Property Taxation in India: Issues Impacting Revenue Performance and Suggestions for Reform

Rajul Awasthi
Mohan Nagarajan
Rajul Awasthi and Mohan Nagarajan are Senior Public Sector Specialists (Governance Global Practice) who work on tax policy and revenue administration in the Equitable Growth, Finance, and Institutions Vice-Presidency of the World Bank.

This series is produced by Governance Global Practice of the World Bank. The papers in this series aim to provide a vehicle for publishing preliminary results on Governance topics to encourage discussion and debate. The findings, interpretations, and conclusions expressed in this paper are entirely those of the author(s) and should not be attributed in any manner to the World Bank, to its affiliated organizations, or to members of its Board of Executive Directors or the countries they represent. Citation and the use of material presented in this series should take into account this provisional character.

For information regarding the Governance Discussion Paper Series, please contact contact: Ayse Boybeyi, at aboybeyi@worldbank.org

JEL Classification: H71, H24, H20, H83

© 2020 The International Bank for Reconstruction and Development / The World Bank 1818 H Street, NW Washington, DC 20433 All rights reserved.
ABSTRACT

Rapid urbanization in India means cities face a tremendous challenge to finance and deliver the increasing demand for basic municipal services. When compared to peers in the Organisation for Economic Co-operation and Development (OECD), India performs poorly in generating revenues from the urban immovable property tax. The data show that while the average collection from property taxes in the OECD group is about 1.1 percent of national gross domestic product, the number for India is about 0.2 percent, which is just one-sixth. Most Indian states, including the relatively better performers, collect small amounts compared to OECD countries. Several factors lead to low property tax revenue in India: undervaluation, incomplete registers, policy inadequacy, and ineffective administration. A big challenge for property tax administration is the lack of accurate property tax rolls under the jurisdiction of the urban local bodies (ULBs). Property tax laws are generally seen to provide many exemptions. Undervaluation is rampant. ULBs — especially smaller municipalities and Nagar Palikas — are constrained with the capacities they possess to effectively administer a property tax. Reform would need to undertake a range of activities: updating property tax laws, getting rid of ineffective exemptions, completing property registers, adopting more effective valuation approaches, and strengthening administration. There is merit in preparing a model municipal act to help build a more robust property tax system. A fresh approach to property tax administration is needed to help bridge the resource gap in the revenue raising capacity of ULBs. For small ULBs that lack capacity, property tax (and perhaps other municipal revenue sources as well) could be administered by a centralized body that handles property registers and databases of all ULBs under its remit through a unique information technology platform. The paper suggests a model to support and manage the technical- and policy-related aspects of the property tax: the establishment of a Municipal Revenue Board at the state level. The board is conceptualized to leverage the latest technology to implement the “back office” functions of a typical property tax administration.
# Table of Contents

1. THE CONTEXT: RAPID URBANIZATION AND THE CHALLENGE OF INADEQUATE RESOURCES
   - Financing the Infrastructure Deficit in Urban Areas 2
   - India’s Performance on Property Tax Revenue Generation Is Below Par 3

2. LEGAL FRAMEWORK FOR TAXING IMMOVABLE PROPERTY IN INDIA: EMPOWERING ULBS TO TAX PROPERTY 7

3. ISSUES IMPACTING REVENUE PERFORMANCE AND PROPOSED REFORMS 9
   - Incomplete Property Rolls 10
   - Build Complete, GIS-Based, Accurate Property Rolls through Surveys 11
   - Property Tax Rates and Classification 13
   - Property Tax Exemptions 14
   - Update Property Tax Laws 15
   - Property Valuation 16
   - Property Undervaluation Is Rampant, and Information Is Scarce 16
   - Capital Values Are Understated 17
   - Information on Rental Values Scarce and Unofficial 18
   - Bring Modern Valuation Approaches into Use 19
   - Unit Area Method Provides a Way Forward 19
   - Assessment Based on Capital Market Value 20
   - Property Tax Administration 21
   - Strengthen Property Tax Administration 22
   - Capacity Building in Property Tax Administration at Local Levels of Government 23

4. SUGGESTED INSTITUTIONAL MODEL FOR PROPERTY TAX REFORM: A MUNICIPAL REVENUE BOARD
   - Functions and Responsibilities of the MRB 27
   - Advantages of a Municipal Revenue Board 28
   - Functions and Responsibilities of the ULBs 29

Bibliography 30

ANNEX A. STATE AND CITY RANKINGS OF PROPERTY TAX REVENUE PERFORMANCE 33

ANNEX B. TYPES OF URBAN LOCAL BODIES IN INDIA 37

ANNEX C. SIX GOOD PRACTICE CASE STUDIES 41

ANNEX D. COMMON EXEMPTIONS PROVIDED IN PROPERTY TAXATION IN INDIA 50
1. THE CONTEXT: RAPID URBANIZATION AND THE CHALLENGE OF INADEQUATE RESOURCES

India is undergoing rapid urbanization. According to the 2011 census, 377 million people lived in around 8,000 urban areas, 1 53 of which had over 1 million people. At the time, India had 4,041 statutory towns. Urban areas account for one-third of India’s population and 75 percent of its gross domestic product (GDP). Projections vary, but some estimates indicate that the urban population will be close to 600 million by 2031. According to the United Nation’s World Cities Report 2016, India is expected to house seven mega cities each with a population greater than 10 million (UN-HABITAT 2016). The Economic Survey of 2016–17 suggests that urbanization will define the trajectory of India’s development (Ministry of Finance 2017).

Owing to this rapid urbanization, Indian cities are facing a tremendous challenge for the financing and delivery of basic municipal services, such as sanitation and sewerage facilities, public transport, fire services and infrastructure including water supply, public roads, and civic amenities. The Sustainable Development Goal number 11 has a direct link to improving urban conditions —“make cities inclusive, safe, resilient, and sustainable.”

The primary responsibility for developing urban areas lies with the state governments and urban local bodies (ULBs). ULBs are of three types: Municipal Corporations; Municipal Councils, and Town Panchayats. 2 Their problems include poor governance, service and infrastructure deficits, and inadequate finances. Annex B presents classification criteria for ULBs used by some select states.

Governance challenges at the ULB level include a significant fragmentation of responsibilities over service and infrastructure provision across ULBs themselves, state government departments, development agencies, and parastatals. Another severe problem is the lack of reliable and complete municipal-level data. Despite the calls of the last two Central Finance Commissions (CFCs) to improve on the availability of municipal-level data, and the fact that each state has an urban development department responsible for ULBs, basic information on municipal finances is not available and coverage and quality of services are still lacking in most states.

---

1 Defined by the 2011 census as including statutory towns and census towns. The census presents at least 24 classifications of urban built-up areas. Statutory towns are towns with a Municipality, Municipal Corporation, Cantonment Board, or Town Area Committee.

2 There are definitional differences among different states. For example, Nagar Palika Parishads, City Municipal Councils, and Municipality each have a different reach of population. Census 2011 classification of Municipalities, Municipal Councils, City Municipal Councils, Town Municipal Councils, and Nagar Palika Parishad yields an approximate count of 516. Technically, Municipal Corporations are expected to cover cities with a population of 1 million or more, whereas Municipal Councils cover cities with populations between 100,000 and 1 million. But that distinction has somewhat dissolved with states having different criteria (population and area) to define Municipal Corporations and Municipal Councils and their variants, with some states having Municipal Corporations with a population of 100,000 or less. There are about 205 Municipal Corporations in India. Maharashtra leads the list with 28.s. Other states with many Municipal Corporations include Uttar Pradesh with 17, Andhra Pradesh and Madhya Pradesh with 16, Chhattisgarh and West Bengal with 13, Tamil Nadu with 12, Bihar and Karnata with 11, and Punjab and Haryana with 10 each.
Financing the Infrastructure Deficit in Urban Areas

The current and future service and infrastructure deficit is another major challenge. The High-Powered Expert Committee (HPEC 2011), appointed by the Ministry of Urban Development, estimated the capital investment requirement for the 20-year period (2012–13 to 2031–32) to be of the order of Rs 39.2 lakh crore (US$593 billion), plus an estimated Rs 19.9 lakh crore (US$301 billion) toward operation and maintenance for ensuring adequate access to municipal services. HPEC projected urban infrastructure investment to increase from 0.7 percent of GDP in 2011–12 to 1.14 percent of GDP by the year 2021–22, and maintain this level thereafter, with an average of 1.05 percent of GDP between 2012 and 2031. The projected increase in capital expenditure has not been realized.

According to HPEC projections based on population in 2011, the per capita investment in 2018–19 should be Rs 4,610 (see figure 1). If the investment had been maintained at the same percentage of GDP as in 2011, the per capita investments would have been lower at Rs 3,107 per capita. In contrast, in Tamil Nadu, which is a relatively developed state, the per capita investment in 2014–15 was Rs 2,854. Similarly, the capital expenditure per capita in 20 large cities in 2017–18 was Rs 3,138. In 22 large cities in 2016–17, it was Rs 1,989. Thus, in comparison to the overall requirement of 1.05 percent of GDP, the actual investment is unlikely to have exceeded the 2011 levels of 0.7 percent of GDP, reinforcing the need for sustained capital expenditure by ULBs.

Figure 1. Annual Capital Expenditure per Capita

![Figure 1. Annual Capital Expenditure per Capita](image)

Analysis in the 2016–17 economic survey shows a positive link between service provision and fiscal resources. The analysis showed a positive correlation of 0.34 between own revenue and services with cities such as Pune, Mumbai, and Hyderabad in the upper quadrant of relatively higher service levels and higher service delivery. Obviously, fiscal strength is just one important determinant of service delivery levels for it provides the resources for staffing and capital investment that have higher correlation with service delivery provision. Administrative, governance, and accountability structures determine how well fiscal resources are translated into service delivery.
Generating the required financing is the other major challenge of the ULBs. The Working Group on Financing Urban Infrastructure, constituted by the Government of India for the 12th Five Year Plan (2011), suggested several financing options for these huge investment needs: ULB’s own funds. They are accumulated revenue surplus from own-source revenues (OSR) and intergovernmental transfers, public-private partnerships, commercial borrowing, and land value instruments. Overall, municipal infrastructure has largely depended on fiscal transfers provided by central and state governments, with modest contributions coming from OSR or commercial financing.

In terms of OSR, scattered evidence suggests that about 50 percent comes from property taxes. While for several technical reasons (e.g., its immovable and visible base, and a positive relationship between property values and income levels) property taxes are one of the preferred municipal revenue instruments, their collection in India has been abysmally low. Although there are no robust and current data on this, available information shows that, as compared to the developing country average of 0.7 percent of GDP, property taxation in India only generates 0.2 percent of GDP (Rao 2013, 3). The actual collection of property taxes is quite low, ranging from 5 to 20 percent of the potential. Using satellite imagery to better assess the potential of property taxes in Bangalore and Jaipur, it was found that in the former, collections were only 16 percent of the potential, while in the later they were as low as 5 percent (see India Economic Survey, Ministry of Finance 2017).

**India’s Performance on Property Tax Revenue Generation Is Below Par**

When compared to its peers in the Organisation for Economic Co-operation and Development (OECD), India performs poorly in terms of generating revenues from the urban immovable property tax (figure 2). The data show that while the average collection from property taxes in the OECD group is about 1.1 percent of national GDP, the number for India is about 0.2 percent of GDP, which is just one-sixth.

**Figure 2. OECD Country-Level Property Tax Revenues Compared to India, 2016**

Sources: OECD (2017), Bandyopadhyay (2013).

*Note: Korea = Republic of Korea; OECD = Organisation for Economic Co-operation and Development.*
For some OECD countries, such as Canada, the United Kingdom, and the United States, property tax collections form the bedrock of local government revenues and, taken as a percent of GDP, are about 3 percent. In Asia (table 1), property tax is concentrated in a small number of high-income economies, such as those of Japan and the Republic of Korea.

Table 1. Asia’s Level of Property Tax Revenues Compared to India, 2015

| Country or Economy | Property Tax/Gross Domestic Product |
|--------------------|-------------------------------------|
| Hong Kong SAR, China | 3.3 |
| Taiwan, China | 2.3 |
| Singapore | 1.8 |
| Kazakhstan | 0.6 |
| Kyrgyz Republic | 0.5 |
| Malaysia | 0.5 |
| Philippines | 0.5 |
| Nepal | 0.4 |
| Indonesia | 0.3 |
| India | 0.2 |
| Bangladesh | 0 |
| Bhutan | 0 |

Source: ADB (2018).

When viewed in terms of per capita collection of property taxes in dollar terms (i.e., recurrent annual urban property tax divided by the urban population), the problem becomes starker. Most Indian states, including the relatively better performers, collect small amounts compared to OECD countries. Figure 3 illustrates the position.

Figure 3. Per Capita Collection of Property Taxes (US Dollars), 2013

Note: Korea = Republic of Korea.
This shines a light on the difficult problem urban local bodies face. To the extent public infrastructure and services cost roughly the same internationally in dollar terms, the resources available to ULBs in India are inadequate.

Per capita income differentials — and they are large — are often taken as justifiers for the differentials in property tax collections. However, it is important to point out that the tax base for this tax instrument is immovable property. In many high-value jurisdictions, such as Bengaluru, Delhi, and Mumbai, the cost of real estate, which is the base for property tax, is not much lower than in leading cities in Asia, Europe, or North America. See figure 4 as an example of comparative commercial rent costs.

**Figure 4. Comparative Commercial Rent Costs by Central Business Districts, 2014**

| City          | USD per Square Foot per Year |
|---------------|------------------------------|
| New York      | 127                          |
| New Delhi     | 115                          |
| Singapore     | 103                          |
| Paris         | 102                          |
| Mumbai CBD    | 82                           |
| Zurich        | 80                           |
| San Francisco | 70                           |
| Mumbai        | 62                           |
| Los Angeles   | 57                           |
| Brussels      | 41                           |
| Kolkata       | 39                           |
| Toronto       | 28                           |
| Bengaluru     | 24                           |

*Source: Cushman and Wakefield (2014).*

Specific examples serve to illustrate the problem. Table 2 presents basic data on property tax collection in 3 ULBs of different sizes in Madhya Pradesh, from a study commissioned by the World Bank (ICRA 2015). The data reveal several weaknesses, including low collection rates of 3 percent to 13 percent of total revenues; incomplete property cadasters varying from 64 percent to 81 percent, indicating that 25 percent to 30 percent of the properties are not registered; and a low collection efficiency showing that 30 percent to 60 percent of the actual demand (the potential is even larger) is not being collected.
Table 2. Property Tax Collection in Madhya Pradesh, 2015

| Indicator                        | Burhanpur | Mandsur | Maheshwar |
|----------------------------------|-----------|---------|-----------|
| Population                       | 210,886   | 141,468 | 24,408    |
| OSR / total revenue              | 21%       | 56%     | 23%       |
| Property tax / OSR               | 30%       | 56%     | 30%       |
| Property tax / Total revenue     | 4.50%     | 13%     | 3%        |
| Coverage (total / registered properties) | 64%       | 74%     | 81%       |
| Collection efficiency            | 39%       | 72%     | 35%       |

Note: OSR = own-source revenues.

