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AN OVERVIEW OF POLICY LESSONS

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FINANCING URBAN INFRASTRUCTURE IN INDIA: AN OVERVIEW OF POLICY LESSONS

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Financing Urban Infrastructure in India: an Overview of Policy Lessons

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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*[1] 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*[2]*, 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[3]. 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

[1] 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'.

[2] Government of India, 2013. *Twelfth Five Year Plan (2012-17),* Planning Commission, New Delhi, p. 318.

[3] *Ibid,* p.319.

growth of 'Census towns'[4] (which increased by 2,532) rather than 'statutory towns'[5] (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[6] *that a*s 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[7] *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.*

[4] '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.
[5] 'Statutory towns' are towns with municipalities or corporations.
[6] Twelfth Five Year Plan, *p.321.*
[7] Government of India, 2013. *Key Indicators of Drinking Water, Sanitation, Hygiene and Housing Conditions.* NSS 69th 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)
As percentage to GDP								
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
of which								
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
As percentage to total expenditure								
Expenditure on Social Services	23.8	24.1	24.7	24.0	24.4	24.8	24.9	24.9
of which								
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
As percentage to social services								
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 Survery-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.[8]

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[9]. 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[10], 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 12th FYP to the 15th 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[11]. 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.[12]

[8] Government of India, 2016. *Economic Survey- 2015-16*, New Delhi, pp. 192-93.
[9] Government of India, 2009. *Report of the 13th Finance Commission,* New Delhi.
[10] The outlay for the rural sector in the 11th Plan was Rs. 5.5 Crore as against Rs. 68,080 for the urban sector (Government of India, 2011).
[11] Of this, Rs. 17.3 lakh Crore. (or 44 percent) is accounted for by urban roads. Also, the total estimates include Rs. 34.1 lakh Crore for asset creation, out of which the investment for the eight major sectors is Rs. 31 lakh, Rs. 4.1 lakh for renewal and development including slums, and Rs. 1 lakh Cr. for capacity building.
[12] The sectors and periods covered by these studies together with their projected estimates, and an estimate made by Mohanty *et al* (2007) greatly differ in terms of service standards and definitions of 'urban infrastructure'.

IV. Evolution of Infrastructure Policy and Institutions in India

In India, policy and institutions supporting urban infrastructure have evolved over time. During the Fourth Five Year Plan (FYP) (1969-74) to the Sixth FYP (1980–85) the focus was mainly at the national level.

In 1980-81, improvement of infrastructure was recognized as a critical requirement for economic revival. Accordingly, a special coordination cell was established to identify problem areas requiring action on a priority basis and to coordinate efforts at overcoming critical bottlenecks. The Sixth FYP largely emphasised on the development of small and medium towns, and provision of basic services in urban slums. The plan introduced a centrally-sponsored scheme known as *Integrated Development of Small and Medium Towns (IDSMT)* with the objective of promoting growth in towns with less than 100,000 populace through the provision of infrastructure and basic services[13]. The state component included slum improvement, small-scale employment generation, low-cost water supply schemes, drainage and sanitation, sewerage, preventive medical facilities, parks and playgrounds. In the initial stages, the scheme included 231 towns located in various states and union territories.

The Seventh FYP (1985-90) heralded a shift in urban policy by initiating a process of opening up avenues for private sector participation in urban development[14]. In order to boost the housing finance market, it recommended setting up of the National Housing Bank. It also proposed to set up a National Urban Infrastructure Development Finance Corporation to augment the capacity of urban local bodies to create infrastructure, particularly water supply and sewerage facilities. In 1988, the first National Housing Policy (NHP) was announced to improve the condition of those with inadequate housing facilities. The Plan also launched the Urban Basic Services (UBS) Scheme with a focus on improving the status of women and children in urban low-income families through community participation, integrated development and cost effective schemes.

In 1988, the Report of the National Commission on Urbanisation (NCU) identified 329 cities that were termed as Generators of Economic Momentum (GEMs) and further divided into National Priority Centres (NPCs) and State Priority Centres (SPC). The future growth in urbanisation was expected to take place along these nodes and corridors.

In 1991, the Structural Adjustment Programme (SAP) was launched and this put the country firmly on the path of ‘neo-liberal globalisation’. The Eighth FYP (1992–97) -- the first plan after the launch of the SAP -- expressed the need to link urban growth with economic development and advanced many policy directives to achieve this objective. It envisaged incorporating cost recovery into the municipal finance system. This was further reinforced during the Ninth FYP (1997-2002) with a substantial reduction in budgetary allocations for infrastructure development.

In 1992, the Town and Country Planning Organisation prepared a draft National Urban Policy. Also, the centrally sponsored Mega City Scheme was launched in five cities, *viz.* Mumbai, Kolkata, Chennai, Hyderabad and Bangalore. The Eight FYP focused on preparing municipalities to use institutional finance and to eventually market instruments like municipal bonds for capital investment requirements.

[13] Government of India, 1981. *Sixth Five Year Plan,* Planning Commission, New Delhi.
[14] Government of India, 1985. *Seventh Five Year Plan, Vol. I,* Planning Commission, New Delhi.

