of ‘Census towns’<sup>4</sup> (which increased by 2,532) rather than ‘statutory towns’<sup>5</sup> (which increased by only 242). The trend indicates that there is a significant spill over of existing cities into ‘peri-urban’ areas.

## II. Current Status of Infrastructure

Given the spill over of existing cities into ‘peri-urban’ areas, *the deficit in infrastructure and better public services in India’s urban areas is not only large but growing. Therefore, India’s economic growth momentum cannot be sustained if urbanisation is not actively facilitated. Therefore, cities will have to become the engines of national development.*

*The Twelfth Five Year Plan (FYP) points out<sup>6</sup> that as per Census 2011 only 70.6 per cent of urban population is covered by individual water connections; duration of water supply ranges from 1 hour to 6 hours and per capita supply of water ranges from 37 litres per capita per day (lpcpd) to 298 lpcpd for a limited duration. Even a partial sewerage network is absent in 4861 cities and towns in India. Almost 50 percent of households in cities like Bangalore and Hyderabad do not have sewerage connections. About 13 percent of urban households do not have access to any form of latrine facility and defecate in the open. Less than 20 percent of the road network is covered by storm water drains. As per the Central Pollution Control Board (CPCB), only about 30 percent sewage generated was treated before disposal in Class I cities and Class II towns (as per 2001 census). As per CPCB report brought out in 2005, about 1,15,000 MT of Municipal Solid Waste is generated daily in the country. However, scientific disposal of the waste generated is almost non-existent. Public transport accounts for only 27 percent of urban transport in India. Share of the public transport fleet has decreased from 11 percent in 1951 to 1.1 percent in 2001. In 2009, only 20 out of 85 Indian cities- with a population of 0.5 million- had bus services.*

*The National Sample Survey further points out<sup>7</sup> that in 2012 only 76.8 percent of urban population is covered by individual water connections; 89.6 percent of urban households are getting sufficient drinking water, 95.3 percent households had improved source of drinking water. The survey also shows that 16.7 percent of households in urban India did not have any bathroom facility. Besides, 89.6 percent households in urban India had access to ‘improved source’ of latrine. Results show that 93.6 percent households in urban India lived in a house with a *pucca* structure whereas 5.0 percent of the households in urban areas lived in a house with semi-*pucca* structure. Also, about 71.3 percent urban households had secured tenure. The result shows that 82.5 percent urban households had ‘improved drainage’ facility. At the all-India level, only 10.8 percent of urban dwelling units were situated in slum and 11.8 percent of households, who had stayed in slums/squatter settlement, did not have any residential proof.*

*Such problems are likely to worsen in the near future given the unabated growth of urban centres and agglomerates. This would put enormous pressure on the existing infrastructure. Development of infrastructure will, therefore, continue to be a bottleneck and one of the biggest challenges for growth unless it is significantly improved. This challenge has become even more daunting after several companies building infrastructure projects over the last few years found it difficult to manage their debt burden.*

<sup>4</sup> ‘Census towns’ are agglomerations that grow rural and peri-urban areas with densification of population that do not have an effective urban governance structure or requisite urban infrastructure.

<sup>5</sup> ‘Statutory towns’ are towns with municipalities or corporations.

<sup>6</sup> Twelfth Five Year Plan, p.321.

<sup>7</sup> Government of India, 2013. *Key Indicators of Drinking Water, Sanitation, Hygiene and Housing Conditions*. NSS 69<sup>th</sup> Round. National Sample Survey Office. New Delhi.

The trends in expenditure on different items of infrastructure indicate that the overall spending is much lower than the desired level. For example, expenditure on education as a proportion of the Gross Domestic Product (GDP), has been around 3 percent during 2008-09 to 2014-15. Similarly, expenditure on health as a proportion of GDP has remained stagnant at less than 2 percent during the same period. During 2013-14, out of the total expenditure on social services, 11.6 percent was spent on education, while 4.6 percent was spent on health (table 1).