While no rigorous analysis has been done to test for a flypaper effect on the impact of grants, it seems the sizable amount of transfers may be crowding out the demand for additional revenues from own sources (and commercial financing as well) in two main ways. First, the national- and state-level grant programs provide a substantial share as grant finance. The national government’s Atal Mission for Rejuvenation and Urban Transformation (AMRUT), for example, provides grants up to 70 percent of project cost for ULBs creating a “grant culture” and reducing the need for ULBs to look at alternative avenues of fundraising. Secondly, the allocation formulae of the national grant programs follow standard criteria (e.g., per capita basis or fixed percentage of capital cost) with little incentives for performance and tax effort on the part of the ULBs. Over the last few years, the share of municipal revenues in the combined state and central revenues has declined.

Traditionally, ULBs have tended to rely on fiscal transfers for most of their capital investment requirements. Partly to address the huge investment gap at the municipal level, there has been a continuous increase in fiscal flows to ULBs from the federal and state levels. From 2007/08 to 2012/13, grants to ULBs grew 4.6 times, which is unprecedented. For the 2015/16 – 2019/20 period, the 14th CFC recommended a further increase of 3.8 times, for a total of US$13.6 billion. In addition to increases in the transfers from the CFC, several centrally sponsored schemes, notably the AMRUT and the Smart Cities missions, have channeled an additional US$15 billion, double their predecessor schemes. The total funds flow to ULBs from the CFC and the two centrally sponsored schemes alone represent US$28.6 billion. According to a report commissioned by the IFC (2017), the grants received by 20 large ULBs across India was 1.5 times the revenue surplus. Another study estimates that grants were 3.4 times the revenue surplus in 21 large ULBs (Janaagraha Centre for Citizenship and Democracy 2018). In Tamil Nadu, capital grants were 1.7 times revenue surplus for Municipal Corporations (except Chennai) and 4.3 for the entire state.

In the last few years, various cities have taken several steps to improve the performance of their property tax systems, such as adopting more objective methods of determining the tax base, introducing self-reporting or self-assessment systems, and adopting online payment systems to ease tax payments and reduce compliance cost. Annex C summarizes the experience of the property tax reforms, including in Karnataka, which introduced many of them.
States and top cities have been ranked based on their performance on property tax revenue realization. The data\(^3\) compare certain states (as per data availability) on the property tax to gross state domestic product ratio. The tables are presented in annex A. The key point is, even the best performing states in India fall woefully short of international standards.

2. LEGAL FRAMEWORK FOR TAXING IMMOVABLE PROPERTY IN INDIA: EMPOWERING ULBs TO TAX PROPERTY

The Constitution of India, as drafted at the time of independence, did not provide much guidance on the third tier of government, focusing on getting the division of powers between the center and the states right. Since 1992, however, after the 74th Constitutional Amendment, there is a formal recognition of urban local bodies as legitimate entities forming part of the third tier of government. They have been given powers to raise revenues, including property taxes, in line with state-mandated limits.

In the Indian federation, the Seventh Schedule of the Constitution assigns the legislative powers of the central and state governments. Entry 5 in the state list (Article 246, Seventh Schedule) empowers the state governments in all matters relating to local governments, including “the constitution of powers of municipal corporations, improvement trusts, district boards, mining settlement authorities, and other local authorities for local self-government or village administration.”

The Indian Parliament passed the 74th Constitution Amendment Act in 1992, which recognized ULBs as “institutions of self-government” and provided constitutional basis to the process of decentralization with greater devolution and delegation of powers to local governments. Consequently, Part IXA has been inserted to the Constitution which states that the state government at its discretion is authorized to devolve powers to the ULBs on functions listed in Schedule 12 of the Constitution. The states are also expected to transfer the related powers to the ULBs to enable them to carry out the responsibilities conferred upon them. Article 243X authorizes the state governments to devolve the power to levy taxes, duties, fees, and tolls in accordance with the limits set and procedure laid down by the legislature of the state government.

While there is a separate schedule that mentions the functions to be devolved to ULBs, there is no “municipal/ULB tax list” mentioned in the Constitution. The state governments are required to assign the taxation powers to local governments from the State List in the Seventh Schedule of the Constitution. The devolution of functions and sources of finance to municipal bodies is to be done at the discretion of state government, and hence the municipal power to levy tax, duties, fees, and

---

\(^3\) These data have been obtained from the datasets of the Central Statistics Office, Ministry of Statistics and the Program Implementation, Government of India. Property tax data have been obtained from the report of the Administrative Staff College of India for the Fourteenth Finance Commission, titled *Municipal Finances and Service Delivery in India*. A caveat about the property tax data is in order. The entire dataset has not been collected from the urban local bodies. It has been extrapolated from the data obtained from a limited number of local bodies within each state.
tolls are within the limits laid down by the state government. Thus, property tax in India is levied by the municipal governments in compliance with the procedures provided by the state, in their municipal acts. The procedures laid down cover the following aspects: tax bases, rate structures, rebate and exemption policies, and measures for dealing with payment defaults and delays. The autonomy of the municipalities in formulating property taxes is strictly limited. The only flexibility that the municipal governments enjoy is in designing collection mechanisms and fixing tax rates, the bandwidth for which is restricted mostly within the range that the state has set.

Ideally, the ULB’s functional responsibilities should be closely linked with the financial powers delegated to them, which implies that there should be a strong Wicksellian Linkage — the linkage between revenue and expenditure decisions (Bird 2013). However, there is a significant mismatch between these two that leads to severe fiscal stress at the local level. The OSR of ULBs enables them to meet only a part of their operation and maintenance expenditure requirement.

To enable seamless flow of fiscal transfers to ULBs, the 74th Constitution Amendment Act also brought in a new fiscal arrangement. Article 243Y mandates every state to constitute, at regular intervals of 5 years, a State Finance Commission (SFC), and assign it the task of reviewing the financial position of ULBs and making recommendations on the sharing and assignment of various taxes, duties, tolls, fees, and grants-in-aid to be given to the ULBs from the consolidated fund of a state. It also stipulates that the state legislation should provide for the composition of the SFC, the qualifications for its members, and the manner of their selection. Every recommendation of the SFC together with an explanatory memorandum is to be laid before the legislature of the state.

Based on the recommendations of the Joint Parliamentary Committee, a clause was inserted in Article 280(3)C of the Constitution pertaining to recommendations of the Central Finance Commission on “the measures needed to augment the State Consolidated Fund to supplement the resources of the Municipalities in the State based on the recommendations made by the state Finance Commissions.” This amendment explains that, just as the state government has the responsibility under Article 243Y to devolve resources to ULBs, the central government also has a corresponding role and responsibility. This clause was inserted to enable and provide a legal basis for the pass-through of central funds to the local governments, with which the center has no direct relationship. Thus, Central Finance Commissions may also recommend or urge governments to strengthen provisions to empower ULBs and improve efficiency in property taxation.

So, ULBs now have sufficient legal powers to raise revenues (Box 1), and a number of large and small cities have set up property tax systems, which are working quite well. Many of the large cities have also put in place efficient IT-based platforms for property tax administration, which provide easy filing and payment solutions for taxpayers. Technology has also been deployed in several states to

---

4 A memorandum of the Ministry of Urban Development, Government of India, to the Thirteenth Finance Commission, http://mohua.gov.in/upload/uploadfiles/files/Memorandum%20submitted%20by%20Ministry%20of%20Urban%20Development%20to%20the%2013th%20Central%20Finance%20Commission09.pdf.
complete the enumeration of properties with a modicum of success. Despite these efforts, revenue performance from the property tax in India remains poor. Several factors impact revenue uptake from property tax.

**Box 1. Key Constitutional Provisions Pertaining to Property Taxation by Municipal Bodies in India**

- Entry 5 in the state list (Article 246, Seventh Schedule): Empowers the state governments in all matters relating to local governments, including “the constitution of powers of municipal corporations, improvement trusts, district boards, mining settlement authorities, and other local authorities for the purpose of local self-government or village administration.”

- Article 243X: Authorizes the state governments to devolve the power to levy taxes, duties, fees, and tolls in accordance with the limits set and procedure laid down by the legislature of the state government.

- Article 243Y: Mandates to constitute, at regular intervals of five years, a State Finance Commission (SFC), and assigns it the task of reviewing the financial position of ULBs and making recommendations on the sharing and assignment of various taxes, duties, tolls, fees, and grants-in-aid to be given to the ULBs from the Consolidated Fund of a State. It also stipulates that the state legislation should provide for the composition of the Commission, the qualifications for its members, and the manner of their selection. Every recommendation of the Commission together with an explanatory memorandum is to be laid before the legislature of the state.

- Article 280(3)C: Mandates the Central Finance Commission to recommend measures to augment the consolidated fund of a state to supplement the resources of the municipalities based on recommendations of the respective SFCs.

**3. ISSUES IMPACTING REVENUE PERFORMANCE AND PROPOSED REFORMS**

Several issues impact the ability of ULBs to collect revenue from property tax. Property tax revenue realization depends on the following factors: a sound tax base resulting from accurate valuation; coverage of the entire tax base through complete property rolls; sensible tax rates in a simple structure and a reasonable overall tax burden; and effective and efficient property tax administration. Chapter 3 discusses the issues around each of these factors in India that lead to a suboptimal realization of property tax revenues.
Incomplete Property Rolls

A big challenge for property tax administration is the availability of accurate property tax rolls in the jurisdiction of the ULBs. Historically, urban local bodies in India made little attempt to update property cadasters on a regular basis to identify properties and their owners. Vacant land, additions of property, and extensions to existing property are not included in the property rolls. The second Administration Reform Commission\(^5\) had estimated only about 60–70 percent of properties in urban areas were assessed. Exemptions from property tax include places of worship, educational institutions, institutions providing free medical relief, properties owned by ex-servicemen, offices of trade unions, and buildings and land of the Urban Development Authority. Central government properties are traditionally exempt under Article 285 of the Constitution except from municipal service charges for utilities (Rao 2013).\(^6\) An efficient property tax administration requires data that are accurate and economical to maintain. Building and maintaining the property database is a labor-intensive and costly proposition for ULBs. Linked to the property database is tax mapping to complete the property tax management system. Digitizing a property database using a geographic information system (GIS) and automating property tax calculations were attempted for the first time under the Jawaharlal Nehru National Urban Reform Mission (JnNURM). Under JnNURM participating cities signed a memorandum of understanding (MOU) requiring them to:

- undertake a proper mapping of properties using GIS;
- make the property tax system a self-assessment system; and
- collect at least 85 percent of property tax demand.

But the challenge in using technological solutions does not end with the initial GIS mapping of urban properties. The challenge is in keeping the data dynamic and up to date for additions of property, additions to existing property, and change of ownership. For most municipalities that undertook the GIS mapping exercise under JnNURM, the updating of data has lagged for several reasons: (i) the cost-benefit of the exercise has been unclear, and incremental revenue gain after the last exercise is uncertain; (ii) the cost of repeating the exercise is that of the Municipality concerned, unlike central funding for the initial exercise; (iii) the resolution in available GIS imagery has not been adequate to resolve valuation disputes in densely populated localities causing perception problems with the project; (iv) new technology is becoming available using drones rather than remote sensing; and (v) services to manage the property tax system using an outsourced model have emerged. As a result, while changes on the ground are a continuous process, GIS data have often lagged behind, throwing up credibility questions that had to be battled.

---

5 The Second Administrative Reforms Commission was constituted on August 31, 2005, as a Commission of Inquiry, for preparing a detailed blueprint for revamping the public administrative system. The commission submitted 20 reports.

6 Although no recent data are available, one estimate put the extent of property tax exempt property at 10 percent of assessed properties. In Delhi, it is estimated to be 60 percent, and Bengaluru at 40 percent (Mathur et al. 2009).
This then raises the issue of mechanisms to keep the property tax database dynamic. For one, revenue buoyancy creates the necessary incentives to keep the property tax database up to date. GIS “tax maps” serve to locate property but are not a substitute to the official cadastral land and property titling systems. In the long run, the best way to keep digitized property registers current is to link them to the state cadastral database and revenue maps of the area and other systems, such as construction permits, through an integrated system. This system would automatically record changes in ownership, property division and consolidation, changes in property use, development of a new road, and additions and alterations to existing property. In many states, the building permit systems are being linked to the property tax registers under Ease of Doing Business efforts, to reflect changes in land and buildings. Other aspects, such as ownership change and property division, are still a subject of re-survey as the cadaster and property tax registers are yet to be linked.

**Build Complete, GIS-Based, Accurate Property Rolls through Surveys**

GIS mapping should be done in all urban cities and towns to create base maps and accurately assess the number of properties. They should be assigned with unique IDs. A preliminary digital assessment of properties should be done to account for underassessed ones. A digital database of all properties should be created to help prevent manual errors that encumber physical record maintenance and to make the process of data management simpler and more transparent. Follow-up visits as a part of door-to-door surveys are often necessary to identify property owners, particularly where single buildings located in crowded, narrow streets may house several properties.

The JnNURM required participating cities to take necessary steps to complete the mapping of properties and strengthen the property tax administration through MOUs. It also provided resources for training revenue inspectors and initiating publicity campaigns, setting up dispute resolutions mechanisms, and using web-enabled Information technology systems for self-assessment of taxes and tax payment, help kiosks, and the dissemination of information on the status of property tax compliance to taxpayers.