A major landmark in the decentralization process of urban local bodies (ULBs) was to promulgate the 74th Constitutional Amendment Act in 1992. It sought to decentralize decision-making in cities and towns through the creation of elected ULBs as institutions of democratic self-governance and devolution of essential functions related to city planning and service provision to these bodies.

In October 1996, an Expert Group on Commercialization of Infrastructure Projects recommended opening up of urban infrastructure to private capital and exploring 'innovative' forms of financing such as through the issue of municipal bonds[15].

The Ninth FYP (1997–2002) sought to make ULBs and parastatal agencies accountable and financially viable by cutting down on budgetary allocations for urban infrastructural development. The Plan recognized that while larger municipalities may be in a position to raise funds directly from the capital market and financial institutions, the smaller ULBs simply do not have the financial and technical capability to do so. It thus proposed to create an 'Urban Development Fund' based on the principle of 'pooled finance' to help smaller towns realize commercial borrowings. In 1998, the National Housing and Habitat Policy (NHHP) was announced. This specifically emphasized that housing construction should be left in the hands of the private sector.

The Union Budget 2001-02 not only advocated moving away from state grants, transfers, and subsidy-based urban infrastructure financing regime to a market-based financing regime, but also proposed to set up a special funding vehicle-- the *City Challenge Fund (CCF)*-- to finance ULBs to undertake reforms.

In 2002 the government allowed 100 percent Foreign Direct Investment (FDI) in integrated townships, including housing, commercial premises, hotels, resort, and infrastructural projects.

The overriding thrust of the 10th Plan (2002–07) was on promotion of public-private-partnerships (PPPs) in urban infrastructure and services. The Plan opined that urban infrastructure could not be funded by budgetary support alone. To enable ULBs to raise their own resources the Plan advocated (a) reform in property tax, (b) levying of user charges, (c) increasing non-tax revenues, (d) controlling establishment costs, (e) better utilization of municipal assets, and (f) overhauling of the municipal accounting systems. The Plan also spoke about substantially increasing investment in upgradation of urban infrastructure and services. However, it clearly stated that central assistance in this regard should be made conditional upon states and ULBs carrying out sectoral reforms, particularly those related to better standard of services and levying of user charges.

The 2002–03 Budget announced the setting up of the *Urban Reform Incentive Fund (URIF)* which sought to incentivize urban reforms in many areas. The budget also proposed to set up a *Pooled Finance Development Scheme (PFDC)* to provide credit enhancement grants "to access market borrowings through Pooled Financing Bonds on behalf of identified ULBs for investment in urban infrastructure projects".

In 2005, the government further liberalised norms for FDI in real estate and permitted it through the automatic route, i.e. without prior approval from the government or the Reserve Bank of India.

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[15] Government of India, 1996. *Report of the Expert Committee on Commercialisation of Infrastructure*. New Delhi.

The process of urban reforms reached its high point in December 2005 when the Prime Minister launched the *Jawaharlal Nehru National Urban Renewal Mission (JnNURM)* for a period of seven years (up to 2012). It was basically a reform-linked incentive scheme for providing assistance to state governments and urban local bodies (ULBs) in selected 65 cities- comprising all cities with a population of over one million, state capitals, and a few other cities of religious and tourist importance- for the purpose of reforming urban governance to facilitate[16] the setting up of urban infrastructure and provision of basic services to the urban poor. The Scheme is comprised of two sub-missions, *viz.* Sub-Mission for Urban Infrastructure and Governance and Sub-Mission on Basic Services to the Urban Poor. The admissible components under both these sub-missions together include urban renewal, water supply and sanitation, sewerage and solid waste management, urban transport, slum improvement and rehabilitation, housing for urban poor, civic amenities in slums etc. The tenure of the Scheme was later extended for two more years, *i.e.* up to March 2014. In April 2015, the scheme got a further extension up to 2017 for the unfinished projects.

The 12th FYP highlighted the fact that with nearly 70 percent of the GDP contributed by the urban sector and the population projection indicating 40 per cent urbanization in the coming decade, it was imperative that the focus be shifted to the development of the urban sector. It was felt that this would be critical for its inclusive growth given the strong positive effect that a prosperous urban sector has on the rural hinterlands[17].

In this context, prior to 1990, urban infrastructure was financed largely through government grants and Plan funds of the central and state governments. Decisions on local infrastructure investments were made by central and state governments. Due to the disconnect between local needs and infrastructural plans drawn up at higher levels of government, these infrastructure investments were made without any clear understanding of the local demand. In the absence of inputs on both the nature and extent of local demands, the infrastructure that was built was found to be inadequate, of poor quality and often unrelated to people’s needs.

In addition to these direct government levers of grants and Plan funds, cities were also allowed to access debt from the Housing and Urban Development Corporation (HUDCO) that has been empowered by the central government to lend to cities[2]. The borrowings from HUDCO were guaranteed by state governments, thereby de-risking the investment for HUDCO by ensuring that the lender was exposed to the state government’s risk and not to the particular project’s risk. By design, such an arrangement ensured that the credit discipline that is associated with prudent, commercial lending programmes was missing. Consequently, while HUDCO has performed the job of providing subsidised debt to municipalities, it has not focused attention on developing municipal capacities in the long-term, thereby only spawning a culture of dependence and lack of accountability.

