

From Wicksell to Stiglitz: Lessons for Urban Finance Reforms in India

*A thesis submitted during 2022 to the University of Hyderabad in
partial fulfillment of the award of a Ph.D. degree in Economics.*

BY

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and

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1. 11th Doctoral Thesis Conference organised by IBS Hyderabad on 19-20 April, 2018 (National)
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DECLARATION

I, **Shibani Mishra** hereby declare that this thesis entitled “**From Wicksell to Stiglitz: Lessons for Urban Finance Reforms in India**” submitted by me under the guidance and supervision of **Dr. Alok Kumar Mishra** and **Prof. P.K. Mohanty** is a bonafide research work. I also declare that it has not been submitted previously in part or in full to this University or any other University or Institution for the award of any degree or diploma. I hereby agree that my thesis can be deposited in Shodhganga/ INFLIBNET.

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CONTENTS

<i>Acknowledgement</i>	iii
<i>List of Tables</i>	vii
<i>List of Boxes</i>	x
<i>List of Figures</i>	xi
<i>Abbreviations</i>	xii

CHAPTER 1: Financing Cities in India: The Centrality of the Benefit Principle

1.1 Introduction	1
1.2 Urbanisation Trends and Projections	5
1.3 Evolution of Municipalities in India	9
1.4 Paradox of Municipal Finance	15
1.5 Centrality of the Benefit Principle	26
1.6 Motivations behind the Study	33
1.7 Research Objectives	35
1.8 Methodology and Data	35
1.9 Organisation of the Thesis	36

CHAPTER 2: Local Public Finance and Benefit Taxation: A Survey of Literature - From Wicksell to Stiglitz

2.1 Role of the Public Sector	37
2.2 Framework of Fiscal Federalism	40
2.3 Theory of Public Goods	43
2.4 Theory of Local Public Goods	45
2.5 A Case for Benefit Principle	47
2.6 The Wicksellian Connection	61
2.7 Conclusion	64

CHAPTER 3: Land and Property Tax as Benefit Taxes: Lessons for Property Tax Reforms

3.1	Importance of Property Tax	67
3.2	State of Property Tax in India	69
3.3	International Trends in Property Tax	74
3.4	Property Tax: Theoretical Views	85
3.5	Property Tax Reforms: The Indian Experience	88
3.6	Property Tax Reform based on Benefit View	100
3.7	Revisiting Government of India Guidelines on Property Tax Reforms	109
3.8	Conclusion	110

CHAPTER 4: Study of Selected Municipal Corporations: Lessons for Bhubaneswar

4.1	From Municipal Corporations to Municipal Economic Regions	113
4.2	Study of Bhubaneswar Municipal Corporation	115
4.2	A Comparative Study of Bhubaneswar Municipal Corporation	131
4.4	Lessons for Bhubaneswar Municipal Corporation	146
4.5	Conclusion	152

CHAPTER 5: Designing Urban Finance on The Benefit Principle: A New Theoretical Framework

5.1	Evolution of Benefit Principle	154
5.2	Unaddressed Issues in Existing Models	160
5.3	A New Theoretical Model	162
5.4	Tool Box for Urban Local Finance	170
5.5	Conclusion	177

Chapter 6: Lessons for Urban Finance Reforms: Direction and Conclusion	
6.1 India's Municipal Finance Crisis	179
6.2 Benefit Principle: Lessons from Theory and Practice	182
6.3 Wicksellian Connection: Lessons for Urban Finance Reforms	188
6.4 An Agenda for Municipal Reforms in India	191
6.5 Summary and Conclusion	203
6.6 Directions for Future Research	205
 Bibliography	 208

List of Tables

Table	Title	Page No.
1.1	World Urbanisation Trends and Prospects	5
1.2	Population of Urban and Rural Areas at Mid-Year (thousands) and Percentage Urban, 2020	6
1.3	India: Total, Rural and Urban Population (In Million) and Level of Urbanisation (Percentage) 1901-2020	6
1.4	Growth of Urban Local Bodies in India	15
1.5	Revenue Sources of Municipal Corporations and Municipalities in India	16
1.6	Trends in Municipal Revenues in India by Source: 2007-08 to 2017-18	17
1.7	Distribution of Municipal Revenues by Category of Urban Local Body: 2007-08, 2012-13 and 2017-18 (Percentage)	19
1.8	Distribution of Municipal Revenues by Source in India (Percentage): 2012-13 and 2017-18	20
1.9	Distribution of Tax Revenue Sources of Select Metropolitan Cities	22
1.10	Taxes subsumed under GST	23
1.11	Expenditure Estimates for Core Urban Sectors in India 2012-31 (Rupees at 2009-10 Prices)	25
2.1	Indicators of Fiscal Decentralization to Local Bodies 2008-09	42
2.2	Types of Goods Based Degree of Rivalry and Excludability	44
3.1	Trends in Property Tax: 2011-12 and 2017-18	69
3.2	Importance of Property Tax: 2011-12 and 2017-18	71
3.3	Estimates of Property Tax Potential in Urban Local Bodies of India (Rs. Crores)	73
3.4	Trends in Real Per-Capita Property Tax Revenues in Selected Metropolitan Cities (US\$)	75
3.5	Importance of Property Tax in Selected Metropolitan Cities	76

3.6	Trends in Recurrent Taxes on Immovable Property in OECD Countries 1965-2020	76
3.7	Property Tax Revenue as Percentage of GDP: Groups of Countries	78
3.8	Share of Tax Revenues in GDP in OECD Countries	79
3.9	Distribution of Tax Revenues in OECD Countries	79
3.10	Share of Property Tax Revenues in GDP in OECD Countries	80
3.11	Property Tax Rates of Patna	90
4.1	Bhubaneswar Municipal Corporation: Sources of Revenues	118
4.2	BMC Budget: Actual 2017-18, RBE 2018-19 and BE 2019-20 (Rs. Crores)	120
4.3	BMC: Revenue and Capital Budgets 2019-20 (Rs. In Crores)	120
4.4	Components of Revenue Receipts of BMC (in Rs. Crores)	122
4.5	Components of Tax Revenue Receipts of BMC (in Rs. Crores)	124
4.6	Holding Tax Receipts of BMC (in Rs. Crores)	125
4.7	Holding Tax for BMC: Demand Raised, Collections and Balance (in Rs. Crores)	127
4.8	Population and Area of the Municipalities	132
4.9	Population and Area Comparisons: Ratio of BMC to Selected Municipal Corporation	132
4.10	Municipal Revenue of Select Municipal Corporations (in Rs. Crore)	133
4.11	Municipal Expenditure of Select Municipal Corporations (in Rs. Crore)	134
4.12	Comparative Budgets of Select Municipal Corporations: Municipal Revenue and Municipal Expenditure as a percent of GSDP	134
4.13	Comparative Budgets: Ratio of BMC to Other Municipalities (in percent)	135
4.14	Comparative Budgets: Ratio of BMC to Other Municipalities after discounting for population and density (in percent)	135
4.15	Own Revenue of Selected Municipal Corporations (in Rs. Crore)	136
4.16	Tax Revenue of Selected Municipal Corporations (in Rs. Crore)	137
4.17	Non-Tax Revenue of Selected Municipal Corporations (in Rs. Crore)	137
4.18	Tax Basket of the Selected Municipal Corporations	138

4.19	Property Tax Revenue of the Selected Municipal Corporations (in Rs. Crore)	138
4.20	Importance of Property Tax Revenue in the Selected Municipal Corporations (in Rs. Crore)	139
4.21	Other Tax Revenue of the Selected Municipal Corporations (in Rs. Crore)	140
4.22	Town planning-related Charges and Fees: Greater Hyderabad Municipal Corporation 2014-15	140
4.23	Combined Central Transfers and State Transfers for the Selected Municipal Corporations (in Rs. Crore)	143
4.24	Fiscal Autonomy Ratio for the Selected Municipal Corporations: Own Revenue / Combined Central Transfers and State Transfers	143
4.25	Buoyancy of Selected Taxes for the Selected Municipal Corporations	144
4.26	Revenue Instruments of Municipalities: International Practices	150
5.1	Revenue Tool for Infrastructure Financing	173
6.1	Typology of Twelfth Schedule Municipal Functions	191
6.2	Financing Tools for Municipal Functions	201

List of Boxes

Box	Title	Page No.
1.1	Functions of Municipalities in India	12
3.1	Property Tax Reforms in Bogota	81
3.2	Property Tax Base: Alternative Valuation Systems	82
3.3	Property Tax Model of Patna	90
3.4	Bengaluru Municipal Corporation: Salient Features of Self-Assessment of Property Tax Scheme 2008	95
3.5	Municipal Corporation of Greater Mumbai: Capital Value-Based Property Assessment and Tax Calculation System	97
3.6	Case for Property Tax: Theory	105
3.7	Property Tax: Practical Difficulties	106
6.1	Characteristics of a Good Local Tax	189

List of Figures

Figure	Title	Page No.
1.1	Percentage of Population in Urban Areas	8
1.2	Urban Population Trends and Projections in India (in Thousands)	8
1.3	Central Tax-GDP Ratio and State Tax-GDP Ratio	18
2.1	Lindahl Equilibrium	51
2.2	Bowen's Model	54
2.3	Venables Model	57
2.4	User Charges	60
4.1	Components of Revenue Receipts of BMC:2017-18	123
4.2	BMC: Composition of Fees and User Charges for 2017-18	130
5.1	Congestion Toll	156

Abbreviations

AMRUT- Atal Mission for Rejuvenation and Urban Transformation

ARV – Annual Rental Value

ASCI – Administrative Staff College of India

BBMP- Bruhat Bengaluru Mahanagar Palike

BE- Budget Estimate

BMC – Bhubaneswar Municipal Corporation

BSCL- Bhubaneswar Smart City Limited

CAMA – Computer-Assisted Mass Appraisal

CFC – Central Finance Commission

DBT- Direct Benefit Transfer

GDP – Gross Domestic Product

GHMC- Greater Hyderabad Municipal Corporation

GIS – Geographic Information System

GPS – Global Positioning System

GSDP – Gross State Domestic Product

HPEC – High Powered Expert Committee

IGNDPS- Indira Gandhi National Disability Pension Scheme

IGNOAPS- Indira Gandhi National Old Age Pension Scheme

IGNWPS- Indira Gandhi National Widow Pension Scheme

JNNURM – Jawaharlal Nehru National Urban Renewal Mission

LBT – Local Body Tax

MBPY- Madhu Babu Pension Yojana

MCGM- Municipal Corporation of Greater Mumbai

MIC – Management Information System

MRV – Monthly Rental Value

NFBS- National Family Benefit Scheme

NMMP- National Mission Mode Project

NOC- No Objection Certificate

NUHM- National Urban Health Mission

NULM- National Urban Livelihood Mission

O & M – Operation and Maintenance

OECD – Organisation for Economic Co- operation and Development

OUIDF- Orissa Urban Infrastructure Development Fund

PAYT- Pay As You Throw

PID – Property Identification

POS- Point of Sale

PTIN – Property Tax Identification Number

RBE- Revised Budget Estimate

SAS – Self-Assessment System

SFC – State Finance Commission

TMC – Thiruvananthapuram Municipal Corporation

UAM – Unit Area Method

UAV – Unit Area Value

ULB – Urban Local Body

Dedicated to My Family

CHAPTER 1

FINANCING CITIES IN INDIA: THE CENTRALITY OF THE BENEFIT PRINCIPLE

1.1. Introduction

The erstwhile Ministry of Urban Development (MoUD) (currently, Ministry of Housing and Urban Affairs), Government of India in their website proclaimed that the “*growth story of India shall be written on the canvas of planned urban development*” (https://twitter.com/MoHUA_India). This statement clearly recognises the growth generating potential of cities, supported by appropriate public policies. As the experiences of both developed and developing countries suggest, cities drive economic growth by catalysing agglomeration and network externalities. Such externalities support cities, the generators of national wealth, by augmenting productivity and bringing down costs. They lead to benefits of diversity, competition, and specialisation, and generate economies of learning, matching, and sharing (Henderson 1974, Fujita 1989, Fujita and Thisse 2002, Duranton and Puga 2004, Rosenthal and Strange 2004, Puga 2010, Brueckner 2011, Glaeser 2011, Combes, Duranton, Gobillon, Puga and Roux 2012, Cheshire, Nathan and Overman 2014, Duranton, Henderson and Strange 2015). Agglomeration and network externalities play a pivot role in making cities the “engines of structural and spatial transformation,” especially for developing countries. The importance of cities in India can be gauged from the fact that the contribution of urban areas to GDP rose from 29 percent in 1950-51 to 62-63 percent in 2007. The figure was projected to rise to about 75 percent by 2030 (Planning Commission 2008, Smart Cities Mission, Government of India 2015). McKinsey (2010) reveals that 70 percent of new employment and 85 percent of public finance in India over the next two decades will be generated by cities. Cities pave the path for a country’s prosperity. Cities can also prove to be instrumental in uplifting the poor and marginalised. However, providing a growth momentum through cities requires properly planned urban development and adequate finances. These are the significant challenges before Indian policymakers (Mohanty 2014, 2016, 2019, 2022; McKinsey 2010; HPEC 2011; Ahluwalia, Kanbur, and Mohanty 2014).

Glaeser (2011) terms cities as “our species’ greatest invention”. Cities essentially emerged in the process of elimination of distance between productive agents and production sites. They are created by people who desired, strived and organised to live, work and learn together, cooperating, competing and collaborating with each other. The collocation of firms, households and institutions in cities resulted in the accumulation of physical, social and human capital, thereby increasing production efficiency and decreasing costs of actors and agents in the spatial economy. Cities represent density and an ‘economic mass’ due to the spatial proximity between economic activities in the secondary and tertiary sectors, which are often subject to increasing returns. They lead to scale, agglomeration and network effects, translating into savings in the costs of movement of goods, people, ideas, information and knowledge (Glaeser 2011). Cities facilitate what Glaeser calls “collaborative brilliance”, making them nurseries of new ideas, and hubs of innovation. However, density, when exceeding a threshold, leads to external diseconomies, manifesting in overcrowding, traffic congestion, pollution, degradation of the environment, shortage of housing, infrastructure and public services, poverty, slums, crime, social unrest, and the like. The need to assist cities in maximising the external economies of agglomeration, while mitigating or minimising the diseconomies of congestion carves out a key role for public policy, especially that at local government level to finance infrastructure and services needed by productive firms and residents, including creative workers and innovative entrepreneurs.

Despite being the engines of growth and national wealth generators, cities suffer severe fiscal stress. This affects the growth generating capacity of cities by crumbling the infrastructure and service delivery system. Cities benefit multiple economic agents due to their agglomeration and network economies. These economies capitalise on the tax bases of governments. However, city governments are deprived of the buoyancy cities create. Their functions are not in sync with their finances. The base for municipal revenues is narrow, inflexible, and non-buoyant. With the emergence of the Goods and Services Tax (GST) regime, property tax has remained the only primary source of own revenue for ULBs in India. Even the resources available to these local bodies, including land-based revenue sources such as property tax, are not adequately exploited. While the need for urban public finance reforms is widely realised, no systematic approach has been made in this regard, either in policy or in research. These considerations carve out a vital role for the "beneficiaries pay" paradigm in the scheme of urban public finance. The existence of urban externalities, market failure, internalising benefits, and costs of local services are the major reasons behind the third tier of government. This is backed by the subsidiarity principle, which advocates delivering governance tasks at

the level closest to the people (Oates 1972, Musgrave 1989, Buchanan 1999, Bird 1993, and Smoke 2007). According to Watt (2006), “a significant advantage of local government lies in its ability to arrange for the provision of local public goods in line with local tastes and preferences.” However, such provision requires investments in infrastructure and services; finances should follow functions.

Several theories are affirmative regarding a robust local government. This requires a well-defined fiscal arrangement, for ensuring “efficiency, accountability, manageability, and autonomy” in the delivery of public services. According to public finance literature, raising adequate revenues is a prerequisite for establishing a strong local government. Local governments should be provided sufficient taxation powers and have the right to determine tax rates and utilisation of tax proceeds. However, the current fiscal federalism framework makes local governments heavily dependent on the central and state governments for grants and aid. Lack of administration and efficiency further accentuates the misery of ULBs. The outdated municipal finance regime neglects growth generating capacity of city externalities. Municipalities are left at the mercy of higher levels of government and ad hoc grants without any theoretical backing. There is perhaps no better way to design a system of municipal finance in India than considering 'benefit taxation' as the foundational principle to build the structure of local governance and finance, taking into account direct, indirect, and induced benefits accruing to various actors in the urban economy. This principle also addresses the resistance of taxpayers to pay taxes, increasingly becoming common due to political reasons.

The 'benefit principle' of taxation – focusing on the taxation of rents of various types, dates back to the works of Adam Smith (1776), George (1879), Wicksell (1896), and Lindahl (1919). It was further elaborated by Buchanan (1963), Musgrave (1969), and Stiglitz (2012, 2015). The benefit principle advocates that beneficiaries of public services and infrastructure must pay a part of the cost of the provision of such facilities. Cities are appropriate for implementing the benefit principle as they generate various benefits during the structural transformation process. Agglomeration and network externalities in cities manifest in land and property values, leading to windfall gains for land and property owners at vantage locations. New Economic Geography (NEG) suggests that the cumulative and circular causation forces operate in the spatial economy linked to scale economies, externalities, and infrastructure, leading to 'agglomeration rents' to both immobile and mobile production factors that can be taxed without the tax base disappearing. Benefits of local public services capitalise into property values and translate into higher rents and values of properties. The benefits garnered from such provisions are much

more than the cost in terms of the tax paid. Additionally, the Piketty-Stiglitz debate on capital in the twenty-first century highlights the role of unearned rents to capital, urban land rents and monopoly rents in accentuating the inequality in wealth and raising wealth-income ratios in countries. Thus, there is an enormous opportunity for city governments to raise revenue based on the principle of “beneficiaries pay” including “users pay.” By the same logic, those who create dis-benefits in the economy (in the form of congestion and pollution) ought to pay towards meeting the mitigation costs. Thus, “polluters pay”, “congesters pay”, “exacerbaters pay” and “growth pays” paradigms may be considered as natural corollaries to the benefit principle. These principles, widely applied in developed countries - can be pooled together under the caption of the “generalised benefit principle” (Mohanty 2016).

Currently, India is around 35 percent urbanised and projected to be more than 50 percent urbanised by 2050 (United Nations 2015). The United Nations projections indicate that urban population in India will witness a rise from about 461 million in 2018 to 877 million in 2050. Further, India will account for the largest addition to world urban population between 2018 to 2050. Thus, India has a long way to go in the direction of urbanisation and spatial agglomeration. While strong empirical evidence exists in favour of agglomeration economies in cities of developed countries, the Williamson’s hypothesis suggests that agglomeration economies tend to be strong at the lower stages of urban transition (Williamson 1965). A recent research covering cross-country data set for 105 countries for 1960-2000 finds “consistent evidence” in favour of Williamson’s hypothesis that agglomeration boosts GDP growth up to a level of economic development. The critical threshold is some US\$10,000 per capita in 2006 PPP prices, corresponding roughly to the current level of development of Brazil (Brulhart and Sbergami 2009, Mohanty 2016). Thus, India will have a long opportunity to harness the benefits of agglomeration and network externalities to promote economic growth and raise public finance for socio-economic development. Apart from externalities, spatial planning and infrastructure development in cities will also provide enormous opportunities to raise resources based on a strategy of creation, capture and recycling of benefits. India is uniquely positioned to move to a higher growth trajectory with planned urban development as a national resource to foster economic growth, create employment, promote inclusion, and generate public finance. Cities have been termed as the “catalyst of development and transformation” because they provide the infrastructure and civic services required by firms and households and facilitate innovation to accelerate growth. This requires huge amount of finance and unless cities are able to mobilise the required amount, they will not be able to sustain growth momentum. The

principle of benefit taxation presents an elegant strategy to cities to raise resources while also enhancing accountability and transparency in public service delivery and addressing resistance from taxpayers. This thesis is concerned with the theory and practice of benefit taxes and charges to restructure the urban finance system in India to support economic growth and structural transformation. The term ‘benefit’ is used in this thesis to include direct, indirect, externalities-induced and public policy-related gains to various actors in the urban economy, including land owners.

The rest of the chapter is organised as follows: section 2 discusses the trends and projections in urbanisation for the world and India. Section 3 discusses the emergence of local self-government in India and subsequently puts forth the causes of its decline. The municipal finance scenario in India is presented in section 4. It describes the abysmal state of urban public finance in India and the reasons behind the same. Section 5 focuses on the role that the benefit principle can play in improving the revenue generation and governance by municipalities and placing Indian municipal system on a strong footing. Section 6 presents the motivations behind the study; section 7 – objectives; section 8 – data and methodology. The organisation of the thesis is presented in section 9.

1.2. Urbanisation Trends and Projections

The world is urbanising and so is India. This section is dedicated to the trends in urbanisation around the world with special reference to India. Table 1.1 gives the trends for the world and projections for 2035 and 2050. The world is expected to be 68.4 percent urban by 2050.

Table 1.1

World Urbanisation Trends and Prospects

Pop ⁿ (in thousand s)	1950	1970	1990	2010	2015	2020	2025	2035	2050
Total	25,36,275	37,00,578	53,30,943	69,58,169	73,83,009	77,95,482	81,85,614	88,92,702	97,71,823
Urban	7,50,903	13,54,215	22,90,228	35,94,868	39,81,498	43,78,994	47,74,646	55,55,833	66,79,756
Rural	17,85,372	23,46,362	30,40,715	33,63,301	34,01,511	34,16,488	34,10,967	33,36,868	30,92,067
Urbanization (%)									
World	29.6	36.6	43	51.7	53.9	56.2	58.3	62.5	68.4

Source: United Nations: World Urbanization Prospects: The 2018 Revision. Accessed at:

<https://population.un.org/wup/Download/> on 3 May 2022

Table 1.2 shows the population of urban and rural areas in 2020. It reveals that the urbanisation rate stands at 34.9 percent for India in 2020, which is much lower than the urbanisation percentage for less developed regions taken together (51.7 percent).

Table 1.2

Population of Urban and Rural Areas at Mid-Year (thousands) and Percentage Urban, 2020

	Urban	Rural	Total	% Urban
World	43,78,994	34,16,488	77,95,482	56.2
More Developed Regions	10,03,640	2,65,637	12,69,277	79.1
Less Developed Regions	33,75,354	31,50,852	65,26,205	51.7
Nigeria	1,07,113	99,040	2,06,153	52
China	8,75,076	5,49,472	14,24,548	61.4
India	4,83,099	9,00,099	13,83,198	34.9

Source: United Nations: World Urbanization Prospects: The 2018 Revision. Accessed at: <https://population.un.org/wup/Download/> on 3 May 2022

Table 1.3 gives the information on India's rural and urban population over different census years from 1901 to 2011 based on Census data and 2020 based on world bank data. The level of urbanisation increased from 10.8 percent to 31.2 percent in 1901 to 2011 respectively. The figure stood at 34.9 percent in 2020. The table also reveals that the pace of urbanisation has increased over the years. The Census 2011 reveals the level of urbanisation to be 31.2 percent. However, an "agglomeration index" developed by the World Bank puts the share of India's population living in areas with "urban-like" features at 55.3 per cent in 2010. The understatement of the degree of urbanisation in census reports may be due to the unaccounted urbanisation in the peripheries of big cities.

Table 1.3

India: Total, Rural and Urban Population (In Million) and Level of Urbanisation (Percentage) 1901-2020

Year	Total Population	Rural Population	Percentage Rural	No of Cities /Towns	Urban Population	Percentage Urban
1901	238.4	212.5	89.2	1,916	25.9	10.8
1911	252.1	226.2	89.7	1,908	25.9	10.3
1921	251.3	223.2	88.8	2,048	28.1	11.2
1931	279.0	245.5	88.0	2,220	33.5	12.0

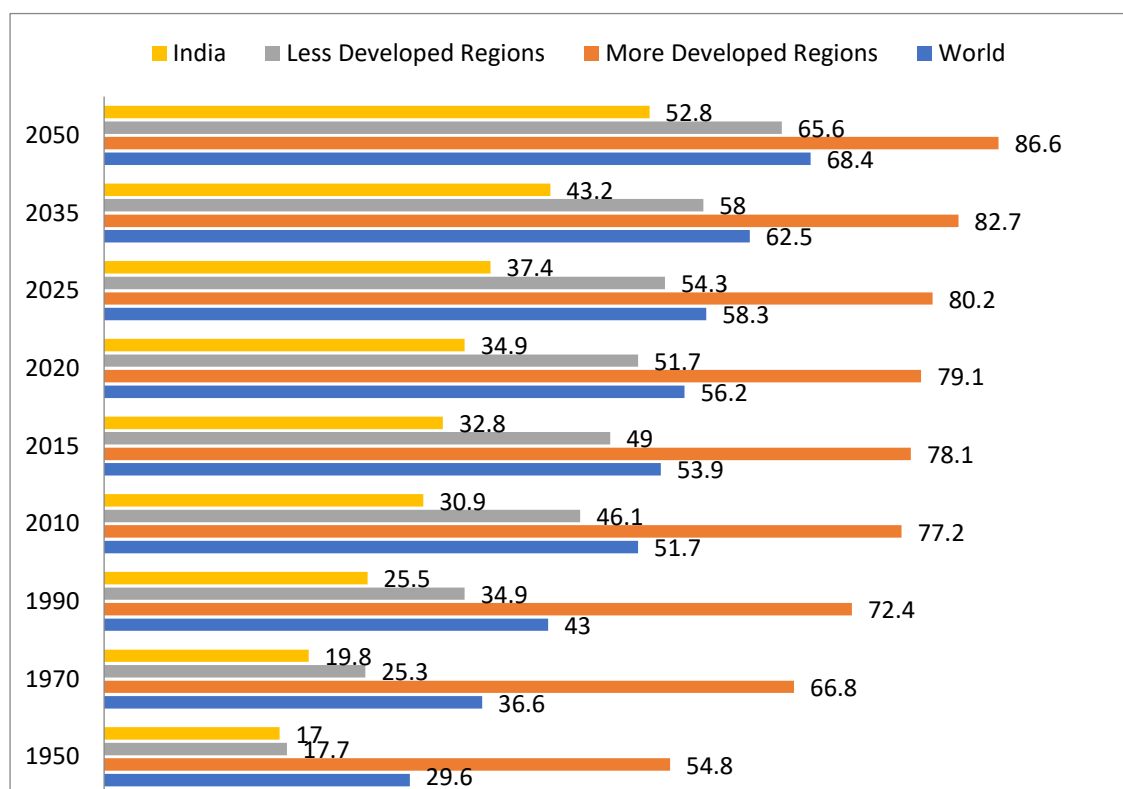
Year	Total Population	Rural Population	Percentage Rural	No of Cities /Towns	Urban Population	Percentage Urban
1951	361.1	298.6	82.7	3,060	62.4	17.3
1961	439.2	360.3	82.0	2,700	78.9	18.0
1971	548.2	439.0	80.1	3,126	109.1	19.9
1981	683.3	523.9	76.7	4,029	159.5	23.3
1991	846.3	628.7	74.3	4,689	217.6	25.7
2001	1028.7	742.5	72.2	5,161	286.1	27.8
2011	1210.7	833.5	68.8	7,935	377.1	31.2
2020	1380	898.4	65.1	-	481.6	34.9

Source: Census of India for different years, World Development Indicators, Accessed at: <https://data.worldbank.org/indicator/SP.POP.TOTL?locations=IN> on 3 May 2022

India's urbanisation is marked by the spatial concentration of population in large cities, especially metropolitan agglomeration. Two Indian cities featured among the thirty largest urban agglomerations ranked by population in the world in 1950. They were Kolkata (then Calcutta) at rank 9 with 5 million population and Mumbai (then Bombay) at rank 15 with 3 million urban population. In 2015, four Indian cities made it into this list. Delhi with 26 million population was ranked as the second largest urban agglomeration in the world. Mumbai was the sixth largest with 19 million urban inhabitants. Kolkata was ranked 13th (14 million urban population) and Bengaluru was ranked 29th with 10 million population. The projections suggest that Delhi will top this list in 2030 with 39 million urban inhabitants. Mumbai will be 6th (25 million), Kolkata at 16th rank (18 million), Bengaluru at 21 (16 million). Further, Chennai (14 million) and Hyderabad (13 million) will also feature in this list for 2030 at rank 26 and 29 respectively.

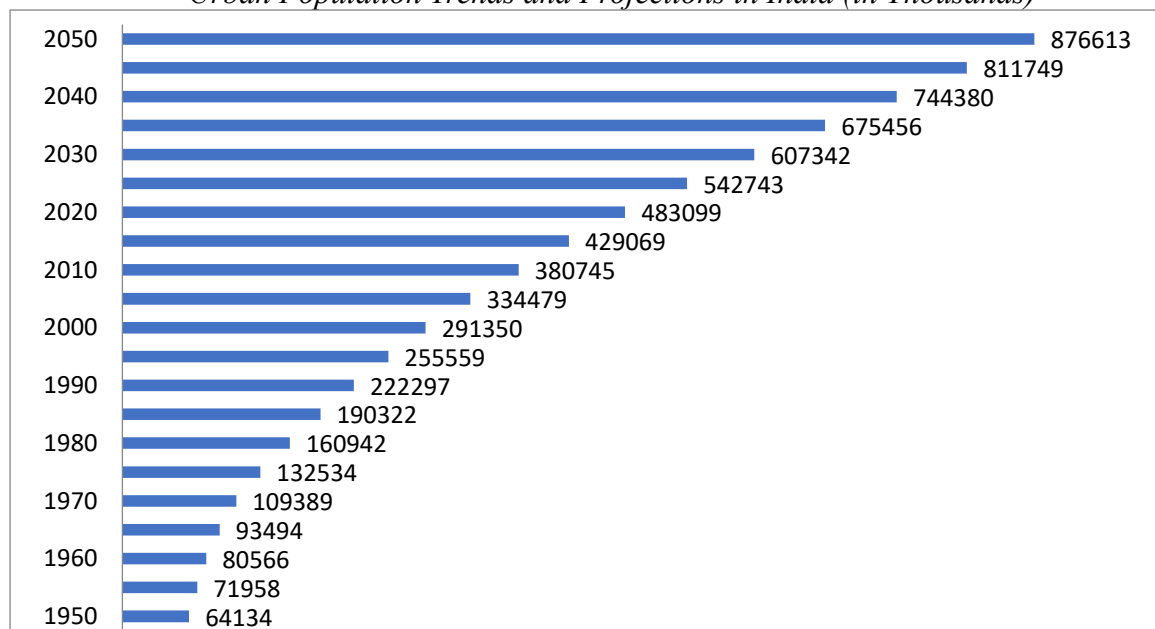
Figure 1.1 presents the trends in urbanisation for different regions, country and the world for 1950 to 2020 and projections for 2025, 2035 and 2050. The figure reveals that the world will be 68.4 percent urban by 2050 while India will be 52.8 percent urban in 2050. Figure 1.2 shows the trends in urban population growth in India for the period 1950-2020 and projections for the census years 2020-2050. As the figure reveals, urban population in 2050 will be of the order of 876 million and it will more than double between 2010 and 2050. The figure further reveals that the urban population is projected to rise at an exponential rate over the given period of time. It is indicative of the colossal challenges that developing countries like India would face due to urbanisation.

Figure 1.1
Percentage of Population in Urban Areas



Source: United Nations: World Urbanisation prospects: The 2018 Revision. Accessed at: <https://population.un.org/wup/Download/> on 3 May 2022

Figure 1.2
Urban Population Trends and Projections in India (in Thousands)



Source: United Nations: World Urbanization Prospects: The 2018 Revision. Accessed at: <https://population.un.org/wup/Download/> on 3 May 2022

The tables and figures given in this section reveal that the urban population is expected to increase substantially in the years to come. India will have to address the dual problems of rural and urban development for several decades. Such an increase will be accompanied by an increase in demand for housing, serviced land, public services, infrastructure, health care, education, poverty alleviation, public safety, disaster preparedness and so on. These facts suggest that India will require an enormous amount of funds not only to finance these demands but also to mitigate the negative impacts of urbanisation like slums, poverty, overcrowding and crime. The issue of financing urbanisation will remain central to India's development strategy in the years to come. It is the municipalities or Urban Local Bodies (ULBs) which have to primarily shoulder the responsibility of providing civic services in urban areas. The abysmal state of finance has made service provision a daunting task for the ULBs – to meet the “backlog, current and growth” needs. The next section presents the rise and fall of municipalities in India. Lack of financial autonomy and empowerment of local government are major causes for the decline of the third tier in India.

1.3. Evolution of Municipalities in India

Municipal government arose in India long before the emergence of state governments. Lord Ripon's Resolution of 1882 marked the beginning of “local self-government” in India. The period prior to Lord Ripon's resolution had a municipal governance framework in its crude form. A municipal corporation in Madras was set up in 1688. The year 1726 saw the formation of municipal bodies in Calcutta and Bombay along with the reconstitution of the municipality for Madras. The passage of Act X of 1842 was the first formal attempt towards municipal organisation; the Act XXVI of 1850 vested municipalities with the responsibility of conservation, lighting and road repair and endowed them with the power to levy taxes, including indirect taxes (Mathur 2006). Lord Ripon's resolution vested municipal committees with the responsibilities of managing local services and functions. It further suggested that such committees should be endowed with sufficient financial resources to execute their functions. For almost a century since the resolution was passed, there were no major changes or reforms in the municipal governance structure in India. Municipalities functioned as an important tier of administration in the absence of state governments.

In 1906, the Royal Commission on Decentralisation was set up. It made multiple recommendations for decentralising functions and powers. However, it was not until 1918 that these recommendations were heeded to. The Government of India's resolution of 1918 suggested developing the local governments in line with the recommendations of the Royal

Commission on Decentralisation. In 1919, local government was made a budget head. The Government of India Act 1919 allocated tax powers to municipalities. Octroi, terminal tax, toll and tax on trade, professions and callings were reserved for municipalities, in addition to land and property taxes, including land value tax (LVT). Additionally, municipalities could also levy taxes for the provision of municipal services like water supply, drainage, lighting etc. This was a sound form of local finance and believed to be the best scheme for local taxation so far (Mathur 2006). The Government of India Act 1935 had a major impact on the local self-government in India. It ended the diarchic administration in India, marking the decline of local government. The state (previously called province) government was brought into existence. The 1935 Act listed the powers and functions of central government and the provinces, disregarding the local bodies as a tier of government. Provinces were assigned the task of determining both the functions as well as the tax powers of the local governments. In line with the 1935 Act, the Constitution of India also distributed the functions and tax powers among the union and the state governments. Prior to the enactment of the Constitution (74th Amendment) Act, 1992, there was no specific mention regarding 'municipalities' in the Constitution of India, except implicitly. Under Entry 5 of the State List, the subject of local self-government was assigned to states.

Due to elaborate Constitutional provisions, the Parliament and the State Legislatures flourished as democratic institutions over the years. However, the urban local bodies met a different fate, subjecting their destiny to state laws, policies and programmes, including executive decisions. However, there have been attempts at different levels over the years to strengthen the municipalities. A Local Finance Enquiry Committee was set up by the Government of India in 1950. In its report in 1951, the Committee gave a series of suggestions meant to endow the local authorities with clear-cut sources of revenue. It emphasised that adequate power to tax should be vested in the local bodies. The Committee recommended some more local taxes, namely tax on consumption or sale of electricity, tax on advertisements other than those published in newspapers, tax on vehicles, capitation tax and tax on entertainment exclusively for municipalities. It proposed that a valuation department should be established for all local bodies. And it should be the responsibility of this department to undertake comprehensive work related to the composition of the valuation list of all the taxable properties within the jurisdiction of the local body. The committee strongly suggested that state governments should make local bodies financially self-sufficient, so that they could discharge their responsibilities efficiently. The power to sanction budgets was recommended to be

entirely put in the hands of the local bodies. The Taxation Enquiry Commission (1953-54) added duty on transfer of property to the list of municipal revenue sources identified since the 1919 Government of India Act. However, the central and state governments largely neglected the recommendations of expert groups and committees.

In spite of the fact that municipal institutions in India came into existence long before the formation of states, elected municipalities were frequently suspended and superseded by the concerned state governments in the absence of Constitutional protection. These suspensions and supersessions extended to periods exceeding a decade in some cases, e.g. Chennai, Kanpur, Lucknow, etc. This led to an erosion of the very basis of local self-government and municipal democracy, relegating municipalities to a low level equilibrium trap. Over the years, there was a steady encroachment on the traditional functions of the municipal authorities by parastatals and specialised agencies of the state governments. Thus, the municipalities became weak and were unable to meet the needs and aspirations of the people. The first ever significant attempt at giving urban and rural local bodies a constitutional status was made in 1989. This resulted in the enactment of the 73rd and 74th Constitutional Amendment Acts, 1992. It was only in the year 1994 that these acts became operational after the passage of conformity legislations by the states. The Acts mark a notable turning point in the status and development of the local government system in the country. The 74th Amendment Act prescribes a legal-institutional framework for the conduct of effective local government in cities at the grassroots level and carry power to the people. Further, it also specifies the criteria for constituting the municipalities of three types and stipulates their composition. The Constitution (74th Amendment) Act 1992 presents an important milestone for elevating the status of the third tier in India; it aimed at re-establishing and strengthening local self-government.

The 12th Schedule inserted into the Constitution of India vide the 74th Amendment Act 1992 vested municipalities with several responsibilities – a list of eighteen legitimate municipal functions. Box 1.1 exhibits these functions under various groups. However, the 74th Amendment did not provide for the means of financing these functions. Article 343X of the Constitution simply stipulates that a State Legislature may, by law,

- (i) authorise a Municipality to levy, collect and appropriate such taxes, duties, tolls and fees in accordance with such procedure and subject to such limit;
- (ii) assign to a Municipality such taxes, duties, tolls and fees levied and collected by the State Government for such purposes and subject to such conditions and limits;

- (iii) provide for making such grants-in-aid to the Municipalities from the Consolidated Fund of the State; and
- (iv) provide for the constitution of such Funds for crediting all moneys received, respectively, by or on behalf of the Municipalities and also for the withdrawal of such money therefrom, as may be prescribed by law.

Box 1.1

Functions of Municipalities in India

The Twelfth Schedule, inserted into the Constitution of India vide the 74th Amendment Act 1992, provides an illustrative list of 18 municipal functions (Article 243W) as follows:

Planning-related

- Urban planning, including town planning;
- Planning for economic and social development;

Infrastructure and Services

- Roads and bridges;
- Water supply for domestic, industrial and commercial purposes;
- Public health, sanitation, conservancy and solid waste management;
- Fire services;
- Provision of urban amenities and facilities such as parks, gardens and playgrounds;
- Public amenities including street lighting, parking lots, bus stops and public conveniences;
- Promotion of cultural, educational and aesthetic aspects;

Environment-related

- Urban forestry, protection of the environment and promotion of ecological aspects;

Redistributive functions

- Safeguarding the interests of weaker sections of society, including the handicapped and the mentally retarded;
- Slum improvement and upgradation;
- Urban poverty alleviation;

Regulatory and Miscellaneous

- Regulation of land use and construction of buildings;
- Burials and burial grounds, cremations, cremation ghats/grounds and electric crematoria;
- Cattle pounds, prevention of cruelty to animals;
- Vital statistics including registration of births and deaths; and
- Regulation of slaughter houses and tanneries.

Source: Constitution (74th Amendment) Act 1992, Mohanty 2014

The 74th Amendment Act provided for two channels to correct for the lack of assignment of adequate revenue sources to local bodies. Article 243Y, inserted into the Constitution of India by the Constitution (73rd Amendment) Act, makes it mandatory on the part of the State Governments to constitute State Finance Commissions once in every five years to review the financial position of the rural and urban local bodies. As far as the urban local bodies are concerned, it is mandatory for the State Finance Commission to review:

(a) the principles which should govern -

(i) the distribution between the State and the Municipalities of the net proceeds of taxes, duties, tolls and fees leviable by the State, which may be divided between them, and the allocation of such proceeds between the Municipalities at all levels;

(ii) the determination of the taxes, duties, tolls and fees which may be assigned to, or appropriated by the Municipalities;

(iii) the grants-in-aid to the Municipalities from the Consolidated Fund of the State;

(b) the measures needed to improve the financial position of the Municipalities; and

(c) any other matter referred to the Finance Commission by the Governor in the interest of sound finance of the Municipalities.

The Constitution (74th Amendment) Act provides a safeguard regarding the implementation of the recommendations of the State Finance Commissions. It amended Article 280 of the Constitution under which a Central Finance Commission is appointed once every five years to assess the financial needs of the State Governments and to recommend a package of financial transfers from the Centre. It is now mandatory on the part of the Central Finance Commission to recommend *"the measures needed to augment the Consolidated Fund of a State to supplement the resources of the Municipalities in the State on the basis of the recommendations made by the Finance Commission of the State"*. This provision was made to ensure a good match among the finances of all the three tiers of government: local, state and centre.

In spite of the elaborate provisions in the 74th Amendment Act regarding municipal functions, finances, SFCs and CFC, a sound municipal finance system in India is far from sight. The country is way behind other comparable developing and developed nations with respect to "revenue decentralisation to urban local bodies". Ironically, the ratio of municipal revenues to combined central and state revenues has declined from 3.92 percent in 2007-08 to 3.62 percent

in 2012-13. The ratio of municipal taxes to combined central and state taxes has gone down from 2.11 percent to 1.79 percent between the two years. The ratio of municipal revenue to GDP in India is estimated at 1.03 percent for 2012-13 - compared to Poland (4.5), South Africa (6.0), Germany (7.3), Brazil (7.4), Austria (7.8), United Kingdom (13.9), Norway (14.2), Italy (15.3), Finland (22.4) and Denmark (37.1) (Mohanty 2016).

Except in Maharashtra, which permitted Mumbai to levy octroi till recently, property tax is the only major municipal tax in India. Over a period of time, taxes like motor vehicles tax, entertainment tax, entry tax, profession tax, advertisement tax etc. have been taken away by states from municipalities in India. Compensations for the loss of revenue has not kept pace. While the revenue base of municipalities in India is narrow, inflexible and non-buoyant, the new Goods and Services Tax (GST) has led to further decline in the revenue sources of local bodies in India. It has subsumed key taxes of urban local bodies or meant to be assigned to them such as octroi, entry tax and advertisement tax. The ULBs in India today are struggling with severe fiscal stress. This has found expression in the inadequate provision of infrastructure and civic services to the citizens. Prasad and Chary (2014) observe in their study on the state of urban services that against the service level benchmark of 100 percent for water connection in premises, the national average stood at 53.6 percent. The figure was as low as 17 percent in Bihar. Sewerage network coverage wore a dismal look with the national average being only 49.5 percent and a meagre 9.7 percent in Chhattisgarh. Only 57.2 percent of the households had solid waste management coverage. Their study reveals that urban India has a long way to go in order to achieve proper service delivery. It is the Municipalities who have to shoulder the responsibility of making these services available. It is estimated that cities will require 9.74 million crores by 2030 to address their needs (McKinsey 2010).

While the financing requirement is gigantic, the resources available with municipalities – to meet the cost of salaries, O&M and capital expenditure- were estimated at less than Rs. 1 lakh crores for the country as a whole for 2012-13. The figures are disturbing as cities drive economic growth by catalysing agglomeration and network externalities. Cities will not be able to perform their fundamental roles as agents of socio-economic transformation unless they are in a position to finance infrastructure and civic services needed by firms and households. Ironically, cities which create multiple benefits to multiple actors in the economy that capitalise into tax bases of governments, are deprived of the buoyancy they create in the economy due to their agglomeration and networking economies. Even benefit taxes like land and property tax are not exploited. Urban finance reforms are urgently required to address the problem. Nothing can

perhaps be better than adopting the benefit principle of public finance as the cornerstone of such reforms.

1.4. Paradox of Municipal Finance

The Constitution (74th Amendment) Act 1992 led to a renewed interest in urban local government in India. In 1989, the total number of municipal bodies in India was 2789: 73 municipal corporations, 1770 municipalities, 229 town area committees and 717 notified area committees. There has been an increase in the number of ULBs in the country from 3,682 in 1998 to 4,041 by 2011. Table 1.4 shows the growth of urban local bodies by tier. As per Census 2011, there are 4,041 ULBs in the country covering 85.61 percent of the urban population and the remaining urban population lives in what are called census towns but are governed by rural local bodies like gram panchayats (ASCI 2014). The Fifteenth Finance Commission reported the total number of ULBs to be 4300. The Local Government Directory, an online real data source established by the Government of India suggests the total number of urban local bodies to be 4791 in August 2022.

Table 1.4

Growth of Urban Local Bodies in India

Period	Municipal Corporation	Municipality	Nagar Panchayat	Total
11 FC (As on 1.4.1998)	96	1494	2092	3682
12 FC	109	1432	2182	3723
13 FC	139	1595	2108	3842
Census 2011	151	1608	282	4041
14 FC	162	1482	2349*	4143 **
15 FC	206	1683	2411***	4300
2022				4791

* They include 205 ULBs which are categorised as cantonment boards, notified areas, industrial townships, ITS, etc., and other ULBs which have not been classified by the states.

** As some states provided total number of ULBs instead of tier-wise. There may be variation in totals.

*** Nagar Panchayats also include town municipal councils, small town committees, town councils, notified area committees

Source: ASCI, 2014, Report of XV Finance Commission Pp. 171, Local Government Directory

The revenue sources of the municipal corporations and municipalities in India as at present are given in table 1.5 below.

Table 1.5*Revenue Sources of Municipal Corporations and Municipalities in India*

<i>Revenue head/category</i>	<i>Sources of revenue</i>
Tax revenue	Property tax; advertisement tax; tax on animals; vacant land tax; taxes on carriages and carts; tax on consumption and sale of electricity; toll tax
Non-tax revenue	User charges; trade licensing fee; town planning charges; building permission fees; sale and hire charges; lease rentals
Other receipts	Law charges/costs recovered; lapsed deposits; fees, fines and forfeitures; rent on tools and plants; miscellaneous sales
Assigned (shared) revenue	Entertainment tax; surcharge on stamp duty; profession tax; motor vehicles tax
Grants-in-aid	(i) Plan grants from state and central governments under programmes, e.g. Atal Mission for Rejuvenation and Urban Transformation, National Urban Livelihoods Mission, etc. (ii) Non-plan grants from state governments to compensate for loss of income; specific transfers
Debt	Loans borrowed for capital projects from HUDCO, LIC, state and central governments and banks; municipal bonds.

Source: Budgets of Municipal Corporations and Municipalities.

Data submitted by state governments to the 14th Finance Commission of India shows that the estimated total revenues of all municipal bodies together was less than Rs.100,000 crores in 2012-13 (Table 1.6) – about 1 percent of GDP. Eleventh and Twelfth Finance Commission data indicate that the Municipal tax-GDP ratio stagnated at around 0.70 percent in the nineties and Thirteenth Finance Commission estimates this figure at about 0.94 percent for 2007-08 (Mohanty 2014). In 2017-18, municipal own revenue stood at 0.43 per cent of GDP, which was the lowest in eight years (ICRIER 2019). The own taxes constituted only 32 percent of total municipal revenues nationally in 2012-13. Property tax accounted for 50 percent of municipal taxes in 2012-13 and 60 percent in 2017-18. However, the Central tax-GDP ratio and States tax-GDP ratio have seen an increasing trend over the years. While the former rose from 3.89 in 1950 to 10.83 in 2016, the latter saw a rise from 2.6 to 10.82 over the same period. On an average, property tax constituted 16 percent of total municipal revenues and 30 percent of ‘own’ municipal revenues in India in 2012-13. However, property tax revenue as a share of GDP in India stood at a meagre 0.15 per cent in 2017-18 (ICRIER 2019).