Some Municipal Corporations did experience a modicum of success under the program. Property tax reform in Bengaluru through the Aasthi program is presented in annex C. The Vishakhapatnam Municipal Corporation (VMC), although following the annual rental value system,7 doubled its property tax from Rs 77 crore in 2010–11 to Rs 169 crore in 2013–14. The VMC mapped 352,000 properties using GIS, a property survey, and unique property identifiers and added 50,000 new properties and 47,000 vacant land parcels to its property register. Improved assessment enabled it to generate real-time demand and collection statements for property tax. Assessment of new properties and reassessment began to be carried out on a regular basis by the tax collector. Because of the exercise in Vishakhapatnam, property tax coverage was extended to the steel plants, the Navy, and properties embroiled in litigation (National Institute of Urban Affairs 2015).

---

7 Rental values are sampled in 20 percent of rented properties in various categories in each zone and published in the official District Gazette every 5 years.
Bengaluru reformed its valuation approach and rolled out a Unit Area Assessment System over its entire expanded jurisdiction of 800 square kilometers. Bengaluru mapped 1.6 million properties, adding 100,000 new properties to its property roll. Collection efficiency improved in Vishakhapatnam’s case to 90 percent in 2009–10 and in Bengaluru’s case to 74 percent in 2013–14.

Pune implemented the capital value system in 2011–12 that saw its property tax revenue increase by 29 percent. Ranchi outsourced its property tax collection and saw its assessed base increase by 55 percent in 2012–13. Raipur saw a 68 percent increase in 2017–18 through outsourced GIS mapping, door-to-door surveys, drones to capture property images and details, creation of an electronic tax management system. The use of GIS in mapping property is now standard practice in Tier I cities, and it is being used in Tier II and Tier III cities, such as Burhanpur, Dewas, Katni, Khandwa, and Singrauli in Madhya Pradesh. Detailed case studies of reform by these cities is presented in annex C.

JnNURM’s successor, AMRUT seeks to make reform more widespread. Improvement of ULBs’ OSR has become a focal area under the Government of India’s flagship Rs 50,000 crore AMRUT from 2015. Under a set of 11 targeted reform areas, the scheme seeks improvement in municipal taxes and in the levy and collection of user charges targeting a recovery rate of 90 percent. All the participating AMRUT cities are expected to prepare Service-Level Improvement Plans, which are consolidated and prioritized at the state level in the form of a State Annual Action Plan (SAAP).

AMRUT adopted an incentive approach to promote reforms. Originally the incentive amounted to 10 percent of the total program budget which was later increased to 20 percent. Under AMRUT, 30 cities in Andhra Pradesh have proposed property tax reform, 9 in Haryana, 21 in Karnataka, 12 in Telangana, 55 in Bengal, 24 in Bihar, 9 in Chhattisgarh, and 61 in Uttar Pradesh and so on according to the SAAPs of 2016–17. The cities covered under AMRUT have a two-year timeframe for implementing e-governance solutions including GIS mapping, and most are in the process of undertaking the exercise. For example, Pune is close to completing mapping of 800,000 properties while Bhopal has already achieved it and Chennai is undertaking the mapping now. In a couple of years, most of the 500 cities are expected to complete the exercise.

---

8 The scheme targets 500 cities with a population over 100,000. All the participating AMRUT cities are expected to prepare Service Level Improvement Plans, which are consolidated and prioritized at the state level in the form of a State Annual Action Plan. In terms of reforms, AMRUT prescribed an 11-point urban agenda focusing on state- and city-level institutional and governance reforms. It adopted an incentive approach for states and cities to undertake the program reforms. Originally the incentive amounted to 10 percent of the total program budget (US$750 million), which was increased to 20 percent (US$1.5 billion).

9 AMRUT prescribes an 11-point agenda in the following areas: (i) e-governance focusing municipal services, personnel management, payroll and pensions, procurement, and project management; (ii) constitution and professionalization of municipal cadre; (iii) augmenting double-entry accounting; (iv) urban planning reforms and preparation of city level plans; (v) devolution of functions and funds as per the 74th Constitutional Amendment; (vi) review of building bylaws including a single window clearance for all building plan approvals; (vii) set up of a state-level financial intermediary to access nonbudgetary sources of financing (including municipal bonds, commercial borrowing, private investments); (viii) improvement of own-source revenues; (ix) completion of credit ratings; (x) the conduct of energy audits; and (xi) elimination of open defecation and scientific disposal of municipal solid waste.
Property tax registers, once collated, will need to be updated every year (Mathur et al. 2009). A related issue is valuation of the properties to the nearest proximate market value in the area. Even if the value will be an average for the area, it is still essential to update the value more frequently than the current practice of 5 or 10 years. Three years is usually considered the norm. The responsibility and methodology to be used in the process needs to be standardized. One way is to assign this responsibility from the ULBs to a higher-level common body or authority. This could also help to remove the nexus between powerful property owners and the municipal authorities in valuing properties.

This new authority or board, such as a Municipal Revenue Board (suggested in this paper), may be made responsible for carrying out property valuation and revaluation across the state, somewhat akin to the West Bengal Central Valuation Board or the Karnataka Municipal Database Society. It would have, however, a broader mandate of maintaining the associated information technology (IT) systems within which GIS property information and tax information will reside. This shared system will have the dual benefit of an updated property tax register while reducing the overhead costs of running and maintaining the system. The second requirement would be to improve the quality of data on market valuation in the circle rates, also known as the ready reckoner rate or guidance value, prepared by the state government’s Revenue Department through more objective methods of recording property value data. Under inflation, real value of an assessment can decline quite rapidly, and taxpayers become accustomed to low effective levels of taxation. On the other hand, the political cost of revaluing to the market value rises if revaluation is delayed too long. In the interim between two valuation periods, one option is to index property values to a cost of living index to provide some buoyancy to the property tax base (Mathur et al. 2009).

**Property Tax Rates and Classification**

The second aspect is to look at the property tax rates themselves. The rates often have a historic basis, bearing no linkages to international comparators as is the case with personal and corporate income taxes or trade taxes. They bear no relationship to municipal revenue requirements either. The bands for property tax rates are usually set by the state government. This has both advantages and disadvantages. For one, ULBs are often reluctant to change tax rates and therefore can find this arrangement easier to implement. On the other hand, the rate revision by government will take place only under extraordinary circumstances not linked to the financing needs of the ULBs.

Delegating the rate setting in theory to ULBs brings immediate linkage to service delivery and builds accountability for service delivery performance. The rates themselves should bear an objective relationship to revenue needs and follow some benchmarks. For instance, what matters for compliance is the total tax burden. So, the rates should be seen in conjunction with the valuation of bases with sufficient flexibility for adjustment to maintain a reasonable tax burden.

Having too many classes of property tax rates raises the scope for misclassification. There could
potentially be 240 different categories (Rao 2008). For instance in the Visakhapatnam Municipal Corporation, there are eight taxation zones, six categories of properties, and further classification based on their usage. The market rental value must be estimated for each category of building per square meter of plinth area by surveying 20 percent of rented buildings in different categories. Bengaluru has six zones. Properties are classified based on cost of construction, usage of buildings, and whether self-occupied or let out. In its simplest form, Patna Municipal Corporation has three norms for location, three construction types, and three usage categories. Too much differentiation will defeat simplicity. Although in principle differential values are tax distribution friendly in their incidence, the nontransparency and complexity of tax administration increase over time if there are too many categories.

**Property Tax Exemptions**

Another important policy issue is keeping exemptions to the minimum. A tax system is considered good if it has a very broad base and a low rate. Any limitation in the base (due to exemption and exclusion) results in a higher tax burden on other taxpayers. In the context of property tax, exemptions (i) create complexity in the tax system; (ii) encourage fraudulent behavior; and (iii) administrative burden for ULBs. Exemptions or any exclusion under property tax laws are often criticized for the following reasons:

- Nontaxable or exempt buildings use municipal services just as like other buildings; therefore, they should be subject to tax.

- Commercial buildings that are out of the tax system based on ownership (e.g., leased shops owned by charitable institutions) create distortion and undue economic advantage in relation to commercial buildings owned by private enterprises.

- They limit the tax base, and as a result, other properties are subjected to a higher tax rate to compensate.

In the Indian context, the nature of exemptions is varied. For example, a blanket exemption of properties owned by a charitable organization is undesirable owing to their possible commercial use. Similarly, properties owned by private colleges and schools should not be exempted as such institutions may be making an operating surplus from education-related charges.

Municipal laws have several exemptions for types and groups of properties, with tax either wholly exempt or levied at reduced rates. Some exemptions are common among states. Common exemptions include places of worship, properties serving charitable purposes, public properties (such as playgrounds, parks, or monuments), or those used for education purposes. Reduction in the tax liability for property vacancy, type of ownership is also common, but the claims based on such provisions are always difficult to administer. It is relevant to highlight that even with respect to common exemptions, differences or disparities in the applicability of common exemptions under
different state laws are visible. There are many variations and no clarity on the principles followed to grant exemptions, which results in a big loophole in the system. More objective criteria to grant exemption may help narrow exemptions and extend the coverage of the property tax. A comparison of exemptions under 10 state municipal acts is presented in annex D.

Apart from the common exemptions, there exists unique categories of exemptions and benefits. For example, in Chhattisgarh, properties owned by political parties are exempt. In West Bengal holdings classified as sick industries are extended benefits in relation to nonsick industries. Even with respect to common exemptions, differences or disparities exist in the applicability of common exemptions under different state laws. Exemptions under state municipalities acts or other enabling acts should be justified using clear criteria and kept to a minimum.

**Update Property Tax Laws**

Some municipal laws have clearly framed provisions for enumeration, assessment, valuation, billing, and collection that enable strong property tax systems. A well-written state municipal act, with responsibilities for property taxation clearly devolved and articulated, not only makes the ULB responsible for its revenue but also provides an authorizing environment to improve tax compliance, as the Pune example shows. Thus, there is merit in preparing a model municipal act with coherent, comprehensive and progressive legal provisions that can help build a more robust property tax system. A quick win is to eliminate inefficient exemptions.

Exemptions and preferential treatment undermine revenue productivity of the property tax system and, as tax expenditure, do not serve distributional goals. They on the other hand may have the unintended consequence of raising tax incidence on other taxpayers. Some exemptions that may be revisited include:

- Distinctions based on owner-occupied or leased property (e.g., in Madhya Pradesh, a 50 percent discount is allowed to owner-occupied properties).

- Private educational institutions: privately run pre-school, kindergarten, schools, colleges, and universities should not enjoy any exemption.

- Public parks and playgrounds: should not cover any privately run amusement parks even though they are open to the public.

- Hospitals: private hospitals should not be extended the benefit of any exemption

- Widows and disabled owners should have a threshold so as to exclude valuable properties from the purview of exemption.

- Freedom fighters and retired defense personnel: any other such category must also have threshold exemption limits.
• Property owned by recognized political parties should only be restricted to offices of political parties by clearly defining the scope of the exemption.

• Charitable purposes must be carefully defined to ensure no misuse.

Property Valuation

The biggest challenge in property tax administration is valuation of properties. Valuation by any of the three popular methods — annual rental value, capital value, and unit area method — requires regular updating to market values. While the use of new technology, such as GIS, has improved the coverage and capture of built-up areas and improved accuracy of locational classification, valuation of properties continues to pose a challenge. Opaque property markets and lack of accurate sources of information on property capital or rental values imply that the property tax base is undervalued. Many urban municipalities have experienced a one-time jump from better property mapping using technology, property survey, and property numbering followed by e-governance and self-assessment using web-enabled property tax information systems for ease of compliance.

But growth in revenue gains tapers off with time, as the exercise is not accompanied by valuation of properties to approximate market value, leaving the property tax base more-or-less static until the next episodic revaluation. It must be stated that (i) many countries do not reassess their properties frequently, an indexation factor usually does that automatically; and (ii) and more important is that the original valuation is indeed done at market values. This is important because the basis upon which later indexation takes place is “true and accurate.”

Property Undervaluation Is Rampant, and Information Is Scarce

Raising revenue from property taxes requires regular property revaluations to reflect market conditions. However, most property sale deeds are registered at rates that reflect the circle value (or guidance value) for the area as determined by the state government and not at the actual transaction value. Circle values used by the government are usually at a discount to prevailing market values. This is done as buyers and sellers wish to save on transaction taxes, such as stamp duty and capital gains tax, and eventually results in understated property tax.

---

10 From the viewpoint of the taxpayer, however, because the market values are so much higher than the old or undervalued book values, it is important to make clear that this will not mean their property tax bill will go up dramatically. In other words, while the “assessed value” can or should be close to market value, the “taxable value” can be kept lower and increased over time incrementally until it gets closer to the assessed market value.

11 State governments set circle rates or values specifying a rate per square foot or per meter at which properties are expected to be transacted at for each municipal zone. Stamp duties are calculated using these values, or actual transaction prices, whichever is higher.

12 One way to tackle the problem is to adjust the rates as the value of tax base comes up so that taxpayers perceive this as small and incremental costs. The other way is to make a better job of verifying transaction values, but this practice is known to be difficult.
It is difficult to determine the exact levels of undervaluation. The method of determining circle rates is also somewhat ad hoc. State governments constitute Valuation Committees to establish area-wise property circle (or guidance) values for the levy of stamp duties and registration charges on property sale deeds. There is no regular frequency to the undertaking of the exercise, but typically, Valuation Committees are constituted every 3 to 5 years. They work up values from the district upward using information from registered documents and some market information collected by informal survey that usually result in an ad hoc increase determined by political feasibility.

**Capital Values Are Understated**

The extent of undervaluation has not been systematically studied. Black money traditionally lubricates the real estate sector, providing the easiest way to channel nontax paid funds. The difference between the circle rate, which is fixed by the government, and the market rate of properties in many areas is large and provides an easy parking ground for unaccounted funds. For instance, in Delhi’s Defense Colony, circle rates are around ₹2.45 lakh per square meter whereas the market rates are above ₹5 lakh per square meter. Other reports say the cash component in real estate secondary market transactions was between 30 percent and 50 percent to avoid paying capital gains tax. But the extent of the cash component (or black element) in property transactions has declined after peaking in the early 2000s. This may be attributed to a number of factors: (i) circle values gradually closing the gap with market values; (ii) spread of institutional home finance; (iii) property market gradually becoming an end-users market as home buyers outstrip speculators; (iv) oversupply keeping market property rates less buoyant while circle rates have maintained periodic increase; (v) from June 1, 2013, tax deduction at source of 1 percent by property buyers has become compulsory in cases of property valued over Rs 50 lakh; (vi) for real estate developers, the ready reckoner circle rates have become the base price for calculating income of the developer making circle rates a

---

13 *Mint*, August 2, 2018.