V. *Urban Local Bodies: Issues in Finances and Sources of* Financing of Infrastructure

India’s municipal corporations, municipalities and Nagar Panchayats (NP)- commonly known as urban local bodies (ULBs)- need to be strengthened as local self-governments with clear functions, independent financial resources, and autonomy to take decisions on investment and

[16] The sub-mission on Basic Services to the Urban Poor was later on extended to cover all municipalities.
[17] Government of India, (2011), *Report of the Working Group on Financing Urban Infrastructure,* Planning Commission, New Delhi, p.8.

service delivery. Elements of this shift are already present in the local government framework as reflected in the 74th Constitutional Amendment, the Jawaharlal Nehru National Urban Renewal Mission (JnNURM), and the emphasis placed on the urban sector by the Thirteenth Central Finance Commission.

The Indian federation is a three-tier structure comprising of the Central Government at the top, States and Union territories in the second tier, and local self-governments or ULB's in the third tier. All these tiers provide for infrastructure, as and when necessary and if possible[18].

Urban local bodies[19] play a crucial role in delivery of social and economic services (such as power, irrigation, transport etc.) in urban areas. Fiscal status of these bodies is, therefore, important for overall economic development, particularly for the upliftment of the masses.

India has 4,143 Urban Local Bodies (ULBs), of which 162 are Municipal Corporations (MCs), 1,482 are municipalities and 2,349 are Nagar Panchayats (NPs) (i.e. Notified Area Councils that are in transition from rural to urban areas)[20]. While all the local bodies, in general, are governed by the 73rd and 74th Constitutional Amendments, there are specific provisions for the administration of tribal areas[21].

The tier-wise analysis indicates that in 2007-08 MCs collected Rs. 6,590 Crore from property tax, municipalities Rs 1,407 Crore. and NPs a meagre Rs.161 Crore. across 19 states. By 2012-13, the MCs more than doubled the property tax income with Rs. 12,666 Crore, municipalities marginally increased this income to Rs 2,201 Crore. For NPs this rose by 50 percent to Rs.243 Crore. The CAGR in MCs, municipalities and NPs was 14.0 percent, 9.4 percent and 8.6 percent respectively.[22] The income of MCs in Bihar also includes the municipalities and NPs as noted earlier.

This explains the buoyancy in MCs and lack of buoyancy in municipalities and NPs**.** The per capita property tax income in 2012-13 for ULBs was Rs.517, MCs Rs.813, municipalities Rs.206 and for NPs a meagre Rs.70.

Overall, the state of finances of the municipal bodies of the country is very poor. On the basis of per capita income, the total revenue of municipal bodies was a meagre Rs 735 in 2002-03 and increased to Rs 1430 in 2007-08. The own revenue (0.50 percent of GDP) of ULBs are a little

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[18] Three institutions have evolved over the last sixty years. The Five Year Plans recommend fiscal devolution for the creation of assets for development and removal of inter-state economic inequality. The Central Finance commissions recommend revenue sharing between centre and the states to take care of revenue account fiscal gaps. However, since the adoption of the 73rd and 74th Constitutional Amendment in 1992, the states constitute their own state finance commissions as a mandatory statutory provision under Article 243-I of the Constitution of India to recommend a formula for revenue sharing between the state and its third level entities as well as *inter se* distribution among its rural and urban local bodies of various types. The transfers are for revenue sharing and grants. The Central Finance Commissions also provided specific purpose grants to ULB's for some specific projects.

[19] The term 'urban local bodies' signifies governance of urban local area through their elected representatives. The area of the ULBs is determined by the state government. There are eight types of ULBs: Municipal Corporation, Municipality, notified area committee, town area committee, Cantonment Board, Township, Port Trust, and special purpose agency. The system of urban local government was constitutionalised through the 74th Constitutional Amendment Act of 1992.

[20] Administrative Staff College of India, 2014. *Municipal Finances and Service Delivery in India,* study sponsored by the 14th *Finance Commission,* New Delhi (www.fincom.nic.in), p.5.

[21] Entire Indian jurisdiction is divided into general areas, areas covered under the Sixth Schedule and Fifth Schedule as per the provisions of the Constitution of India, 1951. Those States covered by the Sixth Schedule of the Constitution are basically governed by the autonomous districts/regions. The Fifth Schedule is applicable to the tribal areas in the rest of the country.

[22] Administrative Staff College of India, 2014. *Op.cit.* p.94.

over half of their total revenue (0.94 percent of GDP). *In fact,* ULBs are undergoing fiscal stress with the municipal own revenues being insufficient to meet the revenue expenditures. As in most developing countries, in India too, the ULB's are not in a position to generate own sources that can adequately maintain their existing urban infrastructure at current levels of efficiency.