Table 1.6*Trends in Municipal Revenues in India by Source: 2007-08 to 2017-18*

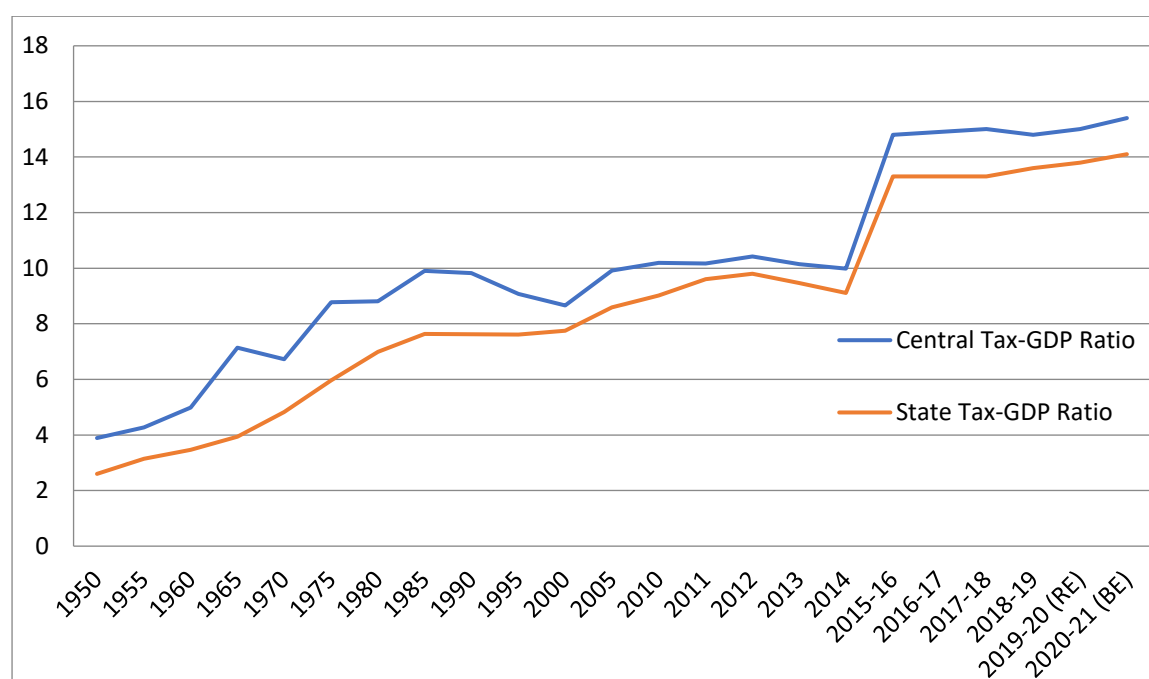
Sl. No.	Sources of Revenue	2007 – 08		2012 – 13		2017-18	
		Total (Rs. Crore)	% of Total Municipal Revenue	Total (Rs. Crore)	% of Total Municipal Revenue	Total (Rs. Crore)	% of Total Municipal Revenue
A. Own Sources							
1.	Total Taxes	18,366	37.20	30,912	32.00	42954.3	25.02
	Property Tax	8,159	16.53	15,110	15.64	25551.9	14.88
	Other Taxes	10,207	20.68	15,801	16.35	17402.4	10.14
2	Non-Taxes	9,134	18.50	19,002	19.70	30377	17.69
	Total Own Source Revenues	27,501	55.70	49,913	51.60	73331.3	42.71
B. Other Sources							
1	Government of India Transfers	3,515	7.10	5,387	5.60	8244.9	4.8
2	Central Finance Commission Transfers	986	2.00	3,760	3.90	12324.5	7.18
3	State Assignment/ Devolution	9,342	18.90	18,537	19.20	55573.9	32.367
4	State Grant-in-Aid	6,653	13.50	14,809	15.30		
5	Others	1,355	2.70	4,234	4.40	22222.5	12.943
	Total Other Source Revenues	21,851	44.30	46,727	48.40	98365.8	57.29
C. Total Revenues		49,351	100.00	96,640	100.00	171679.1	100.00
Gross Domestic Product at Factor Cost in Current Prices (GDP)		45,82,086		93,88,876		1,70,95,005 (At Market Prices)	
Municipal Revenue as a % of GDP			1.08		1.03		1.00

Source: ASCI (2014) – based on data furnished by state governments to the Fourteenth Finance Commission of India; *Indian Public Finance Statistics 2013-14*; Mohanty (2016); Compiled from ICRIER (2019)

Figure 1.3 gives a graphical representation of the Central tax-GDP ratio and States tax-GDP ratio. As evident from the data, municipal taxes have been grossly neglected over the years.

Figure 1.3

Central Tax-GDP Ratio and State Tax-GDP Ratio



Source: Report of the Fifteenth Finance Commission

Ironically, the bulk of municipal revenues collected goes towards staff and operation and maintenance costs. In many states, the municipalities are not even in a position to meet the cost of employee salaries and pensions. With an exception of a small number of cities, capital spending for civic infrastructure is grossly deficient. While India has to plan for urban infrastructure and services to meet the housing and employment needs of “more than 400 million people” to be added to cities between 2015 and 2050, there is an urgent need for resource mobilization to meet the backlog and current demands. In the absence of the requisite finances, infrastructure and services cannot be provided effectively and thus, the role of cities in enhancing growth would suffer.

Table 1.7 presents the distribution of municipal revenues by category of ULBs in India. Between 2007-08 and 2017-18 the ratio of "own revenues" to total revenues declined in all groups of ULBs, i.e. Municipal Corporations (tier I), Municipalities (tier II) and Nagar Panchayats (tier III), indicating that all tiers of ULBs have experienced an erosion in fiscal autonomy. The smaller the size of ULB, the greater is the dependency on inter-governmental transfers to finance civic services and facilities. Per capita revenue and per capita expenditures

for Municipal Corporations, Municipalities and Nagar Panchayats are estimated as Rs. 2869 and Rs.1491; Rs. 962 and Rs. 790; and Rs. 982 and Rs. 424 respectively (ASCI 2014).

Table 1.7

Distribution of Municipal Revenues by Category of Urban Local Body: 2007-08, 2012-13 and 2017-18 (Percentage)

Sl. No	Sources of Revenue	Municipal Corporations			Municipalities			Nagar Panchayats		
		2007-08	2012-13	2017-18	2007-08	2012-13	2017-18	2007-08	2012-13	2017-18
A. Own Sources										
1.	Total Taxes	45.5	40.9	30.4	18.6	14.7	14.6	10.9	8.2	8.1
2	Non-Taxes	22.2	23.9	21.4	9.3	10.5	10	11.3	11.8	10.3
	Total Own Sources	67.6	64.8	51.8	27.9	25.2	24.6	22.1	20.1	18.4
B. Other Sources										
1	Government of India Transfers	7.0	4.6	8.4*	8.4	7.3	19.2*	3.0	2.2	21*
2	Central Finance Commission Transfers	0.8	2.1		5.3	8.8		2.8	8.8	
3	State Assignment/ Devolution	11.4	12.6	26**	31.2	29.0	43.9**	63.1	49.9	54.7**
4	State Grant-in-Aid	10.4	12.2		24.2	23.8		6.9	14.0	
5	Others	2.7	3.8	13.8	3.0	5.8	12.3	2.1	5.2	5.9
	Total Other Sources	32.4	35.2	48.2	72.1	74.8	75.4	77.9	79.9	81.6
C	Total Revenue	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Government of India transfer + Central Finance Commission transfer

** Assigned revenues from state governments + devolution through State Finance Commission + state government grants-in-aid

Source: ASCI (2014) - based on data furnished by state governments to the Fourteenth Finance Commission of India; Mohanty (2016), Compiled from ICRIER 2019.

Table 1.8 presents the distribution of municipal revenues by source in the states of India in 2012-13 and 2017-18. Except in Maharashtra and Punjab, the dependency of ULBs on inter-governmental transfers is very substantial, exceeding 70 percent in the cases of Himachal Pradesh, Jammu & Kashmir, Kerala, Bihar, Madhya Pradesh, Uttarakhand, Odisha and Karnataka. The Maharashtra case is explained by the presence of octroi in Mumbai and local body tax (LBT) in other municipal bodies – which has been abolished by the Government of Maharashtra later; in Punjab, the municipalities have access to excise revenues.

Table 1.8

Distribution of Municipal Revenues by Source in India (Percentage): 2012-13 and 2017-18

Sl No.	State	Taxes		Non-Taxes		Central Transfers*		State Transfers**		Others	
		2012-13	2017-18	2012-13	2017-18	2012-13	2017-18	2012-13	2017-18	2012-13	2017-18
1	Andhra Pradesh	33.5	35.4	24.3	27.4	7.5	13	34.7	18.4	-	5.8
2	Arunachal Pradesh	NA	NA	NA	5.6	NA	NA	NA	94.4	NA	NA
3	Assam	14.9	36.2	14.7	25.8	11.9	NA	23.3	38	35.2	NA
4	Bihar	13.2	5.1	5.2	1.2	28.4	32.9	52.5	60.8	0.8	NA
5	Chhattisgarh	36.1	34	25.4	18.5	17.3	26.9	6.7	2.5	14.6	18.1
6	Goa	14	21.4	32.4	25.5	0	15.3	22.8	23.4	30.7	14.3
7	Gujarat	18.8	33	12.1	14.1	5.4	8	57.1	35.2	6.5	9.6
8	Haryana	18.5	12.7	24.3	12.4	14.9	14.3	37.6	60.5	4.9	NA
9	Himachal Pradesh	10.6	11.3	20	19.6	37.2	21.8	32.2	47.3	NA	NA
10	Jammu and Kashmir	6.1	4.6	5.5	4.3	31.5	3.9	56.9	83.8	-	3.3
11	Jharkhand	2.1	4.9	7.4	3.9	11.2	40.7	79	50	0.3	0.5
12	Karnataka	20.2	19.7	8.8	7	17.8	9.1	53.2	62.3	-	1.8
13	Kerala	9.8	14.6	5.9	8.6	39.1	22.6	45.1	54.2	-	NA
14	Madhya Pradesh	10	32.3	8.6	10.4	8.8	6.9	69.2	42.2	3.4	8.2

Sl No.	State	Taxes		Non-Taxes		Central Transfers*		State Transfers**		Others	
		2012-13	2017-18	2012-13	2017-18	2012-13	2017-18	2012-13	2017-18	2012-13	2017-18
15	Maharashtra	53.2	33.2	29.9	32.2	3.8	2.6	9.8	8.8	3.4	23.2
16	Manipur	1.6	1.8	1.6	2.6	59.7	50.4	34.3	43.6	2.5	1.4
17	Meghalaya	24	51	10.4	8.9	46.6	0	11	22.3	7.6	17.8
18	Mizoram	8.4	6.3	3	4.5	75.3	46.3	13	43	0	NA
19	Nagaland	79.8	69.1	19.2	23	0	0	NA	8.4	0	0
20	Odisha	10.2	4.7	9.2	5.5	41.4	17.1	33.7	67.4	5.5	5.3
21	Punjab	69.2	66.6	16.8	15.4	8.9	13.5	2.8	1.7	2.3	2.9
22	Rajasthan	7	15	32.1	17.5	12	18.2	47.7	44.1	1.3	5.2
23	Sikkim	8.5	4.9	51.2	36.9	2.4	34.5	33	23.8	3.6	0
24	Tamil Nadu	21.6	16.4	12	13.4	6.6	13.4	56.6	27	3.2	29.8
25	Telangana	NA	35.8	NA	30	NA	6.8	NA	27.4	NA	6.7
26	Tripura	1.5	2.6	2	2.8	25.6	5.6	27.8	51.1	43	37.9
27	Uttar Pradesh	10.8	7.5	5.6	6.1	10.4	18.1	54.7	56.7	18.6	11.5
28	Uttarakhand	5.9	6.5	3.4	4.6	7.6	27.9	69.3	61	13.8	0
29	West Bengal	20.1	10.3	19.1	9.6	13.7	38.4	46.2	37.7	0.8	4
30	India	32	25	19.7	17.7	9.5	12	34.5	32.4	4.4	12.9

* Government of India transfer + Central Finance Commission transfer

** Assigned revenues from state governments + devolution through State Finance Commission + state government grants-in-aid

Source: ASCI (2014) - based on data furnished by state governments to the Fourteenth Finance Commission of India; Mohanty (2016), Compiled from ICRIER (2019).

The problems of municipal finances in India are complex. These are rooted in the framework of India's fiscal federalism and the state of urban governance. Unlike many countries around the world, municipalities in India do not have access to income, sales, value added, goods and services, excise and business tax bases that keep pace with economic growth (see Table 1.9).

Table 1.9*Distribution of Tax Revenue Sources of Select Metropolitan Cities**

Name of City	Year of Data	Composition of Municipal Tax Revenues (% of Total)
Barcelona	2009	Property tax (64.7); VAT share (12.0); Sales tax (11.8); Vehicle tax (8.6); Construction tax (2.9)
Beijing	2009	Sales tax (39.3); Corporation income tax (22.5); VAT share (9.4); Individual income tax (9.3); Property tax (8.1); Deed tax (5.4); Construction tax (3.7); Stamp tax (1.7); Vehicle tax (0.6)
Buenos Aires	2007	VAT share (78.5); Property tax (9.0); Vehicle tax (8.7); Stamp tax (3.8)
Cape Town	2009	Utilities tax (68.2); Property tax (31.8)
Chicago	2009	Property tax (39.3); State sales tax share (9.6); Sales tax (8.5); Utilities tax (8.3); State income tax share (8.2); Gasoline tax (6.7); Telecommunications tax (6.0); Transportation tax (4.0); Amusement tax (3.3); Excise tax (2.7); Hotel tax (2.0); Other taxes (1.0)
Lima	2010	Property tax (58.8); Vehicle tax (22.6); Excise tax (8.3); Gambling tax (7.9); Other taxes (2.5)
Sao Paulo	2010	Sales tax (53.9); Property tax (38.2); Individual income tax (6.6); Other taxes (1.4)
Tokyo	2008	Individual income tax (42.4); Corporation income tax (23.9); Excise tax (5.6); Vehicle tax (2.0); Other taxes (7.2)
Delhi	2010	Property tax (88.8); Utilities tax (11.2)
Mumbai	2018	Property Tax - General (26.8), Water Tax (22.25), Sewerage Tax (21.61), Education Tax (11.43), Fire Tax (4.11), Street Tax (14.48), Tree Cess (0.006), Theatre Tax (0.04)
Bengaluru	2018	Property Tax (98.5), Advertisement Tax (1.5)
Hyderabad	2018	Property Tax- General (45), Sewerage Tax (12.5), Conservancy Tax (30), Lighting Tax (12.5)
Thiruvananthapuram	2018	Property Tax (55.4), Advertisement Tax (0.55), Profession Tax (41.53), Entertainment Tax (2.52),
Bhubaneswar	2018	Property Tax (74.3), Advertisement Tax (25.7)

* includes both own and assigned tax revenues

Source: Martinez-Vazquez (2013), p.204 and Budget and Accounts of Indian States

Property Tax is the most important source of “own revenue” for Indian ULBs. There are few other local taxes, including:

- Octroi or entry tax (which is now subsumed under GST)
- Local Entertainment Tax
- Advertisement Tax (which is now subsumed under GST)
- Tax on non-motorised vehicles
- Taxes on animals
- Tolls
- Profession Tax

Further, with the advent of the new GST regime, several traditionally local taxes have been subsumed (Table 1.10). With octroi, entry tax, and advertisement tax abolished, and States appropriating ‘local’ taxes such as entertainment tax, tax on sale or consumption of electricity, profession tax, motor vehicles tax, and duty on transfer of urban property over the years, the financial condition of the municipalities in India lies severely constrained. The advent of GST has accentuated the financial problems of the municipalities as consumption-based taxes like octroi, entry tax, etc. can no longer be assigned to them by the States under the GST regime.

Table 1.10

Taxes subsumed under GST

Central Level	State Level
1. Central Excise Duty	1. State Value Added Tax
2. Duties of Excise (Medicinal and Toilet Preparations)	2. Entertainment Tax (other than the tax levied by the local bodies)
3. Additional Excise Duty	3. Central Sales Tax (levied by the Centre and collected by the States)
4. Service Tax	4. Octroi and Entry tax
5. Additional Customs Duty commonly known as Countervailing Duty	5. Purchase Tax
6. Special Additional Duty of Customs	6. Luxury tax
7. Cesses and surcharges in so far as they relate to supply of goods or services	7. Taxes on lottery, betting and gambling
	8 Taxes on advertisements
	9. Cable Tax
	10. State Cesses and surcharges in so far as they relate to supply of goods and service

Source: www.cbec.gov.in

With the advent of GST several taxes like octroi including accounts-based octroi in the form of local body tax, entry tax and advertisement tax got subsumed. Further, no replacement for these taxes have been designed. Wherever such taxes are collected by state governments, they are reluctant to share the tax proceeds with ULBs. Octroi was a buoyant source of revenue for ULBs. Mumbai was the last ULB to abolish Octroi, and revenue from “other taxes” witnessed a 20 percent fall in 2017-18 following this abolishment. Currently, profession tax and entertainment tax are the significant “other taxes” with ULBs. However, to the dismay of municipalities, these taxes are levied by state governments and proceeds are partly shared with ULBs. Profession tax is of significant importance in the Municipal Corporations of Tamil Nadu and Kerala. It contributed 7 per cent to Chennai Municipal Corporation’s revenue and 11 per cent to Thiruvananthapuram Municipal Corporation’s revenue in 2017-18 (ICRIER 2019). This sets an example for other ULBs. Entertainment tax on the other hand, remains mostly insignificant. States such as Haryana, Gujarat, Madhya Pradesh, Maharashtra, Kerala, Punjab, and Tamil Nadu have levied entertainment tax as an urban local tax over and above the GST levied, on entertainment centres. The Municipal Corporations of Kerala, had the highest nominal entertainment tax revenue amongst the Municipal Corporations. However, the figures are not very impressive.

While the finances of municipalities are in a sorry state, the expenditure requirements of municipalities are huge. In terms of absolute requirement, McKinsey (2010) points out that India needs to spend Rs. 9.74 million crores on its cities by 2030, with Rs. 5.31 million crores for capital expenditure. The largest demand of capital funding would come from affordable housing – almost one-third, followed by mass transit. If we exclude affordable housing, the capital expenditure required till 2030 would be Rs. 3.54 million crores. The High-Powered Expert Committee (HPEC) for estimating the investment requirements for urban infrastructure services (2011) estimates that India would need Rs. 3.92 million crores for urban infrastructure over the period 2012-31. If operation and maintenance costs are added, the figure would be Rs. 5.92 million crores. Table 1.11 presents the expenditure needs of core urban infrastructure sectors in India based on HPEC (2011). As it shows the largest demand for funds would come from road sector, followed by urban transport, water supply and sewerage. The operation and maintenance norms adopted by HPEC (2011) suggest that municipalities in India spend about 20 per cent of what is needed for efficient delivery of civic services. A Reserve Bank of India study, using data of 35 metropolitan municipal corporations for 1999-2000 to 2003-2004 also found that these corporations are subject to massive ‘under-spending’ relative to normative

requirement – varying between 94.43 per cent for Patna to 30.78 per cent for Pune. The average under-spending was 76 per cent (Mohanty et al. 2007).

Table 1.11

Expenditure Estimates for Core Urban Sectors in India 2012-31 (Rupees at 2009-10 Prices)

Sector	Total Capital Expenditure (Rs. Crore)	Total Operations & Maintenance Expenditure (Rs. Crore)	Average Per Capita Investment Cost – Rs.	Average Per Capita O&M Cost (Annual - Rs)
Water Supply	3,20,908	5,46,095	5,099	501
Sewerage	2,42,688	2,36,964	4,704	286
Solid Waste Management	48,582	2,73,906	391	155
Urban Roads	17,28,941	3,75,267	22,974	397
Storm Water Drains	1,91,031	34,612	3,526	53
Urban Transport	4,49,426	3,04,386	5,380	371
Traffic Support Infrastructure	97,985	36,690	945	34
Street Lighting	18,580	4,717	366	8
Total (Core Sectors)	30,98,141	18,12,637	43,385	1,806

Source: High Powered Expert Committee on Urban Infrastructure Report (2011) pp.69-84

Sadly enough, the already financially weak municipalities suffered further with the emergence of the Goods and Services Tax (GST). GST has subsumed local taxes such as octroi including accounts-based octroi in the form of local body tax, entry tax and advertisement tax. While the entire municipal revenue system in India in the post-GST era needs to be drastically overhauled, paradoxically, cities in India have not harnessed the instruments of benefit taxation to generate resources for financing planned urban development. In particular, they have not exploited land and property taxes already assigned to them. These are important benefit taxes suitable for local governments to finance collective services and infrastructure facilities in cities, creating direct, indirect and induced benefits to land and property owners and the city residents in general. However, the subject of benefit taxation in India is grossly neglected by research in India, as is urban public finance. The principle suggests that “beneficiaries pay”. This includes “users pay”, regarded as the “first-best” principle to finance public services. By corollary, those who create dis-benefits to the society pay for the mitigation costs; congesters

pay, polluters pay and growth pays. The fiscal equivalence, correspondence and subsidiarity principles in fiscal federalism consider the internalisation of benefits and costs in a geographically defined area as a sound basis for local government organisation. Urban economics suggests that cities create benefits in multifarious ways due to their powerful externalities. New economic geography refers to the cumulative and circular causation forces in the spatial economy, leading to benefits to mobile factors of production in terms of ‘agglomeration rents’ due to interactions between scale economics, externalities and transport costs. The local public finance literature refers to phenomenon of capitalisation: urban infrastructure investments and public services along with taxes capitalise into land and property values. Infrastructure, land use planning, zoning, land development rights, and amenities and services in cities lead to large unearned benefits and location rents. The Stiglitz-Piketty debate on the causes of rising wealth inequality around the globe points to the importance of rents: land rents, monopoly rents and other unearned benefits accruing to fixed and mobile factors, including capital. It is puzzling that there is no research on the taxation of various forms of unearned rents to finance core urban infrastructure, creating benefits and values and making benefit creation, capture and recycling a foundational paradigm for reforming urban finance in India. This thesis makes a strong case for the design of reforms based on the benefit principle

1.5. Centrality of the Benefit Principle

The existence of dynamic externalities in cities provides them with the opportunity of “self-finance”. Cities enhance productivity and reduce cost of transaction and transportation. City externalities, urban planning, land use regulations and infrastructure investments also get capitalised into land and property values. Thus, ULBs can make the beneficiaries in the spatial economy pay for the services and infrastructure facilities which benefit them, capture and recycle benefits to generate further investments and benefits. The presence of agglomeration and network externalities also accentuates the need for local government and proper revenue management is intrinsic to a sound local government system. There are two key principles of local revenue management (Freire and Garzon 2014):

1. The services that municipalities provide should be clearly linked to the revenue sources needed to finance them.
2. Services should be financed by their beneficiaries— “the general benefit principle”— directly or indirectly.

The benefit principle of public finance states that taxes should pay for public-goods expenditures on a politically-revealed willingness to pay for the benefits received. In other words, the community should be provided with utility corresponding to the necessary sacrifice due to taxation. If one aim of policy is to ensure that the public sector operates efficiently, it is important to establish as clear a linkage between expenditure and revenue decisions as possible – to strengthen what Breton (1996) calls the Wicksellian Connection.

If the benefit principle in this sense of a link between taxation and spending – the Wicksellian Connection – is central to achieving the aims of fiscal decentralization, charging for public services and earmarking revenues to the services provided should be equally central to a sound local finance system. In such a system, expenditure responsibilities would be matched with revenue resources, revenue capacities matched with political accountability, and benefit areas matched with financing areas (Bird and Slack 2015). Whenever possible, services provided by the public sector should be sold to those who receive them and the revenues yielded by such sales should be sufficient to pay for the cost of providing the service. The application of benefit principle in local finance, where local authorities make service provision for the last (marginal unit) in accordance to the willingness to pay of the users or charge according to the benefits users receive; can help to establish a local government characterised as “effective, efficient and accountable”.

The emergence of the “benefit theory of taxation” can be found in the doctrine of natural law of the 17th and 18th century. Physiocrats brought the principle into existence. These doctrines advocated that the protection assured by the state forms the ground for levying taxes. This typical view of the benefit principle found expression in the works of Hobbes (1651), Petty (1667), Von Justi (1755), Pufendorf (1672), Grotius (1625) and Locke (1690), with certain variations. The broad idea behind the theory was that taxes depict the price of public provisions and services.

Adam Smith talked about the benefit principle of taxation: “*The subject of every state ought to contribute towards the support of the government, as nearly as possible, in proportion to their respective abilities; that is, in proportion to the revenue which they respectively enjoy under the protection of the state*” (Smith, 1776). The principle of benefit and ability to pay are thus both present in his views, leading to the concept of benefit-as-ability-based taxation. Smith also argued that, local public works such as roads and bridges should be financed and managed by the appropriate local government and paid for by those who use them (Bird and Slack 2017).

Wicksell (1896), whose insights laid a foundation for modern public choice theory, tried to design a more equitable and efficient tax system. Wicksell envisioned creating a tax system that assigned tax shares to correspond to each taxpayer's benefit from the public expenditure, anticipating Lindahl (1919) pricing. Wicksell's idea was to ensure that tax shares corresponded to Lindahl prices by requiring an approximate unanimous agreement among taxpayers before undertaking public expenditures. Wicksell (1896) stated that, "*No-one can complain if he secures a benefit which he himself considers to be (greater or at least) as great as the price he has to pay.*" According to Lindahl pricing, individual must pay a marginal price equal to the marginal benefit the individual receives from consuming the good. The benefit taxation principle is clearly embodied in the works of Wicksell and Lindahl.

Perhaps there can be no better level of application of the benefit principle than to cities which arise and grow due to their externalities. Cities generate external economies of agglomeration and networking. Infrastructure and civic services provided by local governments accentuate the benefits due to these externalities. These get capitalised into land and property values. Many economists believe that such increments and windfall gains accrue to land owners without any active contribution, so it is ideal to levy a charge in lieu of the services which result in such gains. Considering that landowners belong to a special order, benefitting disproportionately from good governance of the state, Smith (1776) made a strong case for taxation of land rents to finance government expenditures. John Stuart Mills (1909) stated that "*land rents are created by circumstances and unexpected windfalls in land values justify for expropriation.*" Such views are also articulated by Henry George (1879) who vouched for a single tax on land value. George vehemently argued that land value or rent did not result from individual enterprise; rather it owed to the progress of society that resulted from community effort. Alfred Marshall (1926) supported taxation of site value and stated it to be analogous to taxing monopoly profits. Pigou (1927) advocated the levy of tax on windfalls. Benefit principle forms the very foundation of all these views. Benefits enhance not only land rents, but also other forms of rents such as monopoly rents, unearned increments accruing to natural resources and capital, and rents due to external economies.

Musgrave (1959, 1985) emphasised that, the benefit principle works as a principle of tax equity, under which the citizen pays a tax equivalent to the benefit received from the activity of the State, except in those cases where it may be necessary to mitigate the distribution of the tax burden with the principle of ability to pay. Rousseau, Montesquieu, Condorcet and Sismondi made assessment of the benefits from state protection, reached the conclusion that

the wealthy were the most advantaged, and that progressive taxation should follow from the application of the benefit principle.

The benefit principle has several advantages. First, it makes the public authority more responsible and accountable for proper service delivery. Second, it increases the willingness of citizens to pay taxes as they see a close link between the tax they pay and the benefit they get. Third, it ensures the availability of resources to fund viable projects that meet the benefit-cost test. Fourth, it urges the beneficiaries of rents due to powerful urban externalities, linked with the operation of market forces and government policies to contribute towards funding planned urban development.

There is perhaps no better level of government for the application of the benefit principle of public finance than the city. Urban economics argues that cities form and grow to reap benefits from externalities. Cities offer several economies to several economic actors due to the interactions between market forces, externalities and public policies. Economic activities subject to scale economies agglomerate. Firms, households and institutions choose to collocate in cities to harness the economies of agglomeration and networking, leading to enhanced productivity and reduced cost. These economies are strongly impacted by public policies, including land use planning, zoning, development management regulation, investment in core urban infrastructure facilities, including health care and strategy of economic growth. For example, the value of land parcels in an urban area increases by leaps and bounds when such parcels are assigned higher order use such as ‘commercial’ or higher Floor Space Index (FSI) – defined as permissible built-up area divided by plot area. Similarly, when a major urban transportation project such as ring road or public transit is implemented, properties at vantage locations gain from benefits of accessibility. These considerations suggest that the definition of benefits in cities needs to be expanded far beyond those accruing to the users of civic services. Benefits may be direct, say those accruing to users of civic services like water supply or street cleaning and indirect, say, those leading to increase in land and property values, or decrease in traffic congestion or environmental pollution.

The “benefit principle”, with benefit defined broadly to include direct, indirect, externality-induced, infrastructure, public policy and related benefits, is the bedrock of local public finance for two three reasons. First, it guarantees adequate resources for worthwhile projects that pass the “benefit-cost test”. Second, it acts against resistance from taxpayers, increasingly becoming common in cities. Third, it promotes good urban governance by linking services provided by public authorities with taxes paid. Of course, the first principle for the design of a good local public

finance system is that direct beneficiaries or “users” pay. Users of services must pay for consumption of civic services when these can be measured and beneficiaries can be identified. However, there are many collective services like roads, storm water drainage, street lighting, fire services, etc. where identification of beneficiaries or measurement of services is difficult. In such cases “benefit taxation” is appropriate. When benefit taxes are not adequate, other taxes and inter-governmental transfers are required. For long gestation projects, whose benefits extend to more than one generation, debt-financing is appropriate. In this context, the theory of urban public finance suggests some guiding principles to direct how financing can be done for specific municipal functions. These principles, called the “golden rules of urban public finance” are guided by the benefit taxation paradigm. These principles reflect on the following policies for designing municipal finance reforms (Bahl and Linn 1992):

- Where the benefits of public services are measurable and accrue to readily identified individuals in a jurisdiction, user charges are the most appropriate financing instruments;
- Local public services such as administration, local roads, traffic control, street lighting, and public safety and security, which are services to the general public in the sense that identification of beneficiaries and measurement of benefits and costs to individuals are difficult, are most appropriately financed by benefit taxes levied on local residents;
- The cost of services for which significant spillovers to neighbouring jurisdictions occur (e.g., health, education and welfare), should be financed substantially by state or national inter-governmental transfers; and
- Borrowing is an appropriate source to finance capital outlays on infrastructure projects, particularly public utilities, highways and transit where investment requirements are very large and benefits accrue to generations.

Properly designing and implementing user fees not only provides adequate funds for financing local services but also reflects on the demand for services i.e. how much service should be provided, to whom it should be provided and of what quality. Properly designed user charges lead to better utilisation of scarce public resources more efficiently because people are given “what they want and are willing to pay for instead of what someone else decides they should have.” In terms of the “own sources” revenue side Wicksellian Connection also prices or user charges are stronger than general taxes. Another benefit of user charges is that it curbs over consumption. If consumers do not pay for the consumption of a particular service, they attach

nearly zero value to the last unit consumed. If services are free, people will consume more than they would have if they were required to pay. Thus, free service, under-pricing or subsidisation not only results in over and wasteful consumption but also necessitate unnecessary investment in expansion of certain services.

The benefit principle suggests that whenever imposition of a pricing mechanism or user charges is not possible or not desirable (e.g. when it is costly to administer), local expenditure may be carried out by linking “service benefit areas to the spatial dimension of the financing sources.” Local residents should be made to pay for local services through taxes. To the extent possible and acceptable even non-residents should be subject to such benefit levies. To the extent possible, local services should be financed through local charges and taxes. Exceptions may be made when there is a clear rationale for meeting such costs either partly or entirely through transfers from the upper tiers. Only when local charges and taxes are not adequate due to reasons such as free ridership, spillover of benefits, lumpiness of infrastructure facilities and need to make investment to attract economic growth and generate external economies, other sources of revenues including inter-governmental transfers need to be explored.

The Wicksellian Connection draws several robust inferences regarding local public finance. Bird and Slack (2014) refer to the policy implications of this principle:

- Whenever possible, local services should be charged by local governments (Bird, 1993);
- Local property taxes could serve as a surrogate for user charges (Hamilton, 1976);
- Non-residents should not be over-burdened with heavy property taxes. However, they may be made to pay an amount lesser than the residents of that area (Bird, Slack, and Tassonyi, 2012);
- Non-residents may be charged sales taxes or local payroll taxes to finance the local services (McLure, 1998);
- Tax-exporting should be kept away (Bird, 1993);
- External benefits and spillovers should be internalized and met by intergovernmental transfers (Break, 1980; Oates, 1999).

Sadly, tax sharing and intergovernmental grants play an essential role in sub-national government revenue rather than benefit principle (Kim 2015). Swianiewicz and Łukomska (2013) state in the context of Poland that budget maximization determines the municipal budget

and not the Wicksellian Connection. However, this holds for most municipalities globally, especially in India. Theory and practice do not seem to be in sync with each other. Expenditures and revenue decisions are mostly made independently.

In the context of municipal finances, practice seems to be disjoint from theory. In principle, for designing local taxes optimally, first, the requisite size and desired nature of local expenditures should be determined. This should be closely followed by a tax or transfer system which would incentivise local authorities to choose to finance exactly that expenditure bundle. However, in reality, decisions regarding the revenue and expenditure sides of local budget are generally made independent of each other. Mostly, state government makes these decisions with very less or no local input. Thus, local expenditures are not linked to local revenue policies and accountability of local authorities is “confused and confusing.”

A close linkage between taxation and spending and joint decisions regarding both simultaneously and by the same authority would render local governments more successful in terms of service provisions. With the application of the benefits principle, a close linkage has to be established between service delivery and taxes raised. This not only increases the willingness to pay of the tax payers but also improves the responsiveness of the service providers or public authorities. Linking taxes and expenditures at the local level might be done by establishing the necessary foundations such as (1) incorporating a municipal finance list in the Constitution and municipal law subscribing to the benefit principle; (2) providing local authorities and citizens access to an improved information base; (3) better technical support (e.g. in establishing good pricing systems); and (4) an appropriate “local equalization transfer system” to enable authorities to provide services efficiently at least cost.

Local governments are important both in theory and practice and there is a sound economic rationale behind the establishment of competent local governments. However, there are several less discussed questions like: “what benefits are provided by local government?”; “Who benefits from these services and how much?”; “Who pays for these benefits and how?”; “Who gets the payments and who has the instruments to tax benefits?” India is urbanising rapidly and simultaneously the responsibilities of ULBs are also rising. However, municipalities are not financially positioned favourably to execute these functions. The major factor behind this being the “lack of implementation of theory in practice.”

Apart from generating myriad opportunities, cities present numerous benefits to city dwellers—cities host agglomeration economies that arise due to the collocation of economic activities, firms, and households. Agglomeration theories explain the phenomenon of city

densification, which emerges due to reducing costs, enhancing productivity, exploiting forward and backward linkages, etc. Cities benefit workers who can explore the opportunity to switch jobs and employers using a larger pool of skilled workers. Cities also promote the economies of learning, matching, and sharing and facilitate innovation (Duranton and Puga 2004). City externalities translate to increments in land and property values, and windfall gains accrue to owners of such land and property. Cities thus have the potential to generate adequate finances for local governments. However, to a certain degree, diseconomies in the forms of congestion and pollution creep into the system. At the same time, city externalities present a case for benefit-based taxation; dis-benefits may also be taxed. The existence of economies and diseconomies in cities presents a strong case for application of “general benefit principle”. However, this principle has been grossly neglected both in research and policy. This study is an attempt to explore the benefit principle and its application in India through reforms in the system of urban finance.

1.6. Motivations Behind the Study

Cities are a source of revenue for all the tiers of government. McKinsey (2010) reveals that 80-85 percent of public finance in India over the next two decades will be generated by cities. However, Indian city governments operate on a weak foundation with regards to their “own” finances. They are subject to a big fiscal gap due to discrepancies between their revenue and expenditure assignment framework. The existing financial set-up in the majority of the cities makes it difficult to meet even the necessary expenses including establishment costs, operation and management. They suffer from a “rich city - poor city government” syndrome. This is a highly significant issue since finances lie at the heart of providing infrastructure and services required by households and firms in cities. These in turn facilitate and augment the externalities of agglomeration and determine the contribution of cities towards employment, public revenue and GDP.

Piketty in his best seller book, *Capital in Twenty-first Century* (2014) highlights the tendency of the rate of return on capital (r) exceeding the rate of economic growth (g) over the long term, resulting in the concentration of wealth and unequal distribution of income. Where r includes profits, dividends, interest, rents and other income from capital, g is measured in income or output. Piketty proposes a global system of progressive wealth taxes to help reduce inequality. However, Stiglitz (2015) argues that Piketty’s logic confuses between capital and wealth. According to him, a large fraction of the increase in wealth is due to increase in the value of land, monopoly rents, and other forms of rents – not the amount of capital goods.

It is the unearned increment in the value of urban land that Stiglitz specially talks of. In this context, urban economics suggests that cities are the reservoirs of agglomeration and network economies and these externalities, operating in conjunction with market forces and public policies such as spatial planning and provision of infrastructure and civic services, lead to substantial increases in land and property values and rents. City firms and households draw unearned benefits from these urban externalities. If the municipal revenue system is designed properly to tap such benefits and the municipal expenditure system is structured to ensure that such expenditure leads to the creation of adequate benefits, then the Wicksellian connection could ensure adequate finances for cities in developing countries like India to meet their expenditure needs. Stiglitz's new theoretical perspectives suggest that the taxation of rents in various forms including those to land and capital in cities can be a key strategy to apply the benefit principle to finance planned urban development.

The Covid 19 pandemic disturbed the fiscal structure of all the three tiers of government in several ways in terms of loss of tax base as well as revenue. It put additional strain on the public authorities by necessitating higher expenditure on healthcare, vaccination, medical facilities, isolation centres, relief to the section who lost their livelihood owing to the pandemic and stimulation of post-pandemic growth. The local governments are argued to be better equipped to face the challenges of the pandemic and design suitable interventions on the grounds of the subsidiarity and decentralisation principle. But the pandemic further increased the gap between their revenue and expenditure. The Covid-19 exposed the condition of health care infrastructure in India. The lack of doctors, paramedics, beds, quarantine centres, ICUs, ambulance, medicines, etc. brought to the fore the exigency of reviewing the existing conditions, strategy and approach towards pandemic management, including strengthening of local governments in pandemic management and preventing the spread of corona virus. Sadly enough, several states have lacked in transfer of “funds, functions and functionaries” to local governments. Additionally, the pandemic also fuelled the need for appropriate spatial planning, housing and adequate infrastructure facilities, including waste management, health and medical care - especially in urban areas. The pandemic has made public authorities more cautious towards building more resilient cities and rejuvenating old cities. All these factors point towards reprioritising expenditures, raising additional revenue through innovative models, efficient administration, policy reforms and ensuring accountability in public spending.

This thesis draws motivation from the works of Adam Smith, Henry George, Wicksell, Lindahl, Buchanan, Musgrave and Stiglitz and combines their theories with urban economic

perspective to apply the principle of “benefit taxation” to Indian cities. Attempts at designing and reforming municipal finance regime devoid of theory does not lead to the desired results. This is the major motivation behind the current study. Another driving force behind the study is the successful adoption of innovative practices in several local bodies around the globe. These practices draw upon theory and practice and have improved the revenue generated. Thus, Indian policymakers need to appreciate both theory and practice of benefit taxation.

1.7. Research Objectives

The present thesis: From Wicksell to Stiglitz: Lessons for Urban Finance Reforms in India is concerned with the benefit principle of public finance and suggests its application in Indian Municipalities to bring forth reforms in the urban finance structure. The broad objectives of the study are furnished below:

- To study theory and practice to identify the causes of municipal fiscal stress in India and to examine the factors behind the neglect of the benefit principle in the urban public finance system in India.
- To explore the works of Smith, George, Wicksell, Lindahl, Buchanan, Musgrave and Stiglitz to learn lessons for the designing of benefit taxation as an instrument of urban public finance.
- To broaden the definition of benefit to include direct as well as indirect benefits in cities, including externality and public policy induced benefits and establish the case for reforming property tax as a benefit tax.
- To undertake an empirical study to analyse the trends and issues of finances of the municipal corporations of Hyderabad, Bengaluru, Mumbai, Thiruvananthapuram and Bhubaneswar.
- To draw lessons from theory, empirics and successful practices on “benefit taxation” and the “Wicksellian connection” so as to suggest municipal finance reforms in India in order to strengthen the municipal finance and governance.

1.8. Methodology and Data

The research is a combination of theory and empirical work. It attempts to develop a new theoretical perspective, combining the theories of benefit taxation from Wicksell to Stiglitz and urban economic theory, with focus on agglomeration externalities. Empirical work involves quantitative analysis. Data is collected from the RBI Handbook of Statistics on Indian States,

ICRIER Study prepared for the 15th Finance Commission, budget and accounts of the municipal corporations under study. A case study of the major sources of revenue of the Municipal Corporations of Bhubaneswar is undertaken to understand the structure of own revenue and transfers and determine the fiscal autonomy. Further a comparison has been drawn between the municipal corporation of Bhubaneswar and Hyderabad, Bengaluru, Mumbai and Thiruvananthapuram. There is a special focus on learning from the benefit principle of public finance to strengthen the finances of municipalities. The study also presents directions for urban finance reforms in India, with special focus on the city of Bhubaneswar in Odisha.

1.9. Organisation of Thesis

The thesis is divided into 6 chapters. Chapter 2 studies the theory of urban public finance and the role of benefit principle of taxation in this theory. It makes an assessment of several theories based on the benefit principle. Chapter 3 presents land and property taxes as benefit taxes. It discusses the economics of property tax, with property defined to include land. Property tax, after octroi was abolished due to the new Goods and Services Tax, remains as the sole municipal tax in India; it is associated with municipal fiscal autonomy and accountability. A property tax reform agenda is also chalked out in this chapter. Chapter 4 analyses the trends and issues of finances of the municipal corporations of Hyderabad, Bengaluru, Mumbai, Thiruvananthapuram and Bhubaneswar. Chapter 5 presents a theoretical framework for designing urban finance system in India based on the foundation of the benefit principle. It brings forth an urban sector reform agenda by drawing lessons from theory and practice so as to implement the “benefit principle” of taxation and strengthen the “Wicksellian connection”. Chapter 6 concludes and provides directions for future research.

CHAPTER 2

LOCAL PUBLIC FINANCE AND BENEFIT TAXATION: A SURVEY OF LITERATURE - FROM WICKSELL TO STIGLITZ

“Local government is the foundation of democracy; if it fails, democracy will fail.”

- Robert W. Flack

2.1. Role of the Public Sector

Economists have held different views regarding the role of Government and these views have evolved over time. Beginning from limited role specific to the promotion of trade and commerce and provision of national security, the need for Government intervention was gradually felt in providing social security and regulating competition. More specifically, economists came to a consensus over the fact that all economic functions cannot be undertaken by the market mechanism alone and there is a need for public policy to correct, supplement and guide it (Musgrave and Musgrave 1989, Stiglitz 2000). Since always, Government policies have had a significant impact on economic activities. Monetary, fiscal and regulatory policies and other devices channelized by Government, influences the actions of different economic agents.

Public Finance literature describes at length the need for government intervention. Taking care of market failures is one of the major reasons which advocate the importance of government along with the provision of defence services, maintenance of law and order, protection of property rights, facilitation of legal and administrative institutions and the like. A market failure is defined as a “circumstance in which the pursuit of private interest does not lead to an efficient use of society's resources or a fair distribution of society's goods” (Weimer and Vining 1999, p. 41). It could be a result of either production inefficiencies or allocative inefficiency or both. Market failure could also occur in the presence of externalities. A negative externality means that the social cost of production exceeds the private cost while a positive externality occurs when the social benefit of consumption exceeds private benefit. Imperfect

competition and monopolies could also lead to a market failure by resulting in under production or higher prices. A legal structure sanctioned by Government is required to provide protection and enable markets to operate effectively.

The existence of externalities results in market failure and calls for public sector intervention in the form of the mechanisms like: budgetary provisions, subsidies or taxes. These policy mechanisms influence economic activities in different ways and are designed to address several aspects. The broad objectives include the following:

1. Allocation Function: Government provides public goods. It determines the allocation or division of total resources between private and public goods while providing a mix of public goods.
2. Distribution Function: Government formulates policies to adjust the distribution of income and wealth in the society. This is undertaken with an intention of building societies which are considered to have a “fair or just state of distribution”.
3. Stabilization Function: Government works towards ensuring stability in the society. This function includes the pursuits to maintain a high rate of employment, price level stability, a healthy balance of payments and an appropriate economic growth rate.

Musgrave (1959) suggests that stabilization and distribution functions can be executed effectively by the national government and efficient resource allocation can be done by local governments. While national government brings out policies, the local governments play a crucial role in implementing the same.

The relative merits of decentralisation and a decentralised local government has long been contemplated by economists. The role of local government in highly significant resource allocation, policy implementation and civic services provision. According to Bird (1993), “so long as there are variations in tastes and costs, there are clearly efficiency gains from carrying out public sector activities in as decentralized fashion as possible.” Oates, in the “decentralized theorem” asserts the significant role played by local government. The theorem states that, “each public service should be provided by the jurisdiction having control over the minimum geographic area that would internalise benefits and costs of such provision” (Oates 1972 p. 55). Various accepted and celebrated theories vouch for a strong local government and decentralised decision-making structure, citing the reasons of accountability, efficiency, autonomy and manageability. Some of the theories are furnished below:

- **Stigler's Menu:** Stigler (1957) suggests that for designing jurisdictional limits two conditions must be considered. First condition states that a representative government works better when it is closer to the people. Second condition states that people should be allowed to decide the kind and amount of public services they need. These conditions suggest that in order to achieve the objective of allocative efficiency, decision making should be undertaken by the lowest possible level of government. However, the optimal jurisdiction size may vary taking into consideration benefit-cost spillovers and economies of scale.
- **Principle of Fiscal Equivalency:** Olson (1969) suggests that free-rider problem can be overcome by overlapping benefit area and political jurisdiction. This would ensure the required equality between marginal cost of production and marginal benefit. Further, this would facilitate optimal public service provision. However, it suggests there should be separate jurisdiction for each public service, which may not be feasible for large countries.
- **Correspondence Principle:** Oates (1972) proposed a concept similar to the principle of fiscal equivalency. According to him, every public good providing jurisdiction should precisely constitute of the individuals who consume the particular public good. This suggests the existence of several overlapping jurisdictions.
- **Decentralisation Theorem:** Oates (1972) further suggests in the decentralisation theorem that, local governments are more suited for efficient provision of public goods as:
 - they effectively understand the needs and concerns of local residents
 - decision making at local level is more responsive towards the people for whom the services are designed. This stimulates fiscal responsibility and efficiency.
 - It can eliminate the need for several jurisdiction layers.
 - It encourages competition among the jurisdictions and enhances innovation.
- **Subsidiarity Principle:** This principle assigns a significant role to local governments by asserting that public expenditure, taxation and regulatory functions should be carried out by the local governments or lower levels of government unless there is a strong case for assigning these to higher levels of government. The subsidiarity principle is the opposite of the *residuality principle* which suggests that local governments are assigned the functions which the central government is not able to undertake or is unwilling to perform.

These theories along with several others exhibit the significance of the local governments. However, the ability to raise revenue is crucial for maintaining a strong local government. Several arguments run in favour of assigning adequate powers of local taxation to lower levels of government in order to finance their expenditures. This would eliminate the need to depend

on the grants and aids from higher levels of government. Sadly enough, Indian municipalities are one of the “weakest in the world” with regard to resource access, ability to raise revenue and fiscal autonomy. Further, their tax bases are narrow and non-buoyant. In addition to these, they do not put their assigned revenue sources to effective use. They depend on state governments for meeting their operational expenditures and salaries. The ratio of own tax revenue to total municipal revenues has been declining, wearing down fiscal autonomy. In such a scenario, the application of the ‘benefit principle’ can play a pivotal role in designing municipal taxes and reforming municipal revenue system.

2.2. Framework of Fiscal Federalism

The literature on fiscal federalism stresses on the gains from fiscal decentralisation. It is considered to be an optimal institutional arrangement for the provision of public services. It combines the advantages of decentralisation with the benefits from economies of scale. Federal Constitutions assign responsibilities and resources among the various tiers of government. They also provide for the distribution of borrowing powers between them, and mechanisms for correction of vertical and horizontal imbalances. The devolution of resources from higher to lower tiers of government to correct these imbalances and achieve federal objectives is the most significant dimension of fiscal federalism. In shaping intergovernmental relationships in actual practice, historical, social, linguistic and political factors have often played a far more important role than the considerations of economic efficiency (Bird, 1986).

The Constitution of India, while expressly assigning greater powers of taxation to the centre, stipulates an institutional mechanism – the Central Finance Commission – to determine the share of states in the revenues collected by the centre. While India is a Union of States and the local bodies are constituted under the State laws, with the enactment of the Constitution 73rd and 74th Amendment Acts 1992, there is a constitutional recognition of the local bodies as a third tier of government, preparing and implementing plans for economic development and social justice and performing functions as assigned. The 73rd Amendment Act has inserted the 11th Schedule containing 29 legitimate functions of rural local bodies into the Constitution of India; the 74th Amendment Act has included the 12th Schedule providing for 18 legitimate functions of urban local bodies. However, the Amendment Acts did not provide for a local finance list in the Constitution and the assignment of revenues to local bodies has been left to the state governments, subject to two constitutionally prescribed mechanisms to review the same – at the levels of the Central Finance Commission and the State Finance Commission.

The assignment of functions demarcates the spheres of responsibility of different governmental units. The demarcation of the sources of finance endows the ability and flexibility to different governmental units to undertake the functions assigned to them. Efficient assignment should provide sufficient flexibility to all governmental units to vary the levels of public service-tax mix at the margin to cater to the diversified preferences of the consumers (voters), minimise inter-jurisdictional tax and benefit (expenditure) spillovers and provide adequate finances to the Central government to undertake regional equalisation so that ‘competitive equality’ of the jurisdictions or ‘horizontal equity’ of individuals across the federation is established (Rao 1996).