14 In *Moneycontrol News*, “Number of buyers in secondary real estate market rise by 10-12% since demonetization,” July 30, 2018. The article also suggests that demonetization has increased transparency in the secondary real estate market.

15 In 2017–18, Delhi saw 72 percent of its real estate transactions in the secondary market while 28 percent was in the primary market. The opposite was true in Bengaluru, Chennai, and Hyderabad. Mumbai, Pune, and Kolkata saw an equal distribution (Grant Thornton India 2018).

16 One study noted that in the Gurgaon area, the cash component in property transactions declined from 72 percent in 2004-05 to 56 percent in 2008–09. This may have declined even further since then because of market factors and demonetization in 2016 and stamp duty reduction undertaken in 2004-05. In some instances, quoted market rates were almost 200 percent over circle rates. A similar study found 70 percent to 200 percent difference between official guideline values and market values in Chennai in 2014. Budget 2018 permitted property to be valued up to 5 percent below circle rates in view of flat market conditions and acknowledging circle rates had caught up with market values in many areas. The requirement of a clearance certificate (under Section 269 UC that allowed the department the right of preemptive purchase in case of undervaluation) from the Income Tax Department did not prevent undervaluation in property sale transactions.

17 Budget 2018 now allows properties to be registered 5 percent below their circle rates for calculation of stamp duty and capital gains tax.
benchmark, which implies that circle rates must be derived by state governments using more robust techniques; and (viii) plateauing of the real estate market with 683,663 houses unsold as on March 31, 2018\textsuperscript{18} and a boom in the affordable housing segment that is financed by home loans and government interest subsidy under the Government of India’s Pradhan Mantri Awas Yojana.

For example, Kerala issued 500 notices in 2014 for property undervaluation. An estimate put the number of undervalued properties at 1.19 lakh, of which about 23,839 cases were settled through a one-time facility that closed on March 31, 2014. In 2013, the Bangalore Mahanagar Palike reported that a five-star hotel had undervalued its property by Rs 61 lakh, and a tech park had reported its total area as 1.1 million square feet when it was 2.7 million square feet in area. In 2017, the Tamil Nadu High Court heard a case for releasing property registration deeds impounded under Section 47A of the Indian Stamps Act 1889 wherein the court suggested that revenue of Rs 12,000 crore had not been collected. In their 2009 study of 36 Municipal Corporations, Mathur et al. (2009) suggested that assessed values were only 30 percent of market values on average.

**Information on Rental Values Scarce and Unofficial**

While the focus so far has been on determining capital value, market rental values are even more difficult to determine. There are no official sources for determining rental values. Information is largely from informal market surveys, except in some states such as Maharashtra where registration of rental agreements is mandated. But not all agreements are registered. Rent control restrictions\textsuperscript{19} in notified residential and commercial areas (such as under the Maharashtra Rent Control Act of 1999 in Mumbai, the Delhi Rent Control Act of 1958, and the Tamil Nadu Buildings Lease and Rent Control Act of 1960)\textsuperscript{20} depress the annual rental value (ratable value) as opposed to market-determined rents that have a bearing on the property tax base. The existence of these controls distorts the annual rental value. The difficulty with this method of determining the property tax base has meant it is the least preferred option of the three options for setting the property tax base. However, an analysis conducted by Janaagraha for this study shows that out of 21 states examined for which the municipal acts were available online, 15 states still followed the annual ratable value or the annual rental value method.\textsuperscript{21}

---

\textsuperscript{18} *Mint*, August 2, 2018.

\textsuperscript{19} The Rent Control Act 1948, adopted by various states, applies to tenancy over 12 months. This has led to a proliferation of leave and license agreements with tenure of 11 months.

\textsuperscript{20} The fair rent of a building is 9 percent of the total value of the building comprising the market value of the portion of the land, cost of construction (determined at Public Works Department rates), and value of amenities (fixed at 15 percent of the cost of the site) subject to depreciation depending on building age. A rent control court may be approached to fix the fair rent. On the other hand, the Delhi Rent Control Act allows for a revision of 10 percent every three years and is applicable to all properties let out for a monthly rent of Rs 3500.

\textsuperscript{21} Himachal Pradesh, Jammu and Kashmir, Delhi, Odisha, and Bihar have the unit area method. Karnataka (except Bengaluru) and Maharashtra use the capital value method. (Property Taxation Landscape in India, Janaagraha, 2018).
Bring Modern Valuation Approaches into Use

In the case of developing countries, market-based, mass property valuations such as computer-assisted mass appraisal (CAMA) can be excessively complex. However, they can be used in large urban jurisdictions where large numbers of properties must be valued at the same time. The advantage is that there could be frequent revaluation cycles, say once every 2 to 3 years, and fewer staff are needed to undertake the appraisal processes.

In any case, the base rate (assigned rental value when using an annual rental value system of valuation and unit area base rate when using an unmanned aerial vehicles system of valuation) should be revised every few years. There should be a clear provision in all municipal acts on the periodicity with which valuation is undertaken or, in the alternative, an indexation formula that can be used for regular revaluation.

A rental value-based system should be replaced by area-based system or capital value-based system to make the tax system progressive, buoyant, and equitable for all. The legal provisions should clearly define the board, division, or person to be held accountable for valuation of properties. It should also clearly state the criteria to be used for arriving at the base rate value (type of construction, proximity to the main road, and age of building) to ensure transparency in the system.

Unit Area Method Provides a Way Forward

Following Patna Municipal Corporation’s successful demonstration of the implementation of the unit area method in 2002, other Municipal Corporations have gradually transitioned to this method of estimating the property tax base given its predictability and ease of compliance under self-assessment methods. Under this method, properties are classified for tax purposes using criteria such as location, usage, and construction type. As in other systems allowances are provided for the building’s age and occupancy (own or let out). But even under this system, the basic per unit area tax depends on capital valuation (or rental), and the periodicity and accuracy of its estimation determines the buoyancy of the tax. However, it is not easy to revalue properties on a frequent basis, say annually, because of the inability to capture robust information at shorter intervals, administrative difficulties, and the political cost of frequent revision of property taxes. Few municipalities do it annually world over. Furthermore, there are other philosophical issues with regular revision according to Rao (2013). But given the difficulties in property tax administration, valuation under the unit area method presents a more straightforward approach to estimating property tax, even if the tax can become inelastic in its yield if revaluations are not undertaken at more regular intervals than the current infrequent 5 or even 10 years.

---

22 Increases in the market values for the property owners is only an accrual and will not be realized unless they sell their properties. It will be difficult to include higher value of the property that has accrued and not realized in the tax base. Therefore, only a presumptive representative value of an area is taken as base for the tax that is usually lower than the actual market value of the area.
Assessment Based on Capital Market Value

As opposed to the prevalent Indian methods of annual rental value and unit area methods, Capital market value is a relatively more modern valuation method. It considers prevailing market value of properties, i.e., the sale price of similar pieces of property, for levying the tax. Alternatively, it can be based on the cost of construction of a building. However, as this method require details of property sales and its nature, in India the circle rate (i.e., market valuation adopted for stamp duty purposes) is used for levying property tax. Currently, Bangalore and Mumbai apply this method to property taxes. Migration to this method in 2011–12 in Mumbai yielded a significant one-time increase in property tax revenue as depicted in figure 5.

Figure 5. Property Tax Collection in Mumbai

Detailed studies suggest considerable potential revenue gains from moving to a system that reflects market values (Lall and Deichmann 2006). The following are seen to be the benefits of a market-based valuation in comparison to rent- or area-based valuation systems (Bird and Slack 2004):

- Benefits from services are more closely reflected in property values than in the size of the property. For example, properties close to transit system or parks enjoy higher property values.

- Market value has the advantage of capturing benefits from public amenities in the neighborhood. For example, two properties of identical size and age where one is located next to a park and the other is adjacent to a factory will pay the same tax under an area-based assessment system, but would be valued differently under capital-based value system.
• Area-based assessment results in a relatively greater burden on low-income taxpayers than high-income taxpayers when compared to value-based assessment. It taxes all properties that are the same size at the same amount, whether they are in high-income or low-income neighborhoods. For example, in area-based assessment, older houses in a bad state of repair but with a large floor area will pay relatively high taxes.

**Property Tax Administration**

Tax administration has a big bearing on tax productivity. ULBs — especially smaller municipalities and Nagar Palikas — are constrained with the capacities they possess to effectively administer a property tax administration, both in terms of human resources and financial capabilities. Like any tax administration, property tax functions need a core staff that can handle registering taxpayers, processing tax returns, checking for accuracy of tax returns, inspecting the tax return in comparison to the tax base (property, in this case), ensuring collection of payments, enforcing penalties and fines in case of defaulters, and addressing taxpayer disputes.

The improvements necessary in tax administration are in two areas: (i) coverage and (ii) collection. As the Bengaluru and Jaipur cases cited in Chapter 1 show, there is a need for extending the reach of property tax administration to cover unassessed properties to realize the underlying tax potential. Secondly, tax collection performance can be assessed by the levels of arrears. Following JnNURM and AMRUT, self-assessment of property taxes has become the de facto practice to facilitate ease of compliance for the taxpayer. In case of differences between self-assessed property taxes and the taxes as assessed by the ULBs, the Municipal Act provides for a stiff penalty as a deterrent. A reassessment can also be requested. Usually, the assessed values are adhered to. Billing and payment procedures have been made easier through web portals, and grievance redressal or hardship and anomaly committees sort out property tax disputes.

But the existence of these mechanisms, improvements as they are, do not take away the need for active tax administration to follow up on delinquency, tax arrears recovery, tax audit, and property tax register updating. ULBs need to pay attention to this area. Technology can be of assistance to improve employee productivity. In the Visakhapatnam Municipal Corporation, each zone has a revenue officer supported by a revenue inspector and a tax collector. Tablet computers were provided to revenue inspectors to facilitate tax assessments. Using the tablet, the revenue inspector identifies underassessed properties through GIS and town planning related information, such as building permission, occupancy certificate, or trade license. All new properties and altered properties are assessed by the revenue inspector and tax collector by inspecting and measuring the property in the owner’s presence and the captured images. Tax defaulters are actively pursued by issuing notices and making visits and public announcements.
Strengthen Property Tax Administration

Collection and enforcement methodologies. The foundation for ensuring compliance is a robust billing and enforcement system. Effective billing systems depend on clarity, transparency, effective delivery, and a clear appeals process. IT systems should automatically generate property tax bills for each property, including a clear breakdown. These bills are easily delivered to each property using GIS maps and sent by mobile phone and email. New bills can be easily printed at tax offices. Because valuation is based on clear criteria, taxpayers can easily appeal their valuations. IT systems can record property tax bills that are delivered, identify overdue accounts, and initiate follow-up.

That said, enforcement will ultimately depend on the willingness of authorities to follow up, levy fines, and if necessary, launch court cases against noncompliant taxpayers. The billing and collection function could be outsourced to a private agency for facilitating collection through digital channels and leveraging tele-calling, similar to how banks collect dues from credit card holders. A management information system could be created to track the performance of the assessors and tax collectors. Online payments could be introduced with an initial campaign to educate and incentivize taxpayers to adopt the system.

Information and communication technology (ICT) systems and web-based platforms for taxpayer interface, e-filing, and e-payment. IT systems have the potential to play a major role in improving outcomes by improving property identification, automating aspects of valuation, improving data management, and reducing the scope for rent-seeking. An online GIS-based property tax management system is available for most large Indian cities. But most ULBs in India operate on stand-alone systems that are not integrated to create an integrated financial management system. A typical architecture of an integrated local government financial management information system that links municipal revenue, expenditure, and accounting systems is presented in figure 6. Most often there will be a stand-alone municipal accounting system and a separate GIS-linked property tax system with e-payment capabilities. One solution could be for state governments to step in and provide the back end, ICT-based administration and systems with all necessary functionality, but that are also simple, relatively low cost, easily maintained, and leave the tasks of collection and enforcement to the ULBs. Karnataka has formed the Karnataka Municipal Data Society, which is rolling out municipal IT applications for citizen services and municipal administration to urban local bodies, managing their websites, and acting as a repository of municipal data (annex C).
Capacity Building in Property Tax Administration at Local Levels of Government

One of the key issues arising in Indian states is that a significant number of ULBs do not have the capacity to administer a property tax system. ULBs face staffing shortages, lack specific technical skills, and are generally unfamiliar with ICT-platform-based property tax administration. They also do not have the capability to administer a regular training regime. With expanding urban geographies and limited human resources, use of technology and outsourcing will dominate tax collection along with self-assessment. However, municipalities will continue to be called in to do valuation, sort out valuation disputes and value special properties using IT applications, and be responsible for collecting tax arrears.

In the future, administering a property tax system will require IT expertise. Training has an important role in (i) strengthening process activities such as property valuation, property tax administration, and data analysis for decision making; and (ii) using futuristic tools such as CAMA and GIS. Trained municipal staff will be more effective in property tax enforcement.
Risk segmentation is important when identifying various classes of property taxpayers such as commercial or residential. Tax administration requires the use of strategies that minimize revenue risk by focusing limited staff resources on the most important taxpayers. It would be important to segment properties into commercial, residential, industrial, and other pertinent categories and develop strategies that concentrate on property tax collection from the largest and riskiest taxpayers. Compliance strategies would focus on commercial properties, particularly shopping malls and commercial establishments, larger residential properties, and industrial establishments. It is important for municipalities to introduce a system of risk-based tax audit to ensure that all properties are included in the tax roll; verify the basis for changes in tax assessment; check the calculations in the tax roll; check completeness in the property tax demand; calculate penalties; and check whether tax demand notices have been dispatched and tax receipts accounted for. This approach will have a beneficial impact on property tax compliance and minimize revenue risk.

4. SUGGESTED INSTITUTIONAL MODEL FOR PROPERTY TAX REFORM: A MUNICIPAL REVENUE BOARD

Several key features in Indian states and ULBs have inhibited the successful garnering of property tax revenues. They suggest that a fresh approach to property tax administration is needed to help fill the resource gaps in the revenue raising capacity of ULBs.

Several countries, including large federations around the world, are now gravitating to a system with a different approach to urban governance for metropolises — or “mega cities” — and smaller ULBs. Metropolitan cities have far more independence in setting policy and deciding on administrative variables for revenue and expenditure management. When it comes to property taxation, these metropolitan cities may have their own property tax laws and independent administration. Smaller urban local bodies, lacking capacity, tend to rely on the central, state, or provincial governments to set policy and administer property taxes on their behalf. Some examples of this approach are the provinces of British Columbia and Ontario in Canada, Colombia, the Philippines, and Spain.