A study from the Reserve Bank of India covering 35 metropolitan Municipal Corporations (MCs), indicates that the spending by all the MCs are lower than that required for providing a minimum level of civil amenities. The Study indicates that the average level of underspending works out to be about 76 percent. The study estimates the projected investment requirement of funds for urban infrastructure in the country is nearly Rs.63,000 Cr. per annum for the 10-year period (2004-05 to 2013-14) and there is an annual shortfall of at least Rs.10,000 Cr. (at 2004-05 prices), even for providing core urban services[23]. The other more recent studies-- by Mathur (2013) and Chary and Prasad (2014) -- further corroborate these results. Thus, the finances of MCs clearly indicate that financing of urban infrastructure is a formidable challenge. Even today the ULB's are falling short of the norms set by the Zakaria Committee way back in early sixties.[24]

Municipal dependence on external sources and inability to mobilise requisite funds confirm that municipal governments suffer from vertical and horizontal imbalances. On the whole, municipal own sources constitute barely around half of the municipal finance, the other part of the revenue from the vertical transfers are at best *ad hoc* and not linked to actual requirement of funds at the ULB level. The intensity and magnitude of horizontal imbalance is equally alarming and a matter of concern as it reflects that most municipal bodies do not have the appropriate instruments at their disposal or lack legal and regulatory capacities to raise the requisite resources.

In spite of the spill over of existing cities into 'peri-urban' areas, *the deficit in* better infrastructure and better public services in India's urban areas *is not only large but also increasing.*

The trends in municipal financing in India indicate that the last 15 years have seen a substantial evolution from a grant and soft-loan-based infrastructure creation programme to the increasing usage of market-based mechanisms that bring in private capital.

The traditional argument favouring public provision of urban services has hinged mainly upon market failures due to their special characteristics like natural monopoly[25], non-excludability[26], externalities,[27] low price elasticity of demand[28] etc. Urban infrastructure in any case is expensive. It requires centrally planned infrastructure including electrical grids, power stations, roads and highways, water-supply networks and sewage, telecommunications networks, railways and airports, in addition to public and private services — schools, hospitals, markets and more.

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[23] Mohanty, P. K., and others (2007).

[24] Government of India, 1963.

[25] Most urban infrastructure services are natural monopolies and are characterized by declining marginal cost over a very large range of output. For such services, it is economically more efficient for one producer to supply the service, and since the private sector could exploit its monopolistic situation, the public sector has normally taken it upon itself to provide the services.

[26] It is difficult to exclude users from using services such as roads and public lighting systems on grounds of non-payment for services.

[27] Many services like sanitation and solid waste disposal have significant external economies, which makes it difficult for market-based systems to provide them in adequate quantities and quality.

[28] Certain infrastructural services being basic necessities have inelastic demand, and could result in exploitative pricing unless pricing was regulated.

Urban infrastructure, particularly water supply and sewerage and roads, are capital intensive activities and have consequently been financed, in addition to the budgetary provisions, through borrowings from the domestic finance and insurance companies, specialized national-level institutions [29] such as the Life Insurance Corporation of India (LIC), General Insurance Corporation of India (GIC), Housing and Urban Department Corporation (HUDCO), the Industrial Development Bank of India (IDBI), Industrial Credit and Investment Corporation of India (ICICI), and Infrastructure Leasing and Financial Services Limited (IL&FS), and more recently by the Infrastructure Development Finance Company (IDFC). Of these, HUDCO has been a major provider of long-term finance for housing and urban infrastructure[30]. Over the years, it has increased its financing of urban infrastructure projects- particularly water supply, roads, and other commercial projects- through the state housing boards, development authorities, and municipal corporations. All of its financing is supported by state government guarantees.

It has been realized that the challenge of managing urbanisation will have to be addressed through a combination of increased investment, strengthening of the framework for governance and financing, and a comprehensive capacity-building programme at all levels of government. In this context, a variety of initiatives have been taken by the new government in the recent years. The following initiatives need special mention:

The Life Insurance Corporation of India (LIC) and General Insurance Corporation (GIC) have extended term loans to parastatal agencies for urban infrastructure projects- on the basis of state government guarantees.[31]

Since its establishment in 1987, the IL&FS (a private entity) has floated special purpose vehicles (SPVs) and entered into concessional agreements with state and local governments for the building and operating of infrastructure projects on a commercial basis. The IDFC is also a private sector initiative for financing infrastructure projects. It is expected to link public infrastructure projects and capital markets by enhancing credit, creating partnerships between financing institutions, and by subscribing to the shares and debentures of infrastructure companies.[32]

Private sector has also been playing an interesting role in some urban infrastructure projects, *e.g.* Tirupur Water Supply, and urban infrastructure projects in Nagpur, Hubli-Dharwa, Alandur and Gorai.

VI. Innovative Financing Vehicles

Post 1990, there has been a greater thrust towards exploring alternative funding models for urban infrastructure. The impetus for this came from three sources:

[29] As local government lending involves a specialized kind of financial analysis, specialized financial institutions have been created to meet the financing needs of local governments.

[30] HUDCO started financing urban infrastructural schemes in 1988-89 by focussing on the critical segments of infrastructure development in cities and towns.

[31] Different financial institutions were mandated to invest in specific priority sectors. The LIC, for example, was required to invest 25 percent of its annual accretion of funds to social sectors, including water and sanitation.

[32] In addition, some states in the past have benefitted from financial assistance from the World Bank, ADB, and ODA in the form of grants. Such assistance was also available from Canadian International Development Assistance or Swedish International Development Assistance until GoI decided not to receive ODA as grants from various countries other than the listed six. However, Japan funded Delhi Metro and is currently funding several other Metro Projects through soft loans.