The starting point of fiscal federalism is expenditure assignment. The Seventh Schedule of the Constitution of India (Article 246) includes three lists of functions: the Union List, the State List and the Concurrent List. The Union List covers all functions of national importance such as defense, atomic energy, foreign affairs, organization of the Supreme Court and High Courts, railways, national highways, major ports, airways, foreign loans, trade and commerce with foreign countries, inter-state trade and commerce, banking, insurance, stock exchanges and future markets, elections to the Parliament and State Legislatures, census, etc. The State List includes public order, police, prison, local government, public health and sanitation, hospitals and dispensaries, roads other than highways, agriculture, fisheries, water supplies, irrigation and canals, land, markets and fairs, and elections to local bodies. The Concurrent List includes criminal law and procedure, transfer of property, contracts, bankruptcy and insolvency, trusts, administration of justice, civil procedure, forests, economics and social planning, commercial and industrial monopolies, social security and social insurance, welfare of labour, education, factories, electricity, trade and commerce in certain goods, etc. Both the centre and states can legislate in the case of the Concurrent List functions. However, if a conflict arises, the central law will prevail.

The Government of India has been assigned the most productive and broad-based tax instruments under the fiscal federalism framework adopted by India. Under Article 292 of the Constitution, the central government is empowered to borrow from within and outside the country subject to limits imposed by the Parliament. Article 293 (2) empowers the central government to lend to states subject to limits prescribed by the Parliament. Under Article 293 (2), the states are empowered to borrow funds from within the country.

Fiscal decentralization to local bodies in India compares poorly with other developed and developing countries (Table 2.1). It may be noted that local bodies include both urban and rural

local bodies. Up-to-date data on finances of Panchayati Raj institutions in India is not available. However, a national study has reported that the total expenditure of rural and urban local bodies in India constituted a meagre 4.7 percent of the combined expenditure of the union, states and local bodies.

Table 2.1

Indicators of Fiscal Decentralization to Local Bodies 2008-09

Measure of Fiscal Decentralisation	Developed Countries	Developing Countries	All Countries
Expenditure Decentralisation (%)	22.6	14.5	17.8
Revenue Decentralisation (%)	16.3	9.4	12.2
Local Government Share in Combined Tax Revenues of Central, State and Local Governments (%)	16.2	10.2	12.7

Source: International Monetary Fund: Government Finance Statistics 2010 – Sample of 68 Countries; Mathur 2012

In theory, the considerations of local choice or preference, economies of scale and transaction costs determine the functional assignments among hierarchical governmental units. However, public service levels can be varied and local preferences can be more effectively met by the sub-Central governments only when the revenue handles to finance these services are also assigned to them. Linking revenue raising to expenditure decisions at the margin is critical to provide the necessary incentives and to ensure accountability in the provision of public services at decentralized levels. However, the mismatch between functions and finances of the third tier has resulted in poor public service delivery and has further burdened the municipalities financially. Devoid of theory and lessons from successful practices, the federal system in India has made municipalities dependent on the higher tiers of government. An efficient system requires a financially sound third tier. The application of the benefit principle can be a major step towards financially strengthening municipal bodies in India to enable them to discharge the functions assigned under the Constitution 74th Amendment Act 1992 and act as engines of growth.

2.3. Theory of Public Goods

Adam Smith proposed the idea of a ‘public good’ which according to him should be financed through taxation. He observed that apart from the benefit of ‘protection’ provided by government, there are some goods which despite being highly desirable and indispensable for the society cannot be provided by the market efficiently. Such goods could be roads, infrastructure, defence, justice etc. These goods are necessary *“for facilitating the commerce of the society” and “for promoting the instruction of the people”*. As per him:

“though they may be in the highest degree advantageous to a great society are, however, of such a nature that the profits could never repay the expenses to any individual or small number of individuals and which it therefore cannot be expected that any individual or small number of individuals should erect”(Smith,1776)

Public goods are different from private goods and cannot be made available through the market mechanism. The market might fail entirely or function inefficiently for these goods. The consumption of such goods is non-rival and non-excludable. “Non-rival in the sense that one person's partaking of benefits does not reduce the benefits available to others” (Musgrave 1989). Non-excludable means no one can be effectively stopped from consuming such goods. In the words of Samuelson, public goods are:

“... (goods) which all enjoy in common in the sense that each individual's consumption of such a good leads to no subtractions from any other individual's consumption of that good” (Samuelson 1954).

Pure public goods can accommodate any quantum of users. For these goods, the marginal cost of adding an additional user is zero. In the case of congestible public goods, marginal cost is not zero. In case of pure public goods, it is either impossible or extremely expensive to exclude someone from consuming it. Table 2.2 shows the types of goods based on their rivalrous and excludability characteristics.

In the absence of government, the private sector would fail to provide pure or quasi-public goods adequately to meet the needs of people. Public goods are characterised by their non-rival and non-excludable nature: for example, defence, roads and highways, street lighting, health, education and so on. These characteristics of public goods can result in uncoordinated markets. There is a lack of private initiative in the provision of such goods due to higher cost and longer gestation period before full benefits or costs are realised. In the absence of government intervention there will be an under provision of such goods.

Table 2.2*Types of Goods Based Degree of Rivalry and Excludability*

	Excludable	Non-Excludable
Rivalrous	Private Goods Example- Food, Clothing, Furniture, Cars, Toys etc.	Common Pool Resources Example- Fish, Hunting games, Water, Air etc.
Non-rivalrous	Club Goods Example- Social and Religious clubs, Cable Television, Private Golf Courses etc.	Public Goods Example- National Defence, Fire Brigade, Law etc.

Source: Author's Compilation

There are several other problems associated with public goods. No consumer wants to voluntarily pay for such goods unless there is a proper mechanism in place to charge the users. Many people get access to the public goods even without making any contribution and free-rider problem becomes highly prevalent in such cases. In these circumstances, determining the optimal quantity of public goods to be provided becomes challenging. The following model provides a guide for determining the optimal level.

Let, there be H households in the economy, indexed by $h=1,2,\dots,H$.

There is a private good, X and a public good, G .

For, household h , the demand for the private good is X^h and the demand for the public good is G^h .

We have, $\sum_h X^h = X$, i.e. aggregate demand for the private good, X is equal to the sum of individual demands.

Further, $G^h = G$ for every h , since, public good are non-rivalrous and non-excludable.

Utility of household h is given by $U^h = U^h(X^h, G)$.

Social Welfare is equal to the weighted sum of utilities. β^h = weight on h in social welfare.

Where, $\beta^h \geq 0$ and at least one $\beta^h > 0$.

For Pareto efficient outcomes, we have to optimise the following Social Welfare Function given the production possibility constraints:

$$\text{Maximise } \sum_h \beta^h U^h (X^h, G) \quad \dots 1$$

$$\text{Subject To: } F(\sum_h X^h, G) \leq 0 \quad \dots 2$$

The First Order Conditions are:

$$\beta^h U_X^h = \lambda F_X \quad \dots 3$$

$$\sum_h \beta^h U_G^h = \lambda F_G \quad \dots 4$$

From 3,

$$\beta^h = \lambda \frac{F_X}{U_X^h} \quad \dots 5$$

Putting 5 in equation 4,

$$\sum_h \lambda \frac{F_X}{U_X^h} \cdot U_G^h = \lambda F_G$$

$$\Rightarrow \sum_h \frac{U_G^h}{U_X^h} = \frac{F_G}{F_X}$$

$$\Rightarrow \sum_h MRS_{GX}^h = MRT_{GX} \quad \dots 6$$

Equation 6 is popularly known as the Samuelson Rule. It states the condition for Pareto efficiency is that the sum of Marginal Rate of Substitution between the public good, G and the private good, X for all the households is equal to the Marginal Rate of Transformation between the goods.

However, the Samuelson Rule can be applied only to pure public goods. In case of congestible public goods, where the marginal cost of adding an additional user is not equal to zero, this rule cannot be applied. The next section discusses the characteristics of club goods and local public goods.

2.4. Theory of Local Public Goods

The literature of public finance saw the introduction of the term “local public goods” in the works of Charles Tiebout in 1956. Tiebout suggested that among the public goods, a certain group of “local public goods” existed which required a decentralised mechanism in order to be provided optimally. He observed that this class of public goods are mostly provided by local

governments and are more severely subject to congestion than others. He asserts that congestion leads to the facilities being crowded and renders them less available and useful for others. In his words, “A city park, a stretch of roadway, a fire department, a school; these are available to everyone in the community, but for any given level of infrastructure the more people who use the facility the more crowded it becomes and the less it is available or useful to others. Using Musgrave's terminology, local public goods exhibit non-excludability but are not non-rivalrous; they are partially rival.”

In Tiebout's model, a bundle of public goods is provided by each jurisdiction or local community. People living in a particular jurisdiction enjoy the benefits of these goods and in turn are taxed equally for consuming these. In his model, the taxes paid are based on the benefits received. This concept was later popularised as the benefits view of local taxation, which is the concern of the present thesis. However, Tiebout's model does not consider any inter-jurisdictional interaction. As a result, the benefit spillovers among the jurisdictions (for instance, roads) are ignored.

The theory of clubs introduced by James Buchanan in 1965 is very close to Tiebout's theory. The development of club theory cleared several aspects related to local public goods. Clubs provide services only to the members and can restrict service provisions to the non-members. Similarly, local public goods are restricted to the members of a jurisdiction and are ideally provided only to the tax-paying members of the jurisdiction. In other words, both local public goods and club goods are partially rivalrous. However, like private goods, clubs are excludable while local public goods are non-excludable.

In a federal system, public goods ought to be provided by different levels of government according to the span of benefit on a spatial scale. Public goods with benefit span nationwide (e.g.: defence, foreign policy etc.) should be provided by Central government. Similarly, decentralisation may be considered appropriate for public goods of local concern. Thus, we have local, municipal, metropolitan, regional, provincial and national goods depending on their benefit spread (Breton, 1965, Olson, 1969, Oates, 1972). However, most of the public goods are not pure public goods but either clubs or local public goods. The mix and types of local public goods will depend largely on the possibility of recognising users, feasibility of excluding non-payers and viability of the model in terms of transaction costs of service provision. Factors like geography, population, usage level, technology etc. may introduce new local public goods or redefine existing ones. In some form or the other, these goods accrue benefits to the users and thus, benefit taxation is an appropriate instrument to finance local public goods.

2.5. Case for Benefit Principle

In order to raise revenues to finance public expenditures, governments across the globe, typically collect general taxes on income, consumption, or wealth, as well as more specific benefit taxes and user fees imposed on the presumed or actual beneficiaries of government expenditures. However, the later ones have not been exploited by Indian municipalities. This section is dedicated towards developing a case for benefit taxation and advocates its importance in financially strengthening Indian ULBs.

The theory of benefit taxation acts both as a justification for taxation as well as an explanation of how to allocate the burden of taxation. The benefit theory calls for a way to identify benefit that generates the obligation to pay tax.

The public choice approach also emphasizes the importance of the benefit principle, taking into account the fact that tax policy is the result of a political process and that political costs are associated with the tax system. The political costs are often ignored in economic analysis of taxation. There is a cost to government of legislating tax policy and there is a cost to those who want to influence tax policy to their advantage (through lobbying and guarding against changes). This political cost of the tax system presents a welfare loss or excess burden because it “causes people to substitute away from whatever is being taxed” (Holcombe, 1998: 360). Efficiency in terms of political cost considerations is assured when the benefit principle applies (Wicksell, 1896). This is because, as Holcombe (1998) explains, if the benefit principle does not apply, people will reveal preferences for receiving benefits paid for by others and against paying taxes for benefits received by others. This will create conflict between those who stand to benefit from the service and those who do not. The greater the match (i.e., the more the tax corresponds to the benefit principle), the smaller the political cost. This section enumerates the work and ideas involving benefit taxation as it evolved in literature.

Adam Smith

Benefit taxation principle has found expression in the works of Adam Smith. A significant part of his revered book, *The Wealth of Nations* (1776), is dedicated to the issues of taxation. He wrote:

"Such things as defending the country and maintaining the institutions of good government are of general benefit to the public. Thus, it is reasonable that the population as a whole should contribute to the tax costs. It is also reasonable to demand certain other things of a tax system – for example, that the amounts of tax individuals pay should bear some relationship to their abilities to pay..."

According to Smith, taxes should ideally be in proportion to the benefits derived by an individual from living in a particular jurisdiction or society. Proportionality should exist across different income levels and different sources of income like wage, rent and profit. In the following words he stresses on proportionality as the “general principle”:

“The subjects of every state ought to contribute towards the support of the government, as nearly as possible, in proportion to their respective abilities; that is, in proportion to the revenue which they respectively enjoy under the protection of the state.”

Smith uses the analogy of a joint venture to compare taxation to the “*expense of management to the joint tenants of a great estate, who are all obliged to contribute in proportion to their respective interests in the estate.*” Taxpayers are like shareholders. Larger shareholders in a venture contribute more while smaller shareholders contribute less. Thus, it can be inferred that Smith talks of the benefit principle and ability to pay principle of taxation simultaneously. According to him, income can assess a person’s ability to pay which in turn is a measure of the degree of benefits one draws from the state. In other words, Smith approved of “benefit as ability” taxation. Richard Musgrave (1959) termed Smith’s ideas as the “classical view of benefit-based taxation”. Smith further argued that landowners drew significant benefits from the services of the state, so he proposed taxation of land rent based on the above principle.

“Both ground-rents and the ordinary rent of land are a species of revenue which the owner, in many cases, enjoys without any care or attention of his own ...Ground-rents and the ordinary rent of land, are therefore, perhaps, the species of revenue which can best bear to have a peculiar tax imposed upon them.

Nothing can be more reasonable than that a fund which owes its existence to the good government of the state should be taxed peculiarly, or should contribute something more than the greater part of other funds, towards the support of that government” (Smith 1776: Book V, Chapter II: 356).

Prior to Smith the benefit principle can be traced to the works of Hobbes, Hume, Rousseau. According to Hobbes (1651) it was ideal to tax individuals for the benefits they got from the national defence service provided by the state:

“To Equall (equal) Justice, appertaineth (includes) also the Equall imposition of Taxes; the equality whereof dependeth (depends) not on the Equality of riches, but on the Equality of the debt, that every man oweth (owes) to the Common-wealth for his defence” (Hobbes 1651).

Petty in his *A Treatise of Taxes and Contributions* (1692) has also talked of contributions and rents on land, building in order to support and pay for the services provided by the state which benefit all the citizens. According to him:

“it is generally allowed by all that men should contribute to the public charge but according to the share and interest they have in the public peace; that is, according to their estates and riches” (Petty 1692, Hull 1899).

This was the time when the “classical view of benefit-based taxation” or the benefit-as-ability taxation principle prevailed. At the time, the benefit theory was applied explicitly to support taxation in the early American colonies, such as New England as explained by Harris (2000):

“[The] duty of every inhabitant to contribute towards the support of the colony was based upon the theory of benefit received by reason of the existence of the government. The amount of the contribution was determined by the ability of the inhabitant to pay, and his ability, by the amount of land and property he possessed, while every able-bodied freeman was required to pay a specified sum as a poll tax” (Harris 2000, 176).

Similar to the works of Hobbes and Petty, Adam Smith also defined tax obligation in terms of “an objective measure of benefit”. And thus, the ability to pay too. Smith looked at benefit as the revenues from the prosperous taxpayers. He assumed that those who benefitted under the state in terms of garnering higher “riches” ought to pay more through taxation. These benefits may not accrue from the provision of specific services or public goods to the individual. Rather, benefits gained from the generic services like security under government ought to be paid for.

John Stuart Mill

Mill is considered as the first proponent of the ability to pay principle of taxation. This principle is considered as the rival of the benefit principle, where tax amount is not determined by the benefits drawn but the paying ability of the tax payer. However, the lesser-known fact is that, Mill advocated the application of the benefit principle at the local level. Mill (1848) viewed applying the benefit principle as a necessity rather than an opportunity at the local level:

“It is an important principle, however, that taxes imposed by a local authority, being less amenable to publicity and discussion than the acts of the government, should always be special—laid on for some definite service, and not exceeding the expense actually incurred in rendering the service. Thus limited, it is desirable, whenever practicable, that the burthen should fall on those to whom the service is rendered; that the expense, for instance, of roads and bridges, should be defrayed by a toll on passengers and goods conveyed by them, thus dividing the cost between those who use them for pleasure or convenience, and

the consumers of the goods which they enable to be brought to and from the market at a diminished expense”.

In a broader sense, literature beginning with the works of Lindahl (1919) and Musgrave (1938) has stressed on the application of the benefit principle as the leading criteria for designing local taxes. To a certain extent, Mill’s view of using benefit principle as a constraint on the local government prevails over Marshall’s views of benefit principle as a means of increasing welfare of citizens.

Knut Wicksell

Knut Wicksell (1896) is considered as the founder father of the benefit principle. The benefit principle was first suggested by him and he argued that:

- (i) Each public good should be financed by a separate, identifiable tax.
- (ii) The unanimous agreement of all members of the society would be required to decide on the amount of the good to be supplied.

Wicksell explained that the benefit principle acts not only as a theory of tax distribution but also gives an insight on the amount of money to be raised for any public activity or providing any public service.

“...the benefit principle must needs be reintroduced, as best it may, in any attempt at a theoretical determination of the actual amount of the taxes to be raised, or at least of total taxation” (Wicksell 1896).

While laying down the advantages of the benefit principle, Wicksell argued that it leads to lesser resistance to taxation when individuals pay according to the benefits being conferred upon them due to the services of the government. In the event of a mismatch, taxpayers will feel overburdened and it becomes the duty of the government to avoid such a situation. In other words, it ensures that government becomes more accountable and responsible towards the tax payers.

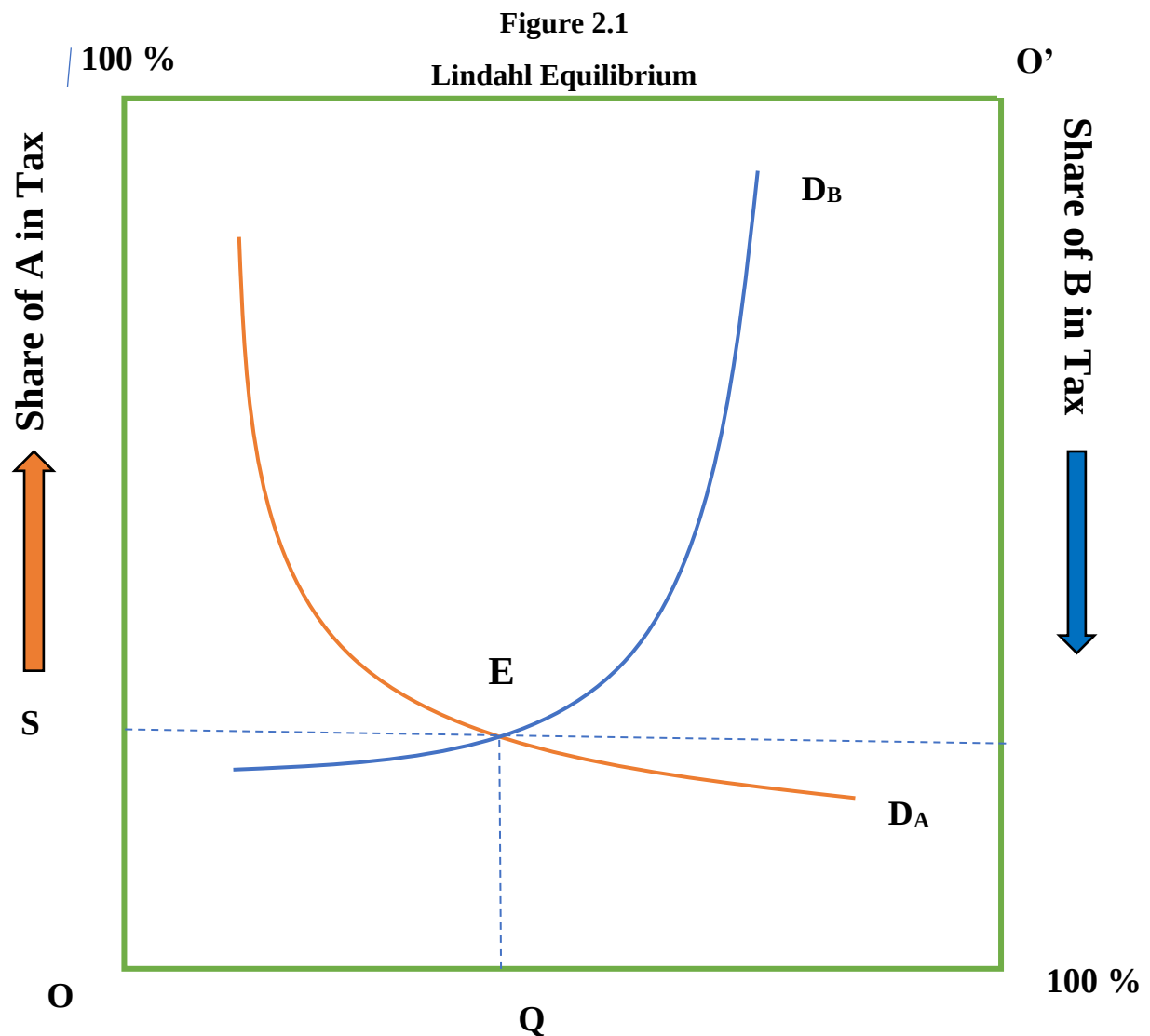
“The principle of taxation according to benefit, and even equality of Value and Countervalue, is completely appropriate to the marginal case, which at the same time is the most important in practice. At this point the distribution of taxes cannot and need not be influenced by any other notions of justice. No-one can complain if he secures a benefit which he himself considers to be (greater or at least) as great as the price he has to pay. But when individuals or groups find or believe they find that for them the marginal utility of a given public service does not equal the marginal utility of the private goods they have to contribute, then these individuals or groups will, without fail, feel overburdened. It will

be no consolation to them to be assured that the utility of public services as a whole far exceeds the total value of the individual sacrifices” (Wicksell 1896).

At the outset, according to Wicksell’s analogy, individuals would know the share of the tax allotted to them. However, the amount of public service or level of service provision need to be decided. This analysis was further undertaken by Lindahl. He presented a model spanning both the amount of service to be provided and the share of taxes.

Erik Lindahl

In Lindahl’s (1919) model, equilibrium requires each individual to pay a tax rate just equal to the individual’s marginal utility from the good. This can be shown for a two-person community (consisting of A and B) in Figure 2.1 which has quantity of public good along horizontal axis and the share of tax paid by A and B along vertical axis.



A's share of taxes increases from the bottom to up and B's share of taxes increases from top to levels of his tax share. As his share of the cost goes down, his desired level of provision increases. D_B indicates B's preferences—again, as his share of the cost falls, his preferred quantity of the good increases. The Lindahl equilibrium involves producing Q of the good with tax shares as indicated at point S . In the Lindahl model, public goods are provided in a manner which ensures everyone gains from their provision. In other words, the provision of goods is always a Pareto improvement. Lindahl's analysis adds the condition that each individual consumes his most-preferred or 'optimal' amount of the public good given his tax share.

The model can be expanded to "h" number of households as given below:

Let, there be H households in the economy, indexed by $h=1,2,\dots,H$.

There is a private good, X and a public good, G .

For, household h , the demand for the private good is X^h and the demand for the public good is G^h . Each household starts with an endowment Y^h of good X .

We have, $\sum_h X^h = X$, i.e. aggregate demand for the private good, X is equal to the sum of individual demands.

Further, each household pays an amount μ^h towards the public good. The household can choose the amount of G they want to consume. Thus, each household pays $\mu^h G^h$ or towards public good funding.

Utility of household h is given by $U^h = U^h(X^h, G^h)$ subject to: $X^h + \mu^h G^h = Y^h$

For Pareto efficient outcomes, we have to optimise the following :

$$\text{Maximise } U^h = U^h(X^h, G^h) \quad \dots 7$$

$$\text{Subject To: } X^h + \mu^h G^h = Y^h \quad \dots 8$$

The First Order Conditions are:

$$U_X^h = \lambda \quad \dots 9$$

$$U_G^h = \mu^h \lambda \quad \dots 10$$

From 10,

$$\mu^h U_X^h = U_G^h \quad \dots 11$$

Demand function of $G^h = G^h(\mu^h, Y^h)$

The Lindahl equilibrium satisfies two conditions: $\sum \mu^h = 1$ (public good is fully financed) and all households must demand same quantity of public good G . We have “H” equations ($G^1 = G^2 = \dots = G^h$ and $\sum \mu^h = 1$) and “H” unknowns (μ^h). Thus, Lindahl equilibrium exists.

Despite being appealing there are practical difficulties in the application of Lindahl’s model. Particularly, it is difficult to arrive at a unanimous agreement. Further, individuals may not indicate their actual preferences and tend to be free-riders. In such a scenario, the relevance of the model will decline. This is why Samuelson (1969) referred to Lindahl prices as “pseudo-prices” and equilibrium as “pseudo-equilibrium”

According to Richard Bird,

“it is only through the application of benefit taxes that an appropriate level and structure of government activity can, at least in theory, be determined simultaneously with the means of financing it” (Bird 1976).

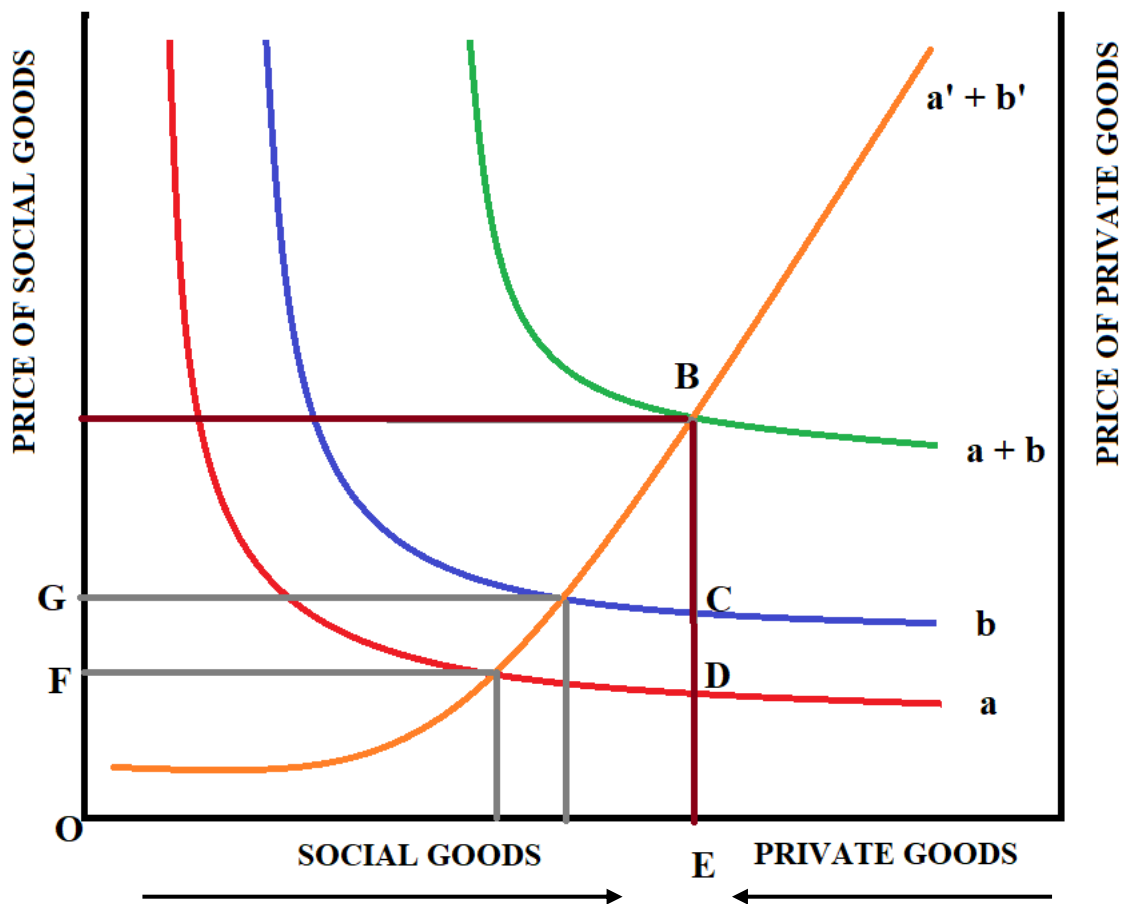
For Richard Wagner,

“only benefit taxation accords with the values of individual autonomy and citizen sovereignty that underlie contractual conceptions of the state, while taxation based on ability to pay accords with an ‘absolutist order’” (Wagner 1991).

Bowen

Bowen’s model has more operational significance, since it demonstrates that when social goods are produced under conditions of increasing costs, the opportunity cost of private goods is foregone. For example, if there is one social good and two taxpayers (A and B), their demand for social goods is represented by a and b ; therefore, $a+b$ is the total demand for social goods. The supply curve is shown by $a'+b'$, indicating that goods are produced under conditions of increasing cost. The production cost of social goods is the value of foregone private goods; this means that $a'+b'$ is also the demand curve of private goods. The intersection of the cost and demand curves at B determines how a given national income should (according to taxpayers' desires) be divided between social and private goods; hence, there should be OE social goods and EX private goods. Simultaneously, the tax shares of A and B are determined by their individual demand schedules. The total tax requirement is the area $(ABEO)$ out of which A is willing to pay $GCEO$ and B is willing to pay $FDEO$.

Figure 2.2
Bowen's Model



Musgrave

In a joint work Musgrave and Peacock stated that the revenue and expenditure sides of the budget are synchronous and their determination is the part and parcel of the same problem and thus, must be determined simultaneously.

“This interdependence between the revenue and expenditure problem is the crux of the matter and explains the inherent superiority of the benefit over the ability-to-pay approach” (Musgrave and Peacock 1967).

Krugman: New Economic Geography

New Economic Geography (NEG) refers to the operation of cumulative and circular causation forces on supply and demand sides being linked to scale economies, externalities, transport cost and factor mobility. These factors lead to market access, home market effect, and other benefits to firms. They also reduce costs to these firms and to workers, including transportation costs, costs of a variety of goods and services, and cost of living in general, etc. The self-propelling forces in the spatial economy lead to many benefits to many actors due to historical,

geographical, and economic factors. They lead to ‘agglomeration rents’ to both mobile and immobile factors of production, which can be taxed without the tax base disappearing.

Research in NEG emphasises that the externalities in cities, apart from creating demand and cost side benefits to many, lead to rents to owners of immobile factors and also create agglomeration rents to owners of mobile factors, e.g. capital. Factors considered as mobile in a normal economy, behave as quasi-mobile or immobile factors in the spatial economy. Agglomeration rents could be taxed without creating distortionary effects on the economy (Ludema and Wooten, 2000; Anderson and Forslid, 2003; Baldwin and Krugman, 2004; Borck and Pfluger, 2006). Thus, by using tax on agglomeration rents for providing local public services and goods needed by firms and households, policymakers and administrator can, in principle, further set an agglomerating force in motion, leading to ‘circular and cumulative causation’ and a self-financed process of planned urban development.

Stiglitz

Stiglitz has advocated for a “generalised benefit principle”, which talks of taxing those who draw benefits as well as those who create dis-benefits. Stiglitz draws inspiration from the works of Henry-George and advocates for a tax on land. Most of the benefits of public amenities and infrastructure is derived by land owners in the form of higher value for their properties. Further, it is feasible to tax land since it is inelastic in supply and does not disappear even when a tax is levied on it. Further, he talks of imposing a tax on negative externalities, in order to curb such activities and enhance economic efficiency. According to Stiglitz, taxing bads (such as pollution and congestion) is better than taxing good things like work. He proposes some “corrective taxes” to enhance economic stability and efficiency, apart from generating revenues. The most important among such taxes are those on environment externalities. A carbon tax or emission permit can improve economic performance along with revenue generation. Broadly, Stiglitz is talking of the corollary of the benefit principle, i.e. polluters pay, congesters pay and exacerbators pay.

Piketty-Stiglitz Debate

Piketty in his best seller book, *Capital in Twenty-first Century* (2014) highlights the tendency of the rate of return on capital (r) exceeding the rate of economic growth (g) over the long term, resulting in the concentration of wealth and unequal distribution of income. Where r includes profits, dividends, interest, rents and other income from capital, g is measured in income or output. Piketty proposes a global system of progressive wealth taxes to help reduce inequality. However, Stiglitz (2015) argues that Piketty’s logic confuses between capital and wealth. According to him, a large fraction of the increase in wealth is due to increase

in the value of land, monopoly rents, and other forms of rents – not the amount of capital goods. It is the value of urban land that Stiglitz specially talks of. In this context, urban economics suggests that cities are the reservoirs of agglomeration and network economies and these externalities, operating in conjunction with market forces and public policies such as spatial planning and provision of infrastructure and civic services, lead to substantial increases in land and property values and rents. City firms and households draw unearned benefits from these urban externalities. If the municipal revenue system is designed properly to tap such benefits and the municipal expenditure system is structured to ensure that such expenditure leads to the creation of adequate benefits, then the Wicksellian connection could ensure adequate finances for cities in developing countries like India to meet their expenditure needs. Stiglitz's new theoretical perspectives suggest that the taxation of rents in various forms including those to land and capital in cities can be a key strategy to apply the benefit principle to finance planned urban development.

Venables

Venables (2007) discusses the effect of infrastructure development on a Central Business District. He adopts the monocentric city model of urban economics to analyse the contribution of transport improvements to economic productivity. Using a spatial computable general equilibrium (SCGE) model, he shows that the transport investment benefits can be substantial and these external benefits can be measured from the elasticity of productivity with respect to employment density. Transport improvements reduce commuting costs, which in turn facilitates the expansion of employment at the Central Business District (CBD). This results in increased productivity of workers through agglomeration economies. Workers benefit from higher wages. Landowners gain from higher rents, and government from income tax wedge. The incorporation of agglomeration effects on production gives rise to 85-147 percent additional benefits for commuting journeys compared to standard benefit-cost analysis. The basic assumption of the Venable's model is that all jobs are located in the CBD. Workers commute to the CBD for work from different parts of the city. City living imposes costs. There is a trade-off between land rent or housing cost and commuting cost. Spatial equilibrium warrants that, workers are indifferent between locations, at the margin. The city expands to the point, where commuting cost is high enough to make workers indifferent between living at city edge and working in CBD and living in a non-city location and working there. The spatial equilibrium condition with no tax on wages is:

$$W_u = W_e + \tau d \text{ or, } W_u - W_e = \tau d \quad \dots 12$$

where, W_u is the wage at the CBD, W_e is the wage at the city edge, τ is the commuting cost per unit distance, assumed to be uniform, and d is the distance to the CBD.

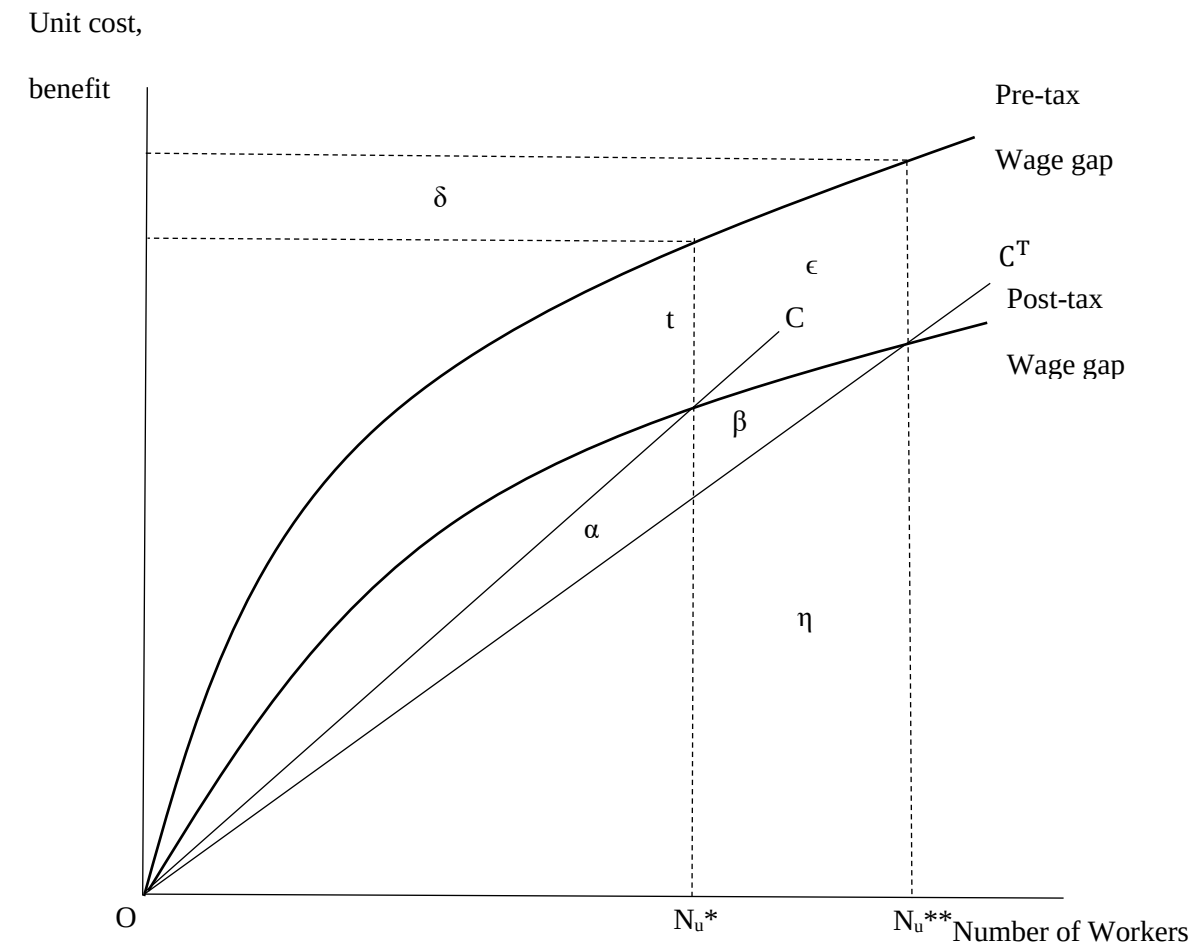
For simplicity, agglomeration economies are assumed to be related to city size; the wage gap $W_u - W_e$ is an increasing function of city population, N_u .

Assuming further that the government taxes W_u at the rate t , the condition of post-tax spatial equilibrium is as follows:

$$(1 - t) W_u = W_e + \tau d \text{ or, } (1 - t) W_u - W_e = \tau d \quad \dots 13$$

Figure 2.3 presents Venables' model with pre-tax and post-tax wage gap depicted as increasing functions of the number of workers, N_u due to agglomeration economies. The equilibrium city size is determined at N_u^* , where the post-tax wage gap curve intersects the commuting cost curve C , assumed to be increasing in N_u . When C falls to C^T due to improvements in transportation, the equilibrium moves to N_u^{**} . Denoting $\eta = N_u^*DB N_u^{**}$, $\alpha = OAD$, $\beta = ABD$, $\epsilon = AEFB$ and $\delta = GHFE$, the increase in the resource cost of commuting with N_u rising from N_u^* to N_u^{**} is $\eta - \alpha$, the increase in output is $\delta + \epsilon + \beta + \eta$. Thus, there is net real income gain of $\alpha + \beta + \delta + \epsilon$. The area ϵ is the tax wedge effect; δ captures the impacts of agglomeration externalities on productivity; it is similar to the measure of elasticity of productivity with respect to city size.

Figure 2.3: Venables Model



Source: Venables (2007)

The area ε captures income or wage tax benefits to government due to agglomeration externalities induced by public transport investment. The area δ captures productivity benefits to firms arising due to such externalities, leading to taxable ‘agglomeration rents’.

The Venables model, depicted above, tries to explain key impacts of transportation improvements in a city. It shows that as economic activity in a city grows, there is an increase in productivity and gain in net real income in the CBD due to externalities. Infrastructure investment can also generate additional employment and strengthen competitive forces. By improving connectivity, it leads to widening and deepening of labour markets. Transportation infrastructure is critical for enhancing productive efficiency and lowering input costs. It leads to a reduction in the costs of skilled labour and material assembly. With the rise in the capacity of infrastructure, the quality of services to firms and households also improves. Importantly, infrastructure investments lead to agglomeration-induced benefits through δ , which can be taxed and wage or income tax through ε . These effects do not exist without investment in infrastructure and agglomeration externalities in cities. A part of the pecuniary benefits can be escrowed to facilitate debt-financing of urban infrastructure investments that lead to such benefits. Thus, the Venables model makes a strong case for benefit taxation.

Models of Benefit Taxation

Abbasian and Myles (2006) applied the principle of benefit taxation to the provision of a public good and compared it with other principles of taxation. They showed that optimal benefit taxes involve both efficiency and equity components. According to them, in the absence of informational restrictions, benefit taxes lead to the same outcome as ability-to-pay taxation. Hence, they drew equivalence between both the systems. Their model is described below:

They consider a consumer who faces prices “ p ” and is provided with quantity “ G ” of a pure public good. The cost of attaining utility level U^i can then be expressed by the expenditure function:

$$E(p, U^i, G)$$

This expenditure function possesses the standard properties with respect to p and U and is strictly decreasing in G . They hold prices constant throughout the analysis and suppress it as an argument of the expenditure function. They consider a reference level of public good provision G^0 . The benefit, “ B^i ” to consumer “ i ” of receiving public good supply G^* rather than G^0 can then be defined by:

$$B^i = E(U^i, G^0) - E(U^i, G^*)$$

If $G^* > G^0$ then, $B^i > 0$.

The tax payment of consumer “i” is denoted by “ T^i ” and the value of taxes paid is:

$$T^i B^i = T^i [E(U^i, G^0) - E(U^i, G^*)]$$

For the government to finance its provision, the budget constraint:

$$G = \sum_{i=1}^n T^i B^i$$

must be satisfied, where, “n” is the number of consumers.

Further, they consider an economy where consumer “i” has lump-sum income M^i . The consumers are labelled in a manner such that $M^{i+1} \geq M^i$. When the consumers have identical preferences, their expenditure functions are the same. The optimization problem for the choice of tax rates is given by the following:

Objective Function: Maximise $\sum_{i=1}^n U^i$ with respect to U^i, T^i

Subject to: $G = \sum_{i=1}^n T^i [E(U^i, G^0) - E(U^i, G)]$

And,

$$E(U^i, G) = M^i - T^i [E(U^i, G^0) - E(U^i, G)], i = 1, \dots, n$$

Where, G is the fixed quantity of the public good.

The optimal point is characterised by:

$$T^1 = \frac{1}{n[E(U^1, G^0) - E(U^1, G)]} (G - \sum_{i=2}^n M^i - M^1)$$

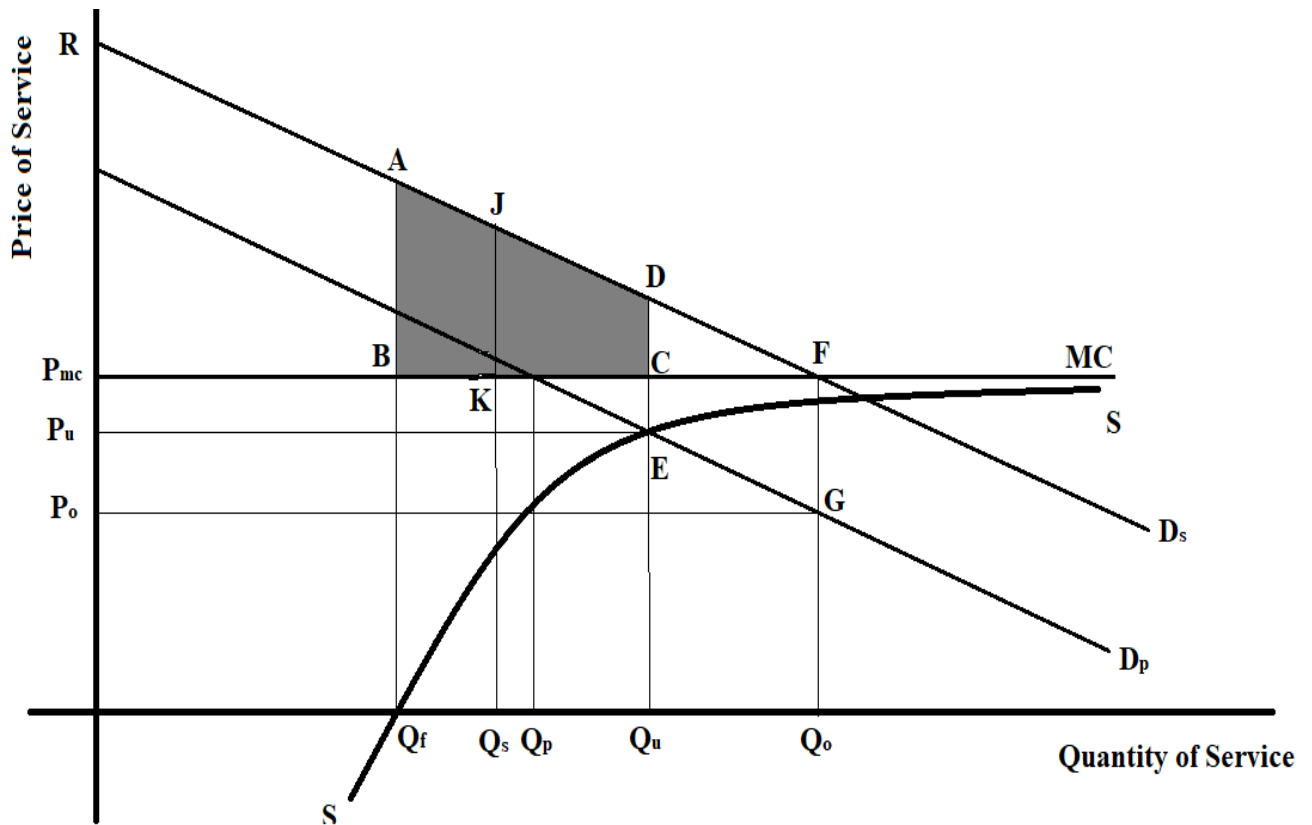
$$T^r = \frac{1}{n[E(U^r, G^0) - E(U^r, G)]} (G + (n-1)(M^r - M^1) - \sum_{i=2, i \neq r}^n (M^i - M^1))$$

$$U^1 = U^i, i=2, \dots, n, 2 \leq r \leq n$$

The optimality conditions reveal that though benefits form the base of the taxes, the system that emerges is a mixture of benefit and ability to pay taxation. “*The tax rates allocate the cost of the public good, G, proportionally to benefits but they also induce a reallocation of income. This redistributive component ensures that the consumers’ utilities are equalized*” (Abbasian and Myles 2006). In a special case, if all the incomes are equal, taxation will be solely based on benefits.

Although the imposition of user charges might appear as a burden for payers, several studies reveal that user charges work as an incentive mechanism to reduce costs. Borge and Ratso (2005) find in the case of Norwegian sewage industry that an increase in user-charge financing by 10 percentage points can reduce the unit cost by up to 10 percent. Thobani (1984) showed that in case of goods with positive externality, where marginal cost pricing is not appropriate, user charges can reduce the net loss to society (Figure 2.4 given below).

Fig 2.4: User Charges



Source: Thobani (1984)

The above model shows that user charge reduces net loss to society in case of a good with positive externality.

Suppose externalities drive a wedge between private demand D_p and social demand D_s . D_p lies below D_s .

The marginal cost (MC) is taken to be constant.

Optimal level of services is OQ_o (where social marginal benefits represented by D_s equals marginal cost). But, if Government charges P_{mc} then, individuals will demand only a quantity equal to OQ_p . So, there is a need to subsidise.

Suppose, the total resource with Government is equal to $OP_{mc}BQ_f$ to use for subsidy. Let, curve SS is the iso-subsidy curve. With MC being constant, the curve is a rectangular hyperbola. So,

$$OP_{mc}BQ_f = P_{mc}CEP_u$$

So, with same amount of subsidy, Government can provide either OQ_f level of service for free or OQ_u level of service at a price, P_u .

The net benefit to society when,

$$\text{service is free} = P_{mc}RAB$$

$$\text{User charge } P_u \text{ is applied} = P_{mc}RDC$$

So, the net increase in benefit by raising user charge to P_u is equal to $ABCD$ (shaded region).

The optimal charge, P_o is less than P_u . But, the optimal charge requires a larger subsidy equal to $P_{mc}FGP_o$. Government is not in a position to provide a subsidy of this magnitude. Further, P_u is better than P_o because, under the fixed subsidy assumption, at P_o only OQ_s quantity of service will be provided, which is less than OQ_u and the net loss is equal to $JKCD$.

2.6. The Wicksellian Connection

Many studies have evaluated the importance of local governments in the provision of services such as health and education as well as their impact on corruption, stability, and growth. One lesson that has been learned is that what governments do and how well they do it is inseparably entangled with the question of how they are financed (Smoke, 2013). From the perspective of efficiency, a key element in decentralization should therefore be to strengthen the linkage between local expenditures and local revenues, which Breton (1996) labelled the Wicksellian Connection.