In the Philippines, for example, designated cities administer the property tax, but the province does the administration for local governments that are not cities. This is largely due to the lack of capacity at the local government level. In Canada, there are examples of provincial assessment; local governments have no responsibility for valuation but deal with collection. Examples are the provinces of British Columbia and its BC Assessment and Ontario with the Municipal Property Assessment Corporation.

For small ULBs that lack capacity, property tax, and sometimes other revenue sources, are administered by a centralized body that handles the property registers or databases of all ULBs under its remit through a unique IT platform. A similar solution is being proposed herein for Indian states.

In several Indian states, many urban local bodies do not have the capacity to levy, collect, and
administer a property tax system. An important first step is the building of a robust, complete, and reliable property roll or cadaster. This needs an initial investment. A comprehensive survey needs to be conducted that captures property attributes, including ownership and use details. Good practice examples of such surveys indicate that a combination of high-tech methods, such as GIS technology or drones, and conventional door-to-door mapping work best at the initial stage when a proper property roll is to be built. The survey can be quite resource- and time-intensive. A centralized, state-level body could be better placed to conduct surveys.23

Second, despite various efforts made in the recent past, particularly following the recommendations of the Thirteenth Finance Commission to improve the property roll by using new technologies, revenue gains have remained elusive in most cases. One reason is that the property tax law and policy framework have not been reviewed or reformed. Significant revenue gains can be achieved by removing needless exemptions, reforming the valuation methodology to bring property valuations in line with market values, capturing revenues from high-value commercial properties, and streamlining the law and policy framework. A centralized, state-level body could undertake these reviews and implement reforms more efficiently and effectively. Such a body could also more easily employ expert advisors.

Third, smaller ULBs in general do not have the resources or capacity to administer strong, ICT-platform-based property tax administrations. Modern tax administrations run on ICT platforms. Such administrations are more efficient, provide better taxpayer service, and are more effective at enforcement. Again, a centralized, state-level body would have the resources and capacity to manage the property tax rolls (which would be in the form of computer databases) for all or most ULBs in a state, and help them run efficient ICT-based property tax administrations.

A suggested model to support and manage the technical and policy related aspects of the property tax is the establishment of a Municipal Revenue Board (MRB) at the state level. This could be an appropriate institutional structure to administer the fiscal cadaster (property register), such as an autonomous board to be created by an act of the state legislative assembly. This model appears to be most suitable to the situation prevalent in most ULBs in states. The board could serve all urban local governments of the entire state, other than large metropolitan Municipal Corporations that have already set up independent administrations. The geographic coverage of the board across the state is useful also in that it would allow it to realize greater economies of scale.

There are several examples in India of governance structures where property tax administration roles are shared between states or Municipal Corporations. The Municipal Corporation of Delhi specifies the valuation method and sets policy for the property tax, which is administered by three

---

23 The Thirteenth Finance Commission recommended the formation of a Property Tax Board at the state level with these responsibilities: “The Board (a) shall, or cause to, enumerate all properties within the jurisdiction of the municipalities and corporations; (b) shall review the present property tax system and make suggestions for a suitable basis for assessment and valuation of properties; and (c) shall make recommendations on modalities for periodic revisions.”
subordinate entities — the North, South, and East Delhi Municipal Corporations. In West Bengal, the Valuation Board undertakes valuation work of lands and buildings in specified ULBs in a 5-year cycle, extends advice and assistance to the ULBs in litigation in the matter of valuation, and renders training and capacity building to the staff of ULBs in the matter of assessment and collection of the property tax, among other things. Several other states, such as Andhra Pradesh, Bihar, and Telangana, have set up property tax boards (PTBs) on the recommendation of the Thirteenth Finance Commission, but it is not clear what role they are actually playing.

It is important to clarify that the proposed MRB, while building on the concept of property tax boards as proposed by the Thirteenth Finance Commission, has several distinct features:

- MRBs are envisaged as operational bodies; PTBs are primarily advisory in nature.
- MRBs are fundamentally a working IT platform where the property register databases (fiscal cadasters) are managed; PTB has no such role.
- MRBs will themselves conduct property tax surveys and develop the database and the management information system. This is especially useful for small municipalities that do not have the resources to make the investment in such an exercise. PTB is again envisaged to play a largely advisory role.

The MRB is conceptualized to use modern technology to implement the “back office” functions of a typical property tax administration. Each Municipality will have access rights to the database to the extent of their jurisdiction and will use it to generate challans and initiate the property tax collection process, but they are spared the expense of creating the database and managing it. The concept of the working of the MRB model is pictured in figure 7.

**Figure 7. Pictorial Representation of the Workings of Municipal Revenue Boards and Urban Local Bodies**

MRB to run as a centralized, state-level, ICT-based property tax administrator

| Municipal Revenue Board | ULBs |
|-------------------------|------|
| Fiscal Cadastre and Central IT System | |
| Policy issues; Valuation; Rate-setting; ICT system; Periodic revaluations; Regular surveys; Training and capacity building, etc. | |
| ULB ULB ULB | |
| Collection and Payments management | |
| Audit and Enforcement | |
| Taxpayer service | |
| Updating of property roll | |

*Note: ICT = information and communication technology; IT = information technology; MRB = Municipal Review Board; ULB = urban local body.*
The proposed MRB would be able to assist the ULBs with the functions for property tax administration in all cities and local bodies in a state. In the proper spirit of devolution, heads of local bodies would be members of the board. In addition, secretaries of finance, local government, and any other relevant stakeholders may also be members of the board. Its actual composition may be determined by the state government, ensuring proper representation of local bodies.

### Box 2. Responsibilities of a Municipal Revenue Board

- To house, manage, and maintain the fiscal cadaster (property register) which will be in the form of a computerized database
- To determine policy and advice on legal issues relating to property taxes (e.g., exemptions)
- To administer valuation, ICT systems, training and capacity building, and conducting periodic revaluations, and regular surveys
- To issue property tax demand notices (on behalf of ULBs)
- Manage the assessment appeal process
- Prepare actionable reports on defaulters to be enforced by the ULBs. (Defaulter lists will be automatically generated through the case management system)
- Use risk-based methods to select and prepare lists of auditable properties to be sent to ULBs for implementation
- Prepare management statistics such as total tax paid, tax in arrears
- Prepare forecasts of tax revenues for the coming year

### Functions and Responsibilities of the MRB

The key responsibility of the MRB would be to house, manage, and maintain the fiscal cadaster (property roll) in the form of a computerized database (see box 2). The board would have an operational role on all revenue administration matters relating to policy issues: exemptions, valuation, ICT systems, training, and capacity building as well as conducting periodic revaluations and carrying out regular surveys (every 3–5 years).

The board would determine policy and legal issues relating to property taxes and other sources of revenue for local bodies. Since property taxation is based on state-level legislation in most cases, these policy decisions of the MRB, such as on valuation, exemptions, and rates, would be brought into legislation through necessary amendments to the relevant acts by the state assembly. These matters should be within the remit of the MRB to ensure uniformity and consistency. It would be
problematic if each ULB had to develop its own property tax legislation and exemption policies. The MRB would also have the authority to specify “floor rates” below which ULBs cannot set tax rates in order to avoid a “race to the bottom.”

The MRB would report to the state government, possibly the minister for local government or the minister of finance. An MRB would be governed by a board of directors composed of chairpersons of ULBs and the secretaries of urban development and finance. The chairman of the board would be elected from among its members. The day-to-day administration of the board could be managed by a chief operating officer reporting to the chairperson of the MRB. It is critical to recruit a professional with domain experience in ICT systems-based administration. The proposal also envisages an IT expert hired from the market on a competitive salary, supported by a professional team of domain experts in areas including ICT, GIS, programming, database management, valuation, legal services, and public communications.

The operating costs of running the MRB could be covered by an administrative charge on the property tax revenues, similar to the Canadian examples that utilize a fee charging model that each local government pays. On the other hand, it could be run through an annual budget appropriation from the state. This is a decision to be made by the national government’s Cabinet.

**Advantages of a Municipal Revenue Board**

The board of the MRB will be populated with chairpersons of local government bodies, among others, and in that sense, it represents a practical mechanism to give a voice to ULBs in the area of property tax administration.

The MRB would be a professionally run, semi-autonomous body which can incorporate best practices in its design and functioning. The board would have statewide responsibility to include all declared rating areas. It would have a dedicated focus on specific components of the property tax (and other sources of local government revenues), i.e., policy issues including exemptions, valuation, ICT systems, training and capacity building, conducting periodic revaluations, and regular surveys.

An MRB would facilitate use of modern technology for property tax administration, including using the latest technologies for property surveys and for building and managing property rolls (databases). Co-ordination of the board’s activities will generate efficiencies and economies of scale.

An MRB would be able to standardize valuation methodology and procedures. A “best practice” method of valuation is a mass valuation system; MRB could help pilot such a system in one or two ULBs and then — depending on the results — roll it out in other ULBs.

An MRB would be able to regulate property taxation at a central (statewide) level. An MRB would provide advice for setting floor rates for property taxation by ULBs.
Functions and Responsibilities of the ULBs

The core property tax administration functions of billing, collection, enforcement, and OSRs will be carried out by the ULBs (see box 3). They will have full functional responsibilities to collect the property tax, carry out inspections and audits, provide taxpayer services, and act against delinquent taxpayers. Each ULB will appoint, from within their staff or hired from outside, a director reporting to respective chairpersons supported by technical staff having proficiencies in various aspects of property tax and revenue administration.

The Karnataka Municipal Data Society (KMDS), constituted by the Urban Development Department of the Government of Karnataka in 2008, offers a good basis for comparison with the conception of the MRB. It has a defined set of objectives geared toward strengthening ULBs through e-governance. KMDS coordinates with project partners, namely the e-Government Foundation (application support organization), Survey of India (technical advice support agency in GIS implementation), Karnataka Urban Infrastructure Development Finance Corporation (funding agency), and Software Technology Parks of India, Bangalore (for operations and maintenance of the data center). A state-level Municipal Data Cell is established within KMDS, and a centralized database of all the ULBs (excluding Bengaluru) are being maintained from it.

Box 3. The Key Functions Performed by Urban Local Bodies

- Issuing demand notices and following up to ensure payment
- On the receipt of reports on defaulters prepared by the proposed Municipal Revenue Board (MRB), following up with defaulters to enforce collection
- Carrying out audits of selected risky taxpayers (identified by MRB) from the point of enforcing compliance
- On detecting wrong declarations or underpayment of property taxes, determining the action to be taken against delinquent taxpayers according to law (penalties or prosecution)
- Acting to collect arrears of taxes
- Providing information to MRB on a regular basis on new properties to be included in the property roll maintained by MRB
- Provide services to taxpayers through taxpayer service centers operated by urban local bodies

The entire process of rolling out the municipal applications of ULBs is handled by a team of KMDS developers. KMDS handholds the ULBs in implementation and maintenance of technology reforms and is tasked with capacity building and training of municipal staff. Apart from managing the
official websites of all of the 275 ULBs, the KMDS also manages several online applications, such as e-Sweekruthi, an online property tax payment system; an online tracker for citizen grievances lodged through mail, calls, Twitter, Facebook, or WhatsApp; the issue of trade licenses, building licenses, birth and death certificates, and water connections; E-Aasthi — property tax information system, an online project tax register. KMDS runs the Fund-Based Accounting System, which is the online accounting system used across all ULBs in Karnataka (excluding Bengaluru). Many of the functions envisaged by the proposed MRB are being carried out by the KMDS in Karnataka.

Bibliography

Arlington County, Taxes and Payments. 22018. 018. Retrieved from https://taxes.arlingtonva.us/.

ADB (Asian Development Bank). 2018. A Comparative Analysis of Tax Administration in Asia and the Pacific: 2018 Edition. Manila: Philippines.

Bandyopadhyay, Simanti. 2013. “Property Tax Reforms in India: A Comparison of Delhi and Bangalore.” International Center for Public Policy Working Paper Series, GSU Paper 1321, Andrew Young School of Policy Studies, Georgia State University. https://icepp.gsu.edu/files/2015/03/ispwp1321.pdf.

Bird, R. M. 2013. “Local Taxes and Local Expenditures: Strengthening the Wicksellian Connection.” International Center for Public Policy Working Paper 13-23 October 2013, Georgia State University — Andrew Young School of Policy Studies. https://icepp.gsu.edu/files/2015/03/ispwp1323.pdf.

Bird, Richard M., and Enid Slack. 2004. “Land and Property Taxation in 25 Countries: A Comparative Review.” In International Handbook on Land and Property Taxation, edited by Enid Slack and Richard M. Bird, chapter 2. Northampton: Edward Elgar Publishing Limited.

Chattopadhyay, Soumyadip, and Smriti Prasad. 2015. “Urban Property Tax in India: Problems and Prospects.” Journal of Economic Policy and Research 10 (2).

Cheeseman, Nic, and Diane Gramont. 2017. “Managing a Mega-City: Learning the Lessons from Lagos.” Oxford Review of Economic Policy 33 (3): 457–477.

Deloitte Japan. 2018. Japan Highlights 2018. Retrieved from https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Tax/dttl-tax-japanhighlights-2018.pdf.

GTAI (German Ministry of Finance, Germany Trade and Invest). 2018. Retrieved from: https://www.gtai.de/gtai-en/invest/investment-guide/the-tax-system/taxation-of-property-65634.

Government of Tamil Nadu. 2016. Report of the Fifth State Finance Commission. Available at http://www.tn.gov.in/tnsfc/fifth_sfc/gos/fifthsfc_report_190417.pdf.

Grant Thornton India. 2018. Improving Transparency in Secondary Real Estate Market. New Delhi: Grant Thornton India LLP. http://www.naredco.in/notification/pdfs/improving-transparency-in-secondary-real-estate.pdf.
Hass, Astrid, and Priya Manwaring. 2017. “Private vs Public Collection in Enhancing Local Tax Revenues.” International Growth Center, London. https://www.theigc.org/wp-content/uploads/2017/11/Tax-collection-29.11.17.pdf.

HPEC (High Powered Expert Committee). 2011. Report on Indian Urban Infrastructure and Services. New Delhi: Government of India. https://icrier.org/pdf/FinalReport-hpec.pdf.

ICRA. 2015. “Municipal Revenue Potential study for Madhya Pradesh — A study prepared for the World Bank.” December 2015.