- Passage of the 74th constitutional amendment has given constitutional status to urban local bodies (ULBs) and has devolved funds, functions and functionaries to the ULB level

- Economic liberalisation and increased competition has forced more efficient allocation of capital by financial institutions. Thus, there is a move away from inefficient financing mechanisms

- State government finances have been under pressure and the state governments have been unable to continue with a programme for subsidising municipal debt.

Box 1. Pooled finance development fund

One of the innovative methods for financing infrastructural requirements adopted by the states.

Based on the premise that while the larger municipal corporations (MCs) are in a relatively better position to get into the capital markets, the smaller and medium-sized ULBs do not have the technical knowhow and financial capacity to go in for this mode.

Through the Pooled Finance Development Fund (PFDF), the smaller and medium-sized ULBs could approach the capital markets for financing requirements of infrastructure projects. PFDF allows small entities to pool together their projects and access the market with one single bond issue backed by the cash flows from all the underlying projects.

Tamil Nadu has taken a lead and has set up a *Water and Sanitation Pooled Fund* (WSPF).

Karnataka also created *Karnataka Water and Sanitation Pooled Fund* (KWSPF) in 2003 and raised funds in 2005 for the Greater Bangalore Water Supply and Sewerage Project.

Pooled finance development fund

One of the innovative methods for financing infrastructural requirements adopted by the states relate to pooled finance development fund (box 1). It is based on the premise that while the larger municipal corporations (MCs) are in a relatively better position to get into the capital markets, the smaller and medium-sized ULBs do not have the technical knowhow and financial capacity to go in for this mode of funding infrastructure development. With a view to overcoming this problem, a system of ‘pooled financing’ has recently been introduced. Through this mechanism, the smaller and medium-sized ULBs could approach the capital markets for financing requirements for setting up of infrastructure projects. Tamil Nadu has taken a lead in this context and has set up a *Water and Sanitation Pooled Fund* (WSPF). Pooled financing allows small entities to pool together their projects and access the market with one single bond issue backed by the cash flows from all the underlying projects. The Central Government approved the Pooled Finance Development Fund Scheme in 2006. On similar lines, the Karnataka Water and Sanitation Pooled Fund (KWSPF) was created in 2003 and raised funds in 2005 for the Greater Bangalore Water Supply and Sewerage Project.

It is important to keep in mind that the mechanism of PFDF is for creating local infrastructure funds, where municipalities create an external investment body to manage local infrastructure. Such funds can be adapted to local conditions and provide funding to develop a project pipeline or eventually to co-finance local infrastructure projects. Such a fund however would require proper oversight to guarantee transparency and expertise. But by encouraging private-sector consulting and investment, local governments can generate capacity around incremental financing. There are several such examples in cities in the United States, Canada (Ontario is a particular case study) and Western Europe, as also in Africa and Asia. Those funds can also have a climate-change component and attract bilateral donors.

VII. Recent Initiatives in Financing Urban Infrastructure

It has been realized that the change in managing urbanization will have to be addressed through a combination of increased investment, strengthening of the framework for governance and financing, and a comprehensive capacity-building programme at all levels of government. In this context, a variety of initiatives have been taken by the new government. The following initiatives need special mention.

Smart Cities Mission: The new government has launched a mission on Smart Cities. Its main purpose is to provide core infrastructure (including adequate water supply); assured electricity supply; sanitation (including solid waste management); health, education etc. to these cities (box 2). The Mission will cover 100 cities (distributed among the states and UTs) and is a centrally sponsored scheme. The central government proposes to give it financial support to the extent of Rs. 48,000 Cr. over five years, *i.e.* an average of Rs. 100 Cr. per city per year. An equal amount, on a matching basis, will have to be contributed by the state/ULB; therefore, nearly Rs. one lakh Cr. of government/ULB funds will be available for the development of smart cities.

Box 2. Smart cities

The Government of India has launched a mission on Smart Cities, with the collaboration of states and UTs for implementation of the flagship programme for urban development.

Purpose: (1) To drive economic growth and improve the quality of life of people by enabling local area development and harnessing technology, especially technology that leads to smart outcomes. (2) To target promoting cities that provide core infrastructure and give a decent quality of life to its citizens.

The focus is on sustainable and inclusive development and the idea is to look at compact areas and create a replicable model which will act like a lighthouse to other aspiring cities.

Scope: The core infrastructure development in a smart city includes adequate water supply; assured electricity supply; sanitation, including solid waste management; efficient urban mobility and public transport; affordable housing, especially for the poor; robust IT connectivity and digitalization; good governance, especially e-Governance and citizen participation; sustainable environment; safety and security of citizens, particularly women, children and the elderly; and health and education.

Box 2. ***(continued)***

Strategy: The strategic components of area-based development in the Smart Cities Mission are city improvement (retrofitting), city renewal (redevelopment) and city extension (greenfield development) plus a pan-city initiative. Greenfield development will introduce most of the smart solutions in a previously vacant area (more than 250 acres) using innovative planning, plan financing and plan implementation tools (e.g. land pooling/ land reconstitution) with provision for affordable housing, especially for the poor. Greenfield development is required around cities in order to address the needs of the expanding population.