In an efficient local finance system, “expenditure responsibilities would be matched with revenue resources”, “revenue capacities matched with political accountability”, and “benefit areas matched with financing areas.” The public services may be considered to be ‘sold’ to the users and the proceeds of such sales ought to be enough to meet the costs of public provision. However, in reality, the institutional set-up in which local governments act is quite different from the one discussed above. Mostly they are mere “agents of the higher tiers of government” and carry out re-distributive functions financed by upper tiers. Sometimes, they provide some excludable services with specific users than the entire community. At several instances, certain

services have their benefits spread across several jurisdictions or local boundaries. Further, in several developing countries including India, decisions for local governments are taken by the central and state governments. They have little or no discretion regarding the kind of services offered and the quantum of service, the method of financing these services and the way of mobilising funds. At several instances, they financially depend on the higher levels of government.

The decentralisation literature reflects upon the Wicksellian influence. For instance, it is widely recommended to adopt user charges for financing local expenditure. Local property taxes are considered to be “surrogate user charges” and may be adopted to make citizens who benefit from usage of local services to pay for such services. Especially, when it is impractical to measure the benefits and identify those who benefit. However, it is advised to refrain from imposing taxes to finance every kind of service because it would “export” the taxes from residents to non-residents (Bird, 1993). A similarly ‘split’ view of the appropriate link between financing and service provision underlies the standard Pigouvian argument for intergovernmental transfers to compensate for external benefits provided to others than local residents from locally-provided services (Bird and Smart, 2002). However, these differing opinions have barely been considered together as a package. They have not been considered a serious component in the “Wicksellian local finance system” on the revenue side. Further, barely anything has been discussed regarding the degree to which certain local revenues are being or ought to be earmarked for specific expenditure requirements.

Bird and Slack (2014) have suggested the following ways to strengthen the wicksellian connection:

- First, local governments should be assigned the appropriate functions. They should have control over an appropriate domain of expenditure functions. Their task should essentially be to “provide local services to local residents and businesses.” Everyone should be clearly aware regarding who is responsible for what, so that a distinction can be made between the role of local bodies in providing services to the locals and their role as “agents of higher-level governments”. As agents they provide services which are financed by the higher tiers. Such a distinction is necessary to gauge the performance of local bodies.
- Second, local governments should be provided sufficient fiscal autonomy in order to carry out their assigned expenditure responsibilities. They should be in a position to meet their responsibilities through access to adequate revenue and should not be subject to unnecessary

controls regarding the kind and amount service provision or the method of financing. However, they may be held fully accountable in “administrative and political terms.”

- Third, local governments should not be considered as simple ‘agents’ to carry out redistributive policies financed by higher tiers. Their role should be more specific towards financing providing local services in an effective and efficient manner.

However, in practice, no country satisfies these conditions in its decentralisation process. Financing local services through the benefit principle, especially user charges, can not only provide sufficient funds for financing these services but would also provide information regarding the kind and quantity of services to be provided and the target population.

The first-best principle of municipal finance hints towards user charges with the direction to “charge, whenever possible”. The economic rationale behind user charges is not just to raise revenue but also promote efficiency in service delivery. When people are not made to pay for the services they consume, the value attached to the last unit consumed is close to zero. In such a scenario, there is over-consumption or wastage than would be if they pay for meeting the costs of service provisions. This would result in the inefficient allocation of scarce public resources. Imposition of well-devised user charges can help to prevent such wastage.

Beyond user charges, two basic principles of assigning revenues to local governments have been suggested by Bird and Slack (2015). First, ‘own-source’ revenues should ideally be sufficient to enable at least the richest such governments to finance from their own resources all locally-provided services primarily benefiting local residents (Bird, 1993). Second, to the extent possible, local revenues should be collected only from local residents, preferably in relation to the perceived benefits they receive from local services. Revenues from other sources (including local business activities) should similarly match the benefits they receive from local services.

When the direct use made of services by specific individuals can be measured, such services should be priced, if it can be carried out at a reasonable cost. In some instances, however, when services like water and sewerage connections are provided to specific locations, it often makes sense to pay for at least the access costs of such services through charges related to relevant characteristics of properties (such as size of lot, frontage, or building height) or to property values. Other services (or components of services) such as arterial streets, utility lines, and public transit as well as major parks and recreation facilities may be ‘area-specific’ in the sense of being most accessible to those nearby. Because the value people attach to such services

should be reflected in property values, a suitable form of financing may again be a value-based property tax. Still, other services may provide city-wide or even region-wide benefits: again, such benefits should affect property values and an appropriate form of financing would again appear to be a property tax.

A key factor to be kept in mind while designing municipal finances based on the benefit principle is the probability of tax exporting which is the negative spillovers to non-residents such as commuters (non-resident labour), tourists and other visitors (non-resident consumers), non-resident owners of local businesses (external capital), and non-resident consumers of city exports (e.g. financial services). However, non-residents also benefit from residing on the periphery of a city or close to a large city. So, it may be appropriate to tax them to a certain extent. Local sales taxes may be considered appropriate to be imposed on the non-residents. Entertainment tax and tax on hotels is also appropriate for this section. A local payroll tax would also appropriately charge non-resident commuters along with the residents.

Literature emphasizes the importance of the Wicksellian Connection—the tightness of the connection between decisions on public spending and on its financing—in determining whether local public policy decisions are right in the sense of being in accordance with citizens' wishes. The more closely spending and taxing decisions are linked by being made by the same body at the same time, the better government will function in its economic manifestation as a provider of services. In the words of Breton:

“Local governments must not only be willing and capable of focusing on such matters but also be prepared to break the golden chain of transfer dependency and make—and largely finance—their own decisions” (Breton, 2004).

For establishing efficient, accountable and transparent local governments, it is necessary to develop self-control and in order to be self-controlled, local bodies need to be financially independent at the margin. They should not be left to the mercy and ad-hoc treatments of other tiers. Reforming local governance and finance by establishing a strong “Wicksellian Connection” will be a fruitful method for making ULBs responsible and responsive, accountable, flexible, transparent and efficient.

2.7. Conclusion

Pure public goods are characterised as being non-rival and non-excludable. However, local public goods are mostly subject to congestion and are partially rival and non-excludable. The market mechanism fails in making such goods available at the quantities required by the

society. The market either fails entirely or runs inefficiently in case of such goods. This necessitates government intervention. Such goods should ideally be provided by the local governments according to the subsidiarity principle and decentralisation theorem. However, due to lack of finances at the level of ULBs on account of the fiscal federalism framework such provisions are becoming difficult, leading to sub-optimal level of local public goods, including urban infrastructure.

In such a scenario, working on the redesigning and improvement of municipal finance is mandatory. A bundle of municipal finance tools can be designed based on the principles discussed in this chapter. While the subsidiarity principle suggests bestowing ULBs with higher revenue raising powers, the benefit principle builds the foundation for raising such revenue. The Wicksellian connection calls for matching revenue and expenditure while the golden rule of public finance suggests how each expenditure responsibility can be financed. All these principles together suggest a basket of tools which can be utilised by the municipalities to meet their financing needs. These principles direct towards the following policies for municipal finance reforms (Bahl and Linn 1992):

- Where the benefits of public services are measurable and accrue to readily identified individuals in a jurisdiction, user charges are the most appropriate financing instruments;
- Local public services such as administration, local roads, traffic control, street lighting, and public safety and security, which are services to the general public in the sense that identification of beneficiaries and measurement of benefits and costs to individuals are difficult, are most appropriately financed by benefit taxes levied on local residents;
- The cost of services for which significant spillovers to neighbouring jurisdictions occur (e.g., health, education and welfare), should be financed substantially by state or national inter-governmental transfers; and
- Borrowing is an appropriate source to finance capital outlays on infrastructure projects, particularly public utilities, highways and transit where investment requirements are very large and benefits accrue to generations.
- All capital works must be financed either through inter-governmental transfers or borrowing or a combination of both.

Though the benefit principle forms the foundation for raising revenue, it should not be considered as a stand-alone principle. The benefit principle has different implications for different cities based on geographical, historical, cultural and socio-economic dynamics of the concerned city. Benefit taxation including user fees and beneficiaries pay charges are appropriate methods for raising revenue for the government in some circumstances while they are inappropriate in other situations. These levies have several merits with regards to fairness, efficiency and accountability. But they are not appropriate in case of pure public goods. These levies must be carefully adopted for financing goods and services which are distributed in terms of merit, right or need. These instruments can turn out to be regressive in certain circumstances. This would require proper designing and implementation of compensatory measures to make up for the burden on the economically weaker sections.

Though there are a number of caveats concerning the levy of benefit taxes, these taxes are important and useful instruments for financing public goods and services and raising revenue. These levies promote accountability on part of the authority or service providers, are fair towards the users or payers and improve resource allocation. However, these advantages can be achieved with appropriate designing of benefit taxes. The taxes should be levied at economically efficient rates and the proceeds must be earmarked for provision of the particular goods and services for which they were imposed at the first place.

Public finance literature specifies various public goods and services where imposing benefit taxes or user fees is not appropriate. These include general administration, social services and public housing. There are other areas of public expenditure where such levies may be imposed subject to the guarantee of access based on merit, right or need. However, properly structured benefit taxes and user fees are highly recommended for certain areas like water supply, sewage, solid waste management and transportation. Municipalities need to explore the potential of benefit taxes in order to be financially sound and provide services efficiently. These taxes need to take into account both direct and indirect benefits including those accruing to economic agents due to agglomeration and networking externalities, monopoly production, public investment in infrastructure and growth-augmenting policies. There is a strong case for taxing idle land owners who benefit due to monopoly, speculation, urbanisation and government policies and programmes.

CHAPTER 3

LAND AND PROPERTY TAX AS BENEFIT TAXES: LESSONS FOR PROPERTY TAX REFORMS

3.1. Importance of Property Tax

Cities drive economic growth by catalysing agglomeration and network externalities. These externalities are responsible, among other things, for cities being the engines of growth and structural transformation. The importance of cities in India can be gauged from the fact that the contribution of urban areas to GDP rose from 29 percent in 1950-51 to 62-63 percent in 2007. The figure is projected to rise to about 75 percent by 2021 (Planning Commission 2008). 70 percent of new employment and 85 percent of public finance will be generated by cities (McKinsey 2010). Cities will not be able to perform their fundamental roles as agents of socio-economic transformation unless they are in a position to finance infrastructure and civic services needed by firms and households. It is important to have in place a comprehensive framework addressing planning, governance and finance simultaneously.

Cities in India are struggling to provide adequate infrastructure and civic services to the citizens. Prasad and Chary (2014) observe in their study on the state of urban services that against the service level benchmark of 100 percent for water connection in premises, the national average stood at 53.6 percent. The figure was as low as 17 percent in Bihar. While the benchmark for coverage of toilets was 100 percent, the national average was 71.1 percent. Sewerage network coverage wore a dismal look with the national average being only 49.5 percent and a meagre 9.7 percent in Chhattisgarh. Only 57.2 percent of the households had solid waste management coverage. Their study reveals that urban India has a long way to go in order to achieve proper service delivery. It is the municipalities who have to shoulder the responsibility of making these services available. It is estimated that cities will require 9.74 million crores by 2030 to address their needs (McKinsey 2010). While the financing requirement is gigantic, the resources available with municipalities – to meet the cost of salaries, O&M and capital expenditure- were estimated at less than Rs. 1 lakh crores for the country as a whole for 2012-13.

Indian Urban Local Bodies (ULBs) suffer from a “rich city-poor city government” syndrome. Fiscal dependency is a defining characteristic of Indian municipalities. They are mostly dependent on the higher levels of Government. The sources of own revenue of the ULBs

are also limited. Octroi, which was a major source of municipal revenue, has been phased out. The options of user charges and borrowing have not been explored properly. Property tax remains the single-most important source of 'own revenues' of ULBs. The own taxes constituted only 32 percent of total municipal revenues nationally in 2012-13 and property tax accounted for 50 percent of municipal taxes in 2012-13 and 60 percent in 2017-18. Ironically, cities in India have not exploited even a fraction of the property tax, the most important municipal tax in the country.

According to the report of the Thirteenth Finance Commission, property tax-GDP ratio in India ranged between 0.16 and 0.24 percent in 36 largest municipal corporations in 2006-07 (Finance Commission of India 2009). Data submitted by State Governments to the Fourteenth Finance Commission indicate that this ratio was 0.18 percent in 2007-08 and 0.16 percent in 2012-13 (ASCI 2014; Mohanty 2016). The figure is very small compared to state tax-GDP ratio of 6.8 percent and central tax-GDP ratio of 10.3 percent in 2012-13. Corporation tax-GDP, income tax-GDP and service tax-GDP ratios in the same year were 3.52 percent, 1.94 percent and 1.31 percent respectively (Finance Commission of India 2015). A study prepared by ICRIER for the Fifteenth Finance commission showed that property tax as per cent of GDP declined from 0.086 in 2012-13 to 0.084 in 2017-18 for 37 largest Municipal Corporations of India (ICRIER 2019).

Various studies like those of Bird (1993) and Oates (1972) establish the importance of local governments and the ability to raise revenue has always been believed to be indispensable in order to maintain a strong local government. Property tax is the most important source of 'own' revenue and can be considered as a reflection of the strength and autonomy of any ULB in India. There is a wide range of theoretical and empirical literature on property tax at international level. This includes Bird and Slack (2015), Kelly (2013), Claudia (2012), Slack (2011), Walters (2011), Bahl and Martinez-Vazquez (2008) and Mikesell (2007) among others. For India, literature on property tax includes the works of Mohanty (2014, 2016), Mathur et al. (2009), Rao (2013), Bandyopadhyay (2013), Gnaneshwar (2009) and Lall and Deichmann (2006) to name some. Lessons from these studies reflect that, at this juncture in India's urban evolution, the country has a significant opportunity to augment municipal revenues by improving the legal framework, design, assessment, collection and enforcement of property tax. However, the studies in India do not combine lessons from theory and practice. This chapter attempts to establish property tax and land tax as benefit taxes and suggest measures for reforming the current property tax framework, drawing upon the principle of benefit taxation.

3.2. State of Property Tax in India

An analysis of the trends in municipal revenues of India reveals that municipal revenue as a percentage of GDP has declined from 1.08 in 2007-08 to 1.03 in 2012-13. The figure stands at 1.00 for 2017-18. A decline in the ‘own sources’ of revenue of municipalities has also been observed. In 2017-18, municipal own revenue stood at 0.43 per cent of GDP, which was the lowest in eight years (ICRIER 2019). The own taxes constituted only 32 percent of total municipal revenues nationally in 2012-13. Property tax accounted for 50 percent of municipal taxes in 2012-13 and 60 percent in 2017-18. The municipalities are increasingly dependent upon the higher levels of government for funds. Property tax is the single-most important tax and “own” source of revenues of ULBs in India. On an average, property tax constituted 16 percent of total municipal revenues and 30 percent of ‘own’ municipal revenues in India in 2012-13. However, property tax revenue as a share of GDP in India stood at a meagre 0.15 per cent in 2017-18 (ICRIER 2019). The trends in property tax of the states of India for 2011-12 and 2017-18 are given by table 3.1. As the table reveals the property tax to GDP ratio is less than 1 percent in all states except Andhra Pradesh, Telangana, Karnataka, Tamil Nadu, Gujarat, West Bengal and Maharashtra (which has the highest ratio of 0.41).

Table 3.1

Trends in Property Tax: 2011-12 and 2017-18

Sl No.	States	PT (in Rs. Crore)		Per Capita PT (in Rs.)		PT as a % of GSDP	
		2011-12	2017-18	2011-12	2017-18	2011-12	2017-18
1	Andhra Pradesh	523.1	945.1	383.3	618	0.138	0.118
2	Arunachal Pradesh	NA	NA	NA	NA	NA	NA
3	Assam	29.9	70.8	94.1	199.1	0.021	0.025
4	Bihar	9.3	60.7	9.7	62.8	0.004	0.012
5	Chhattisgarh	NA	471.4	NA	679.1	NA	0.162
6	Goa	NA	26.7	NA	549.5	NA	0.038
7	Gujarat	832	5312.2	357.4	1911.5	0.135	0.404
8	Haryana	125.7	89.6	135.3	76.4	0.042	0.014

Sl No.	States	PT (in Rs. Crore)		Per Capita PT (in Rs.)		PT as a % of GSDP	
		2011-12	2017-18	2011-12	2017-18	2011-12	2017-18
9	Himachal Pradesh	16.4	34.3	229.9	422.9	0.023	0.025
10	Jammu Kashmir	NA	NA	NA	NA	NA	NA
11	Jharkhand	NA	80	NA	144.4	NA	0.031
12	Karnataka	1076.8	2705	442.6	949	0.178	0.206
13	Kerala	206.5	294.9	271.6	310.9	0.057	0.042
14	Madhya Pradesh	303.6	1079.9	154.4	506.6	0.096	0.148
15	Maharashtra	5233.3	8357.7	1103.3	1512.2	0.409	0.335
16	Manipur	0	0.3	0.5	3.6	0	0.001
17	Meghalaya	4.2	5.2	137	144.9	0.021	0.017
18	Mizoram	NA	2.5	NA	72.7	NA	0.013
19	Nagaland	NA	NA	NA	NA	NA	NA
20	Odisha	55.2	67.2	91.3	95.7	0.024	0.016
21	Punjab	178	251.8	178.9	214.6	0.067	0.052
22	Rajasthan	62.9	187.8	39.5	100.7	0.014	0.022
23	Sikkim	NA	NA	NA	NA	NA	NA
24	Tamil Nadu	971.7	1827.5	310.8	487.4	0.129	0.128
25	Telangana	703.8	1604.1	563.4	522.4	0.196	0.213
26	Tripura	1.5	4.6	19.5	46.4	0.008	0.01
27	Uttar Pradesh	413.2	810.8	99.3	168.9	0.057	0.059
28	Uttarakhand	12.4	55.1	42.8	156	0.011	0.026
29	West Bengal	690.1	1206.8	326.6	499.9	0.133	0.118
30	India	11449.6	25551.9	361.5	688.2	0.131	0.149

Source: Compiled from ICRIER (2019)

Table 3.2 analyses the property tax as a percentage of total municipal revenue, municipal own revenue and total municipal tax. The table reveals the importance the property tax as it forms a major chunk of total municipal tax and municipal own revenue.

Table 3.2*Importance of Property Tax: 2011-12 and 2017-18*

Sl. No.	States	PT as a % of Total Municipal Revenue		PT as a % of Own Municipal Revenue		PT as a % of Total Municipal Tax	
		2011-12	2017-18	2011-12	2017-18	2011-12	2017-18
1	Andhra Pradesh	30	24.3	45.6	38.7	72.7	68.7
2	Arunachal Pradesh	NA	NA	NA	NA	NA	NA
3	Assam	11.5	31.8	38.7	51.2	78.9	87.7
4	Bihar	0.9	2.8	22.5	45.2	28.4	55.9
5	Chhattisgarh	NA	20.2	NA	38.5	NA	59.5
6	Goa	NA	5.3	NA	32.7	NA	71.6
7	Gujarat	10.5	25.5	29	54.1	51.6	77.2
8	Haryana	5.8	2.3	19.6	9.2	44.2	18.1
9	Himachal Pradesh	10	9.5	30.7	30.7	80.8	83.7
10	Jammu Kashmir	NA	NA	NA	NA	NA	NA
11	Jharkhand	NA	4.8	NA	54.7	NA	98.2
12	Karnataka	11.4	18.2	54.4	68.1	89	92.3
13	Kerala	9.9	8.1	32	35.1	59.1	55.7
14	Madhya Pradesh	10.4	8.8	17	20.5	17	27.1
15	Maharashtra	17.6	17.2	21.6	26.4	32.5	52
16	Manipur	0.1	0.3	0	8.1	0	20
17	Meghalaya	15.2	26	37.5	43	51.2	50.5
18	Mizoram	NA	6.3	NA	58.1	NA	100
19	Nagaland	NA	NA	NA	NA	NA	NA
20	Odisha	6	3.8	44.2	37.4	77	81.3
21	Punjab	7.6	7.4	10.2	9	13	11.1
22	Rajasthan	2.5	3.5	6.5	10.7	13.7	23.2

Sl. No.	States	PT as a % of Total Municipal Revenue		PT as a % of Own Municipal Revenue		PT as a % of Total Municipal Tax	
		2011-12	2017-18	2011-12	2017-18	2011-12	2017-18
23	Sikkim	NA	NA	NA	NA	NA	NA
24	Tamil Nadu	15	12.3	40.7	41.1	74.5	74.6
25	Telangana	31.6	35.6	54.2	54.1	99.7	99.5
26	Tripura	0.5	1.3	10	24	20.5	48.9
27	Uttar Pradesh	7	6.6	48.4	48.5	85.7	88
28	Uttarakhand	5.9	5.4	28.1	48.5	60.2	83.4
29	West Bengal	10.8	9.7	43.2	48.8	94	94.3
30	India	13.4	14.9	26.9	34.8	41.9	59.5

Source: Compiled from ICRIER (2019)

As the Economic Survey 2015-16 observes:

“The very fact that systematic data on property taxation across the country is so sparse is a measure of just how little attention has been given to this tax. Property taxes are especially desirable because they are progressive, buoyant (at least in the Indian context), and difficult to evade, since they are imposed on a non-mobile good, which can with today’s technologies, be relatively easily identified. Higher rates (with values updated periodically) can be the foundation of local government’s finances, which can thereby provide local public goods and strengthen democratic accountability and more effective decentralisation. Higher property tax rates would also put sand in the wheels of property speculation. Smart cities require smart public finance and a sound property taxation regime is vital to India’s urban future. (Vol.1, p.117)”

The Economic Survey 2016-17 has also laid emphasis on the large potential of property tax and suggests proper exploitation of the tax in order to generate additional revenues for the city government (Ch.14, pp.314).

Mathur et al. (2009) provide estimates of potential of property tax in India as presented in Table 3.3, indicating that the mobilization from property tax could be increased by 2-3 times. There is thus a need to look to theory and international practice, including innovative experiments adopted by Indian cities for designing an agenda for property tax reforms in India.

Table 3.3:*Estimates of Property Tax Potential in Urban Local Bodies of India (Rs. Crores)*

Estimates	Estimates of the current property tax yields (Rs)	Estimates of property tax potential (Rs.)	Property Tax-GDP Ratio (%)
Estimate 1	8,416	29,346	0.708
Estimate 2	6,274	21,877	0.527
Estimate 3	9,425	32,864	0.793

*Source: Mathur et al. (2009)***Tax Reform: Analytical Framework**

While designing property tax reforms it is important to consider the factors which influence property tax collection. A broad multi-pronged approach involving all such factors is desirable for improving revenue collection. In the absence of such an attempt, the improvement in one factor may be offset by the limitations of another. An analytical framework to understand the problem and furnish reform mechanisms is to analyse the following equation (Bahl and Linn 1992; Mohanty 2014, 2016):

$$R = t \times c \times v \times e \times (B - E) \quad (1)$$

Where, R = revenue mobilised from property tax in a jurisdiction, t = average property tax rate, c = coverage ratio, i.e. ratio of taxable properties captured in the tax registry relative to all properties in tax base, v = valuation ratio or ratio of assessed to actual value of properties, e = enforcement rate or collection efficiency measured by actual tax collection as a percentage of total tax liabilities or invoices, B = legally defined property tax base and E = exemptions/concessions granted.

As the equation shows, the property tax revenues raised by a city depend on revenue base, extent of access to the base, exploitation rate and collection efficiency. Local taxes are highly visible, and unduly high tax rates are vehemently resisted by tax-payers. Thus, expanding tax base and enhancing collection efficiency are key directions for enhancing the revenues of Urban Local Bodies (ULBs).

The Thirteenth Finance Commission Report informs that assessed values of properties were estimated at 8-10 percent of prevailing market values, and on an average 30 percent in 36 largest municipal corporations of India in 2006-07. Only 63 percent of the assessed properties

and 56 percent of the universe of properties were paying property tax. Further, as against the house properties actually assessed, collection efficiency was as low as 37 percent (Finance Commission 2009). Except in the case of a few cities like Bengaluru, systematic property tax reforms have not been carried out in India. Even the Bengaluru model requires improvement. The potential of property tax in most of the cities is not harnessed.

Strengthening urban governance was one of the objectives of the Jawaharlal Nehru National Urban Renewal Mission (JNNURM). In order to achieve this objective, the mission envisaged 23 major reforms at the state and ULB levels. Property tax reforms featured as one of the suggested reforms. The target was to improve the collection efficiency to at least 85 percent over the mission period 2005-12. However, the property tax-GDP ratio declined from 0.18 percent in 2007-08 to 0.16 percent in 2012-13 and further to 0.15 in 2017-18 (ASCI 2014; Mohanty 2016; ICRIER 2019). Presently, property tax along with its components is an appropriate and feasible means of meeting the expenditures of ULBs. It is an ideal instrument to ‘leverage’ resources to meet costs of undertaking planned urban development. It is estimated that the collection of property tax in India could be increased by 2-3 times with relatively modest reforms (Mathur et al. 2009).

The main reason behind the failure of Property tax reforms under JNNURM was the lack of a scientific method to estimate the property tax base. The poor yield from property tax in many cities is largely due to under-coverage and leakages in tax base, apart from inefficiency in collection due to poor tax administration. Vacant land, under-used lands and unauthorised constructions do not feature in the tax register despite benefiting from municipal services. The database is also outdated as data on new construction, additions and alterations to existing buildings are not accounted for. Bengaluru is the only city which has adopted a GIS-enabled database for property tax on a city-wide scale.

The potential of property tax in most of the cities is not harnessed. At this juncture in India’s urban evolution, the country has a significant opportunity to augment municipal revenues by improving the legal framework, design, assessment, collection and enforcement of property tax.

3.3. International Trends in Property Tax

The practice of property taxation varies widely between countries. Table 3.4 presents a comparison of per capita property tax between select metropolitan cities of the world. While comparison of the figures is not very meaningful, as the table indicates, even Bengaluru, which

undertook impressive property tax reforms in 2000 and 2008 through its Self-Assessment Scheme (SAS) has a relatively low figure.

Table 3.4

Trends in Real Per-Capita Property Tax Revenues in Selected Metropolitan Cities (US\$)

Metro / City	2006		2009	
	Property Tax (millions)	Property Tax per Capita	Property Tax (millions)	Property Tax per Capita
Bengaluru	56.95	8.38	137.31	17.16
Cape Town	285.76	89.30	319.94	94.10
Johannesburg	364.13	98.41	321.52	80.38
Kuala Lumpur	174.74	25.32	178.38	25.12
Metro Manila	317.60	21.46	288.71	17.71
Porto Alegre	61.82	22.08	71.83	19.41
Pretoria	202.62	92.10	222.62	92.76
Rio de Janeiro	430.66	39.88	395.42	32.95
Sao Paulo	1087.81	61.46	997.64	53.07

Source: McCluskey and Franzsen (2013)

The importance of property tax reforms in India is unquestionable; however, over-reliance on the tax in the longer term may not be desirable. As Table 3.5 shows, property tax had a share of less than 25 per cent in total revenues of 7 out of 9 metropolitan cities in the world in 2010. Further, in 6 out of 9 such cities, property tax per capita declined between 2006 and 2009. Table 3.6 also reveals that this ratio is on a decline in most OECD countries. In the past, octroi and property tax have been the two major tax sources of municipalities in India. However, over the years octroi has been abolished by all states/cities, except in Mumbai. No alternative as buoyant as octroi has been assigned to municipalities in lieu of octroi. Thus, property tax remains the sole tax with these local bodies. Ironically, none of the state governments have compensated the municipalities for the loss of what could have accrued to them had octroi not been abolished. Since the funding requirement of cities is always on a rise due to urbanisation and economic growth, there is a need to find an alternative to octroi, apart from undertaking property tax reforms.

Table 3.5*Importance of Property Tax in Selected Metropolitan Cities*

Metro / City	Percentage of Total City Revenue		Percentage of Local Tax Revenue	
	2005	2010	2005	2010
Cape Town	22.6	20.5	33.1	41.1
Hong Kong	6.9	3.8	8.8	5.1
Johannesburg	19.9	16.3	30.0	43.8
Kuala Lumpur	68.4	44.9	92.0	93.0
Metro Manila	27.0	28.0*	43.0	54.0*
Pretoria	20.4	19.4	28.4	42.8
Rio de Janeiro	21.8	17.5	34.5	25.0
Sao Paulo	27.2	24.8	35.0	31.0
Singapore	6.1	5.8	6.9	6.3

* Figure for 2009

Source: McCluskey and Franzsen (2013)

Table 3.6*Trends in Recurrent Taxes on Immovable Property in OECD Countries 1965-2020*

Tax Revenue as Percentage of GDP

Country/Year	1965	1975	1985	1995	2005	2015	2020
Australia	1.4	1.3	1.3	1.3	1.3	1.7	1.7
Austria	0.5	0.3	0.3	0.3	0.2	0.2	0.2
Belgium	0.0	0.3	0.3	0.4	1.2	1.3	1.3
Canada	3.0	2.6	2.6	3.1	2.8	3.1	3.3
Chile	..	..	..	0.6	0.6	0.7	0.7
Czech Republic	..	..	..	0.2	0.2	0.2	0.2
Denmark	1.4	1.5	0.8	1.0	1.1	1.4	1.4
Estonia	..	..	..	0.4	0.3	0.3	0.2
Finland	0.0	0.0	0.1	0.4	0.4	0.8	0.8
France	0.7	1.1	1.5	1.9	2.0	2.6	2.4

Country/Year	1965	1975	1985	1995	2005	2015	2020
Germany	0.5	0.4	0.4	0.4	0.4	0.4	0.4
Greece	0.0	0.1	0.1	0.2	0.1	2.0	1.8
Hungary	..	..	..	0.1	0.3	0.6	0.5
Iceland	0.4	0.8	0.9	1.2	1.3	1.6	1.3
Ireland	3.0	2.0	0.9	0.8	0.6	0.7	0.3
Israel	..	..	..	2.1	2.2	2.0	1.8
Italy	0.4	0.0	0.0	0.8	0.8	1.6	1.3
Japan	0.9	1.2	1.5	2.0	1.9	1.9	2.0
Korea	..	0.4	0.4	0.6	0.5	0.8	1.0
Latvia	..	..	..	0.9	0.6	0.8	0.8
Luxembourg	0.4	0.2	0.2	0.1	0.1	0.1	0.3
Mexico	..	..	0.1	0.2	0.2	0.2	0.1
Netherlands	0.3	0.3	0.7	0.7	0.8	0.9	1.0
New Zealand	1.9	1.9	1.9	1.7	1.7	2.0	1.9
Norway	0.2	0.2	0.2	0.3	0.2	0.4	0.4
Poland	..	..	..	1.0	1.3	1.2	1.1
Portugal	0.0	0.0	0.0	0.3	0.5	0.8	0.8
Slovak Republic	..	..	..	0.4	0.5	0.4	0.5
Slovenia	..	..	..	0.4	0.4	0.5	1.2
Spain	0.1	0.1	0.6	0.6	0.6	1.2	0.7
Sweden	0.0	0.0	0.4	0.8	0.9	0.8	0.2
Switzerland	0.1	0.1	0.1	0.2	0.2	0.2	0.2
United Kingdom	3.4	3.7	3.7	2.6	3.0	3.1	3.0
United States	3.2	3.0	2.4	2.6	2.7	2.5	2.8
OECD - Average	0.9	0.9	0.8	0.9	0.9	1.1	1.0

Source: Revenue Statistics – OECD Countries: Comparative Table <https://stats.oecd.org> accessed on 4 June 2022

Average per capita property tax collected in 36 largest cities in India in 2006-07 was of the order of Rs. 486 as against demand of Rs.1,229 (Mathur et al. 2009). Based on data furnished by state governments to the Fourteenth Finance Commission of India, per capita property tax for the country in 2012-13 is estimated at Rs. 517, ranging from Rs. 70 for Nagar Panchayats to Rs. 206 for Municipalities and Rs. 813 for Municipal Corporations (ASCI 2014). The figures are very low compared to the revenues critically needed for financing the massive needs of core urban infrastructure and services. They are also very low in terms of international comparisons. Bahl and Martinez-Vazquez (2008) reveal that for 2000s, property tax-GDP ratio was 2.12 percent for developed countries, 0.68 percent for transitional countries and 0.60 percent for developing countries (Table 3.7). However, this ratio was merely 0.16 for India in 2012-13, which shows that property tax collection in India is way behind its revenue potential. Table 3.8 shows the share of different taxes in GDP for OECD countries and 3.9 shows the share of different taxes in total tax. The share of various components of property tax in GDP is given by table 3.10.

Table 3.7

Property Tax Revenue as Percentage of GDP: Groups of Countries

	1970s	1980s	1990s	2000s
OECD Countries	1.24	1.31	1.44	2.12
	(9.7)	(9.9)	(13.65)	(12.40)
Developing Countries	0.42	0.36	0.42	0.60
	(18.7)	(15.97)	(13.49)	(18.37)
Transitional Countries	0.34	0.59	0.54	0.68
	(3.67)	(4.92)	(7.75)	(9.43)
All	0.77	0.73	0.75	1.04
	(14.49)	(12.89)	(11.63)	(3.40)

Note: Figures in parenthesis show property tax as a percentage of total revenues of municipalities

Source: Bahl and Martinez-Vazquez (2008)

Table 3.8*Share of Tax Revenues in GDP in OECD Countries*

Unweighted Average as % of GDP

Category of Taxes	1965	1975	1985	1995	2005	2015	2020
1. Taxes on Income and Profits	8.7	10.9	11.8	11.3	11.7	11.5	11.3
Personal Income Tax	6.8	9.0	9.8	8.7	8.0	8.4	8.0
Corporate Income Tax	2.1	2.1	2.5	2.6	3.3	2.8	3.0
2. Social Security Contribution	4.5	6.4	7.3	8.8	8.5	9.0	8.9
3. Taxes on Payroll and Workforce	0.3	0.4	0.4	0.3	0.4	0.4	0.5
4. Taxes on Property	1.9	1.7	1.6	1.6	1.8	1.9	1.8
Recurrent Taxes on Immovable Property	0.9	0.9	0.8	0.9	0.9	1.1	1.0
5. Taxes on Goods and Services	9.4	9.1	10.2	11.0	10.8	10.9	10.8
All Taxes	24.8	28.6	31.5	33.3	33.5	34.0	33.5

Source: Revenue Statistics – OECD Countries: Comparative Table <https://stats.oecd.org> accessed 4 June 2022

Table 3.9*Distribution of Tax Revenues in OECD Countries*

% Share in Total Taxes

Category of Taxes	1965	1975	1985	1995	2005	2015	2020
1. Taxes on Income and Profits	34.7	37.1	36.9	33.9	34.5	34.1	34
Personal Income Tax	26.2	29.8	29.8	25.1	23.1	24.4	23.5
Corp. Income Tax	8.8	7.6	8.0	8.1	10.3	8.9	9.6

Category of Taxes	1965	1975	1985	1995	2005	2015	2020
2. Social Security Contribution	17.6	21.9	22.1	25.4	25.1	25.8	25.9
3. Taxes on Payroll and Workforce	1.0	1.3	1.1	0.9	1.0	1.1	1.3
4. Taxes on Property	7.9	6.4	5.4	5.3	5.6	5.8	5.5
Recurrent Taxes on Immovable Property	3.8	3.1	2.7	2.7	2.8	3.4	3.2
5. Taxes on Goods and Services	38.4	32.8	33.7	33.6	33.0	32.4	32.6

Source: Revenue Statistics – OECD Countries: Comparative Table <https://stats.oecd.org> accessed 4 June 2022

Table 3.10

Share of Property Tax Revenues in GDP in OECD Countries

Unweighted Average as % of GDP

Category of Taxes	1965	1975	1985	1995	2005	2015	2020
1. Recurrent Taxes on Immovable Property	0.9	0.9	0.8	0.9	0.9	1.1	1.0
2. Recurrent Taxes on Net Wealth	0.2	0.2	0.2	0.2	0.2	0.2	0.2
3. Estate, Inheritance and Gift Taxes	0.3	0.2	0.1	0.1	0.1	0.1	0.1
4. Taxes on Financial and Capital Transactions	0.4	0.4	0.4	0.4	0.6	0.4	0.4
5. Other Property Taxes	0.0	0.0	0.0	0.0	0.0	0.0	0.1
All Property Taxes	1.9	1.7	1.6	1.6	1.8	1.9	1.8

Source: Revenue Statistics – OECD Countries: Comparative Table <https://stats.oecd.org> accessed 4 June 2022

Bogota, Columbia provides a good example of a city that embarked upon a comprehensive programme for property tax reforms (Box 3.1). Initiating reforms in 2008, Bogota updated

physical records and taxation values of 2.1 million properties, leading to an increase in the share of property tax in municipal “own” revenues to 40 percent by 2010 – from 20 percent in 2008.

Box 3.1: Property Tax Reforms in Bogota

Bogotá’s initiative for property tax reform, adopting a self-assessment approach has proved that political will, technical expertise, and critical investment can increase property tax yields significantly. To raise finance for a planned first subway line, the Mayor of Bogotá initiated in 2008 a major updating of physical records and taxation values of 2.1 million properties. As a result, property tax revenue increased by US\$171 million and reached 40 percent of own revenues by 2010. The cost of improvement was less than US\$15 million.

For quite a while, the property tax base of Bogotá had not been updated, and the city was forgoing important revenues during a boom in the real estate market. To capture those gains, the city refurbished tax administration and revaluated the properties. The cadastral value increased by 47 percent, from US\$ 66.5 billion in 2008, to US\$98 billion in 2010. The key elements behind this success included improved human resource management, introduction of information technology, engagement of stakeholders and career civil servants, openness to review the project’s results, massive improvement in assessment techniques with econometric modeling, and mitigation of the project’s impact on the property tax through a ceiling on the tax increase. The reassessment exercise led to dramatic increases in cadastral values and property tax bills.

To minimize the resistance of taxpayers, Bogotá’s city council adopted an increased ceiling, to change the property tax proportionally, linked to the logarithm of the property’s value. This had two benefits: (a) it separated the technical updating of the cadastre from the political implications of increasing the property tax; and (b) property owners no longer observed jumps in their property tax, leading to predictability and certainty over the medium term and lessening resistance. The ceiling cut about 20 percent of the additional revenues for 2009 and 2010.

The reassessment work included three components: the physical revision of changes in parcels’ physical configuration; legal changes, through the verification of ownership; and economic changes through assessment of property values by researching the real estate market. All these components required human and technical resources proportional to the number of plots and inversely so to the time available for the process. The cadastre update of

1,212,000 urban plots costed the city about US\$7.8 million, or US\$6.50 per property. Hundreds of temporary workers carried out the physical updating, representing about 35 percent of the total cost. The economic and market analysis represented about 23 percent of the total cost. The rest was spent for technology and administration.

Among the factors leading to Bogota's success were strong political support; the technical capacity of the cadastre agencies to revalue properties; and a clear policy to avoid sudden increases in tax bills.

Source: Ruiz and Valejos (2010) – reported in Freire and Garzon (2014)

In India, Bogota-type of property tax reforms has not been attempted. Bengaluru property tax experiment perhaps comes the nearest to Bogota's initiative. Due to two spells of Self-Assessment Scheme (SAS), property tax collection in Bengaluru increased by 33 per cent during 2000-01, and by 39 per cent between 2009-10 and 2010-11.

International practice in property taxation suggests that a holistic approach is necessary for property tax reforms to be successful. A number of key issues must be taken into consideration; they relate to: tax base, tax rate, tax coverage, exemptions, valuation, assessment, billing, collection, enforcement, dispute resolution, record-keeping and capacity building.

Internationally three approaches are used to "assign" value to property tax base: rental value, capital value and area-based method (see Box 3.2). These methods are applied to components of property and their uses. Components of property include land only, improvements only, and land and improvements together. Property uses cover residential and non-residential, the latter divided into sub-categories such as commercial, industrial, institutional, and recreational. In a sample of 121 countries around the world, the largest number are found to opt for capital value method, followed by area-based method, rental value method and flat rate tax system. The number of cities using various methods are: capital value of land and buildings together – 52, capital value of land only – 16, capital value of land and buildings separately – 8, capital value of buildings only – 4, area-based approach – 42, rental value method – 37 and flat rate tax – 6 (Bell 2011).

Box 3.2: Property Tax Base: Alternative Valuation Systems

Rental value method: Adopted in Hong Kong, Malaysia, Singapore, India, Ghana, Uganda, Niger and Trinidad, this method is based on the concept of rent reasonably expected to a

property in a fair market. Administrators using this method resort to rent surveys validated by expert judgment or impute rent based on estimated capital value of property or net profit from property.

The merit of rental value method is that it links property tax to rental income of property owner. The difficulties with it are: (i) data on current rents may not be available; (ii) some properties such as “self-occupied” and “industrial” rarely come to the market; (iii) large tracts of vacant lands in cities have no rental value; (iv) for properties subject to "fair rent" under rent control law, tax rates become exorbitantly high, e.g. exceeding 200 per cent of annual rental value in Mumbai; and (v) rents represent the current use value and not value in the "highest and best use" of property.

Capital value method: Used in most OECD countries, Latin America and South Africa, this method relies on the value of property in open market transactions. Sydney, Brisbane, Christchurch, Kingston and Nairobi implement site value or unimproved land value tax. South Africa resorts to valuation of land and buildings together. South African metropolitan cities have set tax rates ranging from 0.5 per cent to 0.9 per cent of market values for residential properties and 1.0 to 2.5 per cent for commercial properties. Brazil and Philippines adopt separate valuation of land and buildings. Assessment of land in Metro Manila is based on market transactions whereas that of buildings is based on depreciated replacement cost. This approach is followed by most Latin American countries. In Jakarta, land is classified into approximately 100 value zones according to use and location; buildings are categorized into 40 classes, with each class having a determined rate per square metre.

The merits of capital value method are: (i) linkage to market value results in revenue buoyancy and productivity of property tax; (ii) valuation of vacant land is possible unlike rental value method; and (iii) tax assessment is equitable as property values reflect benefits, those receiving more benefits paying more taxes. The difficulties with the method are: (i) adequate data on current market sales may not be available; (ii) in dense central areas of cities, the determination of value of properties with no comparable sales data is difficult; (iii) registered property values may be underestimates as buyers underreport value to avoid stamp duty, while sellers underreport value to avoid capital gains tax; (iv) property markets in cities of developing countries like India are not well-developed and a large number of transactions in property occurs in informal property markets; and (iv) this method requires professional valuers who may be in short supply.

Area-based method: This method, under implementation in Eastern and Central Europe, India, Vietnam, Nigeria, Tanzania, etc., determines “unit area” value for property groups. It adopts simple area or "calibrated" area that takes into account the characteristics of property such as location, type of construction and nature of use. Bengaluru has adopted a hybrid between an area-based and a value-based method.

The merits of area-based method are: (i) it is simple, transparent, fair and easy to implement; (ii) rigorous valuation techniques or expert valuer services are not necessary; and (iii) it can be implemented when property markets are at a nascent stage or are informal. The demerits of this method are: (i) lack of linkage to market value deprives the tax of buoyancy; and (ii) arbitrariness and subjectivity creep in the classification of properties and fixation of unit values, leading to varying successes. The experiment with area-based tax has been successful in Bengaluru, but not so in Delhi.

Source: Norregaard (2013); McCluskey and Franzsen (2013); Mohanty (2016)

In rental and capital value-based systems, property-owners are primarily responsible for tax payment; in area-based regimes the occupiers of property are sometimes required to bear the property tax liability. In Bengaluru, if the owner does not pay property tax, the tenant is required to pay the same.

International Experiences: Lessons

International experiences in property taxation and property tax reforms suggest the following lessons for designing and implementing property tax reforms in India:

- A robust, comprehensive but simple legal framework for property tax that makes the tax easily understood by tax-payers and enforceable by tax officials;
- Rationalisation and expansion of property tax base and minimization of exemptions and concessions;
- Simplification of property valuation procedures for the purpose of determining tax base and fixing or revising tax;
- Preparation of land and fiscal cadastres using satellite imagery and remote sensing data with field surveys for validation, adopting techniques of GIS, GPS and geo-informatics;

- Indexation of property tax to market value or inflation between comprehensive revisions of property tax;
- Rationalisation of property tax rates;
- Upgradation and professionalization of human resource through competitive and merit-based recruitment, regular training of tax officials and outsourcing of expertise as needed;
- Use of e-tools and other techniques like CAMA and GIS-enabled mapping and MIS to undertake, update and track property valuation, assessment, billing, collection, and enforcement;
- Strict implementation of property tax laws, providing for special tribunals to deal with tax disputes after the same are not settled through first appeals at the official level;
- Close involvement of local political leaders as well as taxpayers' associations in the levy and collection of property tax;
- Demonstration of visible links between tax payment and improvement in civic services and infrastructure, both city-wide and area-specific to garner support from tax-payers; and
- Strong political will to undertake property tax reforms.

Some researchers have advocated a "collection-led" strategy as against a "valuation-pushed" strategy, citing impressive results in countries like Indonesia. However, experiences of Indian cities like Hyderabad, Ahmedabad and Bengaluru that have achieved good results in the past due to property reforms suggest that property taxation should be viewed with a "systems" approach rather than as a combination of disjointed initiatives. Systemic reforms must go hand-in-hand with efforts to improve collection efficiency through improvement in tax administration.

3.4. Property Tax: Theoretical Views

Property tax has two components; land and buildings. Tax may be imposed on either or both of the components. There are three major views regarding property tax impact and incidence. The traditional or 'old' view, which treats property tax as an excise tax; the capital or 'new' view, which considers property tax as a tax on capital generally; and the benefit view, which regards property tax as a benefit tax or user charge for locally provided public services. The various theoretical perspectives on property tax and their implications for the design of property tax reforms in developing countries like India are described below:

The Traditional View

The traditional view of property tax (Edgeworth 1897; Simon 1943; Netzer 1966) focuses on its effects on the local housing market. It regards property tax as an excise tax on the occupancy rights for land and housing with two components. The first is a tax on perfectly immobile land, whose incidence is borne by the landowner as land is inelastic in supply. The second is a tax on perfectly mobile capital whose burden is shifted to the consumers of housing. Assuming an ‘open economy’ and that the nationally determined return on capital is fixed, the traditional view argues that the local capital embodied in structures does not bear the local property tax as in the long run local capital migrates out to other jurisdictions until the after-tax return to such capital equals the national value. The land part of property tax is borne by people in proportion to the rental income to land they receive while the structure part is borne in proportion to the amount of housing they consume. As an excise tax on capital, property tax leads to an increase in housing price and a reduction in housing stock. With capital perfectly mobile, the incidence of property tax for the most part is shifted forward to tenants in the form of higher rents. Further, as the share of housing consumption expenditure in total income declines when one moves up in the income ladder, property tax under the traditional view is a regressive tax, requiring a larger share of income from relatively lower income segments compared to higher income groups.

The Capital Tax View

The capital or ‘new’ view of property tax (Mieszkowski 1972; Zodrow and Mieszkowski 1983; Mieszkowski and Zodrow 1989) regards it as a distortionary tax on the local use of capital, resulting in the misallocation of national capital across jurisdictions. It assumes that national capital is fixed in supply, but mobile between sectors and jurisdictions. Property tax on capital has two components. The first is a basic or average tax applied to all capital – a tax that cannot be escaped, the total capital stock in the country being fixed. The national average tax burden is in effect a ‘profits tax’ borne by all capital owners, including homeowners, business entities, and investors. This is the capital tax effect. The second is a local tax differential that varies between municipalities, prompting local capital to reallocate among jurisdictions until the net after-tax returns are equalised. The local component of property tax is borne locally through changes in land rents, housing prices and wages. This is the excise tax effect. The incidence effects of the local tax that exceeds or falls short of the national average tends to cancel one another in the aggregate. Accordingly, the profits tax effect is the main determinant of the distributional aspects of property tax in the economy. Property tax differentials will be borne by renters only to the

extent they are immobile. Thus, property tax is progressive – or not as regressive as portrayed by the old view as land and capital are owned by higher income individuals.

The Benefit Tax View

The benefit view of property tax (Hamilton 1975, 1976, 1983; Fischel 1975; White 1975) regards the tax as a price or user charge for locally provided public goods and services. It relies on two key assumptions: mobility of households and immobility of housing stock, restricted through land use zoning. It argues that households choose residential locations based on the mix of civic services provided by, and the property taxes paid to the local authority. The benefit view further suggests that the benefits of public facilities and property taxes to finance them, along with zoning regulations followed by the authority, capitalize into property values, and therefore, a tax on such values is a fair way of financing public infrastructure and services. Fischel argues that municipalities decide on tax-spending programmes, guided by whether these would lead to positive capitalization. Further, a combination of strict zoning regulations and fiscal capitalization has the effect of converting property tax into a benefit tax. Empirically recognising that “*capitalisation is everywhere*”, Fischel (2001) observes:

Local governments are very different from state and national governments, primarily because voters at the municipal level know taxes and services affect their home values. This difference makes the property tax a benefit tax at the local level (2001, p.34)

Under the benefit view, a tax on immovable property is non-distortionary and does not adversely impact the incentives to save, invest and supply labour for productive economic activities. In particular, residential property taxes are considered appropriate for financing local government expenditures, which benefit property owners. The benefit view has some crucial implications. First, property tax is simply a payment for public goods and services provided by municipal governments – similar to payment for purchase of private goods and services. Second, like other benefit taxes, it does not affect the distribution of income, implying that there are no concerns of equity in taxation – regressivity or progressivity. Third, as property tax acts as a price, it signals local authorities to deliver public services efficiently, matching the preference of taxpayers and securing their ‘willingness to pay’. Thus, it can be a tool for good urban management. When local public goods and services are financed by property taxes, the functioning of the municipal government is likely to be more efficient as taxpayers will support those activities for which benefits exceed the taxes paid by them.