**Table 1. Trends in social services expenditure by government (centre and States)**

Item/Year	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15 (RE)	2015-16 *BE)
<b>As percentage to GDP</b>								
Total Expenditure	28.4	28.6	27.6	27.4	27.0	26.2	28.1	27.0
Expenditure on Social Services	6.8	6.9	6.8	6.6	6.6	6.5	7.0	6.7
<i>of which</i>								
i) Education	2.9	3.0	3.1	3.1	3.1	3.0	3.1	3.0
ii) Health	1.3	1.4	1.3	1.2	1.3	1.2	1.3	1.3
iii) Others	2.6	2.5	2.4	2.2	2.2	2.3	2.6	2.4
<b>As percentage to total expenditure</b>								
Expenditure on Social Services	23.8	24.1	24.7	24.0	24.4	24.8	24.9	24.9
<i>of which</i>								
i) Education	10.1	10.6	11.4	11.4	11.6	11.6	10.9	11.2
ii) Health	4.6	4.8	4.7	4.6	4.7	4.6	4.8	4.9
iii) Others	9.0	8.7	8.6	8.0	8.2	8.6	9.1	8.9
<b>As percentage to social services</b>								
i) Education	42.6	44.1	46.1	47.7	47.5	46.7	44.0	44.9
ii) Health	19.5	19.7	19.0	19.0	19.1	18.6	19.3	19.5
iii) Others	37.9	36.1	34.9	33.3	33.4	34.7	36.7	35.6

**Source: Government of India, 2015 Economic Survey-2015-16, New Delhi, pp 193.**

*Notes:* 1. Social Services includes, education, sports, art and culture; medical and public health, family welfare; Water supply and sanitation; housing; urban development; welfare of Scheduled Castes (SC), Scheduled Tribes (ST) and Other Backward Castes (OBC); labour and labour welfare; and social security and welfare, nutrition, relief on account of natural calamities.

2. Expenditure on 'Education' pertains to expenditure on 'Education, Sports, Arts and Culture.

3. Expenditure on 'Health' includes expenditure on 'Medical and Public Health, 'Family Welfare 'and 'Water Supply and Sanitation'.

4. Data for states from 2013-14 onwards is provisional and pertain to budgets of 25 state government.

5. GDP data from 2011-12 is based on new base year 2011-12.

At the state level, in 2013-14, the total state capital expenditure on education was Rs. 110,894 million. Of this, Tamil Nadu had the highest share in the expenditure of about 12 percent, followed by Uttar Pradesh with a share of 8.67 percent and Gujarat with 6.67 percent. However, in terms of per student expenditure, Sikkim and Goa spent more than Rs. 2000, while Tamil Nadu spent about Rs. 726. States such as Rajasthan and Madhya Pradesh spent as little as Rs. 37 and Rs. 40 per student, respectively.

An overall assessment of social sector expenditures in terms of achievements shows that there is a decline in the percentage of enrolment in government schools in rural areas, from 72.9 percent

in 2007 to 63.1 percent in 2014, as per the Annual Status of Education Report (ASER) 2014. This decline is partly made up by private schools which have registered an increase in enrolment from 20.2 percent in 2007 to 30.7 percent in 2014.<sup>8</sup>

Despite these developments, the city's internal revenue generation- especially through property tax and user charges- remains under exploited. The Thirteenth Finance Commission estimates that property taxes collection constitutes 0.16 percent to 0.24 percent of the GDP, while revenues generated from user charges are abysmally low, at 0.13 percent of the GDP<sup>9</sup>. However, these have the potential to garner more resources.

### III. Estimates of Required Investment for Urban Infrastructure

Investing in urban infrastructure and services has in the past been a public sector activity. This investment was financed largely by government grants and Plan funds of the central and state governments. In addition, cities were also allowed to access loans from the Housing and Urban Development Corporation (HUDCO), a public sector enterprise, for various city infrastructure projects such as water supply, roads and bridges, sanitation etc.

In view of the fact that Plan outlays have historically focused on the rural sector<sup>10</sup>, development of the urban infrastructure was not given the requisite 'big-push'. The time is now ripe to take care of the backlog created.

Various reports/studies - such as India Infrastructure Report (1996), Mohanty (2007), India's Urban Awakening (2010), and the Report on Indian Urban Infrastructure and Services (2011)- were prepared in the recent past on funding requirements for urban infrastructure.

*The Report on Indian Urban Infrastructure and Services (2011)* recommends large investment on urban infrastructure. The Committee has made projections for the period of the 12<sup>th</sup> FYP to the 15<sup>th</sup> FYP, viz. 2012-31. Given the volatility of land prices, the estimates do not include the cost of land acquisition. The investment requirement for urban infrastructure for this 20-year period is estimated at Rs. 39.2 trillion at 2009-10 prices. The Committee has made explicit provision of Rs. 4 trillion towards investment in renewal and development of infrastructure including slums<sup>11</sup>. Committees of Ministers constituted by the Central Council of Local Self Government, popularly known as the Zakaria Committee (1963), and the India Infrastructure Report (1996) have prepared estimates for the investment requirement for urban infrastructure in India for the period 1996 to 2006. Mohanty et al also estimated the urban infrastructure investment requirement for the period 2004 to 2014.<sup>12</sup>

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