Janaagraha Centre for Citizenship and Democracy. 2018. Annual Survey of India’s City-Systems (ASICS) 2017: Shaping India’s Urban Agenda. Bengaluru, India: Janaagraha Centre for Citizenship and Democracy and Jana Urban Space Foundation.

Jibao, Samuel, and Wilson Prichard. 2015. “The Political Economy of Property Tax in Africa: Explaining Reform Outcomes in Sierra Leone.” African Affairs 114 (456): 404–431.

Jibao, Samuel, and Wilson Prichard. 2016. “Rebuilding Local Government Finances After Conflict: Lessons from a Reform Program in Post-Conflict Sierra Leone.” Journal of Development Studies 52 (12): 1759–1775.

Khan, Adnan, Asim Khwaja, and Benjamin Olken. 2016. “Tax Farming Redux: Experimental Evidence on Performance Pay for Tax Collectors.” Quarterly Journal of Economics 131 (1): 219–271.

KPMG. 2017. “Greece: Changes in Income and Real Estate Law.” Available at https://home.kpmg.com/xx/en/home/insights/2018/08/tnf-greece-changes-to-income-tax-vat-real-estate-tax-laws.html.

Lall, Somik V., and Uwe Deichmann. 2006. “Fiscal and Distributional Implications of Property Tax Reforms in Indian Cities.” Working Paper 06/39, National Institute of Public Finance and Policy, New Delhi, India. https://ideas.repec.org/p/npf/wppaper/06-39.html.

Mathur, Om P., Roy Bahl, Debdulal Thakur, and Nilesh Rajadhyaskha. 2009. Urban Property Tax Potential: India. New Delhi: National Institute of Public Finance and Policy.

Ministry of Finance. 2017. India Economic Survey 2016–17. New Delhi: Government of India.

———. 2019. India Economic Survey 2017–18. New Delhi: Government of India.

Ministry of Strategy and Finance. 2012. Korean Taxation. Seoul: Republic of Korea. https://www.nts.go.kr/eng/data/KOREANTAXATION2012.pdf.

Ministry of Urban Development. 2012. “Report of the Sub-Committee on Financing Urban Infrastructure in the 12th Plan.” High Level Committee on Financing Infrastructure, Government of India, New Delhi. http://mohua.gov.in/upload/uploadfiles/files/Report%20of%20the%20Sub-Committee%20on%20Financing%20Urban%20Infrastructure%20in%20the%2012th%20Plan%200.pdf.

Muthupandian, B., and P.S. Velmurugan. 2014. “Restructuring Indian Real Estate Market to Avoid
Black Money Formation.” *ELK Asia Pacific Journal of Marketing and Retail Management* 4 (2): 125–132.

National Institute of Urban Affairs. 2015. *Urban Reform in Indian Cities*. New Delhi: National Institute of Urban Affairs.

Nunlist, Tom. 2017. “Virtual Valuation: GIS-Assisted Mass Appraisal in Shenzhen.” *Land Lines* October: 8–12.

OECD (Organisation for Economic Co-operation and Development). 2017. *Revenue Statistics 2017*. Paris: OECD Publishing. https://doi.org/10.1787/9789264283183-en.

Prichard, Wilson. 2014. “Using Local IT Solutions to Improve Local Government Tax Reform.” IDS Policy Briefing 58, Institute of Development Studies, Brighton. https://www.ictd.ac/publication/ids-policy-briefing-58-using-local-it-solutions-to-improve-local-government-tax-reform/

Rao, M. Govinda. 2013. “Property Tax System in India: Problems and Prospects of Reform.” Working Paper No. 2013-114, National Institute of Public Finance and Policy, New Delhi.

Rao, U. A. Vansath. 2008. “Is Area-Based Assessment an Alternative, an Intermediate Step, or an Impediment to Value-Based Taxation in India.” In *Making the Property Tax Work: Experiences in Developing and Transitional Countries*, edited by Bahl Roy, Martinez-Vazquez and Joan Youngman, 241–267. Cambridge, Mass: Lincoln Institute of Land Policy. https://www.lincolninst.edu/sites/default/files/pubfiles/making-the-property-tax-work-chp.pdf.

Slack, Enid. 2011. “The Property Tax — in Theory and Practice.” IMFG Papers on Municipal Finance and Governance, Munk School of Global Affairs, University of Toronto, Canada.

UN-HABITAT. 2016. *World Cities Report 2016: Urbanization and Development — Emerging Futures*. New York: UN. https://doi.org/10.18356/d201a997-en.

Uribe Sánchez, Maria Camila. 2010. “Land Information Updating, a De Facto Tax Reform: Updating the Cadastral Database of Bogotá.” In *Innovations in Land Rights Recognition, Administration, and Governance*, edited by Klaus Deininger, Clarissa Augustinus, Stig Enemark, and Paul Munro-Faure, 180–207. Washington, DC: World Bank.
ANNEX A.-D.

ANNEX A. STATE AND CITY RANKINGS OF PROPERTY TAX REVENUE PERFORMANCE

From table A.1, it can be discerned that Gujarat is the top performer. Most of the 17 states reviewed from Andhra Pradesh to Uttar Pradesh lie in the mid-range bracket, while Rajasthan, Haryana, and Bihar are the lowest performers.

Table A.1. Ranking of Property Tax Revenues to GSDP, 2017–18

| Ranking | States and Union Territories | Property Tax/GSDP (percent) | Per Capita Property Tax Revenue (Rs) |
|---------|------------------------------|----------------------------|-------------------------------------|
| 1       | Gujarat                      | 0.40                       | 1,911                               |
| 2       | Maharashtra                  | 0.34                       | 1,512                               |
| 3       | Karnataka                    | 0.21                       | 949                                 |
| 4       | Telangana                    | 0.21                       | 522                                 |
| 5       | Madhya Pradesh               | 0.15                       | 507                                 |
| 6       | Tamil Nadu                   | 0.13                       | 487                                 |
| 7       | Andhra Pradesh               | 0.12                       | 618                                 |
| 8       | West Bengal                  | 0.12                       | 500                                 |
| 9       | Uttar Pradesh                | 0.06                       | 169                                 |
| 10      | Punjab                       | 0.05                       | 215                                 |
| 11      | Kerala                       | 0.04                       | 311                                 |
| 12      | Uttarakhand                  | 0.03                       | 156                                 |
| 13      | Assam                        | 0.03                       | 199                                 |
| 14      | Odisha                       | 0.02                       | 96                                  |
| 15      | Rajasthan                    | 0.02                       | 101                                 |
| 16      | Haryana                      | 0.01                       | 76                                  |
| 17      | Bihar                        | 0.01                       | 63                                  |
| India   |                              | 0.15                       | 688                                 |

Source: ICRIER (Indian Council for Research in International Economic Relations). 2019. *State of Municipal Finances in India: A Study Prepared for the Fifteenth Finance Commission*. New Delhi: ICRIER.

Note: GSDP = gross state domestic product.

Table A.2 ranks states based on property tax/ gross state domestic product ratio for a select set of states for 2016–17.
### Table A.2. State Ranking of Property Tax Revenues per State GSDP

| Ranking | States     | GSDP 2016–17 (Rs. million) | Property Tax 2016–17 (Rs. million) | Property Tax/GSDP (percent) |
|---------|------------|-----------------------------|-----------------------------------|-----------------------------|
| 1       | Karnataka  | 1,13,239,29.7               | 26,284.8                          | 0.23                        |
| 2       | Chhattisgarh | 29,013,97.0                | 4,285.7                           | 0.15                        |
| 3       | Jharkhand  | 25,353,61.1                 | 3,295.2                           | 0.13                        |
| 4       | Gujarat    | 1,15,815,13.8               | 15,113.7                          | 0.13                        |
| 5       | Punjab     | 42,787,02.4                 | 2,211.3                           | 0.05                        |
| 6       | Uttarakhand| 19,560,60.7                 | 430                               | 0.02                        |

Sources: RBI’s Handbook of Statistics on Indian States dataset for state GDP data; Fifteenth Finance Commission dataset for property tax data.

Note: GSDP = gross state domestic product.

The rankings from the tables are consistent with respect to the common states of Karnataka, Punjab, and Uttarakhand. Gujarat has seen marked improvement and, along with Maharashtra, is an outlier in the dataset with relatively better per capita property tax performance.

Tables A.4 and A.5 rank cities using property tax and other parameters. Twenty cities from Janaagraha’s ASICS data have been chosen for this purpose. The data for these cities are from the city budgets for FY16. Raipur’s data are from the city budget.

### Table A.3. City Ranking: Property Tax Revenues per Capita

| Ranking | City            | Property Tax Revenues/City Population 2015–16 (Rs.) |
|---------|-----------------|--------------------------------------------------|
| 1       | Pune            | 2,676                                            |
| 2       | Visakhapatnam   | 2,059                                            |
| 3       | Bengaluru       | 2,053                                            |
| 4       | Hyderabad       | 1,686                                            |
| 5       | Chennai         | 1,224                                            |
| 6       | Mumbai          | 1,121                                            |
| 7       | Ahmedabad       | 804                                              |
| 8       | Lucknow         | 714                                              |
| 9       | Delhi           | 705                                              |
| 10      | Bhopal          | 477                                              |
| 11      | Thiruvananthapuram | 469                                 |
| 12      | Ludhiana        | 375                                              |
|    | City          |    |
|----|--------------|----|
| 13 | Raipur       | 311|
| 14 | Bhubaneshwar | 256|
| 15 | Patna        | 193|
| 16 | Chandigarh   | 182|
| 17 | Dehradun     | 141|
| 18 | Ranchi       | 109|
| 19 | Kanpur       | 64 |
| 20 | Jaipur       | 7  |

Sources: City Budget statement for FY16 for all cities’ financials except Raipur; City Financial Statements for FY16 for Raipur.

Note: Assumptions made when collating data are:

- Octroi or compensation against octroi has not been included in total receipts, own revenues, and tax revenues because it is a defunct source of revenue.
- Loans, deposits, and liabilities have not been considered in total receipts and revenues from grants.
- Own revenue consist of tax revenue, nontax revenue including fees and user charges, rental income, and other receipts (except assigned revenues).
- Revenues from grants include government grants, project-based grants, capital receipts (except loans, liabilities), and any type of assigned revenues.
- Arrears in revenue have not been included as they might misrepresent the actual revenue for the year.
- Holding tax or house tax has been considered synonymous to property tax.
- Certain cesses have been grouped with property tax following the Municipal Corporation Act.
- The budget data of Delhi’s East Delhi, South Delhi, and New Delhi Municipal Corporations (EDMC, SDMC, and NDMC) have been added to calculate the revenue figures for Delhi.
- Capital expenditure and total expenditure have been adjusted for loans and deposits.
- Delhi’s EDMC, SDMC, and NDMC budget data have been added to calculate the revenue figures for Delhi.
- Capital expenditure and total expenditure have been adjusted for loans and deposits.

Pune, Vishakhapatnam, and Bengaluru are the best performers. Pune has been undertaking administrative and legal reforms over the past decade, which have contributed to the city’s good performance.
Table A.4. City Ranking: Property Tax Revenues as a Percentage of Own-Source Revenue

| Ranking | City               | Property Tax Revenue/ Own-Source Revenue 2015–16 (percent) |
|---------|--------------------|-----------------------------------------------------------|
| 1       | Patna              | 75                                                        |
| 2       | Bengaluru          | 62                                                        |
| 3       | Kanpur             | 61                                                        |
| 4       | Lucknow            | 52                                                        |
| 5       | Dehradun           | 51                                                        |
| 6       | Chennai            | 51                                                        |
| 7       | Hyderabad          | 48                                                        |
| 8       | Pune               | 44                                                        |
| 9       | Ranchi             | 38                                                        |
| 10      | Thiruvananthapuram | 34                                                        |
| 11      | Visakhapatnam      | 29                                                        |
| 12      | Bhubaneshwar       | 29                                                        |
| 13      | Delhi              | 23                                                        |
| 14      | Ahmedabad          | 22                                                        |
| 15      | Raipur             | 20                                                        |
| 16      | Bhopal             | 15                                                        |
| 17      | Chandigarh         | 12                                                        |
| 18      | Ludhiana           | 10                                                        |
| 19      | Mumbai             | 8                                                         |
| 20      | Jaipur             | 1                                                         |

Sources: City Budget statement for FY16 for all cities’ financials except Raipur; City Financial Statements for FY16 for Raipur.

A large portion of the own-source revenues in these cities comes from other nontax revenue streams. Patna is the highest performer in the percentage contribution of property tax to own revenue. It was among the first cities to initiate a presumptive area-based valuation considering the location, usage, built-up area, and type of construction. There were norms for location, construction types, and usage categories.\(^\text{24}\)

The result of this reform was that the tax rate was reduced from the prevailing 43.75 percent to 9 percent. It must be borne in mind that own revenue in a city like Mumbai is dominated by Octroi (or

---

\(^\text{24}\) Rao, M. Govinda. 2013. “Property Tax System in India: Problems and Prospects of Reform.” Working Paper No. 2013-114, National Institute of Public Finance and Policy, New Delhi.
entry tax). It is clear that even among cities whose primary source of revenue is property tax, such as Pune (95 percent), Vishakapatnam (64 percent), and Bengaluru (97 percent), property tax revenues are nowhere near the levels to support the prescribed HPEC projections (based on 2011 population) of per capita investment, in fact, they are less than 50 percent of that level. Of course, compared to revenue per capita available in the Organisation of Economic Co-operation and Development group of countries (see figure 3 above), the amounts are woefully low. Given the tremendous challenges that an additional 400 million urban residents are going to pose to successful governance at the urban local body level, the need to bolster property tax revenues is even more critical.

ANNEX B. TYPES OF URBAN LOCAL BODIES IN INDIA

**Municipal Corporation**

Municipal Corporations in the case of states are established by the respective state legislatures by passing an act, and in the case of union territories, by an act of Parliament. The purpose of establishing Municipal Corporations is to cater to the administrative requirements of large cities. There can be a single act for all Municipal Corporations in the state or a separate act for each Municipal Corporation.

A Municipal Corporation carries out its functions with the support of three authorities; namely council, standing committee, and commissioner. The council acts as the legislative wing of the Municipal Corporation, and mayor (i.e., head of the council) presides over the meetings of the councils. On account of councils being large in size, standing committees facilitate the working of the council. The decisions involving public works, education, and health are taken by the standing committee. The commissioner implements the decisions taken by both the council and standing committee.