The three views on the economics of property tax differ in their assumptions, but they are not mutually exclusive. For example, Wildasin (1986) shows that the traditional view can be derived as a special case of the capital view. Zodrow (2006) reveals that from the perspective of a single-taxing local jurisdiction, with property tax rate deviating from the national average, even the capital view implies that the local use of property tax is subject to many features of the benefit view. While empirical evidence on the economic incidence of property tax in developed countries is not conclusive, there is practically no research on the subject in developing countries. The benefit view, however, offers the most appropriate perspective for cities in developing countries like India for a number of reasons. These reasons include: inappropriate assumption under the capital tax view, treatment of property tax under municipal laws, and intrinsic merits of linking local public services with property-related taxes.

Apart from theoretical and legal perspectives on property tax, the strategy of linking municipal services with property-related taxes is intrinsically valuable for several reasons. First, it is grounded in the broader principle of ‘benefit taxation’ in public finance, which asserts that people should pay for the benefits from government services. This carves out a crucial role for property tax in strategizing a self-financed or even a surplus-generating process of planned urban development through the creation, capture and recycling of benefits – direct, indirect and induced. Second, the strategy is in sync with the criteria for sound organization of local self-government in a federation based on the ‘subsidiarity’ principle, aimed at promoting efficiency in public service delivery and local ownership over policies. This principle advocates that the exercise of political authority for a particular government function should be done at the lowest and the least centralized level feasible – as close to the people as possible. Third, it can be an effective instrument to foster the ‘Wicksellian connection’, linking public services delivered with taxes collected to ensure responsiveness and accountability on the part of public service providers and responsibility on the part of taxpayers. The considerations of benefit taxation, subsidiarity and Wicksellian connection call for rooting the ‘design’ of property tax reforms in India in the broader strategy to promote decentralization and improve urban governance.

3.5. Property Tax Reforms: The Indian Experience

The Finance Commissions set by the Government of India have upheld the importance of property tax and acknowledged the need to improve it in order to strengthen municipal finances. The 11th Finance Commission encouraged setting up of a Central Valuation Authority of the kind set up by West Bengal. The 12th Finance Commission encouraged the use of Geographical Information System (GIS) and digitization to improve property tax

administration. The 13th Finance Commission mandated the setting up of the State Property Tax Board as one of the conditions necessary for performance grant eligibility of states. The primary function of the State Property Tax Board was to help municipal corporations and municipal councils put in place a transparent and efficient property tax regime. The 14th Finance Commission also stressed the need for property tax reforms by states. They also recommended that municipalities be enabled to levy vacant land tax and that a part of land use conversion charges should be shared with local bodies. Further, a clear framework of rules for the levy of betterment tax should be put in place by the states. The 15th Finance Commission has further recognized the need to improve property tax collection. The study prepared by ICRIER for the 15th Finance Commission has advised following the capital value method for property tax collection which is followed worldwide. This method links the property tax to the market value of the property and can eliminate the ambiguities prevalent under alternate methods. Further, the commission advised the states to attempt property tax growth at par with GSDP to ensure that the buoyancy of the tax is not lost. To quote from the report of the commission:

The importance of mobilisation of own revenues by self-governing local bodies cannot be over-emphasised. It leads to better ownership and accountability. Internationally, property tax is one of the most effective instruments for revenue mobilisation by local bodies. For historic reasons as well as because of vested interests, property tax yields remain negligible in India. We recommend that to qualify for any grants for urban local bodies in 2021-22, States will have to appropriately notify floor rates and thereafter show consistent improvement in collection in tandem with the growth rate of State's own GSDP (15th Finance Commission).

Since 1993 some states and cities in India have resorted to experiments in property tax reforms. The initiatives undertaken by Patna, Hyderabad, Bengaluru and Mumbai are discussed below.

Patna Model: Unit Area Method

The first innovative initiative in property tax reforms in India was undertaken by Patna Municipal Corporation in 1993, shifting to a presumptive, area-based valuation system that took into account location of property, usage, built-up area and type of construction to determine tax rates. This system adopted the Unit Area Method (UAM) to address the existing loopholes in property tax system. Property tax had lost much of its buoyancy due to the archaic rent control laws. The Patna model delinked property tax from these laws. This is the most

significant contribution of the model. The rent control laws linked property tax to "fair rent" as a result of which property taxes for older properties were forced to remain at extremely low levels although such properties received full civic services. Moreover, the problems of discretion with tax assessors and collectors, under-coverage, under-assessment and under-collection persisted due to many subjective considerations in the tax system.

Under the UAM, property tax is determined based on a unit area value for groups of properties classified by zone of location, type of building and type of use. The Patna Municipal Corporation adopted three norms of location (principal main road, main road and others), three types of construction (pucca with reinforced concrete roof, pucca with asbestos or corrugated sheet roof and others) and three categories of usage (commercial/industrial, residential and others). Thus, twenty-seven combinations of properties were worked out. Property tax base was determined by fixing annual rental value per square feet for each of these categories. The Corporation effectively reduced the tax rate from 43.75 percent to 9 percent (Table 3.11). The Supreme Court of India has upheld Patna's model of property tax on the ground that it reduced arbitrariness and discretion on the part of officials and the scope for corruption. The apex court lauded the Patna model observing that it was designed with "good intentions".

Table 3.11

Property Tax Rates of Patna

In Percent

Sl No.	Particulars	Before 1993	1993 to 2012-13	Since 2013-14
1	Property Tax	12.5	2.5	(Solely Property Tax)
2	Latrine Tax	10	2	
3	Water Tax	10	2	
4	Education Cess	5	1.25	
5	Health Tax	6.25	1.25	
Total Property Tax Rate		43.75	9	9

Source: Patna Municipal Corporation, <https://www.pmc.bihar.gov.in/ptaxAssessment.aspx>

Box 3.3: Property Tax Model of Patna

Patna Municipal Corporation collects property tax from the properties situated in the jurisdiction of the corporation. At present, the process of collection of property tax has been outsourced to a private agency. Property tax may be paid via either online mode or offline

mode. Door-step tax collection has also been enabled for making the whole process of tax payment easier and comfortable for the citizens.

Present Property Tax Assessment Process

For Property Tax Calculation, Calculation of Property Tax in five different holding, details given below

1. Constructed Property (Residential/ Commercial/ Apartment).
2. Vacant Land (Only Land).
3. Vacant Land with Constructed (If constructed area is less than 70 %).
4. Vacant Land with Constructed (If constructed area is More than 70 %).
5. Government Properties.

1. Constructed Property (Residential/ Commercial/ Apartment)

- . Calculate carpet Areas (Carpet Areas= Build up area x ____%)
(Carpet Areas: For Residential - 70% of Build-up Areas, For Commercial - 80% of Build up Areas)
- A. Calculate ARV (ARV = Carpet Areas x Occupancy Factor x ARV Factor)
- B. Occupancy Factor: (Self-1, Tenant-1.5)
- C. ARV Rate (Road Factor)
- D. PMC has categorically classified the Road in Year 12th August 1993

Types of Construction of Building	Holding at the Principal Road			Holding at the Main Road			Holding at Other Road		
	Fully Commercial	Others	Fully Residential	Fully Commercial	Others	Fully Residential	Fully Commercial	Others	Fully Residential
Pucca Building with R.C.C Roof	54	36	18	36	24	12	18	12	6
Building with Corrugated/ Cement	36	24	12	24	16	8	12	8	4
Others	18	12	6	12	8	4	6	4	2

2. Vacant Land

Property Tax = Vacant Land Areas (in Sq. ft) x ARV factor as per Property Tax Rule.

Table represents Vacant Land factor

Sl. No.	Type of Municipality	Principal Main Road
1	Municipal Corporation	0.46
2	Municipal Council	0.36
3	Nagar Panchayat	0.28

3. Vacant Land with Construction (If Construction area is less than 70 %)

Property Tax = Property Tax on Constructed Areas + Property Tax on Vacant Land

. Property Tax on Constructed Areas

- Same calculation as calculation in Constructed Areas, Only Constructed Areas taken.
- Calculate ARV of constructed Areas (ARV = Carpet Areas x Occupancy Factor x ARV Factor)
- Property Tax=ARV x 9%

A. Property Tax on Vacant land

- Calculate Taxable Vacant Land Areas= Vacant Land Areas - constructed Areas x 1.43
- Property Tax on Vacant Land= Taxable Vacant Land x Vacant Land Road Factor.

4. Vacant Land with Construction (If construction area is more than 70 %)

- . Same calculation as calculation in Constructed Property (Residential/Commercial/ Apartment)

A. Calculate ARV (ARV=Carpet Areas x Occupancy Factor x ARV Factor)

B. Property Tax=ARV x 9%

5. For Government Building: Service charge levied instead of Property tax

- . First Calculate ARV

A. Calculate Total Property Tax

B. Service Charges=75% x Total Property Tax

Source: Patna Municipal Corporation, <https://www.pmc.bihar.gov.in/ptaxAssessment.aspx>

Hyderabad Self-Assessment Scheme

The municipal corporation of Hyderabad introduced UAM-based property tax with a self-assessment scheme in 1999-2000. The objectives were to ensure accountability and transparency in property taxation, correct inequities in the property tax system, and enable citizens to calculate their own property taxes by themselves. General revision of property tax was not undertaken in Hyderabad for 19 years. Property-owners continued to pay taxes fixed decades back. The number of assessments was only about 410,000 in 1998-99 as against an estimated number of taxpayers of about 600,000. Under the new scheme, the Corporation assigned unique property tax identification number (PTIN) to all taxable properties.

As a new law would take time, under the existing provisions of the Hyderabad Municipal Corporation (HMC) Act, the self-assessment route to improve property tax collection was chosen. While calling for mandatory information on property details, including plinth area under Section 213 of the HMC Act, the taxpayers were given the option to determine their tax and file returns. Under law, annual property tax was expected to be equal to three months' rent. However, in practice, most taxpayers were paying much below a month's rent; there were many court cases. Under the new scheme, the Corporation chose not to fix the tax rate, fearing that some property-owners might go to the court for stay. Resident Welfare Associations (RWAs) were closely involved, linking taxes to civic services area-wise. Some smart RWAs articulated three benchmark rents per sft – for high-rent, middle-rent and low-rent areas and proposed a minimum of one month of market rent as the benchmark for filing of tax returns. These views were articulated to other RWAs. These benchmarks were accepted by the municipal corporation for the purpose of accepting tax returns without going in for property-to-property verification to bring all taxpayers to one level.

The Hyderabad self-assessment scheme was a resounding success. About 130,000 taxpayers filed self-assessment returns within 4 months of launching of the scheme. Response from the tax-payers led to a 123 per cent increase in property tax between 1999-2000 and 2001-02 (70 per cent in 1999-2000), and impressive rise thereafter in spite of the effective tax rate being literally reduced by two-thirds. The sources of the increase in yield have been correction of historic inequities in the tax system, better coverage and record-keeping and computed-based decision-support systems leading to better guidance to the tax administrators. The self-assessment principle was extended by the municipal corporation to advertisement tax and trade licensing fee. The period 1998-2000 witnessed a rise in advertisement tax by more than 230 per cent. Trade licensing fee went up by 63 per cent during the year 1999-2000.

The self-assessment of property tax scheme introduced in Hyderabad in 1999-2000 is continuing. However, property tax rates have not changed over the last sixteen years. However, between 2012-13 and 2013-14 the corporation has achieved a remarkable success in property tax collection with a growth of 32 per cent by strengthening enforcement and focusing on tax administration.

Bengaluru Self-Assessment Scheme

The municipal corporation of Bengaluru provides a good example of property tax reforms, adopting the unit area value (UAV) method. It launched the optional Self-Assessment Scheme (SAS) in 2000. The city was divided into six zones: A, B, C, D, E and F based on the guidance values notified by the Stamps and Registration department of Karnataka Government. For each zone, rental rates per square foot were determined linking buildings to location, type of construction, built-up area, use and age.

Tax rates for rented buildings in Bengaluru were fixed at levels much lower than prevailing rates under the SAS. Owner-occupied buildings were given a concession of 50 per cent. Two months deduction in annual rental value (ARV) was provided for repairs, etc. Further, concession was given in accordance with the age of building. Tax was levied at 20 per cent of ARV for residential use and 25 per cent for non-residential use. A cess of 34 per cent was levied, covering education cess (10 per cent), health cess (15 per cent), beggary cess (3 per cent) and library cess (6 per cent). To facilitate political acceptability, a cap on the property tax increase was set at 2.5 times the existing liability. The process was transparent and backed by political leaders. More than 60 per cent of taxpayers filed their declarations within the prescribed 45-days period. Due to the SAS, property tax collection in Bengaluru increased by 33 per cent during 2000-01.

Learning from the optional SAS-2000, Bengaluru has shifted to a mandatory scheme by amending the Karnataka Municipal Corporations (KMC) Act 1976 to provide for self-assessment based on unit area value (UAV). Section 108A of the Act defines UAV as:

... an average rate of expected returns from the property per sq. ft. per month determined by the Commissioner, Bruhath Bangalore Mahanagar Palike on the basis of the average market rate determined through mass appraisal method or real estate market information or any other reliable source or combination of these sources that he may consider it as sufficient and reasonable having regard to the location, type of construction of the building, nature of use to which the vacant land or building is put, area of the vacant land, built-up area of the building, age of the building, parking area of vehicles in non-residential building where it is charged and such other criteria as may be

prescribed. Different rates may be determined for different area or street by classifying into zones, different nature of use to which the vacant land or building is put and for different class of buildings and vacant lands....

Provided further that the land appurtenant to a building to the extent not exceeding thrice the area occupied by such building shall be exempted from the property tax...

SAS-2008 has shifted to the concept of UAV from ARV in SAS-2000 (refer to Box 6). Filing of annual property tax returns in Bengaluru is now mandatory. Up to 10 per cent of the returns filed are required to be verified randomly. The municipal corporation has supplied a handbook to tax-payers at nominal cost, explaining how self-assessment property tax can be calculated. An online tax calculator is also made available. 360 help centres were organised to propagate the features of SAS to citizens and clarify their doubts. Now property tax can be paid online, at computerised kiosks in 'Bangalore One' centres, municipal offices or banks. Credit card payments facilities are also available with no user charges to citizens. Property-owners who make payments in full before April 30 can avail a rebate of 5 per cent. Penalty at 2 per cent per month is levied on defaulters after 60 days from the date property tax is due – April for first half-year and October for second half-year. It is mandatory for all properties, including unlawful properties and those in unauthorised layouts to pay property tax without any assurance of regularisation.

Bengaluru is the first city in India to adopt GIS-enabled database for property tax on a city-wide scale, identifying 1.7 million properties and assigning them unique numbers for Property Identification (PID).

Box 3.4: Bengaluru Municipal Corporation: Salient Features of Self-Assessment of Property Tax Scheme 2008
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In 2008, the municipal corporation of Bengaluru introduced the unit area value system (UAV) of self-assessment of property tax with the following features:

(1) The city is divided into six zones: A, B, C, D, E and F based on published guidance value of land as was in the case of Self-Assessment Scheme-2000.
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(2) Residential use properties are classified into five categories: (i) RCC or Madras terrace buildings, (ii) RCC or Madras terrace and where the flooring of the entire house is either cement or red oxide, (iii) tiled/sheet of all kinds, (iv) all hutments, houses built/allotted for the poor by government, all houses in declared slums with built-up area less than 300 square

feet and self-occupied, and (v) special category - falling in 100 villages newly added to the limits of the corporation.

(3) Non-residential use properties are classified into: (i) buildings not-equipped with central air-conditioning facility and which do not fall under other categories, (ii) those equipped with central air-conditioning, (iii) star hotels, classified so by central and state governments, (iv) hotels/ restaurants other than star hotels having both boarding and lodging facilities, including service apartments, guest houses, etc. - classified into three sub-categories based on average room tariff, (v) entertainment houses such as cinema theatres and multiplexes - classified into four sub-categories, (vi) private hospitals and nursing homes - classified into four sub-categories depending on year of commencement, (vii) marriage halls, community halls, convention centres, function halls and the like - other than hotels/restaurants, (viii) industrial buildings, (ix) properties other than those falling into the categories of (ii) to (viii). Other categories include: (i) excess vacant lands and vacant land not built upon, (ii) buildings exempted from property tax and which are required to pay service charges, (iii) properties on which telecommunication towers are erected, and (iv) hoardings/billboards, including digital or electronic.

(4) For each zone and category of property, a unit area value per square feet is determined as per the method prescribed under Section 108A of the Karnataka Municipal Corporation Act.

(5) For residential use building, the rate of tax is 20 per cent of the taxable annual value; for non-residential use buildings it is 25 per cent. The tax rate for owner-occupied properties is half of that for tenanted.

(6) Vacant land exceeding three times the built-up area is assessed at 30 per cent of the rate fixed for built-up area.

(7) Over a three-year-cycle, the value increase must be at least 15 per cent, resulting in steadily increasing property tax collection.

Due to SAS-2008, property tax collection in Greater Bengaluru Municipal Corporation increased by 39 per cent between 2009-10 and 2010-11. The tempo of property tax growth in the city is continuing.

Source: Bruhath Bangalore Mahanagar Palike; bbmp.gov.in.

Property tax in Bengaluru increased from Rs.157 crores in 2000-01 to Rs 347.00 Crs in 2006-07. The property tax collected by Bruhath Bangalore Mahanagar Palike (BBMP) stood at Rs.408 crores in 2007-08 and increased to Rs.1350.0 crores during the year 2015-16. This was a result of the increase in tax base, new properties added to tax base and time to time property valuation. BBMP was fairly successful in implementing reforms in property tax through the two spells of SAS. Further, BBMP has been making certain changes in its property tax collection to ensure buoyancy. For instance, an Urban Land Transport cess of 2 percent, infrastructure cess (not exceeding 10 percent), solid waste management cess (not exceeding 10 percent) has been imposed on property tax from 2021-22.

Mumbai Capital Value-based Property Tax

The municipal corporation of Greater Mumbai has shifted from rateable value or annual rental value (ARV)-based property tax to a capital value-based system in 2010. The corporation has issued rules for the fixation of capital value of land and buildings in 2012. Under the new scheme, the market value of property is determined based on the stamp duty ready reckoner, revised by the Government of Maharashtra every year. The market value is then multiplied with the carpet area of property (land area in the case of open land) and weight factors notified by the corporation, including nature and type of construction, age of building, floor characteristics and use of property. This gives the property's capital value, which multiplied with the property tax rate notified the city council, determines the property tax payable (refer to Box 7). In a batch of cases filed against the new property tax system, the Bombay High Court has ruled that the property-owners can pay under the old un-amended rates along with 50 per cent differential between the old and new rates, pending the outcomes of the cases.

Box 3.5: Municipal Corporation of Greater Mumbai: Capital Value-Based Property Assessment and Tax Calculation System

In 2012, the municipal corporation of Greater Mumbai has notified rules for fixing capital value of land and buildings, following the introduction of capital value-based property taxation scheme in 2010. Property tax is calculated based on capital value determined as follows:

Capital value of open land: $BV \times UC \times FSI \times AL$, where BV = base value of open land according to the ready reckoner, UC = user category factor, FSI = permissible or approved floor space index, and AL = area of land.

Capital value of building: $BV \times UC \times NTB \times AF \times FF \times BA$, where BV = base value of building according to the ready reckoner, UC = user category factor, NTB = nature and type of building factor, AF = age of building factor, FF = floor factor, and BA = built-up area.

Weight factors for various categories:

User category:

Open land: open land - commercial (1.25); open land - industrial (1.10); open land - residential (1.00), etc.

Residential buildings: bungalow (1.25); room, or flat, or apartment, or tenement and the like (1.00); car parking in stilt, or basement, or podium, or enclosed garage (0.25), etc.

Shops/commercial buildings: hotels - five stars and above (1.25); mall (1.25); multiplex (1.25); shop (1.00); hospital (1.00); educational institution (0.70); etc.

Industrial buildings: industrial estate (1.25), factory, including refinery/workshop (1.25), service industrial estate (1.25), etc.

Nature and type of construction:

Luxurious RCC (1.20), RCC building other than luxurious RCC building (1.00), pucca building, excluding chawl (0.70) and semi-permanent/kachha building, including chawl (0.50)

Age of building:

Buildings with age 0 to 5 years (1.00); more than 5 to 10 years (0.97); more than 10 to 15 years (0.94) more than 50 years (0.70)

Floor factor for a RCC building with a lift:

Above 100 floor (1.35); from 76th to 100th floor (1.30); from 51st to 75th floor (1.25); from 5th to 10th floor (1.05); ground to 4th floor (1.00); basement used for car parking (0.70), etc.

Property tax rates:

Property tax rates are notified by the municipal corporation of Greater Mumbai from time to time under various components: general tax (including fire tax), street tax, municipal education cess, water tax, water benefit tax, sewerage tax, sewerage benefit tax, and tree

cess. The combined tax rates for various user categories ranged from 0.316 per cent to 2.296 per cent in 2013.

Source: Municipal Corporation of Greater Mumbai; <http://cvs.mcgm.gov.in>.

Despite the reforms attempted by the Indian cities, the results are not as expected. The reasons for the sub-optimal results, are rooted in the very form and nature of reforms attempted in the Indian Cities. Many of the Indian cities are still following the rental value method which limits the scope of generating higher revenues from property taxes. Under the rent control regime, property taxes based on the rental value method are underestimated figures. There can be a significant difference between market value and rental value; especially when properties are not put to “highest and best” use. Vacant lands cannot be taxed under this method because they generate no rent.

The Unit Area Method is also laced with several disadvantages. To begin with, size of a property is not an appropriate measure of the benefits drawn from the provision of civic services. A better proxy for the benefits drawn is the value of the property. The area based method is criticised for being unfair to the low-income groups. The reason is that in a specific zone there are high-value as well as low-value neighbourhoods and properties of the same size have to pay same amount. Average household incomes are higher in high-value neighbourhoods than in low-value neighbourhoods. Thus, it is considered regressive. Older houses with large floor area may be in a bad shape, but such structures are also subjected to relatively high taxes. Due to certain changes like a new transit facility or a new school, the value of a zone increases. However, such increases do not reflect in higher property tax revenue due to the lack of proper revision of property values. Over a period of time it results in an iniquitous assessment system. Allocation of shared facilities like lobby, common entrances and exits, halls etc. among the owners is yet another problem.

The Unit Area Value Method (UAV) may be critically evaluated. The method does not seem to be yielding desirable results in the case of non-residential properties. Although unit value may be easier to administer for single-family residential properties, it is difficult to use for multi-residential rental, residential condominium, commercial, and industrial properties (Bird and Slack, 2002). Such properties are highly heterogeneous and the method of ‘averaging’ inherent in the Unit Area Method (UAM) may be leading to subsidization of high end commercial properties and penalization of those at the lower ends. Larger and more

prosperous cities are not necessarily adopting higher unit area rates. Commercial properties in wealthier cities are not necessarily paying property tax at higher rates than less well-off cities.

UAM rates are not revised from time to time. This has led to the lack of buoyancy in the collection of property tax in all cities. Unit area rates have not kept pace with the rise in land and property values due to urbanisation and economic growth. This means that Indian cities are not able to capture these gains and are foregoing important revenues. There is no built-in provision under the UAM to index property tax to inflation

Even the self-assessment method is not free from drawbacks. Compliance and litigation are two issues associated with self assessment. If all the owners do not comply then it is difficult to determine the number of tax payers or taxable properties. Generally, random sampling is adopted to verify if the self-assessment forms submitted reflect the tax liability accurately. For example, in Bengaluru up to 10 percent of the returns filed are verified randomly. There may be cases of underestimation of tax liability in the absence of property inspection by qualified personnel. It is understood that without a reliable verification technique, it is not possible to encourage people to tax themselves. Inaccurate assessments and underestimation can result in significant loss to municipalities by eroding the tax base.

In the backdrop of the flaws inherent in the Annual Rental Value and Unit Area Method, the capital value method as suggested by the 15th Finance Commission seems to be appropriate to be followed by Indian municipalities. However, sadly enough, not much has been done in this direction even by the leading municipalities of the nation.

3.6. Property Tax Reform based on Benefit View

A central problem of the public sector is how to deliver public services efficiently. This calls for ensuring as clear a linkage between public services and taxes as possible or establishing “the Wicksellian connection” (Breton 1996). A close correspondence between the basket of services provided by a public authority and the preferences of taxpayers facilitates matching “expenditure responsibilities with revenue sources”, “revenue capacities with political accountability”, and “benefit areas with financing areas”. It promotes responsiveness on the part of politicians and bureaucrats with coincidence between the three circles of budgetary policy: those who decide, those who benefit, and those who pay (Bird and Slack 2014). In particular, a close connection between the benefits from public expenditure in a municipality with its revenue-raising potential promotes accountability in public service delivery (Litvack et al 1998; Weingast 2006; Bird 2008; Oates 2008).

The Wicksellian connection' provides guidance for designing a sound system of municipal finances. Researchers suggest the following measures for applying the theory in practice:

- Municipalities should charge for public services as far as possible. When services are measurable and beneficiaries identifiable, they should be financed by direct user charges.
- Where public services are characterised by difficulties of measurement and/or identification of beneficiaries, specific and generic benefit taxes are appropriate sources of financing.
- When user charges and benefit charges are not adequate to meet the operation and maintenance costs of services and debt repayment liabilities, benefit taxes may be levied. General taxes may be imposed when benefit taxes are not adequate. A case for inter-governmental transfers arises when user charges and taxes do not suffice.
- Municipal property tax and service-related components such as water tax, sewerage tax, drainage tax, street lighting tax and fire tax may be treated as surrogate user charges for recovering the costs of the relevant public services;
- Property tax burden should be lower for non-residents; relatively higher tax rates may be applied to properties that benefit from vibrancy in the urban economy due to government policies and actions, including spatial planning and infrastructure development;
- As land is immobile and the value of urban land increases due to investment in public infrastructure, land value tax (LVT), land value increment tax (LVIT), special assessments and betterment levies are ideal instruments to recoup the cost of such infrastructure.
- Taxes such as local payroll tax and goods and services tax are appropriate for taxing non-residents, including commuters who benefit from infrastructure facilities and services provided by municipal authorities.
- Dedicated benefit taxes such as motor vehicle tax, motor fuel tax, truck weight fee, transport tax and special assessments in transit-impact zones are appropriate for raising resources to finance public transport infrastructure.
- Income, sales, goods and services and excise taxes can be regarded as benefit taxes for working, living and transacting in the city. This view makes a case for municipalities piggy-backing on such taxes, or getting access to appropriate revenue-sharing mechanisms.

The paradigms of ‘benefit taxation’, ‘subsidiarity’ and ‘Wicksellian connection’ make a strong case for ‘earmarking’ user charges, benefit charges and benefit taxes to finance public services. Nobel laureate Buchanan (1963) considers earmarking as a first best operational way to address the fundamental normative problem of public economics, i.e., providing public services to match peoples' preferences. Earmarking introduces market prices into the budgetary process and facilitates rational choice by taxpayers. The efficacy of earmarking, however, depends on the following conditions:

- Expenditure specificity: Expenditures to be financed by earmarked revenues are well-defined and specific in that taxpayers can identify their obvious benefits;
- Tight earmarking: The linkage between earmarked revenues and expenditures is tight at the margin; and
- Strong benefit linkage: Revenues are in the form of direct user charges such as payments for services and indirect user charges such as benefit taxes.

Apart from theoretical reasons, the case for earmarking to finance urban infrastructure facilities in India is justified for two important reasons. First, such infrastructure, especially public transport, has been neglected for long, leading to serious adverse consequences for economic growth. In the absence of dedicated funding, there is little chance that crucially important projects such as arterial and radial roads, mass rapid transit and high-speed rail would receive the attention they deserve from policy-makers. Second, infrastructure investments in cities create enormous values and unearned rents to land and buildings, disproportionately benefiting the owners. This makes value creation, capture and recycling, along with escrowing of value increments to service the debt incurred for such investments, a robust strategy to finance planned urban development. The principle of earmarking, along with benefit taxation, subsidiarity and Wicksellian connection, calls for rooting the strategy of urban finance reforms in India in the golden rules of urban public finance. These rules are meant for guiding the assignment of different types of revenue sources to match different kinds of local public expenditures in practice.

The ‘beneficiaries pay’ paradigm implies that those creating disbenefits or negative externalities to the society should be required to pay for their mitigation. Thus, ‘polluters pay’, ‘exacerbators pay’, ‘congesters pay’ and ‘growth pays’ can be regarded as corollaries to ‘users pay’ and ‘beneficiaries pay’ principles. It is justified to combine all these paradigms under the caption of the “generalised benefit principle” and regard it as the cornerstone of the urban public

finance system in a developing country like India (Mohanty 2016). This principle, which adopts a broad definition of benefits, including those due to externalities, is important for strategizing local government reforms in India for a number of reasons.

The golden rules of local public finance suggest that user charges are the most appropriate instruments to finance local public goods and services. Where user charging is not feasible, benefit charges and benefit taxes on local residents, including congestion charging instruments are the next-best options. General taxes and inter-governmental transfers are necessary to finance local public services when user charges, benefit charges and benefit taxes are not sufficient. Borrowing is most appropriate for long gestation infrastructure projects whose benefits accrue to more than one generation and one jurisdiction.

Property tax, being a benefit tax, has a key role to play in the scheme of financing urban public services and infrastructure. It has a major role according to the golden rules of urban public finance. It acts as a price for collective services for which user charging is not feasible due to benefits not being measurable or beneficiaries not being identifiable. The benefit view of property tax, taking into account both direct and indirect effects of interactions between market forces, externalities and public policies, is important for cities in developing countries to generate resources with minimal resistance from taxpayers. It is also important for injecting the much-needed fiscal discipline in municipalities. However, while the externalities in cities in India, combined with spatial planning and investment in core urban infrastructure, lead to huge windfall benefits to a lucky group of owners of property, including land, property tax is grossly neglected. A key reason for this is the neglect of the benefit view of property tax and its role as an instrument to facilitate accountable service delivery. The principles of benefit taxation, subsidiarity, Wicksellian connection and earmarked benefit taxes suggest that property tax reforms in India need to be rooted in the strategy of good urban governance. The design of reforms calls for appreciating the arguments for and against property tax, and understanding the economics and politics of property tax as a 'local' tax.

Property Tax as a Local Tax

The theory of public finance recognizes property tax as a good local tax. A local tax is one for which the local government has the authority to levy the tax, determine tax base, fix tax rate, administer tax, keep tax proceeds and grant relief, if considered appropriate. Bird (2006, 2011) present the following key attributes of a 'good local tax':

1. The tax base should be relatively immobile to allow the local authorities to vary tax rates without losing the base;
2. The tax should yield adequate revenues to meet local needs and also be sufficiently buoyant over time;
3. The tax should be stable and predictable over time;
4. It should not be possible to export the tax burden to non-residents except to the extent that such burden captures the benefits that non-residents obtain from local services;
5. The tax base should be visible to ensure accountability;
6. Taxpayers should perceive the tax to be reasonable fair; and
7. The tax should be relatively easy to administer.

A summary of the criteria identified by public finance literature for the choice of good local taxes is presented as follows:

Efficiency:	Local taxes should promote allocative efficiency. Local voters should pay local taxes so that the use of service reflects their willingness to pay.
Equity:	The notions of vertical and horizontal equity should apply as far as possible.
Transparency:	Voters should know exactly how much they pay in taxes and receive in services.
Economy:	Local taxes should be collected with the least costs.
Local autonomy:	Local governments should be free to determine the rates at which local taxes are set.
Adequacy:	Local taxes should be adequate to finance the functions assigned, with an elastic tax base, expanding as fast as expenditures.
Revenue stability:	There should not be undue fluctuations in the flow of local revenues.
Immobility of tax base:	Local taxes may be linked to immobile tax bases such as land and building. This does not rule out the imposition of other taxes.

There is no perfect local tax which meets all the above criteria. Property tax, however, satisfies many of the criteria for a good local tax advocated by the theory of public finance. But being a local tax, property tax is also subjected to sensitive local issues, electoral politics and interests in property, especially land. The long history of urban land taxes in developed countries suggests that improper tax design, high tax rate, landlords' interests and local politics were key factors why such instruments were vehemently opposed in legislative debates and policy discourses. These aspects, closely connected with legal, political and administrative issues, need to be considered in designing property tax reforms in India, duly examining the arguments for and against the tax (Box 3.6 and 3.7)

Box 3.6 Case for Property Tax: Theory

- Property tax and its variants are levied on an immobile tax base. They tax accumulated wealth, not productive behaviour. Therefore, they are efficient in terms of effects on resource allocation – supplying labour, accumulating, investing, producing, innovating, etc. In OECD countries, they are found to be the "least distortionary" of taxes, followed by consumption taxes, personal income taxes and corporation income taxes.
- Property taxes, particularly those levied on local residents act as "quasi-benefit charges" for collective city services. When close linkages between taxes collected and services delivered are established, property taxes promote responsiveness by service providers and willingness to pay taxes by citizens.
- Property-owners reap windfall gains from investments made out of land and property tax revenues. Fiscal differentials at local level capitalise into values of property, including land. Thus, property taxes subscribe to "ability to pay" principle.
- The high correlation between property ownership and income makes property tax a progressive tax. Land and capital are predominantly owned by the more affluent sections of the society. The burden of property tax thus falls on upper and middle income households.
- Property taxes have high visibility. This exerts pressure on municipalities to be responsible to taxpayers for the efficient provision of services, commensurate with the taxes paid. Transparency is likely to promote administrative and political accountability.

- Property taxes incentivise property owners for more efficient use of land and buildings. When tax rate on vacant land is higher than that on built-up property, property taxes stimulate housing, commercial and industrial activities, enhancing economic growth, employment, and agglomeration economies.
- If properly designed, property taxes can mobilise a large sum of revenue, subscribing to the criteria of revenue productivity, elasticity, buoyancy, stability and predictability.
- Property taxes are relatively straightforward. It is easy to identify tax base at local level and compile information for tax assessment, levy and collection. Mapping tools based on Geographic Information System (GIS), Computer-Assisted Mass Appraisal (CAMA) and area-based property tax regimes can increase the efficiency of property tax collection.

Sources: Bird and Slack (2004); Bahl, Martinez-Vazquez, and Youngman (2008); Mohanty (2016)

Box 3.7: Property Tax: Practical Difficulties

- Property tax is levied on the potential income from a property rather than current income. People may be property-rich, but cash poor. In such cases, unless the property is sold or rented out there are no funds to pay the property tax bills.
- It may be difficult to find the market-determined value when a property has not been sold recently.
- Property tax is more conspicuous compared to income and sales taxes. Income taxes are paid through deduction by employers at source; sales taxes are paid in small quantities hidden in goods prices. In contrast, property taxes are raised in one or two big tranches in a year.
- Property tax is often levied on subjective or judgmental basis. In the past, discretions exercised by tax assessors and collectors have been substantial.
- Though property tax is a benefit tax, its benefits are hard to observe. While tax-payers may not correlate the value of their property to civic efforts, there is often no relationship between services received and taxes paid by an area.
- Assessment and enforcement costs of property tax tend to be high. This is particularly true for capital value and rental value-based property tax which require property-by-property data.

- Often property tax exemptions and preferential treatments are large. While local governments are responsible for provision of civic services, state government may grant unilateral exemption to certain classes of property owners. This leads to undue burdens to owners of non-exempt properties.
- Free-riding on local public services creates difficulties in enforcing property taxes on owners of land or buildings. Further, property taxes are not paid by non-residents who visit a city for shopping or commute from peri-urban areas to work in city.
- Land issues are politically sensitive. Thus, vacant land tax is hardly exploited. This is in spite of the fact that the definition of property includes land. Moreover, under municipal laws of states, “vacant land tax” is also mentioned as a separate tax.
- The visibility of property taxes also makes it difficult to undertake hard tax reforms due to opposition from local politicians.
- Over a period of time, property taxes may not be as high-yielding or buoyant as income, business, sales and value added taxes which keep pace with growth.

Sources: Bird and Slack (2004); Bahl, Martinez-Vazquez, and Youngman (2008); Mohanty (2016)

Land value tax (LVT)

Land value tax (LVT), also called site value tax (SVT) or site value rating (SVR) is a tax on unimproved value of land. It takes into account zoning or planning permission, but not improvements. Economists make case for Land Value Tax on efficiency, equity and benefit principles. They argue that LVT scores over taxes that impact on hard work (income), investment (capital gains) and consumption (from post-tax income). Most taxes reduce returns on taxed activities, rendering otherwise viable enterprises and transactions unviable. The cost to the economy of these lost opportunities is called “deadweight loss” or “excess burden” of taxation. Arguably LVT does not lead to such a loss. It does not affect the incentive to buy, develop or use land. On the contrary, LVT promotes the allocation of resources to create wealth. Land being immobile and in fixed supply, the incidence of LVT falls on land, not development. LVT is, therefore, neutral with respect to the density of development, its timing, and the amount of investment in development. A tax on land mobilises resources without distorting the incentive to invest in its productive uses. Further, it penalises those who speculate or leave land idle. By contrast, a tax on improvements discourages investment in new structures and maintenance of existing buildings by reducing the return on such expenditure. It incentivises low density sprawl and discourages high rise construction. The value of land is

determined by market forces depending on the land's worth and the willingness of buyers to pay does not depend on the land tax to be paid.

The equity argument for LVT rests on the premise that much of the return to land is unearned. It owes to external developments such as better transport links. LVT targets to retrieve a portion of the “windfall benefits” accruing to landowners due to public investments made from taxpayers’ money or private investments made by others. Further, LVT is progressive as only households owning land pay any tax at all. Lower and middle class homeowners are not burdened by LVT as they own only modest parcels of inexpensive land under their houses.

Apart from efficiency and equity considerations, LVT is advocated on the benefit principle of taxation. Spatial planning and public investments in city infrastructure facilities benefit landowners by more than they contribute. The development of trunk infrastructure such as highway, railway, public transit, water supply and sewerage increases the value of land.

LVT imposes a cost on land hoarding. It acts against speculation in urban land and moderates land price by removing the speculative element in land value. Land gets bid up to balance economic forces. Lower land values exert downward pressure on housing costs and rents. They make homes and business premises cheaper. Lower rents also lead to increased net wages. Higher net wages stimulate savings and consumption. LVT thus facilitates investments in production and jobs. It prevents a disproportionate amount of capital, often linked to a large debt, being tied up with idle property. Some economists also argue that LVT acts as a market stabilizer, reducing the chances of erratic property booms and busts. They contend that income and sales tax regimes suppress economic activity and encourage bubbles.

LVT promotes sustainable use of land and protection of the environment. By bringing brown-field sites to appropriate uses, it eases pressure on green-belts and conservation areas. LVT facilitates more efficient use of infrastructure through intensive development. It acts against uneconomic extension of infrastructure facilities to the urban fringe. LVT promotes compact development, mixed land use and energy-efficient urban design. Economic activity is directed to areas with high development potential and gains. Owners of neglected properties are required to pay no less tax than those who manage properties more efficiently. LVT thus incentivises the revitalization of blight areas and derelict neighbourhoods. Further, LVT stimulates infill development and density, leading to agglomeration economies and economic growth.

3.7. Revisiting Government of India Guidelines on Property Tax Reforms

Keeping in view the problems inherent in the annual rental value (ARV) and unit area method (UAM), the clear directives are a shift to capital value method (CVM) of property tax valuation. The 15th Finance Commission calls for a reform in the prevalent property tax regime, since its report suggests that in order to qualify for grants from 2021-22 states need to mobilise higher revenue through property tax in tandem with the growing GSDP. As reported by the commission:

“The importance of mobilisation of own revenues by self-governing local bodies cannot be overemphasised. It leads to better ownership and accountability. Internationally, property tax is one of the most effective instruments for revenue mobilisation by local bodies. For historic reasons as well as because of vested interests, property tax yields remain negligible in India. We recommend that to qualify for any grants for urban local bodies in 2021-22, States will have to appropriately notify floor rates and thereafter show consistent improvement in collection in tandem with the growth rate of State's own GSDP” (Report of the 15th FC, pp. 53)

The Ministry of Finance, as part of the additional borrowing of 2% of GSDP to States for 2020-21 under the Atmanirbhar Bharat Abhiyan, has also called for States to reform property tax valuation (linked to 0.25% of the additional borrowing), by linking floor rates to prevailing guidance values/circle rates and putting in a system for periodic revision of property tax rates (similarly for user charges) in line with increase in price.

Both these indicate towards a transition to the capital value system. While the annual rental value is a serious under-representation of the value of a property, the unit area method indirectly subsidises the commercial properties. In such a set-up, the capital value method gives the closest approximate of the benefits reaped by a property due to infrastructure and services provided by the municipal authorities. The properties located in regions with good transit facilities, roads, health and educational infrastructure, recreation facilities including parks definitely enjoy higher property values. However, these do not capitalise into the tax bases because of the faulty property tax regime. The capital value system will take these benefits into account while setting the property value.

The toolkit designed by the Government of India suggests that to achieve the desired growth in property tax revenue, a holistic approach is needed comprising of enumeration, valuation, assessment, billing and collection and reporting.

- Enumeration: All the eligible properties should be entered in the tax registry. In other words, the properties count should be complete and updated regularly.
- Valuation: The property valuation for taxation must be accurate to the extent possible.
- Assessment: All self-assessment should be verified and necessary re-assessments should be done from time to time and updated in the property register.
- Billing and Collection: Billing and collection should be made user friendly. Incentives and penalties may be imposed if need be.
- Reporting: Property tax data ought to be reported timely, accurately and reviewed systematically as part of MIS reports.

The tool kit prescribes capital valuation method for property valuation. It states that “all cities adopt the capital valuation method with modifications to ensure minimal multiplicative factors and a provision for regular updation of property tax in line with increase in guidance value”. The CV system, which is followed in a few States, directly links property tax to the prevailing guidance value as published by the Stamp Duties and Registration Department. However, the property value is generally depressed by virtue of several multiplicative factors that make the system non-buoyant. Moreover, property tax valuations are not revised regularly in tandem with increase in guidance values i.e. outdated guidance values may be used for property taxation. To overcome these challenges, all cities should adopt the CV system with minimum multiplicative factors and a provision for periodic increase linked to increase in guidance value. The Fifteenth Finance Commission has advocated capital value-based property tax. Obviously, the definition of property includes land and structure and guidance values published for stamp duty or capital gains income tax provide benchmarks for property tax assessment.

3.8. Conclusion

The importance of property tax for municipalities manifests itself in the form of a huge revenue potential. It represents the autonomy and strength of local ‘self-government’ and participatory democracy. It has tremendous potential to raise revenues for city services and development. However, the tax has been grossly neglected by cities in India for decades. Property tax has been subjected to under-exploitation due to systemic problems as well as inefficiencies in municipal tax administration. Property tax collection in India has not kept pace with the demands of urbanization and economic growth.

Traditionally, property tax has been collected by Indian municipalities as a composite tax, comprising of several elements: (i) water tax, (ii) sewerage tax, (iii) drainage tax, (iv) street

tax, (v) lighting tax, (vi) conservancy tax, (vii) fire tax and (viii) general tax. Following the golden principles of urban public finance, it is appropriate that the water tax component of property tax is replaced by water user charges based on metering. Drainage and sewerage charges may be hooked onto water charges and levied as a percentage of water charges. Water supply, drainage and sewerage charges may be such that they cover at least the O&M costs as well as depreciation and debt-servicing costs. They may also contain an element of cross-subsidisation for the poor on equity considerations. Thus, in principle property tax may be levied as a tax for collective services for which the levy of user charges is not feasible. The service costs must include O&M and debt-servicing costs.

This chapter suggests that a comprehensive approach to property tax reforms must address systemic design as well as collection-related issues. System without collection is meaningless and collection is not sustainable without a proper system in place. The systemic reforms require a robust regulatory framework which covers the various dimensions of tax base, tax rate, tax liability, property valuation, revaluation, exemptions, billing, collection and dispute resolution. Professionalization of the tax administration with expertise, technology, tools, GIS mapping and management information systems is also required. A seamless integration of multiple databases can improve record-keeping and reduce tax evasion. E-collection of property tax: online and through computerised kiosks, service centres or banks, as in Hyderabad and Bengaluru, can save a lot of time and effort. Improved collection mechanism is the key to a well-functioning property tax system.

Property tax to GDP ratio of 0.15 per cent is very low by any standard. Property Tax Boards must be set up in each state and create conditions for buoyancy in property tax revenue. Use of GIS for extending coverage and tracking demand and collection must be promoted. The unit area value (UAV) method as adopted by Bengaluru or capital value method as adopted internationally should form the basis of making assessments of property value. Revaluation of properties at regular intervals to take account of the rising inflation in property prices, self-assessment and simpler procedures to reduce the administrative cost of collecting this tax, are some of the reforms that should be put in place under the directions of the Property Tax Board. There should be no property tax exemption without state government compensating cities for the loss of revenue. In addition to enabling urban local governments to levy vacant land tax (at a rate of 0.2-0.5 per cent, to begin with) linked to the basic value of the land as published by the registration department, land use conversion/change charges (at least 20 per cent) should also be shared with the urban local governments. Further, a clear framework of rules for the

levy of betterment tax linked to increment in land values and impact fee should be put in place by the states.

At present, property tax is the only major municipal tax and its reform is mandatory to pull Indian cities out of the “rich city-poor city government” phenomenon. Property tax reforms will bring with it revenues to undertake planned urban infrastructure development projects, apart from meeting the costs of collective civic services. Cities have agglomeration economies and this leads to substantial increase in land and property values, rents, number of commercial properties etc. In other words, it renders multiple benefits to several economic agents. If property tax is designed properly and collected efficiently then it can prove to be a revenue-productive and buoyant tax to finance India's urban transformation.

CHAPTER 4

STUDY OF SELECTED MUNICIPAL CORPORATIONS: LESSONS FOR BHUBANESWAR

4.1. From Municipal Corporations to Municipal Economic Regions

The process of economic development of any nation witnesses a structural transformation, marking the decline of importance of primary sector and rising relevance of secondary and tertiary sector activities. Such a structural transformation is nurtured by a spatial transformation and is marked by the emergence of cities. Cities are considered the greatest invention of human race (Glaeser 2011). Cities emerged when firms, industries and households attempted to co-locate so as to reduce distance and transportation costs. When these productive economic agents chose to co-locate, a bunch of externalities emerged due to knowledge spillovers, skilled labour pool, efficient supply chains; broadly categorised as agglomeration economies. People and firms choose to operate in such cities as they provide a match between skilled workforce and better job opportunities. Such a process has resulted in densely populated regions dominated by non-agricultural activities. The world today, is marked by such densely populated cities which are the drivers of economic growth and prosperity. The economic relevance of cities is reflected by the “productive environment” that cities provide by facilitating lower cost of transport, pool of specialised labour, raw materials, infrastructure, knowledge base, collaboration and competition. A Brookings Institution report, Global Metro Monitor 2018 states that the 300 largest metropolitan cities housing a little under one-fourth of the global workforce, generated nearly half of the world’s production in 2016. Further, 48 out of the 60 best performing metropolitan cities are in the emerging economies.

The process of economic development in India has not been any different from the major trends around the globe. India is one of the fastest growing economies for around two decades now. This growth is mostly led by the service sector and concentrated in cities. The top 10 metropolitan cities in India occupy 0.1 percent of the country’s land area and contain only 8 percent of population. However, they generate about 15 percent of India’s GDP. The 53 million-plus cities, with 0.2 percent of land area account for 13 percent of India’s population and 31 percent of GDP. The level of urbanisation is shown to be 31.2 percent in the census of India 2011. However, this seems to be an understatement because the “hidden urbanisation” in the peripheries of large cities have not been accounted for. However, an agglomeration index

developed by the World Bank puts the share of India's population living in areas with "urban-like" features at 55.3 per cent in 2010. This rising share of population in urban and "urban-like" areas, burdens the concerned city governments with responsibility of providing adequate infrastructure, civic amenities and services. In the absence of proper finances this seems difficult and in turn renders cities less efficient in generating agglomeration economies in order to keep the growth figures spiralling upwards.