Finance: The Mission will cover 100 cities which have been distributed among the states and UTs on the basis of equitable criteria. The Smart City Mission will be operated as a Centrally Sponsored Scheme and the central government proposes to give it financial support to the extent of Rs 48,000 Cr over five years, i.e. on an average Rs100 Cr per city per year. An equal amount, on a matching basis, will have to be contributed by the state/ ULB; therefore, nearly Rs one lakh crore of government/ULB funds will be available for smart cities development.

Solid Waste Management: Another Mission launched by the new government is known as Swachh Bharat Mission (SBM). It aims at making India free from open defecation and achieving 100 percent scientific management of municipal solid waste in 4041 statutory towns/ cities in the country. The targets set for the mission that have to be achieved by 2 October 2019 are: construction of 1.04 Cr. individual household latrines (IHHL), 2.52 lakh community toilet (CT) seats and 2.56 lakh public toilet (PT) seats; and the achieving of 100 percent door-to-door collection and scientific management of municipal solid waste (MSW).

National Heritage City Development and Augmentation Yojana (HRIDAY): The HRIDAY scheme aims at preserving and revitalizing the soul and unique character of heritage cities in India. In the first phase, with a total outlay of R500 Cr. fully funded by the central government, twelve cities have been identified for development.

Atal Mission for Rejuvenation and Urban Transformation (AMRUT): AMRUT was launched on June 25, 2015 with the objective of improving basic urban infrastructure in 500 cities/ towns. The total outlay for AMRUT, a Centrally Sponsored Scheme (CSS), is Rs. 50,000 Cr. for five years from the financial year 2015-16 to 2019-20. Cities with a population of 10 lakh or above are entitled to central assistance of one-third of the project cost and all the other cities get assistance for one half of the project cost. Balance funding is to be arranged by state governments/ urban local bodies (ULB) and will be inclusive of private investment.

Infrastructure Financing: The Government of India announced some special schemes for encouraging finance for infrastructure. These included the following:

(i) **The Cabinet Committee on Investment (CCI)** was set up in 2013 to expedite clearances and decisions on large infrastructure projects.

(ii) **Long Term Finance Company:** The India Infrastructure Finance Company Limited (IIFCL) was set up in 2006 for providing long-term financing for infrastructure projects

The IIFCL funds viable infrastructure projects through long-term debt as well as refinance to banks and financial institutions for loans approved by them. This will enable the spreading of debt repayments over a longer period and will benefit PPP infrastructure projects with improved liquidity, better viability, and reduced restructuring risk.

(iii) **Infrastructure Debt Fund:** The government has conceptualised infrastructure debt funds (IDF) for sourcing long-term debt for infrastructure projects. An IDF can be set up either as a trust or as a non-banking financial company (NBFC). The income of IDFs has been exempted from income tax.

(iv) **Tax-free Bonds**: The government has attempted to broaden the corporate bond market by according tax-free status to infrastructure bonds for addressing the specific needs of infrastructure deficit, especially in sectors such as roads, ports, airports, and power which are essential for economic growth in any country.

(v) **Municipal Borrowing:** With a view to deepening the bond markets for infrastructure finance, draft guidelines/framework has been prepared for issuance of municipal bonds in India. It is important to mention that bonds require creditworthiness, a reputational history that signals the likelihood of repayment by the local government. In turn, that may be expensive and complex — and even if obtained, it is still a debt that must be repaid in the future.

(vi) **Public-Private-Partnership Initiatives:** The Government of India is promoting public-private-partnerships (PPP) as an effective tool for bringing in private sector efficiencies for creation of economic and social infrastructure assets and for delivery of quality public services. For financial support to PPPs in infrastructure a Viability Gap Funding [VGF] Scheme has been visualized. The India Infrastructure Project Development Fund (IIPDF) was launched in December 2007 to facilitate quality project development for PPP projects and ensure transparency in procurement of consultants and projects. The National PPP Capacity Building Programme was launched in December 2010, and has been rolled out in 16 states and two central training institutes[33]. The rate of growth of bank credit diminished from an average of 44.8 percent in 2011-12 to 17.7 percent in 2013-14. Power had more than 50 percent share in total credit flow to infrastructure. However, the rate of growth of credit to this sector also decreased from an average of 48.6 in 2010-11 to 25.0 percent 2013-14.

(vii) **Tax and Non-Tax Incentives:** In order to meet the demands of better urban living, government has offered tax and non-tax incentives to promote investments in urban infrastructure and housing sectors besides increasing Plan outlay in the Budget 2014-15. In order to encourage development of Smart Cities, requirement of the built-up area for Foreign Direct Investment (FDI) has been reduced from 50,000 sq. m. to 20,000 sq m and capital requirement from USD 10 million to USD 5 million. To further encourage this activity, projects committing at least 30 percent of the total project cost for low cost affordable housing will be exempted from minimum built up area and capitalization requirements, with the condition of a three-year lock-in period. All these initiatives are given in Box 3.

[33] Adapted from Government of India, 2014, *Economic Survey- 2013-14*, Ministry of Finance, New Delhi.