**Municipal Council**

Municipal Councils are created to cater to the administrative requirements of smaller cities and towns. They are set up by the acts of the respective state governments and in the case of union territories, by an act of Parliament. They are also referred to as Municipality, Municipal Committee, Municipal Board, and City Municipality.

A Municipal Council carries out its functions with the support of three authorities; namely council, standing committees, and chief executive officer. In case of a Municipal Council, the president or chairman is the head of the council and presides over its meetings. The functions performed by a council and standing committee of a Municipal Council are similar to the functions performed by the council and standing committee in case of a Municipal Corporation. The chief executive officer is responsible for the administration of the Municipal Council.

Initially Municipal Corporations were expected to cover cities having a population of 1 million or more whereas Municipal Councils covered cities with a population between 100,000 and 1
million. However, this distinction has somewhat dissolved as certain states with a population as low as 100,000 have Municipal Corporations. In accordance with ASIC 2016 in Andhra Pradesh, Maharashtra and Karnataka, cities with a population of over 300,000, have Municipal Corporations. In Himachal Pradesh, cities with a population of 50,000 also have a Municipal Corporation.\textsuperscript{25}

**Nagar Panchayat**

Nagar Panchayat is a form of an urban political unit in India comparable to a Municipality. An urban local body (ULB) that administers with more than 15,000 and less than 25,000 inhabitants is generally classified as a "Nagar Panchayat" or "Nagar Parishad."

It is also essential to mention that Nagar Panchayats are known differently in different states in India. They are known as Notified Area Committee in Bihar and Jharkhand, Notified Area Authorities in West Bengal, Town Area Committee in Jammu and Kashmir, Town Committee in Nagaland, Notified Area Council in Odisha, and Town Panchayats in Tamil Nadu.

The purpose of establishing a Nagar Panchayat may be to cater to the administration of an area which is either a fast-developing town or town which is not yet developed to fulfill the conditions for creation of a Municipality but is considered important by the state government. Nagar Panchayats are usually entrusted with limited civic functions such as roads, street lighting, and drainage.

**Cantonment Board**

A Cantonment Board is created for the municipal administration of the civilian population in cantonment areas. Unlike other urban local bodies, a Cantonment Board is created and administered by the union government; however, they function under the administrative control of a Union Defense Ministry.

**Township**

Townships are created by large public sector enterprises for its staff and workers. A town administrator is appointed by the enterprise to take care of the administration of the township.

**Port Trust**

Port Trusts are created in the port areas like Kolkata, Chennai, and Mumbai. They are established by an act of Parliament for purposes of managing and protection of ports and to provide civic amenities. Its civic functions are almost similar to those of a Municipality.

**Special Purpose Agency**

Apart from the ULBs, the states are permitted to create certain agencies also known as “single purpose” agencies or “functional local bodies” for performing specific functions. These agencies are function based and not area based. They are created as statutory bodies by an act of the state legislature and work as autonomous bodies dealing with their allotted functions independently of

\textsuperscript{25} Chaubey, P.K. 2003. *Urban Local Bodies in India: Quest for Making Them Self-Reliant*. New Delhi: Indian Institute of Public Administration.
the local urban governments. Examples of such bodies include town improvement trusts, water
supply and sewerage boards, pollution control boards, and electricity supply boards (table B.1).

Table B.1. Census 2011 Classification of Cities and Towns

| City Municipal Council | Cantonment Board |
|------------------------|------------------|
| Estate Office          | Census Town      |
| Industrial Notified Area | Gram Panchayat |
| Municipality           | Industrial Township |
| Municipal Committee    | Municipal Board |
| Municipal Corporation  | Municipal Council |
| Notified Area Committee | Notified Area |
| Nagara Palika Parishad | Nagar Panchayat |
| Notified Town          | Nagar Parishad   |
| Outgrowth              | Notified Town Area |
| Town Committee         | Small Town Committee |
| Town Panchayat         | Town Municipal Council |
|                        | Township         |

Employment in nonagricultural activities. Employment in nonagricultural activities is another
parameter for determining the presence of a Municipal Corporation, Municipal Council, and Nagar
Panchayats across certain states in India (see table B.2). In Bihar, the employment of 75 percent or
more in nonagricultural activities is essential to be classified as an urban local body. Similarly, the
percentage of nonagricultural population is yet another factor determining the kind of local body.
In Sikkim, nonagricultural population above 50 percent is essential for determining the type of local
body.

Table B.2. State Definition of Urban Local Bodies

| State            | Municipal Corporation | Municipal Council | Nagar Panchayat |
|------------------|-----------------------|-------------------|-----------------|
| Andhra Pradesh   | Municipal Corporation *Population above 3,00,000 | Municipality *Population between 40,000 – 3,00,000 *Divided into grades based on annual ULB revenue (₹ crore) Selection Grade: Above 8.00, Special Grade: 6.00 - 8.00, First Grade: 4.00 - 6.00, Second Grade: 2.00 - 4.00, Third Grade: 1.00 - 2.00 | Nagar Panchayat *Population between 20,000–40,000 *Classified as third grade municipalities irrespective of their income |
| State                  | Type                      | Minimum Population | Maximum Population | Criteria                                                                 |
|-----------------------|---------------------------|--------------------|--------------------|---------------------------------------------------------------------------|
| Bihar                 | Nagar Nigam               | >2,00,000          |                    | * Population * Employment in nonagricultural activities 75% or more       |
|                       | Nagar Parishad            | between 40,000 to 2,00,000 | * Employment in nonagricultural activities 75% or more. Further classified based on population: Class A: 1,50,000 - 2,00,000, Class B: 1,00,000 - 1,50,000, Class C: 40,000 - 1,00,000 |
|                       | Nagar Panchayat           | between 10,000 - 40,000 | * Employment in nonagricultural activities 75% or more |
| Chhattisgarh          | Nagar Nigam               |                    |                    | Larger urban area                                                        |
|                       | Nagar Palika              |                    |                    | Smaller urban area                                                        |
|                       | Nagar Parishad            |                    |                    | Transitional Area                                                         |
| Karnataka             | City Corporation          |                    |                    | * Specified as larger urban area                                           |
|                       |                          | *Area with population above 3,00,000 | *Density of population 3,000 per sq. km. *At least Rs 6,00,00,000 annual tax or nontax revenue or Rs 200 per capita p.a. whichever is higher *At least 50% employment in nonagricultural activities |
|                       | City Municipal Council    | Population between 50,000 to 3,00,000 | *At least 50% employment in nonagricultural activities *If an area is a Taluka head quarter, then there is no objection even if the total population is less than 10,000 |
|                       | Town Municipal Council    | Population between 20,000 and 50,000 | |
| Madhya Pradesh        | Nagar Nigam               |                    |                    | Larger urban area                                                        |
|                       | Nagar Palika              |                    |                    | Smaller urban area                                                        |
|                       | Nagar Parishad            |                    |                    | Transitional Area                                                         |
| Maharashtra           | Municipal Corporation     | Population above 3,00,000 |                    | *Small Urban Areas classified as A, B, C based on population A: > 1,00,000, B: 40,000 - 1,00,000, C: up to 40,000 |
|                       | Municipal Council         |                    |                    | *Nonagricultural activities to be above 50%                                |
|                       |                           |                    |                    | *Within 20 km distance of a Municipal Corporation or a class A Municipal Council |
| Tamil Nadu            | Municipal Corporation     | *Large urban area  |                    | Municipality Divided on basis of ULB annual revenue (₹ crore) Special Grade - 10.00 and above, Selection Grade: 6.00 - 10.00, First Grade: 4.00 - 6.00, Second Grade: Below 4.00 |
|                       |                           |                    |                    | Town Panchayat Divided on basis ULB annual revenue (₹ lakhs) Special Grade: Above 20.00 Selection Grade : 16.00 - 20.00 Grade I: 8.00 - 16.00 Grade II: 4.00 - 8.00 |
| Uttar Pradesh         | Nagar Nigam               | *Large urban area  |                    | *Small urban area                                                         |
|                       | Nagar Palika Parishad     |                    |                    |                             |
|                       | Nagar Panchayat           |                    |                    | *Transitional Area                                                        |
CASE STUDY I: Improving Enumeration Using GIS-Based Solutions — the Case of Raipur Municipal Corporation

A. Project Objective

Keeping in mind the advantages of a robust tax system, the Raipur Municipal Corporation (RMC) decided to improve the existing taxation system by leveraging geographic information system (GIS) technology through a project entitled “Improvement of GIS-Based Municipal Tax and Fee Collection System at Raipur.” This objective was to be achieved by analyzing the existing system of assessment and collection and leverage GIS technology to plug inefficiencies. Identifying the unassessed and underassessed properties to increase coverage to at least 90 percent and achieving 90 percent efficiency in tax collection were the goals set by the RMC. Computerization of the tax management system and setting up of a digital grievance redressal system were two other goals set for the project.

B. Pre-Project Situation

For assessment of properties, RMC followed a manual self-assessment system for newly registered properties and properties that had reported changes in construction or use. There was no system for regular assessment of properties. Illegal constructions, unassessed properties, and administrative inadequacies, among others, had eroded the property tax base of RMC. A significant number of properties were not included in the tax base, while those that were included were often inaccurately
assessed, leading to inefficient tax collection. Also, legal disputes over property ownership resulted in poor tax assessment. Moreover, in RMC, property tax details are still maintained in paper format, which makes it difficult to track the tax defaulters and trace the unauthorized and undertaxed properties. This resulted in in poor coverage of properties, low revenue, and an inefficient tax management system.

As on March 31, 2017, an amount of Rs 49.28 crore was collected as property tax against the total demand of Rs 54.18 crore including arrears of Rs 6.09 crore by RMC. RMC’s collection efficiency for 2016–17 stands at 91 percent against the current demand raised, and 92 percent against arrears. Overall, the average collection efficiency for FY15 to FY17 was 94 percent. Revenue had been declining at a corporate annual growth rate of -1.13 percent. The maintenance of records and a billing and distribution system was not computerized but handled manually. Demand bills were prepared ward wise, and the time taken to prepare bills was about 1–2 months. Bills were distributed door-to-door, which took around 1–2 months.

C. Project Implementation

RMC appointed a third party for GIS mapping, door-to-door survey, capturing drone images, and building an electronic tax management system.

GIS-based enumeration. First, a new GIS base map of the city was obtained. The map was divided as per the existing ward boundaries. On field, surveyors along with the RMC revenue inspectors were sent to verify the ward boundaries, and any deviation was corrected. The wards were then divided into equal-sized blocks, and properties within the blocks were given unique IDs. A digital database of the existing properties was created.

Door-to-door survey. A mobile app was designed and developed for a door-to-door property survey. This app can be operated online and offline, and shares e real-time survey data with the server. This feature enables survey supervisor to monitor the survey progress in real time. All fully trained survey teams were allotted user IDs and passwords to access the app with preloaded existing property data of the assigned ward only. This feature removed duplication of work and ensured data accuracy. In the field, a surveyor would collect the GPS coordinates (i.e., geotag the properties and retrieve the property data using the unique ID); and collect property measurements and owner-related data along with geo-tagged photographs of the property and geo-tagged videos and voice messages. The data would be added or used to clean the existing database.

Property tax collection. RMC has partnered with Axis Bank to provide point-of-sale machines with a developed mobile app to all the tax collectors to enable efficient door-to-door collection and

---

26 Commercial property coverage comes to about 10 percent of the total properties in Raipur, but their property tax contribution is 29 percent. The residential cum commercial property coverage is about 6 percent, contributing 12 percent to the total property tax collection. The rest is contributed by the residential properties.
enable digital payments. Axis Bank has also developed a payment gateway to enable citizens to pay
taxes online on RMC’s website. Also, the bank has provided for collection vehicles that collect cash
from zonal offices to enable efficient and prompt cash management. A grievance redressal portal
has also been set up on the website to reduce legal disputes and costs from disagreements raised by
property owners.

**Drone survey.** Drone images were collected from across the city, which further helped in
constructing more accurate base maps. Further, shadow calculations are underway that would
make the property assessment calculations possible within the map and can be used to check for
deviations from the physical assessments.

**D. Project Impact**

Property tax demand increased by Rs 56.2 crore over RMC’s existing demand of Rs 83 crore, a
growth of 68 percent and a 54 percent enhancement in assessed property to 2.94 lakh properties
from 1.91 lakh properties. The total property tax demand has gone up to Rs 139 crore in 2018–19.

**Case Study II: Increasing Property Tax Collections through Improvements in Assessment,
Billing, and Collection — the Case of Pune Municipal Corporation**

**A. Pre-Project Situation**

Prior to 2004–05, the Pune Municipal Corporation (PMC) used the annual rental value (ARV) for
property tax assessment that did not account for the area and value of the property, making it
less progressive and less buoyant. Moreover, an ARV system is highly dependent on the revenue
inspector’s discretion impacting the efficiency and transparency of the system. Assessment data
collection prior to 2013 was an irregular process of physical property assessment by the revenue
department based on applications filed by new property owners. Property tax billing was also a
manual process, and collection was done purely through collection centers in cash.

**B. Project Implementation and Impact**

Steps taken by PMC to improve assessment, billing, and collection of property tax are as follows:

- Self-assessment has been made mandatory every year. Penalties are in place for nonsubmission,
  withholding of information, and submission of false information.

- GIS-based system of city mapping and creation of unique IDs for all properties has led to creation
  of a digital property database. This has led to an increase in assessed properties by 18 percent. Rs
  89 crore was added to the existing tax base of Rs 228 crore from new properties that have been
  brought into the tax net increasing the enumeration base from 8.34 lakh to 9.23 lakh properties.

- Site inspectors have been trained in compulsorily assessing new properties and properties that
undergo any changes in terms of construction or use by using mobile devices with a customized mobile application. This is in addition to the existing system of self-assessment.

• PMC moved to a capital value-based system that considers the increasing value of properties for property tax assessment, making it a more progressive and buoyant tax system.

• The Maharashtra government adopted the capital value system for property valuation in 2010–11. The resultant increase in property tax collection in PMC was 29 percent in 2011–12 (FY12). Property tax revenue has doubled from 2013–14, reaching Rs1158 crore in 2016–17 (see figure C.1).