The economic importance of metropolitan areas is aptly recognised now. The Ministry of Housing and Urban Affairs has also recognised and supported the importance of planned urban development in bringing forth economic growth. Despite this, the governance structure of these areas continues to be inefficient, ambiguous and fragmented. The governance of urban regions in India, is divided on the basis of territorial jurisdictions into: Municipal Corporations, Municipal Councils and Nagar Panchayats. These are elected bodies and have the "constitutional mandate to mobilize/receive funds and deliver public services". The Constitution specifies that Nagar Panchayats are meant for areas which are in transition from rural to urban, Municipal Councils are for smaller urban areas, and Municipal Corporations for larger urban areas. Actually, the practice varies from state to state. State notifications are governed by Municipal Acts of different states. Effectively, state governments notify the establishment of these urban local governments based on population, revenue generated for local administration, employment in non-agricultural activities, etc. Often, multiple urban local governments exist within the same metropolitan region leading to multiple property tax rates, uncoordinated spatial and transport planning, and varying levels of service delivery within the region.

Improper and inefficient governance structure has resulted in lack of coordinated efforts for expenditure and revenue mobilisation. This has been happening at a time when there has been pressing needs for larger funds in order to finance the infrastructure and service demands of big cities. The municipal finances in India are not just in a sorry state but also worsening year over year. The advent of GST has further aggravated these problems.

This chapter is devoted to the study of the financial position of Bhubaneswar Municipal Corporation. Bhubaneswar is one of the emerging cities of the nation. Further, a comparison has been done with three leading municipalities of the country, namely, Mumbai, Bengaluru and Hyderabad. Comparisons have also been done with Thiruvananthapuram, which is also an emerging city and similar to Bhubaneswar in terms of density. This is followed by a set a recommendation for municipal finance reforms in Bhubaneswar. However, these

recommendations can be easily extended to other municipal corporations as they are drawn upon the ‘general benefit principle’ and best practices.

4.2. Study of Bhubaneswar Municipal Corporation

Bhubaneswar, the capital city of Odisha, is the largest city in the state. Of late it has established itself as a center of economic and cultural significance. Bhubaneswar is known as the “Temple City of India”, due to the presence of a large number of temples, archaeological and architectural splendour. It is one of the first planned city of the country and was designed by the German architect Otto Konigsberger in 1946. Bhubaneswar has rose to the capacity of being a major IT hub, center for quality education and advanced medical care. The growth of metals and metal processing industries has further boosted the growth of Bhubaneswar, making it one of the fastest developing cities of India. The inception of Bhubaneswar was as a Notified Area Committee in 1948. It became a municipality in 1979 and finally a Municipal Corporation in 1994. As per the 2011 Census of India, Bhubaneswar has an urban population of 0.84 million and is spread over 186 sq. km. According to the world population review, the population of Bhubaneswar is around 1.22 million in 2022 and is expected to be about 1.65 million by 2035. For studying the municipal finances of Bhubaneswar, the budgets from 2014-15 to 2019-20 have been used.

BMC Budget 2019-20

Budget of any ULB comprises of the revenue budget and capital budget. The revenue budget and revenue account of a municipal corporation or municipality are concerned with the regular operation of municipal services, including the salaries and pension of staff, costs of routine repair and maintenance, and debt servicing (repayments of capital and interest thereon). The revenue account comprises of revenue income and revenue expenditure. The regular or recurrent municipal revenues – taxes, charges, fees, grants-in-aid, etc. are credited to the revenue account. Revenue expenditure comprises of expenditure incurred on salaries, operation and maintenance costs, and debt servicing. The municipal capital budget and accounts are concerned with the creation of long-term assets (e.g. construction of new roads, buildings, drains, parks, stadiums, etc.). They are meant to capture the spending on infrastructure or capital works undertaken by various municipal departments and are designed to track the development functions discharged by civic functionaries. The revenues credited directly to the capital budget comprise of revenue account surplus, loans or grants specifically targeted for capital projects, receipts from the sale of capital assets (land, buildings, and so forth), etc.

The revenue receipts under the BMC budget are grouped into the following heads and the detailed receipts under each head are shown in table 4.1.

Revenue Receipts

- Tax Revenue
- Assigned revenues and Compensation
- Rental income from municipal properties
- Fees and user charges
- Sale and hire Charges
- Income from Investment
- Revenue grants, contribution and subsidies
- Interest Income
- Other income

Revenue expenditures of BMC are classified into the following categories:

- Establishment expenses: salaries, wages, benefits and other allowances
- Terminal benefits
- Administrative expenses
- Operational and maintenance expenses
- Interest and finance charges
- Programme expenses
- Disbursement of Grants
- Miscellaneous Expenses

Capital Receipts of BMC are

- Loan from OUIDF
- Capital Grants

Capital Expenditures are meant for acquisition and purchase of fixed asset. For BMC the various capital expenditures are as follows:

- Parks and Gardens

- Buildings: Office, Community, Market, Hospital, Others
- Boundary/Compound Walls
- Slaughter House
- Kalyan Mandap
- Public/Community/Hybrid Toilet
- Night Shelter and Yatri Niwas
- Roads: Concrete, Metalled (Bitumen), Others
- Culverts
- Open Drains
- Borewell
- Water Reservoirs
- Lakes and Ponds
- Stand Post
- Water ATM
- Lamp Post
- Transformer
- Public Lighting System
- Pump Sets
- Fogging Machines (Mosquito Control)
- Plant and Machinery
- DG Sets
- Vehicles: Motor Car, Tankers
- Equipments: AC, Computers, Photo-copiers, LAN/WAN, Office & Others
- Chairs, Tables, Almirahs, Furniture & Fixtures
- Electrical Fittings

- Crematorium
- Other Fixed Assets
- Temporary Shed
- Gymnasium Equipment
- Dustbin

Table 4.1

Bhubaneswar Municipal Corporation: Sources of Revenues

Revenue Receipts	
Tax Revenues	Advertisement Tax (Land Hoardings/Private Land, Bus Shelters, Government Land), Entertainment Tax, Holding Tax.
Assigned Revenues	Compensation in lieu of Octroi
Rental Income from Municipal Properties	Markets, Shopping Complexes, Community Halls, Yatri Niwas, Kalyan Mandap, Office Buildings, OPOLFED/OMFED/Ground Rent.
Fees and User Charges	Trade License Fees, License Fees (Hawkers, Staff Quarters, Pounding Houses, RoW, Poles), Income from providers of Telephony Services, Fees from sanction of Building Plans, Compounding Fee, Birth/Death Registration Fees, Development Charges, Demolition Charges, Regularisation Fees (Encroachment, Building Construction), Property Transfer Charges/Mutation Fees, Notice Fee/Scrutiny Fee, Application Fees, Miscellaneous Fees, RTI Application Fees, Sponsorship Fees, Fire Fighting Fees, Retention Fee, Septic Tank Cleaning Charges, Ambulance Charges, Funeral Van Charges, Parking Fees (on contract), Crematorium Fees, User Fees on NOC, Income from Temporary Shed/ Platform, Recovery Charges for Damage to Roads, Other fees and Charges.
Sale and Hire Charges	Sale of Water by water tankers, tender papers, ration card and other forms, stores and scraps-obsolete stores, stores and scraps-obsolete asset.

Income from Investment	Interest on Fixed Deposits
Revenue Grants, Contributions and Subsidies	Re-imbursement of Expenses by BSCL, Grant for Swachh Bharat Mission, IGNOAP-Central Grant, IGNWP-Central Grant, IGNDP-Central Grant, 14 th FC Grant, National Family Benefit Scheme (NFBS), Election Fund Grant, DP-Aids, Old Age Pension Grant, Motor Vehicle-State Grant, MBPY- State Grant, Pension/Family Pension- State Grant, Devolution of Fund- State Grant, Harischandra Sahayata- State Grant, Grants for maintenance of non-residential Building- State Grant, Animal Birth Control- State Grant, Chief Minister's Relief Fund, Odisha State Disaster Management Fund, Compensation for Sitting Fees, Honorarium, TA/DA, Grant for AAHAR, 4 th SFC- Maintenance of Capital, Biju Yuva Vahini (BYV), JnNURM- National Mission Mode Project (NMMP), NULM Grants, JnNURM-Challenge Fund.
Interest Earned	Interest from Bank Accounts
Other Income	Penalty on Contractors, Hospital Income-Pathology, Recovery from Employees, Hospital Income-Doctors/Cabin/Nursing Home Fees, Recovery from Employees (Vehicle Usage, Quarter rent), Hospital Income-Others, Audit Recovery, Recovery-Others, Transfer from Solid-Waste Management Account.
Capital Receipts	
Capital Grants	Grant for AMRUT, Storm-Water Drainage Grant, Road and Bridge (State), Urban Asset Creation (State Grant), Public Toilets (State Grant), Development of Night Shelter, 4th SFC-Creation of Capital Asset, Grant for Urban Infrastructure Initiative (UNNATI), National Urban Health Mission (NUHM) Grant, Odisha Urban Infrastructure Development Fund (OUIDF)
Loan from OUIDF	Loan for Reclamation of Water Bodies, Slaughter House, Meat Market, LED Lights

Source: Bhubaneswar Municipal Corporation Budget 2019-20; www.bmc.gov.in/budget

A summary of the budget of BMC for 2019-20 is presented in table 4.2 below. Table 4.3 depicts the composition of BMC's revenue and capital budgets, reflecting the receipts and expenditures under major heads.

Table 4.2

BMC Budget: Actual 2017-18, RBE 2018-19 and BE 2019-20 (Rs. Crores)

Item	Actual 2017-18	RBE 2018-19*	BE 2019-20*
Expenditure			
Revenue Expenditure	173.18	223.4	226.3
Capital Expenditure	107.4	140.2	153.05
Total	280.58	363.6	379.35
Revenue			
Revenue Income	308.8	311.6	339.7
Capital Income	27.6	24.9	55.4
Total Revenue	363.4	363.5	395.1

* BE: Budget Estimate, RBE: Revised Budget Estimate

Source: Bhubaneswar Municipal Corporation Budget 2019-20; www.bmc.gov.in/budget

Table 4.3

BMC: Revenue and Capital Budgets 2019-20 (Rs. In Crores)

Revenue Budget: Income

Head of Account	Budget Estimate 2019-20	Percentage of Total Receipts (%)
Tax Revenues	57	14.43
Assigned Revenues and Compensations	83.28	21.08
Rental Income from Municipal Properties	4.99	1.26
Fees & User Charges	30.95	7.83
Revenue Grants, Contributions and Subsidies	143.79	36.39
Income from Investment	11.52	2.92
Interest Income	6.55	1.66
Other Income	1.20	0.30
Total	339.7	85.98

Revenue Budget: Expenditure

Head of Account	Budget Estimate 2019-20	Percentage of Total Expenditure (%)
Establishment Expenses	83.99	22.14
Administrative Expenses	7.74	2.04
Operations & Maintenance	113.47	29.91
Interests & Finance Charges	1.27	0.34
Programme Expenses	1.45	0.38
Disbursement of Grants	17	4.48
Miscellaneous Expenses	1.34	0.35
Total	226.3	59.65

Capital Budget: Receipts

Head of Account	Budget Estimate 2019-20	Percentage of Total Receipts (%)
Loan from OUIDF	5.5	1.39
Capital Grants	49.9	12.63
Total	55.4	14.02

Capital Budget: Expenditure

Head of Account	Budget Estimate 2019-20	Percentage of Total Expenditure (%)
Acquisition and Purchase of Fixed Assets	153.05	40.35
Total	153.05	40.35

Source: Bhubaneswar Municipal Corporation Budget 2019-20; www.bmc.gov.in/budget

Composition of Municipal Revenue Income

The study of the composition of revenue receipts of BMC is of particular interest for this thesis, since that is where the municipalities can work to improve their financial position. Table 4.4 given below summarises the revenue receipts of BMC from 2012-13 to 2019-20.

Table 4.4*Components of Revenue Receipts of BMC (in Rs. Crores)*

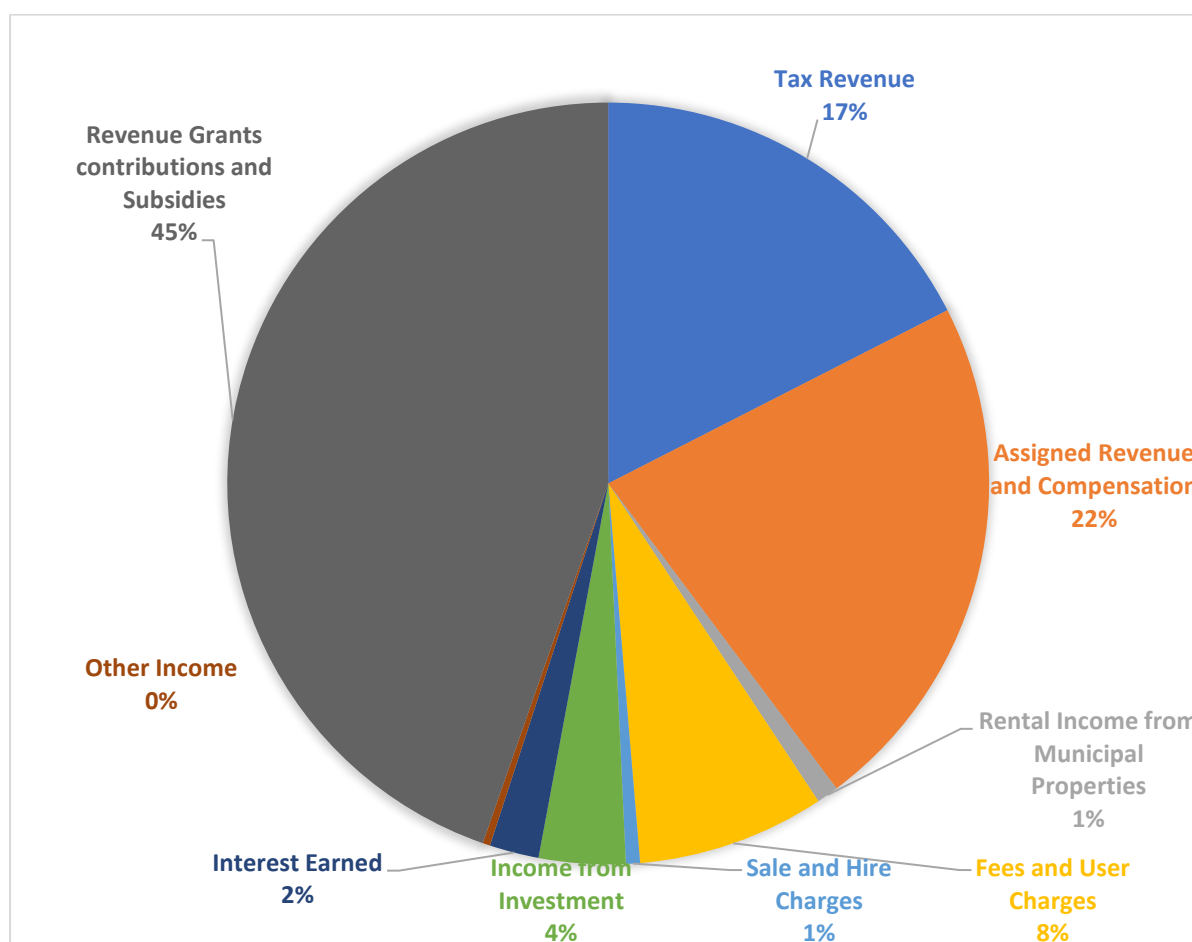
Heads	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (RBE)	2019-20(BE)
Tax Revenue	39.15	31.48	35.82	33.84	48.71	53.98	55.88	57.00
Holding Tax	29.35	20.27	23.69	21.54	32.62	40.13	46.49	47.42
Assigned Revenue and Compensation	50.19	80.91	79.29	54.55	63.24	68.79	74.22	83.28
Rental Income from Municipal Properties	1.88	1.66	1.65	1.51	1.98	2.85	3.72	4.99
Fees and User Charges	16.58	13.01	10.04	21.79	31.14	24.59	27.09	30.95
Sale and Hire Charges	0.82	0.77	0.69	1.08	1.09	1.85	2.08	0.38
Income from Investment	11.50	13.93	12.59	11.13	11.66	11.33	9.04	11.52
Interest Earned	1.40	1.00	0.90	5.40	6.08	6.47	6.36	6.55
Other Income	1.52	2.12	1.71	0.58	3.19	0.97	2.70	1.20
Revenue Grants contributions and Subsidies	136.96	92.34	28.97	45.86	117.69	137.84	130.44	143.79

Source: Bhubaneswar Municipal Corporation Budget for different years; www.bmc.gov.in/budget

As the table shows the major chunk of finance comes from revenue grants, contributions and subsidies. This reflects that BMC lacks autonomy and is highly dependent on the state and central government. The own tax revenue of BMC is also not impressive. The ratio of tax revenue to total municipal revenue rose marginally from 0.15 in 2012-13 to 0.16 in 2017-18 and according to the budget estimates of 2019-20, this figure stands at 0.14. Funds from

assigned revenue and compensations have been consistently larger than tax revenue. Revenue mobilized from fees and user charges have also not been impressive. Figure 4.1 depicts the composition of revenue receipts of BMC for 2017-18 (the last year for which actual figures are available has been taken since the budget estimates could be over-estimated projections).

Figure 4.1
Components of Revenue Receipts of BMC:2017-18



Source: Compiled from Bhubaneswar Municipal Corporation Budget 2019-20; www.bmc.gov.in/budget

The figure shows that the majority of finance came from revenue grants, contributions and subsidies (45 percent), followed by assigned revenue and compensations (22 percent), tax revenue formed 17 percent of the total revenue receipts while fees and user charges stood at 8 percent.

Composition of Tax Revenue

The taxes collected by BMC are not only small in figure but also the tax basket employed by it is limited. Advertisement tax (on land hoardings/private land, bus shelters and government

land) and holding tax are the only taxes. Entertainment tax features in the budgets of BMC only for certain years. Prior to 2012-13 tax on animals, tax on carriage and carts, lighting tax and conservancy/latrline tax were being collected. After 2012-13, lighting tax and conservancy/latrline tax have been included in the holding tax. Entertainment tax has almost no contribution to the total tax receipts. While the RBE for 2017-18 estimated that Rs. 23,951 would be raised through entertainment tax, the actual data shows no revenue under this head. The composition of the tax revenue of BMC is summarised below in table 4.5.

Table 4.5

Components of Tax Revenue Receipts of BMC (in Rs. Crores)

Heads	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (RBE)	2019-20 (BE)
Holding Tax	29.35 (75)	20.27 (64.4)	23.69 (66.14)	21.54 (63.7)	32.62 (67.0)	40.13 (74.3)	46.49 (83.2)	47.42 (83.2)
Advertisement Tax	9.80 (25)	11.21 (35.6)	12.11 (33.8)	12.297 (36.3)	16.09 (33)	13.85 (25.7)	9.39 (16.8)	9.58 (16.8)
Entertainment Tax			0.02 (0.06)	0.003 (0.009)	0.0002 (0.0004)	-	0.0005 (0.0009)	-
Total Tax Revenue	39.15	31.48	35.82	33.84	48.71	53.98	55.88	57.00

**Figures in the parentheses show share in total tax revenue (in percent)*

Source: Bhubaneswar Municipal Corporation Budget for different years; www.bmc.gov.in/budget

Table 4.5 clearly indicates the significance of holding tax in total tax revenue. However, it is surprising that till date property tax has neither been designed nor implemented in one of the fastest growing cities of India. The BMC is losing out on a lot of revenue which can be mobilised by designing an appropriate property tax regime. The next section discusses this issue in details.

Holding Tax in BMC

There is no property taxation system in BMC. The existing holding tax regime is plagued by several loopholes and is marked by several ad-hoc and outdated mechanisms. Before looking at the detailed holding tax regime in BMC, it is important to look at the performance of holding tax in Bhubaneswar. Table 4.6 summarises the amount mobilised through holding tax in Bhubaneswar (in Rs. Crore) and also gives the its share in total municipal revenue, tax revenue and GSDP. The table 4.6 reveals, holding tax comprises the major chunk of tax revenue of BMC throughout the period studied. However, its importance reduces when it comes to total municipal revenue. Holding tax has been roughly around 0.01 percent of GSDP, which is far below the national average of 0.15 in 2017-18. Holding tax as a percent of total municipal revenue was 11.9 percent in 2017-18 while the national average for property tax as a percent of total municipal revenue was 14.5 percent.

Table 4.6

Holding Tax Receipts of BMC (in Rs. Crores)

	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (RBE)	2019-20 (BE)
Holding Tax	29.35	20.27	23.69	21.54	32.62	40.13	46.49	47.42
As a percent of Tax Revenue	75	64.4	66.14	63.7	67	74.3	83.2	83.2
As a percent of Total Municipal Revenue	11.4	8.6	9.7	8.7	10.8	11.9	13.8	12
As a percent of GSDP	0.011	0.007	0.008	0.007	0.008	0.009	0.009	0.009

Source: Bhubaneswar Municipal Corporation Budget for different years;
www.bmc.gov.in/budget

Holding tax as a percent of tax revenue is much higher for Bhubaneswar compared to the national average of 59.5 percent for property tax as a percent of tax revenue. This shows the excessive dependence on holding tax. Despite such importance of holding tax in municipal tax revenue, no serious and planned effort has been taken at reforming it, due to which

Bhubaneswar is not able to capture the benefits of rising property prices which are fuelled by agglomeration economies and provision of infrastructure, services and civic amenities.

Holding Tax Regime in Bhubaneswar and Attempts at Reforms

Holding Tax has been renamed as Property Tax in the Orissa Municipal Corporation Act, 2003. However, the framework of property tax regime has not been fully prepared yet and thus, Bhubaneswar continues to collect Holding Tax as per the Orissa Municipal Act, 1950. Holding tax is levied annually at the rate of 17.5 percent of the annual value of the building. The 17.5 percent rate is arrived at with the following composition:

- Holding Tax at 10 percent
- Latrine/Conservancy Tax at 2.5 percent and
- Lighting Tax at 5 percent.

The annual value for different category of buildings (residential, commercial, rental) are calculated as discussed below:

- **Residential Holdings**

The annual value of residential properties is calculated as follows:

1. Plinth area of the holding is found out (in sq. meter). This is multiplied by Rs 13.65. Let, it be 'X'.
2. 15% of X is deducted for repair and maintenance.
3. 0.5% of the land cost where the holding is located is added. The land cost is determined as per G.A. Department Notification dated 01.05.1998.

Hence,

Annual Value of Residential Properties = 1+3-2

= (Rs. 13.65 × Plinth Area in sq. mt.) + (0.005 × Land Cost) – 0.15 (Rs. 13.65 × Plinth Area in sq. mt.)

Holding Tax is levied at the rate of 17.5 percent of the annual value, with the usual break-up as discussed above.

- **Commercial Holdings**

The annual value of commercial properties is calculated as follows:

1. Determine Civil Cost of the Building + Cost of P.H & Electric fitting
2. 7.5% of the above value is taken.
3. 0.5% of the land cost is added. So,

Annual Value of Commercial Holdings

$$= 0.075 (\text{Civil Cost of the Building} + \text{Cost of P.H \& Electric fitting}) + (0.005 \times \text{Land Cost})$$

Holding Tax payable per annum is 17.5 percent of the annual value determined above.

- **Residential Holdings on Rent**

The annual value of residential properties given on rent is calculated as follows:

1. Monthly Rent of the Building $\times$ 12 to arrive at the annual rent of the building. Let, this figure be 'X'.
2. 15% of X is deducted for meeting maintenance cost.
3. 0.5% of the land cost where the holding is located is added.

Hence,

$$\text{Annual Value of Residential Properties given on Rent} = 1+3-2$$

$$= (\text{Monthly Rent} \times 12) + (0.005 \times \text{Land Cost}) - 0.15 (\text{Monthly Rent} \times 12)$$

Holding Tax is levied at the rate of 17.5 percent of the annual value as calculated above.

- **Other Properties**

Government buildings, Government hospitals, Government educational institutions, Government cultural institutions etc. are not charged the 10 percent general component of holding tax. They have been provided such exemptions under the act. They just pay 7.5 percent towards latrine/conservancy and lighting tax.

Table 4.7

Holding Tax for BMC: Demand Raised, Collections and Balance (in Rs. Crores)

Year	Demand Raised	Collections	Balance	% Collection
2010-11	31.32	20.06	11.26	64.04
2011-12	30.52	20.07	10.45	65.8
2012-13	31.71	20.21	11.5	63.73
2013-14	43.51	20.27	23.24	46.59
2014-15	49.38	25.01	24.37	50.64
2015-16	47.68	23.89	23.79	50.10
2016-17	46.39	35.07	11.32	75.6
2017-18	49.73	41.07	8.66	82.6
2018-19	49.97	39.62	10.35	79.3

Source: www.bmc.gov.in

Problems in the Holding Tax Regime of Bhubaneswar and Attempts at Reforms

When it comes to property tax collection, a simplified framework as given below (Mohanty 2014, 2016) may be useful to understand the dynamics behind revenue mobilization attempts.

$$\mathbf{R} = \mathbf{t} \times \mathbf{c} \times \mathbf{v} \times \mathbf{e} \times (\mathbf{B} - \mathbf{E})$$

Where, **R** = revenue mobilised through property tax in a certain jurisdiction,

t = average property tax rate,

c = coverage ratio, i.e. ratio of taxable properties captured in the tax registry relative to all properties in tax base,

v = valuation ratio or ratio of assessed to actual value of properties,

e = enforcement rate or collection efficiency measured by actual tax collection as a percentage of total tax liabilities or invoices,

B = legally defined property tax base and

E = exemptions/concessions granted.

To understand the issues plaguing the Bhubaneswar Holding Tax regime we need to look at each of these variables. The several problems and the attempts at addressing them are discussed below:

1. The tax rates of BMC have not been revised since long. However, both empirical and theoretical research suggest that local taxes are highly visible and a high tax rate would meet vehement resistance from the public. In most of the municipal corporations, commercial properties and classes therein are taxed at a higher rate compared to non-commercial or residential properties. However, BMC charges all properties at a uniform rate of 17.5 percent. It leads to a subsidisation of high-end commercial properties.
2. When it comes to the coverage ratio, many properties are not captured in the tax registry because of which BMC is losing out a considerable chunk of tax. To tackle this issue, BMC has been consistently working with several Self-Help Groups by incentivising them for bringing more property under the tax register. GIS based mapping is also being attempted to bring more properties under the tax registry. However, the progress has not been satisfactory.

3. The valuation ratio is also not very impressive for BMC. BMC has been adopting the age-old practice of levying tax on the annual value. These annual values underestimate the actual property value. Property values including rents undergo significant changes over time due to trends in urbanisation, geographic, economic and property related variables. Compared to the 1990s, the property values have increased 8 to 9 folds. The figure is as high as 16 times in the previously peripheral areas of Bhubaneswar, which have subsequently been re-classified as urban areas under BMC. Attempts at re-assessment are being made. However, only 20 percent of the properties have been re-assessed. There are also many objections from the public to pay according to the reassessed values. In 2019, benchmarking of property values was undertaken for different *Maujas*. This increased the property valuation by 3 to 4 times. However, a citizen's association moved to the high court and a stay was put on collection of holding tax as a percent of revised value. The High Court maintained that BMC may collect up to 50 percent of the revised value. However, if citizens wished they could pay at the revised rates too.
4. Collection efficiency plays a major role in determining the amount of revenue mobilised. BMC has initiated online payments of holding tax. POS machines have been provided to the ward officers for transparency. However, BMC has a long way to go in order to improve the collection efficiency. Digital door numbering system has been adopted to get hold of defaulters.
5. The holding tax base of BMC is very narrow. Properties with title disputes and unauthorized constructions violating zoning and building regulations have not been brought under the tax net despite enjoying all civic services. Since, these dwellers benefit from the city services they should be made to pay for at least the services. However, such attempts have not been made by BMC. Further, BMC does not levy any tax on the vacant lands. This is not only denying the corporation of a sizeable amount of revenue but also promoting speculation in land. With the city expanding, the peripheral agricultural lands are being turned into plots and sold. Such plots remain idle and are subjected to unwarranted speculations.
6. BMC has exempted government properties from paying holding tax. However, they do pay for lighting and conservancy. Further, BMC provides a concession of 15 percent for maintenance and repair. Newly built properties do not require such concessions. Concessions may be provided according to the age of the building to ensure better revenue mobilisation.

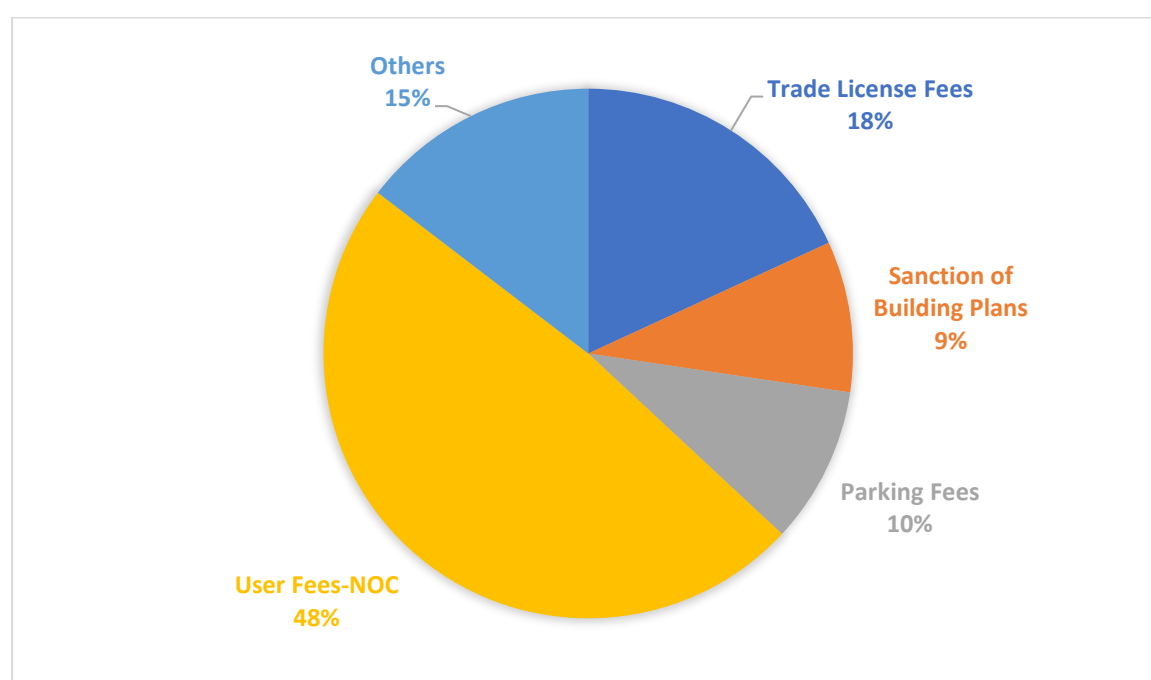
BMC is planning to undertake a shift to the unit area method of property tax regime accompanied by a self-assessment scheme. It is closely working with the census authorities to adopt the same. Online self-assessment portals have been opened but much has not been done in this regard. It is high time that BMC attempts at implementing a robust property tax regime learning from the successful municipal corporations of India like Bengaluru and Hyderabad.

Other Revenue Heads of BMC

Non-tax Own Revenues: Non-tax own revenues include fees and user charges, sale and hire charges, etc. BMC reports both separately. The various heads under fees and user charges and sales and hire charges for BMC have already been discussed in table 4.1. For fees and user charges, the major heads in order of their contribution are user fees for NOC, trade licensing fees, parking fees and fees from sanction of building plans. Their shares in total user fees and charges for the year 2017-18 are shown by figure 4.2. The major share of sales and hire charges comes from the sale of tender papers.

Figure 4.2

BMC: Composition of Fees and User Charges for 2017-18



Source: Compiled from Bhubaneswar Municipal Corporation Budget 2019-20;
www.bmc.gov.in/budget

Assigned Revenues: Assigned revenues are the revenue shares from certain taxes which are collected by the state government. Such shares are provided to ULBs as compensation for the

loss of revenue due to the State taking over local taxes and granting concessions to certain groups of taxpayers. Such revenues are pre-determined either as a fixed amount or as a fixed percentage of the revenue mobilised. In case of BMC, the transfers have been rather ad-hoc than being formula based. Even the revenue assignment heads have not been uniform through the period of study. BMC has mostly been assigned compensations in lieu of octroi. It received shares from entertainment tax from 2012-13 to 2014-15. Beyond that entertainment tax appears as a head under tax revenue. A share in motor vehicles tax was assigned to BMC only in the year 2014-15. Municipalities across India are assigned shares in several other taxes. However, BMC has been deprived of such assignments.

This section discusses the revenue mobilisation by BMC. However, in order to draw specific conclusions and lessons for improving the finances of BMC, it is important to compare its performance with certain leading municipal corporations of the nation. Such a study would also help to understand the dynamics of municipal finances and provide lessons for improvement. The next section makes such a comparative study.

4.3. A Comparative Study for Bhubaneswar Municipal Corporation

The Municipal Corporation of Greater Mumbai (MCGM) has been lauded to be the richest civic body in India. The Bruhat Bengaluru Mahanagar Palike (BBMP) is appreciated for its property tax model and some innovative finance tools. The Greater Hyderabad Municipal Corporation (GHMC) has adopted some unique land-based financing tools, worthy of replication throughout India. A comparative study of the Bhubaneswar Municipal Corporation (BMC) with these municipal corporations has been discussed in this section to gauge the performance of BMC and draw lessons from theory and practices of the leading municipalities of the nation. Further, a comparison has also been done with Thiruvananthapuram Municipal Corporation because of its similarity to Bhubaneswar in terms of area and urban population (Census of India 2011). Data for all the five municipal corporations has been sourced from several sources: RBI Handbook of Statistics on Indian States, ICRIER Study prepared for the 15th Finance Commission, Budget and Accounts of the Municipalities. For comparison, data for the years 2012-13, 2016-17 and 2017-18 have been used. Further, comparisons have also been made with the data at all India level i.e. for all municipal corporations of the country (wherever applicable).

Comparison of Demographic Profile

The demographic profile of the municipalities under study has been discussed below (Table 4.8). Mumbai is the largest in terms of area while Hyderabad is the most populated. Further, Hyderabad has a greater share in state's urban population at 49.5. To draw a comparison, the size of BMC in terms of population and area has been found out (Table 4.9).

Table 4.8

Population and Area of the Municipalities

Municipal Corporation	Population (in million)	Area (in sq. km.)	Share in State Urban Population (in %)
Mumbai	12.44	603	24.48
Bengaluru	8.44	709.96	35.81
Hyderabad	6.73	715.10	49.50
Thiruvananthapuram	0.74	141.74	4.68
Bhubaneswar	0.84	186	12.04

Source: Census of India, 2011

Table 4.9

Population and Area Comparisons: Ratio of BMC to Selected Municipal Corporation

Municipal Corporation	Population (in percent)	Area (in percent)
Mumbai	6.75	30.85
Bengaluru	9.95	26.20
Hyderabad	12.48	26.01
Thiruvananthapuram	113.5	131.22

Source: Own Calculation

Table 4.9 shows that BMC is merely 6.75 percent of Mumbai in terms of population and 30.85 percent in terms of area. It houses 9.95 percent population compared to Bengaluru with about 26.2 percent area. It is 12.48 percent of Hyderabad in terms of population and 26.01 in terms

of area. These figures suggest that Bhubaneswar is less dense than these cities. However, density of Thiruvananthapuram and Bhubaneswar are comparable.

Comparison of Budget Size

Most of the municipalities have adopted the functional budgeting framework under which every function or department in the municipal corporation is assigned specific expenditure responsibilities and revenue tasks. Such a framework helps in reducing the tendency of certain departments of spending revenues mobilised by some other department without shouldering the responsibilities of revenue mobilisation. The budgets of GHMC, MCGM and TMC explicitly report the revenue details by source and department-wise separately. BBMP budget reported the budget only department wise till 2018-19. Thus, one needs to add the revenues collected by all departments under a particular head (like tax, fees and user charges, non-tax, grants etc.) in order to arrive at a consolidated figure for that head. Thus, the BBMP budget did not readily provide the consolidated picture of receipts under categories such as taxes, assigned revenues, user charges and fees, sale and hire charges, intergovernmental transfers, etc. However, the Bhubaneswar Municipal Corporation only provides the revenue details under each head and no reflection on department-wise finances have been made.

Table 4.10 given below summarises the municipal revenue of the municipalities under study for selected years. It also gives the figure for all the ULBs of India. Table 4.11 gives the municipal expenditure data for the same years. Table 4.12 gives the municipal revenue and expenditure as a percentage of the state GSDP for the selected years.

Table 4.10

Municipal Revenue of Select Municipal Corporations (in Rs. Crore)

Municipal Corporation	2012-13	2016-17	2017-18
Mumbai	17615.9	22741.2	23678.1
Bengaluru	3407.2	6036.2	6913.9
Hyderabad	2532.5	3114.8	3720.1
Thiruvananthapuram	210.6	364.3	365.3
Bhubaneswar	257.86	299.94	336.35
India (All States)*	70933.1	106636.1	116725.7

**All Municipal corporations of India*

Source: Budget and Accounts of different years, Compiled from ICRIER (2019)

Table 4.11*Municipal Expenditure of Select Municipal Corporations (in Rs. Crore)*

Municipal Corporation	2012-13	2016-17	2017-18
Mumbai	15735.1	19905.7	20036.6
Bengaluru	4358.1	4515.3	4857.8
Hyderabad	1879.3	2811.7	3533.7
Thiruvananthapuram	148.5	255.9	282.3
Bhubaneswar	138.44	259.43	280.61
India (All States)*	60046.9	85239.1	91559.2

All Municipal corporations of IndiaSource: Budget and Accounts of different years, Compiled from ICRIER (2019)***Table 4.12***Comparative Budgets of Select Municipal Corporations: Municipal Revenue and Municipal Expenditure as a percent of GSDP*

Municipal Corporation	2012-13		2016-17		2017-18	
	Munc. Rev.	Munc. Exp.	Munc. Rev.	Munc. Exp.	Munc. Rev.	Munc. Exp.
Mumbai	1.2	1.08	1.03	0.91	1	0.85
Bengaluru	0.49	0.63	0.5	0.37	0.52	0.36
Hyderabad	0.63	0.47	0.47	0.43	0.49	0.47
Thiruvananthapuram	0.05	0.04	0.06	0.04	0.05	0.04
Bhubaneswar	0.99	0.05	0.08	0.07	0.03	0.06

Source: Own Calculation

As the above tables reflect, the ratio of municipal revenue to GSDP and municipal expenditure to GSDP marked a fall from 2012-13 to 2017-18 for Mumbai and Bhubaneswar. For Bengaluru, while the ratio of municipal revenue to GSDP saw a marginal increase over this period, the ratio of municipal expenditure to GSDP marked a sharp fall from 0.63 to 0.36. The ratios have been stable for Thiruvananthapuram. Overall, it may be concluded that the municipal revenue and expenditures have not been increasing as a ratio of GSDP. In terms of their revenue performance, Bhubaneswar and Thiruvananthapuram fare very poorly compared to the other municipalities.

Table 4.13 below compares the revenue and expenditures of Bhubaneswar with rest of the municipalities being studied. The figures indicate that Bhubaneswar has been faring poorly compared to the other municipalities.

Table 4.13

Comparative Budgets: Ratio of BMC to Other Municipalities (in percent)

Municipal Corporation	2012-13		2016-17		2017-18	
	Munc. Rev.	Munc. Exp.	Munc. Rev.	Munc. Exp.	Munc. Rev.	Munc. Exp.
Mumbai	1.46	0.88	1.32	1.30	1.40	1.40
Bengaluru	7.57	3.17	4.97	5.75	4.86	5.78
Hyderabad	10.18	7.37	9.63	9.23	9.04	7.94
Thiruvananthapuram	122.44	93.23	82.33	101.38	92.07	99.40

Source: Own Calculation

However, the inferences drawn from the above table may be misleading since the larger municipalities have larger tax and non-tax bases and also employ a larger basket of tools. Further, the municipalities under study also have higher density and higher values of property compared to Bhubaneswar. After taking population and density into account the ratios reflect a slightly better picture. These are summarised in table 4.14.

Table 4.14

Comparative Budgets: Ratio of BMC to Other Municipalities after discounting for population and density (in percent)

Municipal Corporation	2012-13		2016-17		2017-18	
	Munc. Rev.	Munc. Exp.	Munc. Rev.	Munc. Exp.	Munc. Rev.	Munc. Exp.
Mumbai	21.608	13.024	19.536	19.240	20.720	20.720
	(6.132)	(3.696)	(5.544)	(5.460)	(5.880)	(5.880)
Bengaluru	76.079	31.859	49.949	57.788	48.843	58.089
	(18.168)	(7.608)	(11.928)	(13.800)	(11.664)	(13.872)
Hyderabad	81.542	59.034	77.136	73.932	72.410	63.599
	(18.324)	(13.266)	(17.334)	(16.614)	(16.272)	(14.292)
Thiruvananthapuram	107.747	82.042	72.450	89.214	81.022	87.472
	(107.747)	(82.042)	(72.450)	(89.214)	(81.022)	(87.472)

**Figures in the parentheses take density into account.*

Source: Own Calculation

The performance of Bhubaneswar in comparison to Mumbai is extremely poor with respect to both municipal revenues and expenditures. The figures stand at less than 10 percent. The performance of Bhubaneswar as compared to Bengaluru and Hyderabad is also poor with the figures standing at less than 20 percent. The density of Bhubaneswar and Thiruvananthapuram are similar. However, Bhubaneswar appears to be less efficient compared to Thiruvananthapuram.

Municipal Revenues

The major revenue heads are similar for all the municipal corporations. However, the composition thereof varies across different municipal corporations. The revenue receipts comprise of own revenue and transfers. Own revenue is comprised of tax and non-tax revenue. Further, the kinds of taxes and non-taxes varies across the municipal corporations. Table 4.15 given below shows the trends in own tax revenue. As can be seen from the table, Mumbai ranks highest in terms of own revenue mobilisation. The case of Mumbai can be explained by the presence of Octroi for 2012-13 and 2016-17. Further, Mumbai also has a wider basket of tax and non-tax revenue. GHMC ranks better in own revenue mobilisation than BBMP. Though Bhubaneswar does not perform very well, its performance is much better than Thiruvananthapuram. We may conclude that Thiruvananthapuram is more dependent on the higher tiers of government for its finances than the other municipal corporations under study.

Table 4.15

Own Revenue of Selected Municipal Corporations (in Rs. Crore)

Municipal Corporation	2012-13	2016-17	2017-18
Mumbai	17197.9 (97.6)	22348.9 (98.3)	17299.8 (73.1)
Bengaluru	1691.1 (49.6)	2836.6 (47)	3048.7 (44.1)
Hyderabad	1420.2 (57.9)	2252.9 (73.1)	2293.7 (50.26)
Thiruvananthapuram	80.4 (38.2)	128.3 (35.2)	123.2 (33.7)
Bhubaneswar	120.9 (31.2)	167.13 (55.7)	170.87 (50.8)

**Figures in the parentheses show own revenue as a percentage of total municipal revenue.*

Source: Budget and Accounts of different years, Compiled from ICRIER (2019)

Own revenue is comprised of tax and non- tax revenue. Table 4.16 gives the trends in tax revenue and 4.17 gives non-tax revenue trends.

Table 4.16

Tax Revenue of Selected Municipal Corporations (in Rs. Crore)

Municipal Corporation	2012-13	2016-17	2017-18
Mumbai	9916.5 (56.3)	12013.9 (52.8)	7195.3 (30.4)
Bengaluru	1102.4 (32.4)	1753 (29.1)	1804.3 (26.1)
Hyderabad	776.2 (31.7)	1311.1 (42.6)	1392.7 (30.5)
Thiruvananthapuram	68.7 (32.6)	100 (27.4)	97.7 (26.8)
Bhubaneswar	39.15 (15.2)	48.71 (16.2)	53.98 (16.04)

**Figures in the parentheses show tax revenue as a percentage of total municipal revenue*

Source: Budget and Accounts of different years, Compiled from ICRIER (2019)

The revenue mobilised through taxes is highest for Mumbai both in aggregate terms as well as a percentage of total municipal revenue. It is followed by GHMC. BBMP despite having an elaborate property tax regime does not seem to fare good. This can be explained by the presence of vacant land tax in Hyderabad. Bhubaneswar is far behind Thiruvananthapuram in terms of tax mobilisation. Non-tax revenue comprises of fees and user charges and sales and hire charges. Looking at the data on non-tax revenue as a percentage of total municipal revenue, Bhubaneswar performs better than other Municipal Corporations and is behind only Mumbai.

Table 4.17

Non-Tax Revenue of Selected Municipal Corporations (in Rs. Crore)

Municipal Corporation	2012-13	2016-17	2017-18
Mumbai	7281.5 (41.3)	10335.1 (45.9)	10104.5 (42.7)
Bengaluru	588.7 (17.3)	1083.6 (18)	1244.4 (18)
Hyderabad	644 (26.3)	941.9 (30.6)	901 (19.7)
Thiruvananthapuram	11.7 (5.5)	28.3 (7.8)	25.4 (7)
Bhubaneswar	81.75 (31.7)	118.42 (39.5)	116.89 (34.8)

**Figures in the parentheses show non-tax revenue as a percentage of total municipal revenue*

Source: Budget and Accounts of different years, Compiled from ICRIER (2019)

The tax basket across the municipal corporations covered under this study varies from one another. Table 4.18 shows the tax basket of these municipal corporations. As the table reveals, Mumbai presents an excellent example of tax basket drawing lessons from the “general benefit principle”.

Table 4.18

Tax Basket of the Selected Municipal Corporations

Municipal Corporation	Taxes Collected
Mumbai	Property Tax, Water Tax and Water Benefit Tax, Sewerage Tax and Sewerage Benefit Tax, Education Tax, Vehicle Tax, Animal Tax, Electricity Tax, Fire Tax, Theatre Tax, Street Tax, Tree Cess
Bengaluru	Property Tax, Advertisement Tax (Hoardings, Hoardings on Private Land, Bus Shelter, Sky walks)
Hyderabad	Property Tax, Vacant Land Tax, Property Tax on Super Structure, Other Minor Taxes
Thiruvananthapuram	Property Tax, Advertisement Tax, Service Cess on Property Tax, Profession Tax, Entertainment Tax, Tax on Animals
Bhubaneswar	Property Tax, Advertisement Tax, Entertainment Tax

Source: Budget Documents of Different Municipal Corporations

Property tax is the most important own tax across the municipal corporations. Table 4.19 shows the trends in revenue mobilised through property tax across these municipal corporations.

Table 4.19

Property Tax Revenue of the Selected Municipal Corporations (in Rs. Crore)

Municipal Corporation	2012-13	2016-17	2017-18
Mumbai	3272.4	4823.1	5200.8
Bengaluru	1085	1724.5	1777.4
Hyderabad	776.2	1311.1	1392.7
Bhubaneswar	29.35*	32.62**	40.13**
Thiruvananthapuram	34.5	51.1	54.1

* Holding Tax + Latrine tax + Lighting Tax

** Holding Tax

Source: Budget and Accounts of different years, Compiled from ICRIER (2019)

Mumbai follows the capital value-based property tax regime. GHMC and BBMP follow the unit area method with self-assessment of property tax. Table 4.20 depicts the importance of property tax for these municipal corporations.

Table 4.20

Importance of Property Tax Revenue in the Selected Municipal Corporations (in Rs. Crore)

Municipal Corporation	PT as a percent of GSDP			PT as a percent of Total Municipal Revenue		
	2012-13	2016-17	2017-18	2012-13	2016-17	2017-18
Mumbai	0.2	0.2	0.2	18.6	21.2	22
Bengaluru	0.1	0.1	0.1	31.9	28.6	25.7
Hyderabad	0.2	0.2	0.2	31.7	42.6	30.5
Thiruvananthapuram	0.008	0.008	0.007	16.4	14.0	14.8
Bhubaneswar	0.01	0.01	0.01	11.4	10.9	11.9
Municipal Corporation	PT as a percent of Own Revenue			PT as a percent of Tax Revenue		
	2012-13	2016-17	2017-18	2012-13	2016-17	2017-18
Mumbai	19	21.6	30.1	32.9	40.2	72.3
Bengaluru	64.2	60.8	58.3	98.4	98.4	98.5
Hyderabad	54.7	58.2	60.7	100	100	100
Thiruvananthapuram	42.9	39.9	43.9	50.2	51.1	55.4
Bhubaneswar	24.3	19.5	23.5	75	67	74.3

Source: Budget and Accounts of different years, Compiled from ICRIER (2019)

Table 4.21 given below shows the trends in taxes other than property tax for the selected municipal corporations. The table reveals that very meagre amount of taxes are mobilised from sources other than property tax. However, the case of Mumbai is explained by the presence of Octroi before it was abolished.