Box 3. Recent initiatives

The Government has taken recent initiatives to ensure accelerated growth in the infrastructure sector:

(a) Harmonized Master List of Infrastructure Sub-sectors:

(b) Smart City Mission

(c) Atal Mission for Rejuvenation and Urban Transformation (AMRUT)

(d) National Heritage City Development and Augmentation Yojana (HRIDAY)

(e) Infrastructure Financing

- **(i)** The Cabinet Committee on Investment (CCI);
- **(ii)** Infrastructure Debt Fund; and
- **(iii)** Tax-Free Bonds; and Municipal Borrowing

(f) Public-Private Partnership (PPP) in India

- **(i)** Viability Gap Funding for PPP Projects;
- **(ii)** Support for Project Development of PPP Projects;
- **(iii)** National PPP Capacity Building Programme; and
- **(iv)** Online toolkits for PPP Projects

VIII. Suggestions and Concluding Observations

The present scenario of financing urban infrastructure indicates that it needs to take care of the existing deficiencies in the system. For example, there is an absence of a rigorous project preparation and appraisal process in many MCs. This has led to giving inappropriate incentives resulting in inefficient utilization of funds, and widespread inefficiencies in provision of service. The ULB's are in most cases unable to contribute resources for new projects as most municipalities are not having sufficient operating revenue surpluses. It is, therefore, imperative that the ULBs should levy user charges as much as possible on the basis of full cost recovery. Most ULBs do not possess project development and management capacity. It is generally found that the inter-governmental loans are not serviced properly. In many cases, non-payment of loans is adjusted against state government transfers; sometimes the loan is rescheduled or written off. This result in making ULB's indifferent to the financial viability of loans. Also, there is an absence of term landing institution like the erstwhile IDBI and ICICI which were converted into banks. It is well recognized that there are some special problems in financing infrastructure projects.

First, most of the infrastructure projects, *viz.* power, bridges etc. need long-term financing as the gestation period for commencement of such projects is quite long. On the other hand, banks have a major part of their source of funds (like deposits) available only for short term. Thus, there happens to be a mismatch between the terms of sources and uses of funds for infrastructure projects.[34]

Second, some of the infrastructure projects have a significant gap in viability, *e.g.,* in the case of roads, the cost of funds from banks is quite high compared to the stream of revenue from tolls or other sources of income. The maintenance costs are quite high. In such circumstances the banks hesitate or even avoid financing of such projects.

Third, most infrastructure projects have a huge outlay in terms of financing-- these may be in thousands of crores. On the other hand, banks have their set limits for sectoral financing and at best finance only part of the outlay. In such circumstances, usually banks have to form consortiums to finance a single project, whereby each bank finances only a part of the cost. This leads to delays in decision-making, and issues relating to guarantees, interest rates, recovery arrangements etc.

It is also an important fact that the investment decisions are taken by higher governmental tiers or the state level utility boards. ULB's do not have any control over these decisions even when they are saddled with both the problems of debt servicing, and operationalizing and maintenance of urban facilities.

Municipal financing in India in the last 20 years has seen a substantial evolution from a grant and soft-loan-based infrastructure creation programme to increasing use of innovative and market-based mechanisms that bring in private capital for municipal bodies. The development of the municipal bond market for the first time enabled Indian cities, such as Bangalore and Ahmedabad, to access private commercial funds for financing public services. The last decade has seen the emergence of the Pooled Finance mechanism (in the Indian states of Tamil Nadu and Karnataka) that enabled small and medium cities to access debt capital markets. While there are some hiccups in their development, these innovations are being carefully nurtured to ensure that there is a sustained flow of private finance for investment into public infrastructure in a capital-starved economy with a huge infrastructure deficit. While these market mechanisms have powerful potential implications, they need to be promoted through appropriate reforms.

Recognising the enormous financing requirements of urban infrastructure, the Government of India has launched a few initiatives in recent years for funding and facilitating market engagement in infrastructure. 'Promotion of Public Private Partnership (PPP)' was one of the objectives of the Jawaharlal Nehru National Urban Renewal Mission (JNNURM). Another initiative was the Pooled Finance Development Fund (PFDF) which aims to catalyse the municipal bond market for the ULB sector. The recent initiatives like Smart Cities Mission, Atal Mission for Rejuvenation and Urban Transformation (AMRUT) and Heritage City Development and Augmentation Yojana (HRIDAY) would also help the urban local bodies to mobilise resources for urban services and setting up of infrastructure. However, a number of regulatory and policy constraints continue to restrict both the demand and supply aspects of debt financing and PPPs in India.

In India, in response to insufficient provision of basic urban services and a lack of access to finance and other resources by ULBs, a number of PPP options have emerged since the late 1990s in urban infrastructure projects: roads, sewerage, water supply and solid waste management. However, certain fiscal incentives, such as increased/ additional FAR/FSI/TDR, tax incentives and Single Window Clearance, need to be given to the private sector in order to incentivise them to finance ULBs. At the policy level, there has been a focused effort on creating

[34] Such lending by banks have created huge default in payments. To illustrate, JP Industries working in Infrastructure sector- Roads & Highways, Power, Real Estate etc. -- have a combined default of Rs 50000 Cr.

national legal framework for PPPs as well as capacity-building efforts at the national, state and local levels. A PPP cell has been set up in the Ministry of Finance which provides access to detailed model documents, guidelines, databases and toolkits for use by states and cities as when they undertake PPP projects.