• PMC increased its collection centers in the past 2 years by partnering with big retailers in the city to increase access to centers. Outsourcing of collection at the PMC authorized collection centers has addressed the lack of human resources in the revenue department. Partnerships with banks, such as HDFC, COSMOS, ICICI, BOM, YES Bank, IndusInd, and Janata Bank, have increased collections at bank branches. For a small charge, PMC also introduced door-to-door collection for property owners who are unable to access collection centers. Door-to-door collectors are provided with point-of-service machines to allow the owners to make on-the-spot digital payments. Special mobile recovery vans, used for doorstep collection, collected Rs 4.08 crore in 2017–18.

• The introduction of various digital platforms for online payment of property tax has led to a significant jump in online collections. Some of the digital payments options made available to the citizens are Bharat QR code, cash card, credit card, debit card, electronic billing and payment, mobile wallet, real-time gross settlement or national electronic funds transfer, net banking, unified payments interface, and Google Pay. No transaction charges are levied to boost online payments. The result has been an increase in online collections with digital payments forming more than 50 percent of the total collections.

• A property tax collection dashboard has been created to bring in more transparency and accountability to the collection process.

• The physical bills issues to the property owners have been facilitated with QR codes to improve collection efficiency.

• E-billing has also been introduced and has been complemented with an automatic short message service (SMS, or texting) and email generation system that sends multiple reminders close to the due date.

• For improving collection from defaulters, a band is played outside the defaulters’ property for recovery. It resulted in recovery of Rs 70 crore from leading hotel chains, malls, and big defaulters. An amnesty scheme was also introduced for a monitored list of defaulters, which allowed them to access a one-time discount on their penalty amount to encourage settlement of arrears. This scheme led to 2.55 lakh defaulters paying Rs 698.38 crore to the PMC.
• A server-to-server integration of property tax and Inspector General of Registration and Stamps Office helps get unassessed properties into the tax base.

• Online no-dues certificates can now be issued to property owners which eases the process of property registration and allows for regular and automatic updating of the digital property tax database.

• All pending potentially legal property tax disputes were referred to the Lok Adalat for faster resolution. This led to a recovery of Rs 61 crore.

**Figure C.1. Property Tax Collection in Pune Municipal Corporation**

| Fiscal Year | Property Tax in Crore (actuals) |
|-------------|--------------------------------|
| 2010        | 245.19                         |
| 2011        | 293.73                         |
| 2012        | 378.64                         |
| 2013        | 444.12                         |
| 2014        | 536.62                         |

*Source: PMC audited budget data from FY20–14.*

**Case Study III: Optimization of Tax Collection — the Case of Outsourcing in Ranchi Nagar Nigam**

**A. Project Objective**

Ranchi has limited sources of own revenue and largely depends on State and Central Government Grants to meet its revenue expenditure. Property tax is the most important individual revenue source for Ranchi. However, property tax collection had not been keeping pace with the growing expenditure. The Thirteenth Finance Commission estimated that the collection efficiency for property taxes for India stood at 37 percent. For Ranchi Municipal Corporation (RMC) the collection efficiency ranged between 15 to 24 percent. To overcome this issue, the RMC decided to outsource property tax collection to a third party in 2014 for providing managed services for collection of tax and other charges from properties within the jurisdiction of the urban local body (ULB).
B. Pre-Project Situation

Ranchi Nagar Nigam staffing had not kept pace with the growth in the number of properties in the city resulting in a shortfall of tax collectors. During the period 2010 to 2013, the tax collections by Ranchi Nagar Nigam, remained stagnant at around Rs 5 to 6 crores even as the city was growing rapidly. The inadequate number of tax collectors in the revenue department (about 22) affected identification, assessment, collection and enforcement, leading to limited expansion of the tax base and poor collection efficiency from identified properties. The number of assessed properties was around 94,000 with an annual growth of 3 percent.

C. Project Implementation

Through a competitive bid process in 2014, Ranchi Nagar Nigam entered into an agreement with a private agency to provide managed services for collecting tax and other charges from properties within the ULB’s jurisdiction. The agency deployed a team of 148 personnel, including supervisors and managerial staff, across 55 city wards. They previously had been served by only 22 collectors.

The agency followed this process for property tax collection:

- Assess properties as per the self-assessment form provided by ULB, and develop a database of this information to be updated on a regular basis. The database was also populated with other information including last payment details and photocopy of receipt collected from owners. A unique property ID was generated under the supervision of ULB officials. A demand collection and balance register was maintained and reported to the ULB.

- Property tax demand notices were generated in real time using handheld devices linked with back office and banking records.

- Door-to-door collection of property tax through cash, check, or demand draft from the assessee against receipts that were deposited within 24 hours from the time of collection into the approved ULB account. Through a text message, the assessee and the ULB were informed of a deposit of cash or clearance of a check. Payment record history was maintained in digital format.

- The property rolls database was updated in real time, and text message confirmation was issued with details of the amount received and mode of payment.

- An online helpline as well as chat, texting, and telephone services were set up for grievance redressal with a complete audit trail of the recorded feedback, grievances, or enquiry.

- Web-based dashboards for ULB staff and management were developed for viewing the completed and pending tasks, and they were able to generate various reports related to assessment, demand, balance, and collection.
D. Project Impact

These steps greatly enhanced the coverage of properties by each tax collector. The number of properties to be covered by each tax collector dropped significantly from 4,273 to 873, on average. This enabled better coverage and follow-up by the collector, which was not feasible earlier.

Table C.1. Property Tax Collection in Ranchi Nagar Nigam since Outsourcing

| Indicator                                           | 2014 | 2015 | 2016 | 2017 |
|-----------------------------------------------------|------|------|------|------|
| Number of tax collectors deployed by the agency     | 110  | 110  | 110  | 110  |
| Number of properties                                | 96,000 | 100,000 | 103,000 | 160,000 |
| Growth in assessment base                           | 2%   | 4%   | 3%   | 55%  |
| Number of properties per collector                  | 873  | 909  | 936  | 1,455|

*Source: Ranchi Nagar Nigam.*

Within a period of 3 years the property tax collection in Ranchi increased more than fourfold from Rs 9 crores in 2014 to Rs 43 crores in 2017. The assessment base of properties tax jumped from 96,000 properties to 160,000 properties, a growth of 67 percent.

Case Study IV: Karnataka’s Aasthi project for GIS-based property tax system

As part of the Karnataka Municipal Reform Project, the state undertook a series of measures through a two-phase approach program to revamp its property tax collections over a 5- to 8-year period.

A. Point of Departure: Why Reform the Property Tax System in Karnataka?

Big revenue losses because of:

- Improper assessment of properties by ULB officials
- Low rate of filing the property tax returns
- Large number of unassessed properties outside the tax net
- Delay in preparing and updating the list of defaulters
- Poor rate of tax collection and inaction on mounting arrears
- Tampering of records
B. Property Tax Reforms: Highlights

- The property tax valuation was changed from ARV assessment to a capital value method.
- A self-assessment system was put in place, shifting the responsibility for calculating property tax from city officials to the citizens (property owners).
- The revenue departments of all the ULBs were computerized and a GIS-based property tax information system was put in place.
- A comprehensive survey of all taxable land within the municipalities was conducted.
- A new IT system for tracking and managing property tax collections was implemented across the state.
- A comprehensive database of all the properties was completed with automatic calculation of the property tax obligations and a software to handle different modalities of payment, including the ability to integrate with credit card and ATM systems.
- Field surveys using digitized ward maps with individual properties and with a unique property ID number were conducted in more than 1.5 million properties.
- Cadastral-level GIS maps were generated for an area of more than 200,000 square kilometers, covering over 3.8 million properties in the state.

C. Reform Results

The reform had positive impact in terms of both systems development and tax collection, including:

- About 1.2 million previously unassessed properties (42 percent of the total) were brought into the tax net.
- Revenue increased by 30–40 percent.
- Citizens’ complaints of calculation errors declined dramatically owing to online calculations.
- Automation brought in real-time data on collection of property tax by the ULB.
- Online systems saved time for citizens.
- Property tax-related data were easily searched and analyzed.
- The task of tracking defaulters on property tax payments was eased.
- Auto calculation and generation of tax extracts have helped minimize complaints of calculation errors.
Case Study V: Optimal Database Management — A Note on the Karnataka Municipal Data Society

Karnataka Municipal Data Society (KMDS) is a registered society in Karnataka. It was constituted in 2008, by the Directorate of Municipal Administration, Urban Development Department (UDD), Government of Karnataka, with a defined set of objectives toward strengthening urban local bodies (ULBs) through e-governance. A state-level Municipal Data Cell is established within KMDS, and a centralized database of all the ULBs (excluding Bengaluru) is being maintained from it. The entire process of rolling out municipal applications of ULBs is handled by a team of developers of KMDS, duly appointed by UDD. KMDS hand holds the ULBs in implementing and maintaining technology reforms and is tasked with capacity building and training of municipal staff. Apart from managing the official websites of all 275 ULBs, the KMDS also manages several online applications.

These online applications are:

- e-Sweekruthi — online property tax payment system
- Lodge your grievance — online tracker for citizen grievance lodged via mail, call, Twitter, Facebook, and WhatsApp
- Apply for licenses— for trade license, building license, birth and death certificates, and water connections
- E-Aasthi — property tax information system, an online project tax register

Other online services are:

- Fund-Based Accounting System — the online accounting system used across all ULBs in Karnataka (excluding Bengaluru)
- Monthly Information Booklet — monthly performance management information system to track operational performance of ULBs
- Service-Level Benchmarking and schemes — central- and state-level spending information on various sponsored schemes across ULBs

Case Study VI: Madhya Pradesh

In 2011, Madhya Pradesh undertook surveys in Burhanpur, Dewas, Katni, Khandwa, and Singrauli towns. The surveys consisted of two components: (i) revenue survey for properties, and (ii) socioeconomic survey of slums. The objective of the revenue survey was to provide complete coverage of all properties using high resolution satellite data and to create a robust database of all properties through a door-to-door contact survey. Based on the survey, a database was created
of all properties including property tax assessment parameters. The survey assisted in identifying unassessed properties, underassessed properties, and properties for which parameters for levy of property tax were not available. Further, it also established a link with the property location on a GIS map, its corresponding property details, and photographs.

**ANNEX D. COMMON EXEMPTIONS PROVIDED IN PROPERTY TAXATION IN INDIA**

**Table D.1. Comparison of Exemptions under 10 State Municipal Acts**

| State               | Public Worship Purpose | Charitable Purpose | Public Purpose (nonprofit) | Education Purpose | Public Parks and Playgrounds |
|---------------------|------------------------|--------------------|---------------------------|-------------------|-----------------------------|
| Andhra Pradesh      | Exemption available only if:  
  • place used for public worship  
  • place not used for any other purpose  
  (Same as Tamil Nadu) | Restrictive in nature. Covers:  
  • recognized educational institutions  
  • sheltering destitute or animals, hospitals and dispensaries | Not available for residential quarters of hospitals or dispensaries | Not available to residential quarters of school or colleges other than hostels |  
  • Should be open to public  
  • Exemption not available to residential quarters or public offices that are part of monuments |
| Chhattisgarh        | Exemption unavailable if:  
  • any trade or business is carried on and rent derived is not exclusively used for religious purposes  
  • rent derived is not applied exclusively for religious purposes | Exemption unavailable if:  
  • any trade or business is carried on and rent derived is not exclusively used for charitable purposes  
  • rent derived is not applied exclusively for charitable purposes | Exemption unavailable if:  
  • any trade or business is carried on and rent derived is not exclusively used for public purposes  
  • rent derived is not applied exclusively for public purposes | To be owned by educational institutions or at their disposal without rent |  
  • Should be open to public  
  • Rent derived from land or building attached to be spent on administration |
| Himachal Pradesh    | Exclusively used for public worship | N.A. | N.A. | N.A. | N.A. |
| Karnataka           | Exemption available only if:  
  • place used for public worship  
  • place not used for any other purpose (same as Tamil Nadu) |  
  • Philanthropic institutions approved by state government  
  • Residential hospitals in charitable hospitals not included |  
  • Philanthropic institutions approved by state government | Government land, no income derived in opinion of state government |  
  • Exemption not available to residential quarters or public office which are part of monuments |
| State       | Exemption unavailable if:                                                                 | Exemption available only if:                                                                 | Exemption to state government properties:                                                                 | Open space property of state or central government |
|-------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| Maharashtra | • any trade or business is carried on the land or building                                   | • any trade or business is carried on the land or building                                   | • government owned and not used for trade or profit  
• owned by corporation and if tax is leviable from government or corporation | N.A.                                                                                       |
| New Delhi   | Exemption unavailable if any trade or business is carried on or any rent is derived         | Exemption available only if:                                                                 | N.A.                                                                                                          | N.A.                                                                                       |
| Orissa      | Exemption unavailable if trade or business carried on  
• rent or income is derived | Exemption by state government on recommendation of Municipality                                | Exemption to educational institution owned by state government                                               | Open space property of state or central government |
| Rajasthan   | Place has to be duly recognized by the Municipality                                         | N.A.                                                                                          | Land, building, vehicle, conveyance, or boat owned by state government used or intended to be used for public purpose | N.A.                                                                                       |
| Tamil Nadu  | Exemption available only if:  
• place used for public worship  
• place not used for any other purpose | • Philanthropic institutions approved by council  
• Residential hospitals in charitable institutions not included | • Philanthropic institutions approved by council  
• Residential hospitals in charitable institutions not included | Buildings for educational purpose including hostels  
• Exemption not available to residential quarters or public office that are part of monuments  
• Open to public |
| Uttar Pradesh | Building to be solely used or occupied for public worship | Should be solely occupied and used | N.A. | Solely used as schools or intermediate colleges | Playgrounds of government aided and unaided sports stadium |
|---------------|----------------------------------------------------------|-----------------------------------|------|-----------------------------------------------|-------------------------------------------------------------|
| West Bengal   | Exemption unavailable if:                                | Approval of Mayor-in-Council required for public charity | Approval of Mayor-in-Council required for philanthropic purpose or medical relief | Approval of Mayor-in-Council required for education of poor, free of charge | Approval of Mayor-in-Council required for education of poor, free of charge |
|               | • trade or business is carried on                         |                                   | • Open spaces which are properties of government | • Heritage building owner | • Open spaces which are properties of government |
|               | • any rent is derived                                     |                                   | • Any government school or college not generating surplus funds or not run on commercial lines | | • Heritage building owner |
|               | • used for any other gainful purpose                      |                                   | | | |
|               | • no right of free access                                 |                                   | | | |