Table 4.21*Other Tax Revenue of the Selected Municipal Corporations (in Rs. Crore)*

Municipal Corporation	2012-13	2016-17	2017-18
Mumbai	6644 (37.7)	7190.8 (31.6)	1994.6 (8.4)
Bengaluru	17.4 (0.5)	28.5 (0.5)	26.9 (0.4)
Hyderabad	0.004 (0)	0.004 (0)	NA
Thiruvananthapuram	34.2 (16.2)	48.8 (13.4)	43.6 (11.9)
Bhubaneswar	9.8 (3.8)	16.09 (5.4)	13.85 (4.1)

Source: Budget and Accounts of different years, Compiled from ICRIER (2019)

In recent years, Hyderabad has been making several attempts at rationalising the levy of town planning-related charges under fees and user charges head. Table 4.22 describes the town planning charges currently being levied by the Greater Hyderabad Municipal Corporation (GHMC). These have a strong connotation with the benefit principle. Hyderabad sets an excellent example for exploring the “growth pays” paradigm of the “general benefit principle”. These consistent efforts being undertaken by the Greater Hyderabad Municipal Corporation (GHMC) makes it one of the leading municipal corporations in the country and the pioneer in exploring innovative tools for financing planned urban development. With the exception of Hyderabad and few fees and charges of Bengaluru and Mumbai, most of the fees and charges heads are uniform across the different municipal corporations.

Table 4.22*Town planning-related Charges and Fees: Greater Hyderabad Municipal Corporation 2014-15*

Instrument	Description
Fee for layout development /sub-division of site/ construction/reconstruction	Fee for permission to undertake land development/building construction/reconstruction/addition/alteration.

Betterment charges for land development/construction	Charges for on-site installation of internal amenities like water supply, drainage, roads, etc. – Rs. 86 to Rs. 129 per square metre of site area.
External betterment charges for land development/construction	Charges for off-site or external amenities like major arterial roads, flyovers, regional parks etc. – Rs. 86 to Rs. 176 per square metre of site area.
Development charges	Charges for institution or change of land use - industrial, commercial, residential, agricultural and miscellaneous.
City level infrastructure impact fee on tall buildings	Fee towards city level infrastructure levied on buildings of height above 15 metres, excluding stilt parking floor – at Rs. 100 to Rs. 5,000 per square metre depending on the nature of building, height and location; no impact fee for first 15 metres or 5 floors (whichever is less) and differential rates for additional floors or part thereof; amount collected to be escrowed – 50 percent for infrastructure development in the same area and balance 50 percent for city level infrastructure improvements.
Impact fee on commercial buildings on important roads	One-time fee to mitigate the impacts of construction of commercial buildings on major roads that lead to increased traffic requiring decongestion – at Rs. 2,200 to Rs. 4,400 per square feet of built-up area depending on the type of road – to be used for on-site and off-site infrastructure under capital improvement and decongestion plan, involving road widening, link roads, junction improvements, flyovers etc.
Special fees	Development charges on lands/sites/premises abutting or in the vicinity of ring road/other highways/mass rapid transit/light rail transit indicated in the Master Plan at special rates prescribed by state government.
Value addition charges	Additional levy per square metre of built-up area in High-tech City area of Cyberabad where an information technology hub has been developed.

Rain-water harvesting charges	Levy per square metre of built up area for all categories of buildings.
Compounding fee	Fee for compoundable violations of building/layout regulations at a rate 33 percent higher than normal fee.
Charges for unobjectionable projections into streets	Charges for unobjectionable projections into footpaths or streets by way of balconies, sheds, etc.
Open space contribution	Contribution from proposed developments in layouts that did not provide open space as statutorily required – at 10 percent of land value for development of parks, compensatory greening, etc.

Source: Greater Hyderabad Municipal Corporation Budgets and Accounts

Assigned revenues of an ULB are those assigned by the State Government as a share from select taxes collected at the State level and as compensation for the loss of revenue due to the State taking over local taxes and granting concessions to certain groups of taxpayers. GHMC receives shares in Surcharge on Stamp Duty and Entertainment Tax and compensations for the loss of Profession Tax, Property Tax due to Concessions to groups of Taxpayers, Octroi and Motor Vehicles Tax. GHMC got such revenues worth Rs. 420.6 crores in 2019-20. BBMP does not have access to shares in Surcharge on Stamp Duty, Entertainment Tax and Profession Tax from the State Government. However, it receives a significant amount of grants from the Government of Karnataka in tune with the recommendations of State Finance Commission and State Government decisions. Bhubaneswar gets compensation only in lieu of octroi under this head.

Transfers from higher levels of Government makes up for the lack of revenue mobilization by Municipal Corporation. Some expenditures having significant inter-jurisdictional spillovers, long gestation periods or whose benefits are spread over different generations ought to be financed through inter-governmental transfers according to the principle of benefit taxation. However, excessive dependence on transfers from higher levels of government is unhealthy for the ULBs. This not only promotes dependence but also makes ULBs lazy. Local bodies in India often clamour for higher transfers from the state and central governments without taking genuine efforts for exploiting the fiscal instruments already available to them or reducing costs. Data on combined state and central transfers show that Hyderabad depends the least on such transfers. However, this is because of no central grants to Hyderabad. Mumbai is also not

excessively dependent. However, around 50 percent of the total municipal revenues are comprised of such transfers for Bengaluru and Bhubaneswar showing dependency. Dependency is highest for Thiruvananthapuram with state and central transfers comprising more than 60 percent of total municipal revenue. Further, the percentage has been rising throughout the period of study. Table 4.23 given below reflects these trends.

Table 4.23

Combined Central Transfers and State Transfers for the Selected Municipal Corporations (in Rs. Crore)

Municipal Corporation	2012-13	2016-17	2017-18
Mumbai	418 (2.37)	392.3 (1.73)	6378.3 (26.94)
Bengaluru	1146.6 (33.65)	3199.6 (53.00)	3865.2 (55.90)
Hyderabad	502.3 (19.83)	461 (14.80)	1060.4 (28.50)
Thiruvananthapuram	130.2 (61.82)	236 (64.78)	242.2 (66.30)
Bhubaneswar	136.96 (53.11)	132.81 (44.28)	165.48 (49.20)

**Figures in the parentheses show central and state transfers as a percentage of total municipal revenue*

Source: Budget and Accounts of different years, Compiled from ICRIER (2019)

Fiscal autonomy of an ULB can be gauged by comparing the ratio between own-revenues and transfers. These ratios are given in table 4.24. These ratios indicate fiscal autonomy has been declining for all the municipal corporations except GHMC. The drastic fall in autonomy of Mumbai was due to the abolishment of Octroi.

Table 4.24

Fiscal Autonomy Ratio: Own Revenue / Combined Central Transfers and State Transfers

Municipal Corporation	2012-13	2016-17	2017-18
Mumbai	41.14	57	2.7
Bengaluru	1.5	0.9	0.8
Hyderabad	2.83	4.9	21.63
Thiruvananthapuram	0.62	0.54	0.51
Bhubaneswar	0.88	1.26	1.03

Source: Budget and Accounts of different years, Compiled from ICRIER (2019)

Tax Buoyancy: A comparison

Tax buoyancy gives the growth of tax revenue in relation to growth in GDP. It can be applied with both change in tax base as well as policy changes (like tax rate). However, if tax mobilises greater revenue compared without any policy change like change in tax rate, it is said to be buoyant. Over the period of study, no major changes in tax rates have taken place thus, checking buoyancy could give proper results.

Let,

$$X = \alpha Y^\beta$$

Where, X = Tax Revenue

Y = GSDP (Gross State Domestic Product)

α = constant

β = Buoyancy

Now,

$$\beta = \frac{\Delta \text{Tax Revenue}}{\Delta \text{GSDP}}$$

We undertake the following regression to arrive at β . The results are summarised in table 4.25 given below.

$$TR_i = \beta_0 + \beta_1 \text{GSDP}_i + \varepsilon_i$$

Table 4.25

Buoyancy of Selected Taxes for the Selected Municipal Corporations

Municipal Corporation	Total Municipal Revenue	Property Tax	Fees and User Charges
Mumbai	-0.00414	0.00134	-0.00004
Bengaluru	0.00163	0.00178	0.00008
Hyderabad	0.00133	0.00129	0.00094
Thiruvananthapuram	0.00011	0.00006	-0.00001
Bhubaneswar	0.00009	0.00010	0.00006

Source: Own Calculation

As may be noted from the above table, municipal revenues lack buoyancy. The negative in Mumbai's buoyancy can be attributed to the loss of octroi. Hyderabad fares better compared to the other municipal corporations. Bhubaneswar and Thiruvananthapuram fare extremely poorly.

Municipal finances of Bhubaneswar Municipal Corporation are in a precarious state. Outdated taxes, insufficient revenue mobilising mechanisms, limited tax sources and tax bases, excessive dependency on higher tiers and lack of borrowing are the major issues plaguing Bhubaneswar's municipal finance regime. To sum up the problems in the municipal finance of Bhubaneswar are:

1. An outdated system of collecting holding tax is depriving Bhubaneswar of the revenues that can be mobilised due to the rising values of land and property. As the city is urbanising at a high rate, the economies of scale, scope, agglomeration and networking capitalise into land and property values, leading to unearned gains for land and property owners. However, because of improper property valuation, assessment and collection mechanisms, municipal authorities are not able to tap such gains.
2. Despite being ill devised and outdated, holding tax remains the sole municipal tax in Bhubaneswar. More than 70 percent of the tax revenue is generated by property tax. Advertisement tax mobilization has been poor in Bhubaneswar. Entertainment tax seems to be just existing as a tax head, since, almost negligible funds have been raised under it.
3. Almost 50 percent of the municipal revenue of Bhubaneswar is comprised of transfers from state and central governments. This shows that BMC is highly dependent and does not perform well in own revenue mobilization. The sadder part is that BMC is not exploiting the avenues already available to it.
4. The assigned revenues and compensations provided to BMC are like piecemeals. It is deprived access to shares in motor vehicles tax, stamp duty, profession tax etc. despite contributing to these taxes. The only compensation it receives is in lieu of octroi but even that is ad-hoc and not formula based.
5. The fees and user charges raised by Bhubaneswar are not backed by theory or inspired from best practices across the nation. A lot of potential remains under this head, especially if designed in accordance to the 'general benefit principle'.
6. All the key municipal autonomy variables including own tax-GSDP, property tax-GSDP, own tax-GSDP ratios are not just below the national average but have also been declining.

The problems are not just regarding revenue mobilization but are rooted in the very structure of municipal finances of Bhubaneswar. Thus, Bhubaneswar needs a comprehensive and holistic approach towards municipal finance reforms. This should address assignment of revenue sources, design of taxes, accountability and transparency ensuring mechanisms, efficient service delivery and revenue collection mechanisms. The benefit principle can act as the foundation of such reforms. Drawing lessons from the benefit principle and practices of successful municipalities, some approaches towards municipal finance reforms for Indian ULBs in general and Bhubaneswar in particular are discussed in the next section.

4.4. Lessons for Bhubaneswar Municipal Corporation

A robust mechanism of municipal finance reforms, guided by the benefit principle and international best practices needs to be adopted by Bhubaneswar. Further, this framework needs to be pursued with clarity, consistency and commitment. Some of the recommendations are listed below:

Property Tax Reforms

Bhubaneswar should attempt at reforming the property tax regime as soon as possible. It can either opt for the Capital Value System as adopted by Mumbai or the Unit Area Method as followed in Bengaluru along with the Self-Assessment scheme. The Capital Value System despite of being more effective may be vehemently opposed by the local citizens owing to the large jump in the property tax due. However, according to the directives of the 15th Finance Commission Bhubaneswar ought to move forward to a Capital Value based property tax system.

The market value of a property seems to be appropriate for calculating the collective city services tax as the market value of a property is a good proxy for the use of civic services by the property owners and tenants.

Taking into account the general benefit principle, principles of urban public finance, successful national and international best practices, the following steps may be taken by BMC to implement property tax reforms:

- The design of property tax reform needs to be comprehensive so as to address all three policy variables: tax base, exemptions and tax rate, and all three tax administration variables: coverage ratio, valuation ratio and collection efficiency. Since property tax is a highly visible tax, imposition of high tax rates will be vehemently resisted. Thus, it is

advisable to keep the tax rates low and expand the tax coverage while attempting at property tax reforms.

- Unnecessary exemptions including similar concessions on new and old buildings for maintenance should be avoided. Government properties should not be left out of the tax registry. In cases where the grant of such exemption becomes necessary, the urban local bodies should be fully compensated for the loss.
- Bringing all major properties, especially “vacant and under-used lands, additions and alterations” to properties and unauthorised constructions to the tax register ought to be the top priority. Unauthorised constructions may be made to pay service taxes or charges exceeding the property tax payable for similar properties with a rider that such payment does not tantamount to conferment of property title, which could be decided by the civil court in the case of controversy.
- As regards small properties, a bulk tax linked to plinth area may be appropriate to avoid the huge cost of gathering property-related information, calculating, collecting and enforcing tax.
- The water tax component of property tax may be replaced by water user charges based on metering. Drainage and sewerage charges may be hooked onto water charges and levied as a percentage of water charges. Lessons must be drawn from the Mumbai in this regard. Water supply, drainage and sewerage charges may be such that they cover at least the O&M costs as well as depreciation and debt-servicing costs. They may also contain an element of cross-subsidisation for the poor on considerations of equity.
- Property tax may be unbundled into two taxes: a land tax in the form of a general tax and a building-related tax in the form of a composite city services tax – meant for meeting the cost of collective services for which the levy of user charge is not feasible. Access to urban land as tax base is necessary to benefit from rising urban land values that occur due to economic development and urbanisation.
- The general tax component of property tax and vacant land tax may be levied based on the capital value of land following the ready reckoner values published by the Registration Department for stamp duty purpose. Use of readily available land and property value data from already available sources of Government obviates the necessity of cumbersome and costly property-by-property valuation.

- General tax component of property tax and vacant land tax may be escrowed to finance debt for urban infrastructure projects that create land values and benefit the land tax-payers. This can address the resistance of tax-payers.
- A rate of vacant land tax at 0.5 percent of capital value for larger or metropolitan cities and 0.2 percent for smaller towns as adopted by Andhra Pradesh and Telangana State may be considered to start with. Subsequently a graduated levy may be adopted for implementation as in Brazil. Even smaller rates may be used to start with.
- The inadequacy of data needs to be addressed by adopting a GIS-enabled Management Information System (MIS); complete automation of property tax management system, including records – from data gathering to tax levy, collection, updating of accounts and records, generation of tax notice, etc. – is necessary. Bengaluru has devised a replicable model for this.

Other Taxes

Despite being inefficient and outdated, the holding tax is the only own tax revenue source for Bhubaneswar. It contributed to about 80 percent of the tax revenue for BMC. Such over-dependence on property tax is not desirable and Bhubaneswar should explore other taxes, at least the ones already available with BMC.

- **Advertisement Tax:** The contribution of advertisement tax has been declining in Bhubaneswar. Attempts should be made to include all hoardings including those on private and government land, bus shelters, public service stations etc. in the tax base.
- **Entertainment Tax:** In the GST regime, entertainment tax cannot be levied by states. Municipal Corporations can exploit this opportunity. For instance, Mumbai was able to generate Rs. 1.25 crores from a single IPL match as entertainment tax. Bhubaneswar should attempt a similar model.
- **Profession Tax:** Currently, Profession Tax is levied by the state government with the proceeds being partly shared with BMC, as and when desired. Profession tax should be designated as a local tax. The existing ceiling on it also needs to be revised upwards.

Fees and User Charges

As the golden rule of public finance suggests, user charges are the “first-best” instruments to establish a match between the services provided and payments. In Bhubaneswar, parking fees, trade-licensing fees, user fees on NOC and fees for sanction of building plans are the only major fees. A town-planning related fees structure, similar to the one adopted by Hyderabad

must be attempted in Bhubaneswar. These instruments are pivotal in unlocking the revenue generating potential of land. Planned urban development leads to several benefits to several actors, especially to the land and property owners. So, it is appropriate to charge the “property and rent premiums” they enjoy because of the services provided by Municipal authorities. Land value can be monetized using an array of instruments – impact fees, betterment levy, premium on relaxation of Floor Space Index (FSI), Transfers of Development Rights (TDR), vacant land tax etc. BBMP collects different types of cesses: health cess at 15 percent, beggary cess at 3 percent, library cess at 6 percent, and solid waste management (SWM) cess linked to plinth area of building. BMC may consider a SWM cess to ensure that instruments such as property tax – conservancy tax component, bulk garbage collection charges, SWM cess and tipping fee for sanitary landfill sites together are able to meet the cost of street cleaning, garbage removal and sanitary disposal of waste.

Assigned Revenues and Compensations

Currently, Bhubaneswar receives compensation only in lieu of octroi under this head. No major taxes are shared with BMC. This is sad since Bhubaneswar contributes the most to such taxes. Some of the taxes which should be shared with BMC include:

- **Surcharge on Stamp Duty:** Most of the properties are purchased and resold in urban areas. Especially, buying and selling of plots is taking place at a large scale in the outskirts of Bhubaneswar. So, it is appropriate to share the proceeds with BMC. For instance, in Telangana stamp duty is levied at 2% of the value of the instrument by Registration Department and 100 percent of it is allocated by the State Government to ULBs, including GHMC on a quarterly basis. Such a structure must also be adopted in Odisha.
- **Profession Tax Compensation:** Despite qualifying for being a local tax, profession tax is imposed by the state governments. The proceeds should be completely devolved to local bodies.
- **Octroi Compensations:** The compensations provided against octroi are largely ad-hoc and not formula based. Octroi was an important tax source and thus, compensations should also be of the same tune.
- **Motor Vehicle Tax:** Cities have the majority of vehicle owners and thus, the major contributors to motor vehicles tax. Thus, BMC should be provided compensation for motor vehicle tax. Many cities around the globe charge a ‘local motor vehicle tax’.

- **Property Tax Compensations:** BMC should also be provided compensation for the revenue lost due to several exemptions provided to government properties or certain section of the population.

Sharing of GST

Cities are the major tax bases for GST. The proceeds from GST are shared between the central and state governments and the ULBs have been left out. All Municipal Corporations including BMC may be compensated by a formula-based fiscal transfer from the State Government in view of taking over or abolishing taxes like Octroi, Motor Vehicles Tax, Entry Tax, etc.

While adopting the broad theoretical principles and national best practices to guide the design of municipal finance system and local resource mobilisation in Bhubaneswar, there is also a need to study innovative international practices to draw lessons. A key lesson from such practices is that the municipal tax system must be broad-based so as to be able to meet the needs of growing cities – for economic growth, welfare and poverty reduction. This is particularly the case for metropolitan cities which are the drivers of national economic growth and structural transformation. Table 4.26 summarises the range of instruments available to municipalities internationally that may be considered for adoption after in India, including BMC.

Table 4.26

Revenue Instruments of Municipalities: International Practices

Category of Instrument	Description of Instrument and Countries/Provinces/Cities where practiced
Land-based Taxes	Property tax (Most countries); Vacant land tax (Brazil, Andhra Pradesh, Telangana State); Land value tax and Land value increment tax (Taiwan); Site value tax (Australia); Comprehensive real estate holding tax (Korea); Land gains tax (United States and Canada); Windfall tax (Ireland); Real property gains tax (Malaysia); Urban land tax (Tamil Nadu); Real estate transfer tax (United States, Andhra Pradesh, Tamil Nadu, Telangana State,)
Non-land based Taxes	Local income tax, Local sales tax, Local excise tax, Local payroll tax and Local motor vehicles tax (United States, Europe); Profession tax (Andhra Pradesh, Kerala); Entertainment Tax

	(Andhra Pradesh, Telangana State); Advertisement Tax (Andhra Pradesh, Karnataka, Telangana State, West Bengal); Business licensing tax (Latin America); Water benefit tax and Sewer benefit tax (Mumbai); Utility user taxes (Chicago, Cape Town, Delhi)
User Charges	Water charges (Most cities); Pay as You Throw (PAYT) charges and Tipping fees (United States); Bulk garbage collection charges (Hyderabad)
Benefit Charges	Sewerage and storm drainage charges hooked onto water charges (Most countries); Special assessment districts (United States); Business improvement districts (Canada, United States); Betterment charges (<i>Contribucion de Valorizacion; Participacion en Plusvalias</i> and <i>Contrubuciones de Mejoras</i> in Latin America)
Shared Taxes	Income tax (Brazil, China, Japan); Value added tax (Argentina, Brazil, China, Spain); Excise tax (Japan, Peru, Punjab); Vehicle tax (Argentina, Brazil, Peru, Spain); Motor fuel tax (United States – dedicated to highways and transit); Business taxes (China, Latin America)
Shared General Revenues/Transfers	Practically all countries, including Brazil, China, Nigeria, Philippines, and South Africa
Development Financing Tools	Developer exactions (United States); Impact fees (United States, Hyderabad, Ahmedabad); Developer contribution (Australia); Planning obligations (United Kingdom); Community infrastructure levy (United Kingdom); Incentive zoning (United States)
Value Capture Financing Tools	Sale of developer land (Most countries); Lease/sale of project-related land (Australia, France, China); Lease/sale of development rights (Floor space index charges - <i>Outorga Onerosa do Direito de Construir</i> (OODC) in Brazil, Auctionable development rights - <i>Certificados de Potencial Adicional de Construcao</i> (CEPAC) in Brazil); Monetisation of land assets (Mumbai Metropolitan Regional Development Authority - Bandra-Kurla Complex); Joint

	development mechanism (Japan, China); Betterment taxes (Latin America); Tax increment financing (United States).
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Source: Bahl and Linn (1992), Bahl, Linn and Wetzel (2013), Mohanty (2016)

4.5. Conclusion

India is urbanizing at a rapid rate. Further, the metropolitan cities in India are growing at an unprecedented rate. These cities are the “engines of growth” for the country. In the near future, these cities will further expand both geographically and economically. More migrants will move to such cities in search of job opportunities. For firms will set up to exploit the agglomeration economies. However, this growth momentum cannot be sustained unless cities deliver the infrastructure, services and civic amenities required by these economic agents. Municipal Corporations finance these needs, and require better governance along with stronger finance to meet the demands of the growing cities and population. This chapter focused on the study of the municipal finance structure of Bhubaneswar Municipal Corporation and made comparisons with Mumbai, Bengaluru, Hyderabad and Thiruvananthapuram.

The financial position of the Municipal Corporations of India has been deteriorating over the years. This has been happening despite the serious attempts by certain corporations to revamp their finances. The reason pertains to the deficiencies in the very system of Municipal Finance. Municipalities are dependent on higher levels of government. They have not been in a position to meet even the operation and maintenance costs on their own. Their tax bases are not just narrow but also non-buoyant. Collection mechanisms are inflexible and not citizen-friendly. These civic bodies lack fiscal autonomy. Be it regarding fixation of tax rate or borrowing from the market, they need approval from the state governments. The poor state of finances and lack of autonomy also reduces the credit-worthiness of the municipal bodies when it comes to borrowing from the market. Further, they also do not exploit the tax bases already available to them including the land-based taxes.

The advent of GST has further worsened municipal financial position. Various taxes like the octroi, entry tax, local body tax and advertisement tax have been subsumed under the GST. Compensation has not been provided in tune with the amount of revenue lost due to such subsumption. Further, GST is shared only between the central and state governments. Local bodies have been left out despite being the major contributors to all forms of taxes.

The deficient municipal finance system needs to be restructured so that it can serve as an instrument to promote planned urban development and economic growth. Cities arise and

grow because they create value to firms and households. The value-creation process is rooted in their powerful agglomeration externalities. Such externalities are facilitated by market forces as well as public policies concerning economic growth, spatial planning, infrastructure development, public service delivery, urban renewal, decongestion, etc. They carve out a unique place for cities in the structural transformation, economic growth and development of nations. These externalities benefit many actors in many ways. They also create negative impacts when they cross a threshold. If a part of the unearned benefits reaped by the gainers are recouped by ULBs and escrowed to meet the debt-servicing needs of planned urban development, then growth can be made to pay for itself. Market borrowings through municipal bonds and other instruments can lead to a self-sustaining process of urban development by facilitating agglomeration economies, mitigating congestion diseconomies, augmenting land and other tax bases, generating tax increments, repaying debts, and undertaking further borrowings. Supplementary resources can also be mobilised through “polluters pay”, “congesters pay” and “exacerbators pay” instruments.

The next two chapters suggest methods to re-design the municipal finances of India, drawing lessons from the ‘general benefit principle’ and the Wicksellian Connection. These attempts need to be made fast and with efficiency and commitment, keeping in view the economic value of the municipal bodies.

CHAPTER 5

DESIGNING URBAN FINANCE ON BENEFIT PRINCIPLE: A NEW THEORETICAL FRAMEWORK

5.1. Evolution of Benefit Principle

The principle of benefit taxation found expression in the works of Adam Smith (1776). According to Smith, citizens ought to pay for the benefits they receive from the services provided by the state. Further, he acknowledged that these benefits are proportionately higher for the rich than the poor, thus, the rich should be made to pay a larger share. In other words, Smith talks of the benefit principle and ability to pay principle simultaneously. He talks of “benefit as ability” principle which is called the “classical view of benefit-based taxation” by Musgrave (1959).

George (1879) suggested imposing tax on land rents on the owners. This is backed by the principle that land owners gain disproportionately due to public investments, infrastructure and services provided by the government. These gains feed in to the land value and should ideally be included in the tax base.

Knut Wicksell (1896) is considered the founder of the benefit principle. He advocated that benefits received should determine the tax to be paid, which ultimately decides the level of service provision. Lindahl (1919) suggested that each individual should pay in accordance to the marginal utility of the public good. However, there are practical limitations to the proposal of Lindahl as measurement of benefits is not possible for all public goods. Further, a certain section of the population needs to be subsidised and cannot be made to pay at par with others.

Henry-George Model of Land Tax

Land values in cities rise due to the agglomeration and networking externalities and infrastructure investments undertaken by public authorities. Owners of land at vantage locations gain from unearned increments in land values. Thus, land rent or a tax on land value is an appropriate way to raise revenue for municipalities. This is amply highlighted by the “Henry George Theorem”. A version of the Henry George Theorem advocating land rent or land value taxation is presented below with simple mathematical model (Stiglitz 1977; Arnott and Stiglitz 1979; Atkinson and Stiglitz 1980; Mishra A.K.2019).

Consider a simple competitive economy with private good X and public good G subject to the underlying specifications:

Production Function of the private good: $X = f(L)$

X = Output of private good and L = Population or labour force

$\frac{\partial X}{\partial L} = f'(L)$ = Marginal productivity of labour

Endowment Constraint: $Y = f(L) = xL + G$

x = Private good consumption and G = Public good consumption.

Assume the private good to be a numeraire good and there is uniform distribution of land rents,

Utility Function of the Representative Individual: $U = U(x, G)$

Conditions maximising social welfare:

Maximise $U = U(x, G)$ subject to $f(L) = xL + G$.

Modifying the model into an unconstrained optimization framework we get the optimisation framework as:

Maximise $U = U\left(\frac{f(L) - G}{L}, G\right)$

First order conditions:

$$\frac{\partial U}{\partial X} [Lf'(L) - f(L) + G] \frac{1}{L^2} = 0 \text{ or, } G = f(L) - Lf'(L) \quad \dots(1)$$

$$\frac{\partial U}{\partial X} \left(-\frac{1}{L}\right) + \frac{\partial U}{\partial G} = 0 \text{ or, } \frac{\partial U}{\partial X} = L \frac{\partial U}{\partial G} \quad \dots (2)$$

Equation 2 states the Samuelson Rule for efficient public good provision. Under competitive conditions, marginal labour productivity equals real wage. Thus, the total wage bill is given by $Lf'(L)$. Thus, according to equation 1, the optimal quantity of public good provision is equal to total production minus the total wage payments i.e. the aggregate land rent. Despite being simple, the model has strong implications for municipal finances. It is appropriate to mobilise revenue by taxing land rents. It is of particular interest in municipal corporations of large cities where land values are high due to city externalities and city public investment in infrastructure and services.

Mohring-Harwitz Optimal Congestion Toll

Mohring suggested that with an optimal Pigovian congestion toll on the congesters, the cost of highway financing can be met (self-financing theorem). His model is discussed in this section. Public goods are characterised as being non-rival and non-excludable. However, local public

goods execute some degree of rivalry owing to congestion. Let us consider the following model for optimal provision of a local public good.

Let 'G' be a congestible public good. The cost of providing G is a function of the number of users, 'N', i.e. $C=C(N)$, $\frac{\partial C}{\partial N} = C'(N) > 0$, due to congestion.

Total Cost of providing the good, $TC = NC(N)$

Marginal Cost/ Social Cost of Provision = $\frac{\partial TC}{\partial N} = C(N) + N C'(N)$

Average Cost/ Private Cost of Provision = $\frac{TC}{N} = C(N)$

Since the users of local public goods suffer due to congestion, we may assume congestion cost per user is $C'(N)$ and total congestion cost is $N C'(N)$.

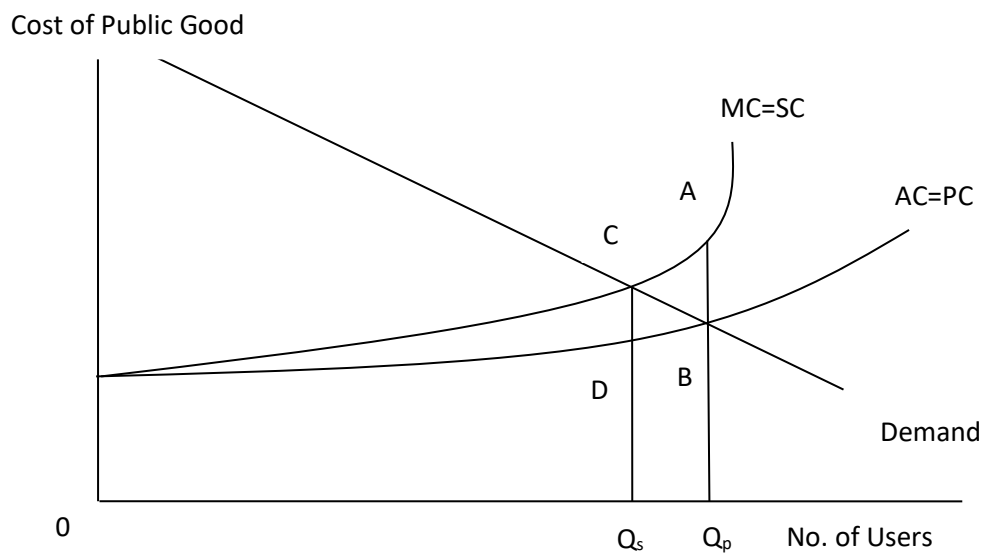
So,

Marginal/Social Cost of Provision = Average/Private Cost of Provision + Total Congestion Cost

Since, $C'(N) > 0$, the MC curve will be above the AC curve and the vertical distance between both the curves measures the congestion damage.

Fig. 5.1

Congestion Toll



Source: Mishra, 2019

The public good demand curve or the marginal benefit curve of using public good is downward sloping. Equilibrium quantity of public good is OQ_p . At OQ_p , social cost of provision is greater than private cost of provision. AB is the congestion damage. The socially desirable quantity is OQ_s . The equilibrium quantity is greater than the socially optimum quantity as every user ignores the congestion cost imposed on other users. A congestion tax of CD will internalise the congestion and ensure the social cost of provision is equal to the private cost of provision. The gains from the congestion tax is equal to ABC. The degree of congestion and congestion tax will depend on the density of the city.

Revisiting the Self-Financing Theorem

Considering the case of a congestible local public good with N number of users and capacity equal to K. The utilisation ratio is given by $\frac{N}{K}$. Let, the cost per unit of provision of the local public good be C. Then,

The Total Cost of provision = CK

The congestion cost imposed by an individual be $g(\frac{N}{K})$.

Total Cost to Society = Cost of Provision + Aggregate Congestion Cost

Or, $TC = CK + N g(\frac{N}{K})$

The optimisation problem is to find the capacity, K, that will minimise the total cost, TC. The First Order Conditions is,

$$\frac{\partial TC}{\partial K} = 0$$

$$C + (N g'(\frac{N}{K}) \times \frac{-N}{K^2}) = C - \frac{N^2}{K^2} g'(\frac{N}{K}) = 0$$

$$C = \frac{N^2}{K^2} g'(\frac{N}{K})$$

$$\text{Total Cost of Provision} = CK = \frac{N^2}{K} g'(\frac{N}{K}) \quad \dots (3)$$

Let, marginal cost pricing of good is done according to the first-best principle of the benefit principle. Then once the optimal capacity, K, has been reached, each additional user increases congestion for other users by $\frac{\partial g}{\partial N} = \frac{1}{K} g'(\frac{N}{K})$. As there are N number of users, each user must pay a congestion charge equal to $\frac{N}{K} g'(\frac{N}{K})$.

$$\text{Total Congestion Tax} = N \frac{N}{K} g'(\frac{N}{K}) = \frac{N^2}{K} g'(\frac{N}{K}) \quad \dots\dots (4)$$

Comparing equations 3 and 4, we get, total cost of provision is equal to total revenue from congestion tax.

Small and Verhoef's Conditions

Following Small and Verhoef (2007), we define all the variables in terms of per unit per user. Let $p(x)$ be the user's inverse demand function where x is the amount of benefit derived (or public good used)

$C(x, K)$ be the user's average cost function for deriving the benefit.

$F(K)$ is the public good capacity investment function.

Now, the objective of the public authority is to maximise the social welfare, W^* .

$$W^* = W(x, K) = \int_0^x p(x)dx - x \cdot C(x, K) - F(K)$$

Now, the First Order Condition is,

$$\frac{\partial W}{\partial x} = p(x) - C(x, K) - x \frac{\partial C(x, K)}{\partial x} = 0 \quad \dots\dots (5)$$

$$\frac{\partial W}{\partial K} = -x \frac{\partial C(x, K)}{\partial K} - \frac{\partial F}{\partial K} = 0 \quad \dots\dots(6)$$

$$\text{So, from 3, User Price} = p(x) = C(x, K) + x \frac{\partial C(x, K)}{\partial x}$$

Or, User Price = Average Cost + externality Cost to all Users

Thus, User Price = Private Cost + Pigovian Congestion Tax

$$\text{From 4 we get, } -x \frac{\partial C(x, K)}{\partial K} = \frac{\partial F}{\partial K} \quad \dots\dots (7)$$

This shows that, at the social optimum, the marginal amount invested in enhancing the capacity of public good should generate benefits equal to the reduction in total users costs from that investment.

The Congestion tax revenue, $R(CT)$, is equal to the number of users multiplied by the tax per user.

$$R(CT) = x \times x \frac{\partial C(x, K)}{\partial x} = x^2 \frac{\partial C(x, K)}{\partial x}$$

Assuming the cost is a function of the utilisation ratio, x/K we get,

$$C(x, K) = C(x/K)$$

Since, it is homogenous of degree 0, by Euler's Theorem we get,

$$x \frac{\partial C}{\partial x} + K \frac{\partial C}{\partial K} = 0$$

$$\text{Or, } x \frac{\partial C}{\partial x} = -K \frac{\partial C}{\partial K}$$

$$\text{Thus, } R(CT) = -x K \frac{\partial C}{\partial K} = K \frac{\partial F}{\partial K} \text{ (using equation 7) } \dots(8)$$

The economies of scale of capacity investment, S_k is defined as the ratio of average cost of investment and marginal cost of investment. So,

$$S_k = \frac{\text{Average Cost of Investment}}{\text{Marginal Cost of Investment}} = \frac{(F(K))/K}{\partial F / \partial K}$$

$$\text{Hence, at the Social Optimum we have, } R(CT) = \frac{F(K)}{S_k} \text{ (using equation 6)}$$

When there are economies of scale, $S_k > 1$; $R(CT) < F(K)$

With diseconomies of scale, $S_k < 1$; $R(CT) > F(K)$

In case of neutral economies of scale, $S_k = 1$; $R(CT) = F(K)$

We know the infrastructure provided by local governments experience economies of scale due to the presence of agglomeration externalities and network externalities. Thus, revenue generated through congestion taxation will fall short of the capacity investment. In such cases borrowing may be adopted, which can be repaid by a combination of congestion toll and benefit tax, including taxes on land whose value increases due to public goods provision.

Combined Henry George and Moring-Harwitz Theorems

The literature on local public finance combines the Henry George land/rent tax and Moring-Harwitz optimal congestion toll theorems to get the following results.

Cost of optimally provided local public goods = Land rent + optimal Pigovian congestion toll (subject to Small-Verhoef conditions) (Mohanty 2018)

Stiglitz's New Perspective

Stiglitz (2012, 2015) has drawn strong results for local finance based on the benefit principle. He refers to the widespread phenomena of rents, including urban land rents, monopoly rent, etc. The New Economic Geography literature refers to agglomeration rents accruing to mobile capital and labour due to strong agglomeration externalities in cities. Economists including

Stiglitz suggest imposing a tax on those who derive benefits from public provisions as well as those who create disbenefits. Similar to Henry George, Stiglitz advocates for a stiff tax on land rents or values. Further, he talks of imposing a tax on negative externalities, in order to curb such activities and enhance economic efficiency. He also lays emphasis on taxing the ‘bads’ like congestion and pollution. Stiglitz has broadened the tax base for application of the benefit principle by advocating for windfall benefit tax on land rent (including agglomeration rent and monopoly rent), congestion toll, land value tax etc. Stiglitz’s new theoretical perspectives suggest that the taxation of rents in various forms including those to land, capital etc. in cities can be a key strategy to apply the benefit principle to finance planned urban development.

5.2. Unaddressed Issues in Existing Models

According to Musgrave, the classical view of Benefit principle drew an analogy between the benefit principle of taxation and the ability to pay principle. However, later on both the theories emerged as rivals. The classical view was endorsed by several economists starting with Adam Smith. It was advocated by Grotius, Pufendorf, Sir William Petty, Hobbes, Turgot, Montesquieu, Mirabeau etc. They were of the opinion that citizens must pay for the services provided by the state including defence and protection of property. Since, such services are of more importance to the rich than to the poor, the classical view talks of the benefit and ability to pay principle simultaneously. While some proponents like Hobbes talk of consumption as a proxy for measuring benefits, others like Thiers appeal for benefit taxes on both labour and property since land owners as well as workers benefit from state protection. However, no formal model was provided by them including Adam Smith on the benefit principle. Despite a theoretical appealing framework, Adam Smith failed to provide a theoretically elegant model regarding the same.

The modern benefit principle of taxation theory can be traced back to the works of Wicksell and was further developed by Lindahl. While Wicksell advocated benefits to be charged in accordance to preference revealed by the users, Lindahl advocated charges to be levied in accordance to the marginal benefit derived. These models were criticised on the grounds that it is difficult to measure such benefits. Further, in the absence of a market for public goods which are non-excludable and non-rival, it is not possible to gauge the willingness to pay. For instance, the benefits of national defence cannot be sold to individual citizens. However, local public goods execute some degree of rivalry and excludability and it is feasible to charge them according to the benefit principle. But the models suggested by Wicksell and Lindahl are considered to be regressive and hurt the poor. Further, they consider only the direct

benefits of usage and ignore the indirect benefits, induced, externality-driven and public policy and investment related windfalls.

The taxation of land rent as suggested by Henry-George has strong implications for raising revenue at municipal level. However, the revenue generated by such means will not be sufficient to meet the growing expenditure responsibilities of the ULBs. Further, several other factors including externalities inherent to cities and nature of public goods provision have also been ignored.

The Mohring-Harwitz optimal congestion theory strongly draws upon the corollary of the benefits principle i.e. congesters pay principle. However, despite being theoretically elegant, it is not possible in practice due to difficulties in revenue mobilisation owing to public resistance. Further, they consider only the negative externality of congestion and ignore the positive externalities unleashed due to better connectivity. Further, the Small and Verhoef condition regarding the effectiveness of the self-financing theorem ignores the facility cost and takes only operation cost into account.

Stiglitz despite being the closest to broadening the application of the 'general benefit principle' does not emphasize much on the 'growth pays' and 'polluters pay' instruments. Further, he has also not addressed the probable regressive nature of benefit taxes. While due recognition of the agglomeration economies resulting in externality benefits including higher property value has been done, not much has been reflected on the indirect and induced benefits.

To sum up, the existing benefit theories have been criticised for being regressive. The poor get benefited from various provisions made by the state but it is not appropriate to charge them at par with others. The need for subsidies arises in this scenario. Benefits are not merely restricted to the direct users, there are other indirect, induced and externality benefits too. For instance, the users of road services draw direct benefits in terms of saving time and cost during travel and comfort due to investment in roads. Indirectly, firms benefit from better access to raw materials and markets and consumers gain through better access to markets and variety. It also generates induced benefits for land and property owners as they enjoy higher property premiums because of the investment.

There are several stumbling blocks on the path of charging tax on land value and land rents. The fear of resistance from the landed class, including large real estate owners, land giants, bureaucrats etc. discourages ULBs to move in this direction. Such decisions largely draw upon political implications rather than economic significance. Improper imposition of tax

on land rents can also dampen housing and building activities. The agglomeration rents despite being theoretically elegant are practically fuzzy. It is difficult to tap these into the tax base.

Most of the theories restrict the role of ULBs to the provision of local public goods. However, ULBs have also been vested with several redistributive functions (safeguarding the interest of the weaker section, slum upgradation and urban poverty alleviation), planning related functions (town planning, planning for socio-economic development) and environment related functions such as urban forestry and conservation. These additional functions require additional revenues which cannot be mobilised from the traditional sources such as property tax and require innovative techniques in addition to inter-governmental transfers.

The lessons drawn from Wicksell to Stiglitz indicate towards the golden principle of local public finance. They indicate towards a bundle of local revenues based on the benefit principle. These include, user charges wherever benefits and beneficiaries can be identified (Wicksell and Lindahl), benefit charges as surrogate user charges when such identifications are not accurate (Bird), inter-governmental transfers when benefits spread over jurisdictions (Musgrave), borrowing and earmarking when benefits are spread over generations (Buchanan) and innovative tools to capture induced and externality benefits like agglomeration rents, natural resource rents, monopoly rents and congestion charges (Stiglitz).

5.3. A New Theoretical Model

Consider the case of a congestible local public good and assume that the preferences are identical. For the representative individual, the utility function, U , is given by,

$U = U(X, G)$ where, X is a private good and G is the received public service.

$$\frac{\partial U}{\partial X} = U_X > 0 \quad \text{and} \quad \frac{\partial U}{\partial G} = U_G > 0$$

Taking the public service technology function, which in this case may be considered as a congestion function, $G = G(Z, N)$ where, Z = Level of public facility or infrastructure and N = Number of users or population.

$\frac{\partial G}{\partial Z} = G_Z > 0$ and $\frac{\partial G}{\partial N} = G_N < 0$ (Due to congestion in service. However, if capacity of infrastructure is augmented, the level of G may not fall as N increases).

Let the cost of provision of the congestible facility or operational cost be $C = C(Z, N)$ and

$$\frac{\partial C}{\partial Z} = C_Z > 0 ; \quad \frac{\partial C}{\partial N} = C_N > 0$$

For simplicity, we assume that there is an equal sharing of cost among all the users. Thus, cost per public service user is $\frac{C(Z,N)}{N}$.

The budget balance condition will require $R = C(Z, N)$, where R = Local Government Revenue
 $R = C(Z, N) = C[Z(G, N), N]$ or $R = R(G, N)$

By budget balance condition and equal cost sharing assumption, $\frac{C(Z,N)}{N} = \frac{R(G,N)}{N}$ = Per person revenue contribution (taxes/user charges)

Let the private good X be the numeraire. Now, the objective function of the social planner is to maximise the utility of the representative individual:

$U = U(X, G)$ subject to the budget constraint: $X + \frac{R(G,N)}{N} = Y$ where Y = income

The Lagrange function is

$$\mathcal{L} = U(X, G) + \mu \left[Y - X - \frac{R(G,N)}{N} \right]$$

The First order conditions give,

$$\frac{\partial \mathcal{L}}{\partial X} = U_X - \mu = 0 \quad \dots (9)$$

$$\frac{\partial \mathcal{L}}{\partial G} = U_G - \mu \frac{1}{N} \frac{\partial R}{\partial G} = 0 \quad \dots (10)$$

Dividing equation 10 by equation 9 we get,

$$\frac{U_G}{U_X} = \frac{1}{N} \frac{\partial R}{\partial G} \quad \text{or} \quad N \frac{U_G}{U_X} = \frac{\partial R}{\partial G}$$

$$\text{NMRS}_{G,X} = \frac{\partial R}{\partial G} = \frac{\partial C}{\partial G} \quad (\text{Since, } R = C \text{ under balanced budget assumption})$$

The above condition is the standard Samuelson condition. For the national planner, the number of users, N , is also a variable. Differentiating the Lagrange function with respect to N we get,

$$\frac{\partial \mathcal{L}}{\partial N} = -\mu \left[\frac{1}{N} \frac{\partial R}{\partial N} + R(G, N) \left(\frac{-1}{N^2} \right) \right] = -\mu \left[\frac{N \frac{\partial R}{\partial N} - R(G, N)}{N^2} \right] = 0 \quad \dots (11)$$

From equation 11 we get,

$$\frac{\partial R}{\partial N} = \frac{R(G, N)}{N} = \frac{C}{N} \quad \dots (12)$$

Equation 12 indicates production efficiency through equality between marginal cost and average cost. It also suggests that if one more individual public service user is added his contribution to revenue must meet the incremental public service cost.

The above model gives an understanding of the principles of local government finance. However, it does not make a distinction between the capital cost of financing, operational cost and externality-related costs. It is also based on the assumption of balanced budgeting which may not happen.

Let us consider the following model of local government budgeting,

Total Cost = Capital Cost + Operational Cost (Congestion cost)

Or, $TC = K(Z) + C(Z, N)$

Where, $K(Z)$ is the facility cost or capital cost and $C(Z, N)$ is the operational cost, including congestion-related costs. The budget balance gets modified as mentioned below:

$R(G, N) = K(Z) + C(Z, N)$

Now considering equal cost sharing among the users we get the contribution required per user as:

$$\frac{K(Z) + C(Z, N)}{N}$$

The new optimisation problem is to maximise the utility of the representative individual $U = U(X, f(Z, N))$ subject to the budget constraint: $X + \frac{K(Z) + C(Z, N)}{N} = Y$.

Framing the Lagrange function,

$$\mathcal{L} = U(X, f(Z, N)) + \lambda \left[Y - X - \frac{K(Z)}{N} - \frac{C(Z, N)}{N} \right]$$

The first order conditions are:

$$\frac{\partial \mathcal{L}}{\partial X} = \frac{\partial U}{\partial X} - \lambda = 0 \quad \dots (13)$$

$$\frac{\partial \mathcal{L}}{\partial Z} = \frac{\partial U}{\partial G} \cdot \frac{\partial f}{\partial Z} - \frac{\lambda}{N} \frac{\partial K}{\partial Z} - \frac{\lambda}{N} \frac{\partial C}{\partial Z} = 0 \quad \dots (14)$$

$$\frac{\partial \mathcal{L}}{\partial N} = \frac{\partial U}{\partial G} \cdot \frac{\partial f}{\partial N} + \lambda \left[\frac{K(Z)}{N^2} - \frac{1}{N} \frac{\partial C}{\partial N} + \frac{C(Z, N)}{N^2} \right] = 0 \quad \dots (15)$$

From the equation 13 and 14 we get the modified Samuelson rule: $NMRS_{ZX} = \frac{\partial K}{\partial Z} + \frac{\partial C}{\partial Z} =$ Marginal facility (augmentation) cost + Marginal operation cost that takes into account congestion. Considering equation 15 we get,

$$\frac{\partial U}{\partial G} \cdot \frac{\partial f}{\partial N} = -\lambda \left[\frac{K(Z)}{N^2} - \frac{1}{N} \frac{\partial C}{\partial N} + \frac{C(Z,N)}{N^2} \right] \quad \dots(16)$$

From equation 13 we get, $\frac{\partial U}{\partial X} = \lambda = U_X$. Putting this in equation 16 we get,

$$\frac{\partial U}{\partial G} \cdot \frac{\partial f}{\partial N} = -U_X \left[\frac{K(Z)}{N^2} - \frac{1}{N} \frac{\partial C}{\partial N} + \frac{C(Z,N)}{N^2} \right]$$

$$\text{Or, } \frac{K(Z)}{N} = \left(\frac{\partial C}{\partial N} - \frac{C(Z,N)}{N} \right) \quad \dots (17)$$

If we assume that the government or social planner is able to levy optimal Pigovian congestion toll $= N \frac{\partial C}{\partial N}$, then the capacity cost of facility and congestion cost could be covered: $K(Z) + C(Z, N) = N \frac{\partial C}{\partial N}$. This is the Self-financing theorem.

In practice, the self-financing result may not be attainable as there may be increasing returns to scale in local public goods provision and monopoly. Also, the optimal Pigovian congestion toll may be exorbitantly high and may not be practical.

We now consider a new theoretical model that relies on the benefit principle of public goods financing, where benefits can be direct or indirect – externality induced. Let, the benefit derived by the representative individual from provision of public good G be equal to B such that,

$$B = B(G, N)$$

Where, $\frac{\partial B}{\partial G} > 0$ and $\frac{\partial B}{\partial N} < 0$ indicating better provision of public goods results in higher marginal benefit and marginal benefit declines with higher number of users due to congestion. If individuals are charged a benefit tax at the rate T, then total revenue generated from benefit based taxes and charges is equal to T B(G, N). Considering, equal cost sharing the benefit related charges per user is $\frac{T \cdot B(G,N)}{N}$.