A related issue is the need for market makers of municipal debt, with HUDCO being a case in point. Set up to finance housing and infrastructure, HUDCO has shifted its focus to financing larger power and gas projects. Its financing for urban infrastructure (to the extent that it does) is subsidised by its profitable lending to larger infrastructure projects. In this context, the following suggestions are put forth:

A. National and State level bodies

First, to instil confidence in the local bodies and to increase volume of bonds and lending credibility to attract investors, India could consider a National Local Body Financing Authority (NLBFA) at the national level and a State Local Body Financing Authority (SLBFA) to meet the requirements of urban local bodies. These entities would function in close coordination with the central and the state governments. First and foremost, NLBFA and SLBFA could focus on standardization of budget-making processes by the urban bodies, assess the financial requirements of feasible projects, train the relevant personnel in budget accounting and policy preparation, and tap the capital markets- akin to the joint-family approach followed by the RBI for state government borrowings under loans for more than six decades since Independence. This will assist in tackling some of the constraining issues pertaining to municipal bonds, as it would raise the level of confidence of the investors, and ensure consistency and volumes in supply of local body bonds in the market.

Since 1996, at least ten ULBs received investment grade credit ratings and six successfully issued municipal bonds. Others are in process. In most cases, bond proceeds funded water and sewerage projects. State-level pooled financing structures, often called bond banks to support borrowing by smaller municipalities that otherwise would find it difficult to directly access the capital market. A bond bank is a state-sponsored intermediary that borrows from the capital markets, usually with some state or federal credit enhancement, and typically uses the proceeds to purchase debt obligations of local governments. Bonds generally are secured by loan repayments of the pool of local borrowers as opposed to one locality, which helps reduce risk for investors and interest rates for borrowers.

Bond banks generally do not issue bonds backed by state guarantees. However, most states pledge some form of credit enhancement to provide borrowers interest rate savings. The objective of a state pooled finance mechanism is to provide a cost-effective and efficient way for smaller ULBs to access the domestic capital market for investment in urban infrastructure. Another objective, for state governments, is to introduce new institutional arrangements for mobilizing urban infrastructure finance.

Second, endogenous sources of revenue are the basis for a healthy municipality. Here are three such sources that deserve special mention.

1. Land assets

The first is land assets. Municipalities need to improve property rights via land registration. In addition, local governments in India must have a system that enables them to periodically update information on asset and property ownership. Such a system requires a basic level of technical expertise, an electronic network and an accounting system.

By reinforcing property rights through a central system that monitors and updates public and private land assets, municipal governments can establish a foundation for land-value sharing. In turn, this enables all interested parties (for instance, residents and local governments) to apply urban planning tools to renew and expand cities, improve neighbourhoods and increase property values. Cities that apply these tools are able to generate more revenue from property taxes and "betterment levies", and to direct those resources toward improving housing for residents and compensating proprietors with income. This creates a virtuous circle for city renewal and expansion. Indeed, land-value sharing has been very successful in cities in Japan, the Netherlands and other countries, where such systems have been in place for more than a century.

2. Productive capacities

The next is the productive capacity. Improving and expanding the layout of cities enhances productive capacity and the mobility of people and goods, so urban areas can generate more income from the private sector. This dimension is usually considered part of strategies around local economic development, and such policies will need to be updated in order to support a productive economy that prioritizes liveability and equity as well as higher urban revenues. How the city is configured? — its transportation system, public space and more — is directly connected to its capacity to improve productivity and expand wealth. To give an example of mobility: Cities with improper transport systems cannot connect people to jobs, and firms are unable to compete and generate sufficient income. Thus, municipalities lose revenue, hampering their ability to provide public goods. Cities that offer a good environment in which to live and efficient urban layout in which to produce, on the other hand, attract people and firms, creating sustainable sources of income.

3. Financial management

The third vitally important endogenous source of revenue is financial management expertise. This varies broadly among municipalities depending on the level of revenue, region and country. In non-metropolitan /smaller municipalities, it may be important to improve basic financial capacity, ranging from accounting rules, capital investment plans, sustainability financial ratios, and rules for expenditures and revenue. Improving financial management top to bottom can have significant benefits. Understanding accounting principles, training on capital investment plans and helping to set up basic electronic government systems have immediate results, as UN-Habitat projects in Asia and Africa demonstrate. Later, support must be given to improve technical knowledge of more complex financial instruments such as bonds, credit ratings, loans, green financing and others.

Table 2. Sources of financing current and projected investment requirements of urban expenditure

(Percent of GDP)

Years	Total Expenditure	Own Revenue	Revenue from Entities Other than ULBs	Transfers from State Government	Other GoI Grants	JNNURM	Deficit
11-12	1.59	0.50	0.33	0.32	0.13	0.10	0.21
21-22	2.10	1.17	--	0.16	0.13	0.25∗	0.39
31-32	2.16	1.47	--	0.16	0.13	0.25∗	0.15

Sources: Report on Indian Urban Infrastructure and services. Pp xxvii.
Note: ∗New improved JnNURM

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