The new optimisation problem is to maximise the utility of the representative individual $U = U(X, G)$ subject to the budget constraint: $X + \frac{T \cdot B(G,N)}{N} = Y$ (18)

Framing the Lagrange function,

$$\mathcal{L} = U(X, G) + \lambda \left[Y - X - \frac{T B(G, N)}{N} \right]$$

The first order conditions are,

$$\frac{\partial \mathcal{L}}{\partial X} = \frac{\partial U}{\partial X} - \lambda = 0 \text{ or } \frac{\partial U}{\partial X} = U_X = \lambda \quad \dots (19)$$

$$\frac{\partial \mathcal{L}}{\partial G} = \frac{\partial U}{\partial G} - \frac{\lambda}{N} T \frac{\partial B}{\partial G} = 0 \text{ or } \frac{\partial U}{\partial G} = U_G = \frac{\lambda}{N} T \frac{\partial B}{\partial G} \quad \dots (20)$$

$$\frac{\partial \mathcal{L}}{\partial N} = \lambda \left[-\frac{T}{N} \frac{\partial B}{\partial N} + \frac{T B(G, N)}{N^2} \right] = 0 \quad \dots (21)$$

Considering equation 21 we get,

$$-\frac{T}{N} \frac{\partial B}{\partial N} + \frac{T B(G, N)}{N^2} = 0 \quad \text{or,}$$

$$\frac{T B(G, N)}{N^2} = \frac{T}{N} \frac{\partial B}{\partial N} \quad \text{or}$$

$$\frac{B(G, N)}{N} = \frac{\partial B}{\partial N} \quad (\text{Cancelling } \frac{T}{N} \text{ from both sides}) \quad \dots (22)$$

Thus, equation 22 indicates an equality between average benefits and marginal benefits of public goods provision at the optimum. The above result also makes a case for broadening the tax base and encompassing various forms of benefit charges/taxes.

Multiplying equation 22 by the tax rate, T, we get,

$$T \cdot B(G, N) = N T \frac{\partial B}{\partial N} \quad \dots (23)$$

Equation 23 suggests that the total revenue generated through benefit-based taxes and fees is equal to the marginal benefit per user multiplied by the tax rate for all users. This is in accordance to the Lindahl principle. Further, the result also has strong implications for subsidising the poor. In case of non-homogenous benefits, it can be extended as follows:

$$T \cdot B(G, N) = \sum T_i \frac{\partial B_i}{\partial N} \quad \dots (24)$$

The poor who get disproportionately benefited due to public service provisions may be subsidised by charging a lower rate. A progressively higher rate may be charged from the rich such that the desired revenue is generated. The result is also based on the golden principle making case for differential tax rates for different kinds of benefits generated. The model also presents a case for a bundle of taxes based on the benefit principle.

Modelling Generalised Benefit Principle

We consider the local/urban private good production function as:

$$P = H(G) F(G, N)$$

Where, G is the urban public good/service, N is the number of users and H is the externality function representing wider economic benefits of public good provision or external/agglomeration economies due to public good.

$$\frac{\partial H}{\partial G} > 0; \frac{\partial F}{\partial G} > 0; \frac{\partial F}{\partial N} > 0$$

$$\frac{\partial^2 H}{\partial G^2} < 0; \frac{\partial^2 F}{\partial G^2} < 0; \frac{\partial^2 F}{\partial N^2} < 0$$

In the broader sense, H could be a function of N and G both. However, we ignore N for simplicity. The public good/service is assumed to be characterised as:

$$G = G(Z, N)$$

Where, Z is the level of facility of public good and N is the number of users.

$\frac{\partial G}{\partial Z} > 0; \frac{\partial G}{\partial N} < 0$ (The higher the number of users, the higher the probability of congestion diseconomies unless capacity of facility is augmented)

Let the total cost for providing the public good be:

$$TC = K(Z) + C(Z, N)$$

$K(Z)$ is the facility cost (or capital cost) and $C(Z, N)$ is the congestion cost (or operational cost).

Representative city dweller's utility function is:

$$U = U(X, Z)$$

$$\frac{\partial U}{\partial X} > 0; \frac{\partial U}{\partial Z} > 0$$

X is a private good assumed to be a numeraire

Z is the level of facility of public good or infrastructure.

Assuming that the cost of provision of public good/service is equally shared among all the users, the individual's budget constraint gets reduced to:

$$X + \frac{K(Z) + C(Z, N)}{N} = Y$$

The individual's objective is to maximise utility, $U(X, Z)$, subject to the budget constraint.

The Lagrange function is:

$$\mathcal{L} = U(X, Z) + \lambda \left[Y - X - \frac{K(Z)}{N} - \frac{C(Z, N)}{N} \right]$$

The First Order Conditions are:

$$\frac{\partial \mathcal{L}}{\partial X} = \frac{\partial U}{\partial X} - \lambda = 0 \text{ or, } U_X = \frac{\partial U}{\partial X} = \lambda \quad \dots (25)$$

$$\frac{\partial \mathcal{L}}{\partial Z} = \frac{\partial U}{\partial Z} - \frac{\lambda}{N} \left[\frac{\partial K(Z)}{\partial Z} + \frac{\partial C(Z, N)}{\partial Z} \right] = 0 \quad \dots (26)$$

$$\frac{\partial \mathcal{L}}{\partial N} = \lambda \left[\frac{K(Z)}{N^2} - \frac{1}{N} \frac{\partial C(Z, N)}{\partial N} + \frac{C(Z, N)}{N^2} \right] = 0 \quad \dots (27)$$

From equation 26 we get,

$$\frac{\partial U}{\partial Z} = \frac{\lambda}{N} \left[\frac{\partial K(Z)}{\partial Z} + \frac{\partial C(Z, N)}{\partial Z} \right]$$

Putting equation 25 in the above equation we get,

$$N \frac{U_Z}{U_X} = NMRX_{ZX} = \left[\frac{\partial K(Z)}{\partial Z} + \frac{\partial C(Z, N)}{\partial Z} \right] \quad \dots (28)$$

From equation 27 we get,

$$\begin{aligned} \frac{\lambda}{N^2} \left[K(Z) + C(Z, N) - N \frac{\partial C(Z, N)}{\partial N} \right] &= 0 \\ \Rightarrow K(Z) + C(Z, N) &= N \frac{\partial C(Z, N)}{\partial N} \quad \dots (29) \end{aligned}$$

Equation 28 gives the Samuelson rule. The sum of Marginal rate of substitution for all users is equal to the marginal cost of public good/service provision. Equation 29 gives the Mohring's self-financing condition. The cost of public good/service provision is equal to the revenue from congestion toll.

Considering the above conditions, the society's endowment constraint can be written as:

$$H(G)F(G, N) = NX + K(Z) + C(Z, N)$$

The new Lagrange Function is:

$$\mathcal{L} = U(X, Z) + \lambda [H(G)F(G, N) - NX - K(Z) - C(Z, N)]$$

The First Order Conditions are:

$$\frac{\partial \mathcal{L}}{\partial X} = \frac{\partial U}{\partial X} - \lambda N = 0 \text{ or, } U_X = \frac{\partial U}{\partial X} = \lambda N \quad \dots (30)$$

$$\frac{\partial L}{\partial Z} = \frac{\partial U}{\partial Z} + \lambda \left[H(G) \frac{\partial F}{\partial G} \frac{\partial G}{\partial Z} + F(G, N) \frac{\partial H}{\partial G} \frac{\partial G}{\partial Z} - \frac{\partial K(Z)}{\partial Z} - \frac{\partial C(Z, N)}{\partial Z} \right] = 0 \quad \dots (31)$$

$$\frac{\partial L}{\partial N} = \lambda \left[H(G) \frac{\partial F}{\partial N} + F(G, N) \frac{\partial H}{\partial G} \frac{\partial G}{\partial N} - X - \frac{\partial K(Z)}{\partial Z} \frac{\partial Z}{\partial N} - \frac{\partial C(Z, N)}{\partial N} \right] = 0 \quad \dots (32)$$

$$\frac{\partial L}{\partial \lambda} = [H(G)F(G, N) - NX - K(Z) - C(Z, N)] = 0$$

$$\Rightarrow K(Z) + C(Z, N) = H(G)F(G, N) - NX \quad \dots (33)$$

From equation 32 we get,

$$X = H(G) \frac{\partial F}{\partial N} + F(G, N) \frac{\partial H}{\partial G} \frac{\partial G}{\partial N} - \frac{\partial K(Z)}{\partial Z} \frac{\partial Z}{\partial N} - \frac{\partial C(Z, N)}{\partial N}$$

Multiplying the above by N we get,

$$NX = NH(G) \frac{\partial F}{\partial N} + NF(G, N) \frac{\partial H}{\partial G} \frac{\partial G}{\partial N} - N \frac{\partial K(Z)}{\partial Z} \frac{\partial Z}{\partial N} - N \frac{\partial C(Z, N)}{\partial N} \quad \dots (34)$$

Putting equation 34 in equation 33 we get,

$$K(Z) + C(Z, N) = H(G)F(G, N) - NH(G) \frac{\partial F}{\partial N} - NF(G, N) \frac{\partial H}{\partial G} \frac{\partial G}{\partial N} + N \frac{\partial K(Z)}{\partial Z} \frac{\partial Z}{\partial N} + N \frac{\partial C(Z, N)}{\partial N} \quad \dots (35)$$

Note that:

$NH(G) \frac{\partial F}{\partial N}$ is the wage bill under competitive conditions; private producers do not take account of externalities

$H(G)F(G, N) - NH(G) \frac{\partial F}{\partial N}$ is production minus wage bill = returns to capital and other factors of production not taken into account in the specification of production function + residual rents (including land rents or unearned increments in land values)

$NF(G, N) \frac{\partial H}{\partial G} \frac{\partial G}{\partial N}$ may be considered as the total benefit derived from public good/service provision including externalities (related to G and N)

$N \frac{\partial K(Z)}{\partial Z} \frac{\partial Z}{\partial N}$ is the total increase in capital cost of public goods provision necessitated when the number of public service consumers and capacity of public facility increases at the margin.

$C_N = \frac{\partial C(Z, N)}{\partial N}$ is the optimal Pigovian congestion toll equal to damage due to congestion externalities to be imposed on a user for the consumption of congestible local public good, say, highway or sewer line.

$N \frac{\partial C(Z, N)}{\partial N}$ is the Aggregate Pigovian Congestion Toll

Thus (35) suggests that

Total Cost of Optimally provided Congestible Local Public Goods in the presence of Migration (Capital + Operation)

= Tax on Rents including Land Rents and Other forms of Rent suggested by Stiglitz + Benefit Taxes and Charges that arise and can be tapped in the process of public goods provision and urbanization + Pigovian Congestion Toll

A careful look at Equation (35) suggests that the Henry George Theorem, the Mohring-Harwitz Theorem and the Adam Smith-Wicksell-Lindahl-Buchanan-Stiglitz benefit principle can be derived as special cases of the general benefit principle presented in the model in this section. Thus, users pay, beneficiaries (especially those deriving windfalls due to public goods provision and government policies) pay, “congesters pay, polluters pay, exacerbaters pay and growth pays” must be the cornerstones of urban public finance reforms in developing countries like India. Land/property tax can be called a benefit tax as property owners benefit from increases in property value and public services financed. Sales tax/GST can be regarded as a benefit tax for doing business or shopping in the city. Income tax can be called as a benefit tax for living or working in a city. $B(G, N)$ and $R(G, N)$ could include taxes on property, sales, income, etc.

5.4. Tool Box for Urban Local Finance

Bahl and Linn (1992) suggested that “*even well-administered property tax and user charge systems will generate enough revenue to meet the financing needs of metropolitan local governments*” and thus broad-based taxes including property tax reforms will be necessary in the revenue-assignment bundle to enhance revenue self-sufficiency. The benefit principle acts as a light house in this direction. It tells us “*how services should be priced, who should pay for them, and how much of the service should be provided*” (Martinez Vazquez 2013). If it can be fully exploited, it would not only generate adequate revenue but would also re-shape the financial architecture of urban local governments. Some of the possible revenue sources are discussed below:

- User Charges and Fees

User charges and fees are the strongest contenders of benefit taxes. Several local public goods can be aptly financed through user charges and fees. These include water and sewerage, parking, parks, amenities centres and garbage collection. User fees can also be charged for registration of births and deaths and approval of building plans. Apart from economic efficiency according to the benefit principle, user charges and fees are also advantageous for local governments on the political economy perspective. By adopting user charges local government do not compete with the higher tiers of government for any tax base. Thus, making the grant of autonomy easier. However, such levies are considered to be regressive and against the interest of the poor. On the other hand, adopting lower rates for user fees results in resource wastage, subsidises the richer sections while increasing the financial burden of ULBs as they struggle to meet the cost-of-service provision. The higher tiers of government may subsidise the poor through direct benefit transfers (DBTs) or other better targeted policies without burdening the local governments.

- **Property Tax**

There is a consensus among the scholars of local public finance in establishing property tax as a benefit tax, entirely appropriate as a local tax. Chapter 3 of this thesis also throws light in this direction. The investments by local governments in infrastructure and services feed into the land and property values resulting in unearned property premiums. It is appropriate to capture such increments or induced benefits in the tax base along with charging the property owners from benefits of direct usage of such provisions. Land tax must be a prominent component of property tax. Property transfer tax for sharing with local bodies is also appropriate.

- **Betterment Levies**

Betterment levies are imposed on land that has gained value because of public investments in infrastructure. They are considered to be the most direct form of value capture (Peterson 2009) and can be earmarked for further infrastructure development apart from meeting the cost of existing infrastructure.

- **Local Motor Vehicles Tax**

These are appropriate local taxes because of a strong connection between vehicle ownership and usage of local infrastructure and services especially roads and parking lots. This can also be considered as a congestion charge to reduce the dis-economies of traffic congestion and pollution in urban areas. These are also elastic, stable and non-exportable

and thus qualify on several fronts as a good local tax. However, sadly enough ULBs in India are deprived of such a buoyant source of revenue. Till a local motor vehicles tax is designed and implemented, ULBs must be provided a share in the motor vehicles tax being collected by the states.

- Local Business Tax

Local Business Tax and business licensing fees are appropriate levies at the level of local governments. It acts indirectly as a tax on income of businesses and directly as a tax on benefits derived from infrastructure and services provided by local governments. Such a levy may be distinguished from corporate income tax which is a tax on the incomes and profits. It is an origin-based tax which serves as a proxy for the benefits received by businesses from local public goods and services at the place of production.

- Piggybacking Income Tax

Income tax qualifies to be a central tax because of its income re-distributive nature, mobility of tax payers and implications on macro-economic targets. However, there is a possibility of piggybacking on the central income tax base (rather than the tax liability) at the local government level. Rather than depending on the transfers from central government, local governments may be given the discretion to set the rates between the minimum and maximum rates legislated by the centre. It not only satisfies the benefit principle but also promotes accountability at the local level because of its visibility. It is also an elastic and buoyant source of revenue. The rates may be kept low but would still yield high revenues. They are also easier to administer.

- Piggybacking Sales Tax

Piggybacking sales tax is possible at the local government level. The ‘general benefits principle’ holds it appropriate to tax the “bads”. For example, piggybacking sales tax collected on alcohol and tobacco could be appropriated to match the extent to which local governments finance health care. Piggybacking sales tax on vehicles and fuel could be used to meet financing responsibilities of ULBs with respect to construction of roads, bridges and their maintenance.

Financing of urban infrastructure is an important role of the ULBs. This section takes up the case of financing infrastructure in urban areas. ULBs have been vested with the responsibility of financing the following infrastructure in urban areas:

- Roads and bridges;
- Water supply for domestic, industrial and commercial purposes;
- Public health, sanitation, conservancy and solid waste management;
- Fire services;
- Provision of urban amenities and facilities such as parks, gardens and playgrounds;
- Public amenities including street lighting, parking lots, bus stops and public conveniences;
- Promotion of cultural, educational and aesthetic aspects;

Table 5.1 given below suggests the financing tools for these functions based on the benefit principle.

Table 5.1

Revenue Tool for Infrastructure Financing

Revenue Tool	Description	Paid By	Infrastructure to be Financed
Sales Tax	Proceeds from sales tax should be shared with ULBs as sales tax may be considered a benefit tax on shopping in city.	Residents, commuters, businesses, visitors/tourists	* Provision of urban amenities and facilities such as parks, gardens and playgrounds * Public amenities including street lighting, parking lots, bus stops and public conveniences * Public health, sanitation, conservancy and solid waste management;
Fuel Tax	A part of VAT on petroleum should be devolved to ULBs because cities contribute to higher sale of petrol and diesel.	Drivers	* Roads and bridges
Development Impact Fees	It is a tax or charge on new developments in the designated benefit area. Such	Developers, land owners	* Roads and bridges;

	developments not only benefit from the provision of infrastructure and services but also create disbenefits like congestion and pollution.	and new home buyers	* Water supply for domestic, industrial and commercial purposes;
Parking Fees	A distinction may be made between parking space for commercial vehicles and private vehicles.	Drivers	* Public amenities including street lighting, parking lots, bus stops and public conveniences;
Land Value Capture	Tax to capture those who benefit from increments in land value due to infrastructure development.	Developers, land owners, residents, businesses	* Roads and bridges; * Water supply for domestic, industrial and commercial purposes; * Public health, sanitation, conservancy and solid waste management;
Increase in Property Tax	Property tax should be levied according to the market value of the property i.e. capital value. Infrastructure and service developments result in increased value of properties especially at vantage locations and benefit the property owners.	Residential property tax on property owners and tenants. Commercial property tax on businesses including shopping malls.	* Water supply for domestic, industrial and commercial purposes; * Public health, sanitation, conservancy and solid waste management; * Fire services; * Public amenities including street lighting
Motor Vehicles Tax	A part of motor vehicles tax should be shared with the ULBs. Vehicle owners benefit from better roads in cities and must contribute towards investment in roads.	Vehicle owners (private and commercial)	* Roads and bridges;

Surcharge on Stamp Duty	A part of the proceeds from stamp duty must be shared with ULBs because most of the purchase and sale of properties occur in cities. This is a way of capturing the unearned increments in land values.	Property dealers.	* Water supply for domestic, industrial and commercial purposes; * Public health, sanitation, conservancy and solid waste management;
Piggybacking Income Tax	Majority of the income tax proceeds come from cities. Income tax may be considered a levy on the benefits of working and living in the city.	Residents and businesses	* Roads and bridges; * Water supply for domestic, industrial and commercial purposes; * Public health, sanitation, conservancy and solid waste management; * Promotion of cultural, educational and aesthetic aspects;
Advertisement Tax	Businesses benefit from larger markets provided by city. They attempt to strengthen their market presence through advertising. Thus, advertisement tax is a benefit levy on them.	Businesses	* Provision of urban amenities and facilities such as parks, gardens and playgrounds * Public amenities including street lighting, parking lots, bus stops and public conveniences
Entertainment Tax	Entertainment tax was subsumed under GST. However, a local entertainment tax may be levied by ULBs as a benefit tax for city living and recreation.	Users of public amenities.	* Promotion of cultural, educational and aesthetic aspects; * Provision of urban amenities and facilities such as parks, gardens and playgrounds
Profession Tax	Profession tax should be strictly designated to ULBs. It	Residents	* Water supply for domestic, industrial and commercial purposes;

	can be considered a benefit levy for working in cities.		
User Charges	Wherever users and benefits can be identified it is appropriate to charge user charges according to the first best principle of golden rules of public finance.	Users of services	* Water supply for domestic, industrial and commercial purposes; * Provision of urban amenities and facilities such as parks, gardens and playgrounds * Promotion of cultural, educational and aesthetic aspects;
Generic Benefit Charges	When it is difficult to measure the benefits and beneficiaries are not readily identifiable, a generic benefit charge in the form of “composite city services tax” may be imposed.	Local residents, visitors.	* Public health, sanitation, conservancy and solid waste management; * Fire services; * Provision of urban amenities and facilities such as parks, gardens and playgrounds; * Public amenities including street lighting, parking lots, bus stops and public conveniences; * Promotion of cultural, educational and aesthetic aspects;
Inter-governmental Transfers	When benefits spread across jurisdictions it is appropriate to resort to transfers from higher tiers of government.		*Roads and bridges; * Promotion of cultural, educational and aesthetic aspects;
Borrowing	When benefits are spread across generations or gestation period is high and investment requirements are lumpy,	Public and businesses	*Roads and bridges

	borrowing is the preferred financing technique.		
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Source: Own Compilation

5.5. Conclusion

Effective decentralisation can only be realised with a strong local government which can be achieved with sound finances and revenue autonomy. Local spending decisions should be guided by marginal cost of fundings. Apart from revenue sufficiency, autonomy brings with it political accountability and efficient fiscal responsibility. Bird et al. (2003) assert that in order to improve accountability and responsiveness of public authorities, it is important to promote a correspondence between the basket of public goods provided and preference of beneficiaries who are also the tax payers. This can be ensured by coincidence of “those who decide, those who benefit, and those who pay”. This calls for establishing the “Wicksellian Connection” which draws upon the “general benefit principle”. However, despite being theoretical elegant and sound, the benefit principle has been subjected to several difficulties on the implementation front. Sadly enough, the implications of the benefit perspective have not been heeded to while designing local revenue policy. The clearest implication being that services should be charged whenever possible. These proceeds should be earmarked for the services for which they are charged and spent only on those services. However, externality related transfers may be barred from such a setup.

The benefit principle guides us to a bundle of economically attractive and successful source of municipal revenues. Exploring such sources are not complex and simply revolve around the power to fix tax rates and availability of requisite tax handles. However, these resources have not been explored and municipalities continue to struggle for meeting the growing expenditure requirements. The user charges and fees are the most advocated revenue sources for local governments backed by the benefit principle. However, it is not feasible to charge user fees for every kind of local good, especially when beneficiaries are not readily identifiable and benefits are not easily measurable. Good local taxes include property charges and betterment levies which are heavily drawn upon the benefit principle. Newer sources like the local motor vehicles tax, local business tax, piggybacking income tax and piggybacking sales tax or a local sales tax may be explored. The benefit principle also suggests sharing of GST with ULBs since the city dwellers including firms and households benefit from property-owning, living, working, shopping and recreation in cities. The next chapter summarises the

lessons from the benefit principle and Wicksellian connection to design a sound municipal finance regime in India.

CHAPTER 6

LESSONS FOR URBAN FINANCE REFORMS: DIRECTION AND CONCLUSION

6.1. India's Municipal Finance Crisis

Historically, cities have not only initiated the process of development but have also helped to sustain the growth trajectory in countries across the globe. Several theories have vouched for cities as the “drivers of economic growth” and development, prosperity and inclusion. They are known to catalyse innovation, investment and consumption. The Ministry of Housing and Urban Affairs, Government of India, has also recognized this growth catalyzing potential of cities. A 2008 report of UN Habitat suggests that in high income countries urban areas account for about 85 percent of GDP, 73 percent in middle income countries and in low income countries around 55 percent of GDP. The Smart City Mission of India estimates the contribution of cities to GDP to rise to a massive 75 percent by 2030. Thus, the role of cities is indispensable in the spatial, structural and socio-economic transformation process of India. However, the growth generating and sustaining potential of cities needs to be backed by adequate and effective public policies with respect to planning, financing, regulating and governance.

Cities not only generate benefits within their official boundaries, but also create significant positive externalities and spillovers beyond their borders. They play a major role in rural development. Cities provide job opportunities for migrants from rural areas and help them escape lower wage traps by benefiting from urban agglomeration externalities. Cities are markets for agricultural inputs as well as outputs. Cities transfer ideas, innovations, technology and knowledge to rural areas. Rural areas, especially those located near large cities get better access to jobs, education, markets, health care etc. With proper policies city externalities can fund the process of rural transformation as well as poverty alleviation.

Cities are also generators of income and wealth. Some cities leave behind large countries with respect to their economic yield. For instance, if five of the largest regions of the USA namely, Los Angeles, New York, Boston, Chicago, and Philadelphia are taken together as a nation, they would feature as the fourth biggest economy of the world. Similarly, New York city would rank seventeenth with a gross cosmopolitan product of \$950 billion in 2005 (World

Bank, 2009). Globally, the largest 300 metropolitan regions accommodate about 24 percent of the world population and generate about 50 percent of the world's GDP (Brookings Institution, 2018).

While urban areas have established themselves strongly as generators of growth both empirically and theoretically, their potential as generators of revenue have not been explored and exploited. As reflected by data and trends, municipalities in India are suffering from severe financial crisis. The lack of city finances poses a major threat to adequate provision of quality services and infrastructure, which in turn acts as a big deterrent in the process of economic growth. Ironically, such a scenario exists despite cities having huge revenue potential.

Urban Local Bodies (ULBs) in India rank as one of the weakest globally. They have poor access to resources, negligible fiscal autonomy and poor revenue-raising capacity. The functions assigned to them have not been matched by requisite finances. The revenue raised by ULBs is not even close to the investment required for keeping up the growth trajectory by addressing infrastructure and revenue needs. The tax bases of municipalities are narrow, revenue sources are non-buoyant and inflexible. The 'own' revenue generated are meagre rendering municipalities at the mercy of the higher tiers of government. The transfers from state and central governments are mostly on an ad-hoc basis without any sound theoretical and practical ground. With the advent of GST, the state of municipal finances further worsened. The GST regime subsumed some of the important municipal taxes with the significant ones being octroi, advertisement tax and entry tax. No proper compensation has been provided in lieu of these taxes. Property Tax remains the sole own revenue source for municipalities in India. However, even it is plagued by several shortcomings. Sadly, the ULBs have failed to exploit the several opportunities, including land-based revenue sources already available to them. Though cities have significant revenue potential they have not been placed on strong grounds when it comes to tapping their potential. With such fiscal stress, Indian cities are not able to meet the demands of the firms and households and are losing out on their competitive strengths in comparison to other cities across the globe.

Cities are fertile grounds for raising most of the major taxes of the government including income tax, GST, motor vehicle tax, tax on land and property and property transfers. Almost all buoyant tax come from cities and cities constitute the tax base for government. Cities experience a rise in property values due to city externalities. This can feed into the tax base of government. Further, majority of the property transfers take place in cities and thus, cities also account for stamp duties. Majority of the motor vehicles are registered in cities, thus, cities

generate the highest portion of motor vehicles tax. Tax collection can be done more effectively and efficiently in urban areas as compared to rural areas. As per McKinsey (2010), in 2008, Indian cities generated above 80 percent of the nation's tax revenue. The contribution is projected to further rise to 85 percent by 2030. Jane Jacobs (1984), the great urbanist, advocated the importance of cities by terming them as "the greatest yielders of revenues in a country."

Over the years, municipalities have been losing out on several taxes previously assigned to them. They have lost access to entertainment tax, profession tax, motor vehicles tax etc. Municipalities are the deserving candidates for raising these revenues. The value of properties increases due to infrastructure, services and public investments made by ULBs, so it is appropriate to entitle them to raise stamp duties during the registration of such properties. Or at least a part of the stamp duties should be shared with the ULBs. These facts call for redesigning the revenue assignments of ULBs.

The Indian scenario regarding decentralisation of revenue and expenditure to local bodies is quite dismal in comparison to other developing and developed nations. The figures pertaining to municipal revenue as a percentage of GDP and combined state and centre finances are not very promising. The share of municipal revenue in GDP fell from 1.08 percent in 2007-08 to 1 percent in 2012-13 and 2017-18 (Mohanty, 2016; ICRIER, 2019). Municipal revenues as a percentage of combined state and central revenue marked a decline from 3.92 percent in 2007-08 to 3.62 percent in 2012-13 (Mohanty, 2016). Further, Municipal taxes as a share of combined state and central taxes also witnessed a fall from 2.11 percent in 2007-08 to 1.79 percent in 2012-13 (Mohanty, 2016). Similar trends have also been observed regarding the municipal expenditures. Municipal expenditure was a meagre 1.09 percent of GDP in 2007-08 and saw a further decline to 0.78 percent in 2017-18 (Mohanty, 2016; ICRIER, 2019). In a sharp contrast to the Indian scenario, in 2010, local government expenditure as a percent of GDP was as high as 37.1 in Denmark, 22.6 in Finland, 8.2 in Austria, 7.9 in Germany and 7 in Belgium (Mohanty, 2016). Municipal expenditure as a share of combined state and centre expenditure declined from 2.11 percent in 2007-08 to 1.79 percent in 2012-13 (Mohanty, 2016). To sum up, ULBs account for as low as 2 to 3 percent of combined central and state revenue and expenditure. The figure is a significant 20 to 35 percent in developed countries. The declining significance of ULBs in India's public finance scenario needs to be analysed and studied deeply. This is disturbing since India is urbanising rapidly and urban areas have been largely contributing to economic growth of India. India is losing out on adopting the "city route to economic growth."

Theory and policy seem to be far apart when it comes to designing municipal finances regime in India. No systematic attempt has been made in research to guide policy makers in this direction. This is a paradox, since cities create multiple benefits to multiple agents, including unearned rents and premiums due to their externalities. Spatial planning undertaken by ULBs including the development of core infrastructure and services backed by public policy creates multi-pronged benefits which can be effectively charged for. This thesis is an attempt to address the issue of reforming municipal finances by drawing lessons from the “generalized benefit principle”. It is guided by the fact that strong urban finance regime is indispensable for cities to continue acting as “engines of economic growth”, generators of income and wealth, drivers of employment, grounds for raising revenue and stimulator of socio-economic transformation.

6.2. Benefit Principle: Lessons from Theory and Practice

The ‘benefit principle’ of taxation – focusing on taxation of rents of various types, dating back to Adam Smith (1776), George (1879), Wicksell (1896) and Lindahl (1919) and subsequently extended or elaborated – in some form or other – by eminent scholars like Musgrave (1959), Buchanan (1963) and Stiglitz (2012, 2015) emphasises that beneficiaries of public infrastructure and services must pay a fair share of their costs. The benefit principle can be most appropriately adopted by cities of developing countries as they generate enormous benefits during the “structural and spatial transformation” of the economy. In fact, urban economics suggests that agglomeration and network externalities in cities manifest in land and property values, leading to windfall gains for land and property owners at vantage locations in the form of “unearned rents”. New Economic Geography (NEG) suggests that the operation of cumulative and circular causation forces in the spatial economy linked to scale economies, externalities and infrastructure, leads to ‘agglomeration rents’ to both immobile and mobile factors of production, on which taxes may be levied without the tax base disappearing. Local public finance literature widely discusses the benefits of local public goods and services. These benefits feed in to the property values. When such capitalisation is strong, benefits are much higher than the cost imposed through taxation. Large cities in India bear testimony to this theory. Additionally, the Piketty-Stiglitz debate on capital in the twenty-first century highlights the role of unearned rents to capital, urban land rents and monopoly rents in accentuating the inequality in wealth and raising wealth-income ratios in countries. Thus, a lot of potential for revenue generation in cities lies in the paradigms of: “beneficiaries pay” including “users pay”. With the same logic as that of the benefit principle, it may be said that those who create “dis-

benefits” in the economy ought to pay for meeting the “mitigation costs”. Thus, ‘polluters pay’, ‘congesters pay’, ‘exacerbators pay’ and ‘growth pays’ paradigms can be considered as natural corollaries to the benefit principle. All these principles can be tagged under the banner of the “generalised benefit principle” (Mohanty 2016).

Devoid of strong theoretical backing, municipal finances are placed on a fragile ground, worsened by ad hoc treatments by state governments. There is perhaps no better way to design a system of municipal finance in a “revenue-starved developing country” like India than considering ‘benefit taxation’ as the foundational principle to build the structure of local governance and finance, taking into account direct, indirect and induced benefits accruing to various actors in the urban economy. This principle also addresses the resistance of taxpayers to pay taxes, increasingly becoming common due to political reasons.

This thesis has established property tax as a benefit tax. Vacant Land Tax (VLT) can be considered as an extension of property tax. Profession tax, advertisement tax and entertainment tax also satisfied several criteria of a “good local tax”. Sadly enough, the GST regime further worsened the financial status of municipalities, but adequate compensation in this regard has not been provided. Motor-vehicles tax is a benefit tax and stamp duties is also a land-related tax and should ideally be charged by city governments.

A fundamental principle in revenue assignment is that there should be broad clarity regarding how each assigned function is to be adequately and predictably financed. Local public finance research suggests the following golden rules for recognizing the revenue source ideal for financing a specific kind of local expenditure (Bahl and Linn 1992). The benefit principle is the base for such a division as follows:

- In a jurisdiction, whenever it is possible to measure the benefits accruing to individuals from the usage of public services and such individuals can be readily identified, user charges prove to be the ideal instruments for financing such services;
- Services to the public in general, where it is difficult to identify the beneficiaries and measure the benefits, can ideally be financed through a benefit tax on the locals. Such services would include, traffic management, administration, security and street lighting;
- Benefits from certain services like welfare, education and health, are not confined to a particular jurisdiction and tend to have significant spillovers to nearby jurisdictions.

Such services need to be financed through transfers from the higher tiers of government; and

- Borrowing may be resorted to finance capital projects like infrastructure, benefits of which accrue to generations, outlays of which are lumpy and gestation period is high.

User charges promote efficiency by providing information on demand to public service providers and also ensure that what the public sector supplies is valued (at the margin) by citizens. The objective of efficiency requires that user charges must be imposed on those who directly benefit from the public services. User charges have sometimes been criticized for being regressive and hurting the poor. Thus, it is advisable to subsidise the poor directly, as and when required. This would prevent the distortion of entire service market due to reduced prices for accommodating the poor. Benefit taxes may be levied on local residents when imposition of user charges is not possible due to difficulty in measuring benefits and identifying beneficiaries. ULBs may seek inter-governmental transfers when such charges and taxes are not sufficient. However, it is important to subject ULBs to a hard budget constraint, since, “accountability must go hand-in-hand with autonomy.”

Benefit taxes occupy a pivotal place in local public finance. For several local services, it is impossible to measure the benefits or recognize the beneficiaries. For such services, user charges are impractical. However, if a clear link can be established between services received and taxes paid then, earmarked benefit taxes could act like “indirect user charges” or “surrogate prices”. Buchanan (1963) regarded earmarking as a “first-best” solution to address the issue of providing public services in accordance to peoples’ preferences. He suggests that market prices are introduced in the budgetary process through earmarking. It facilitates taxpayers to make rational choices. However, the success of earmarking is subject to the following conditions:

- Expenditure specificity: Expenditures met through earmarked revenues should be well-defined and specific so that taxpayers can readily identify the benefits accruing to them;
- Tight earmarking: Earmarked revenues and expenditures should have a link as clear and tight as possible at the margin.
- Strong benefit linkage: Revenue generated should either be through direct user charges pertaining to direct usage or indirect user charges like benefit taxes.

‘Users pay’ and ‘beneficiaries pay’ are the ‘first best’ instruments to finance local public services when benefits can be measured and beneficiaries can be identified. When it is difficult to

measure benefits from services or identify beneficiaries, benefit taxes are appropriate. Earmarked benefit taxes act as surrogate prices of public services. The theory of local public finance makes the following suggestions regarding the imposition of benefit taxes and user charges:

- (i) The first-best principle is to resort to user charges for recovering the costs of provision of public services;
- (ii) User charges need to be levied on the direct recipients of service benefits in order to achieve efficiency;
- (iii) Rather than distorting the entire market through reduced prices for services, it is advisable to subsidise the poor directly, if needed;
- (iv) When imposing a user charge is not viable, specific benefit taxes may be resorted to. Such levies ought to be imposed on local residents;
- (v) If revenue mobilised through user charges and benefit taxes are not sufficient, then, generic taxes and inter-governmental transfers may be resorted to.

A vacant land tax (VLT) may be adopted in place of “the general tax component” of property tax. Properties with less than 50 percent of land area for building may be charged a VLT. VLT rate should be higher than that of property tax to discourage speculation and promote planned development including affordable housing. The revenue proceeds from VLT may be escrowed for infrastructure development which would further escalate land values. In Latin America, vacant land tax is levied at a rate up to 3 per cent of land’s capital value. The Constitution of Brazil, under Article 182, empowers Municipalities to demand owners of un-built, under-used or unused urban land to provide for adequate use thereof as per master plan, subject to the imposition of vacant land tax at rates that are progressive in time. We suggest that Municipalities in India should be authorised to levy a progressive VLT. To start with, an annual rate of 0.5 per cent of the ready reckoner value of land, as adopted by Andhra Pradesh and Telangana, may be considered. If the tax is not paid by a property, the same may be recovered without limitation when a transaction in the property takes place.

Internationally, cities levy a ‘frontage tax’ on properties located on major roads to tap ‘access-related benefits’ accruing to property-owners. The revenues accruing to ULBs from shared motor vehicles tax, frontage tax, fuel tax, etc. may be earmarked for construction and maintenance of highways.

In the United States, gasoline and diesel fuel taxes are earmarked to finance highways under the National Highway Act 1956 and Highway Revenue Act 1956 through the Highway Trust Fund (HTF). A Mass Transit Account (MTA) under this fund was created by the Highway Revenue Act of 1982. About 85 per cent of the HTF revenues go to the Highway Account and the remaining, to the Transit Account. California started dedicating gasoline tax for transportation since 1923. Fuel excise tax on gasoline and diesel, Truck Weight Fee – a fee on commercial vehicles based on weight, representing compensation for wear and tear in the roadways, and Fuel Tax Swap (additional excise tax on gasoline in lieu of sales tax) accounted for bulk of the state spending on public transportation in California in 2011. About two-thirds of the state fuel excise tax goes to state highways under a statutory formula. The remainder goes to counties and cities for roads and streets. These local authorities can also levy a local option sales tax at a rate up to 1.5 per cent under California's Transportation Development Act of 1971. Further, they receive share from state excise tax on gasoline and diesel fuel, and state as well as federal transportation grants.

In France, since 1971 all establishments located in an urban transport area and employing more than 9 persons are required to pay a percentage of their wage bill as *versement transport* or transport tax for funding public transport. In 2000, this tax accounted for about 40 per cent of the total transportation expenditure in France. Initially applicable to urban transport areas with more than 300,000 people, the tax was extended to communities with more than 10,000 people by 2000. Tax rate varies from 1.4 per cent to 2.6 per cent in the Ile de France (Paris metropolitan region). It is limited to 0.9 per cent for urban transport areas with fewer than 100,000 inhabitants. The transport tax has been a stable funding source for developing and extending 10 light rail transit systems since 1985.

Mitigation of congestion and pollution in cities calls for 'polluters pay' and 'congesters pay' charges. 'Polluters pay' principle states that whoever causes damages to the environment should bear the cost of restoration or mitigation. 'Congesters pay' or 'exacerbaters pay' principle suggests that those responsible for creating congestion must contribute towards decongestion. There are many ways these principles can be adopted by cities. For example, developments not adhering to "open space norms" need to pay an "open space contribution" as in Hyderabad. Similarly, multi-storeyed residential buildings and commercial complexes not adhering to parking norms may pay for public parking lots. Establishments discharging sewage into storm water drains without hooking on to sewerage system may be subjected to penal charges that exceed sewerage charges.

‘Congesters pay’ principle has been effectively adopted by cities like Singapore, London and Stockholm. In Singapore, the ever-increasing number of private vehicles were contained by dis-incentivizing via a vehicle quota system. Under this system an open bidding is undertaken for certificates to own a private vehicle. This is coupled with a high cost of registration (about 1.5 times the market value of the vehicle). Further, there exists an annual road tax with progressive rates for higher engine capacity. A surcharge is also imposed on older vehicles. Singapore resorts to a congestion pricing system with high vehicle concentration areas having higher parking fees. It introduced cordon pricing by time of day and vehicle class via manual paper permit system in 1975. The manual system was replaced in 1998 by a “fully automated electronic road pricing” system. The proceeds of such tolls are earmarked for improving public transport. In 2003, a vehicle entering a specified congestion charge zone within 7 am to 6:30 pm was charged £5 per day in London. This fee was gradually increased to £8 in 2005 and £9 to £12 in 2011- subject to the payment timing. Similar to Singapore, the proceeds from congestion charge are dedicated to improving public transit systems. Automated number plate recognition (ANPR) system is used to track payment compliance and identify violators. Since 2006, Stockholm has been levying a congestion tax. It started with a time specific cordon pricing at the rate of SEK10 to SEK20 (about US\$1.50 to US\$3.0) for crossing each cordon line in and out of the city centre.

Cities generate value. The value-generation process is rooted in the economies of cities. Agglomeration economies are facilitated, strengthened and augmented by planned urban development, integration of land-use and transportation planning, infrastructure development, decongestion and urban service delivery. These externalities create multi-dimensional benefits to multiple economic actors. If a part of such unearned gains is tapped and escrowed to leverage investments for planned urban development, then “growth will pay for itself”. Market borrowings through municipal bonds and other instruments can lead to a self-sustaining process of urban and regional development. This can be made possible by augmenting agglomeration economies, mitigating diseconomies of pollution and congestion, facilitating tax increments, expanding land and other tax bases, repaying debts and borrowing further.

Cities witness clustering of economic activities which in turn fuel agglomeration externalities. When accompanied by spatial planning and adequate infrastructure development, they develop strong links with urban public finance. Urban Economics literature suggests that these externalities transform into “agglomeration rents” accruing to both mobile and immobile factors. In other words, these rents accrue to the benefiter of city services. Thus, it is an ideal

source of revenue for ULBs based on the benefits principle. Considering the mobile factors, they get better access to the markets, wider and better employment opportunities, access to raw materials etc., the closer they are to the cities. Thus, it is ideal to tax them. Agglomeration externalities also benefit the non-mobile factors like land. These externalities capitalise into land values and can feed into the tax bases of local governments. Thus, cities can enhance revenue collection of ULBs by drawing upon the “users pay”, “beneficiaries pay”, “polluters pay”, “congesters pay”, “exacerbators pay” and “growth pays” principles. The city development process offers opportunities for value increment financing, linked to the creation, capture and recycling of land and property values. In particular, planned development and renewal programmes in agglomerations of large cities can pay for themselves and even generate surplus. A strategy to raise local revenues on the above principles can lead to a self-sustained process of financing urban development through the forces of agglomeration externalities, interacting with knowledge externalities.

6.3. Wicksellian Connection: Implications for Urban Finance Reforms

The Wicksellian Connection suggests that to the extent possible, a clear linkage must be established between the expenditure and revenue decisions. The benefit principle establishes a close linkage between functions and finances and thus, is indispensable for establishing the Wicksellian Connection. The Wicksellian Connection provides various robust suggestions for designing local finances. Bird and Slack (2014) gathered several recommendations for improving local public finances based on the Wicksellian Connection as discussed below:

- (i) Whenever it is possible, local services should be charged. Such charges ought to be levied by the local governments (Bird, 1993);
- (ii) Whenever levying user charges are difficult, property tax may be levied in the form of a surrogate for user charges (Hamilton, 1976);
- (iii) Non-residents should not be over-burdened with property taxes. Property tax rates may be kept lower for non-residents to reduce the burden (Bird, Slack, and Tassonyi, 2012);
- (iv) Non-residents should be made to pay for consumption of local services through local payroll taxes or sales taxes (McLure, 1998);
- (v) To the extent possible, it is desirable to avoid tax-exporting (Bird, 1993);

- (vi) Sometimes benefits spill-over jurisdictions and in such a case, inter-governmental transfers may be resorted to, in order to internalise the benefits (Break, 1980; Oates, 1999).

According to the local public finance literature, it is important for local governments to raise sufficient finances by themselves in order to secure a strong governance position. Several theories advocate a stronger role for local government which in turn depends on a strong finance position. Local governments should not only be assigned adequate powers to raise taxes locally but should also be allowed to determine the tax rates and channelise the tax receipts. Excessive dependence on the grants and aids from the higher tiers will reduce their status to a mere ‘agency’ of central and state governments. Bahl and Bird (2008) suggest that to the extent possible, local governments should impose taxes on the local residents in accordance to the benefits received from the services rendered to them. Public finance literature (Bahl and Linn 1991, Bailey 1999, Bird 2006, Mohanty 2014, 2016) suggests a good local tax should ideally be buoyant, immobile, efficient, stable, easily administrable, equitable and adequate. Box 6.1 given below summarises these characteristics.

Box 6.1	
<i>Characteristics of a Good Local Tax</i>	
Local public finance refers to the following characteristics of a good local tax:	
Efficiency:	Local taxes should promote allocative efficiency. This requires the local voters to pay local taxes so that the use of service reflects their willingness to pay.
Equity:	The notions of vertical and horizontal equity should apply as far as possible.
Transparency:	Voters should know exactly how much they are paying in taxes and receiving in services. The accountability of service providers to taxpayers depends on this.
Economy:	Local taxes should be collected with the least amount of expenses.
Local autonomy:	Local governments should be free to determine the rates at which local taxes are set.

Adequacy:	Local tax yield should be, as far as possible, adequate to finance the functions assigned, with an elastic tax base, expanding as fast as expenditure.
Revenue stability:	There should not be undue fluctuations in the flow of local revenues.
Immobility of tax base:	Local taxes may be linked to immobile tax bases such as land and building. This does not rule out imposing other levies or fees.
<i>Source: Mohanty (2014)</i>	

Research usually clubs provincial and local governments together under as ‘sub-national’. Bahl and Bird (2008) suggest four basic principles for assigning revenues to sub-national governments:

- (i) Own-revenue sources should generate adequate revenue to finance the services which mostly benefit the local residents. This should at least be true for the richest local bodies;
- (ii) As far as possible, the sub-national taxes should be levied on the local residents. To the extent possible, such taxes should be in accordance to the benefits received by the locals from the services provided;
- (iii) All tiers of government should shoulder public responsibility and clear accountability at the margin for incurring the expenditures for which they are constitutionally responsible; and
- (iv) Sub-national taxes should not unduly distort the allocation of resources.

Oates (1972) suggests the following guidelines for designing a good local taxation system:

- (i) Local taxes should not interfere with the existing economic behaviour and should be neutral to the extent possible;
- (ii) The local residents who are entitled to the service provisions, should be clear regarding the costs and benefits of local taxes;
- (iii) The incidence of local taxes should not unduly burden a certain section and should satisfy the basic equity conditions; and

- (iv) The costs of administering taxes should be kept minimum. Complex taxes should not be assigned to local bodies.

In the context of India's fiscal federalism, the High Powered Expert Committee (HPEC) has suggested a 'municipal finance list' for incorporation into the Constitution of India as follows:

Exclusive taxes: Property tax, including vacant land tax, profession tax, entertainment tax, advertisement tax.

Revenue-shared All taxes on goods and services levied by the State Government.

Taxes:

Non-tax revenues: User charges, trade licensing fee, Floor Space Index (FSI) charge/betterment charge/impact fee/development charge.

6.4. An Agenda for Municipal Reforms in India

While the constitution of India, clearly lays down the functions of the Urban Local Bodies (ULBs), little or almost nothing has been said about their revenue assignments. Mohanty (2014) classifies the 18 functions assigned to the municipalities into 3 categories (Table 6.1). The 'essentially municipal' functions include those activities for which both the benefits and costs can entirely be localised. The 'agency' functions include the activities which are simply discharged or implemented by the local governments. These functions are essentially planned, financed and regulated by higher tiers of government and executed by local governments on grounds of efficient delivery of services. The 'shared or concurrent' functions comprise of those activities which require joint action from state and local governments. These functions are marked by benefit spillovers over different jurisdictions, requirement of resource pooling, economies of scale and national interest.

Table 6.1

Typology of Twelfth Schedule Municipal Functions

Function Group	Functions
'Essentially municipal' functions	Urban planning including town planning; Public health, sanitation, conservancy and solid waste management; Provision of urban amenities and facilities such as parks, gardens and playgrounds; Public amenities including street lighting, parking lots, bus stops

	and public conveniences; Regulation of land use and construction of buildings; Burials and burial grounds, cremations, cremation ghats/grounds, and electric crematoria; Cattle pounds, prevention of cruelty to animals; Vital statistics including registration of births and deaths; Regulation of slaughter houses and tanneries.
‘Agency’ functions	Safeguarding the interests of weaker sections of society, including the handicapped and mentally retarded; Slum improvement and upgradation; Urban poverty alleviation.
‘Shared’ or ‘Concurrent’ functions	Planning for economic and social development; Roads and bridges; Water supply for domestic, industrial and commercial purposes; Fire services; Promotion of cultural, educational and aesthetic aspects; Urban forestry, protection of the environment and promotion of ecological aspects.

Source: Mohanty (2014)

Lessons drawn from the “generalized benefit principle”, public economics and urban economics literature suggest the following mechanism for drawing a balance between the assigned functions and finances of the municipalities in India:

- The ‘essentially municipal’ functions may be met through major ‘own revenue’ sources including user charges, benefit taxes and fees.
- The ‘agency’ functions may be financed through inter-governmental transfers since these functions are essentially planned, financed and regulated by higher tiers. However, local governments should contribute a small part in financing these functions in order to make them ‘accountable’.
- The ‘shared’ functions may be funded by devolving revenues from higher tiers of government, user charges and benefit taxes.

It is important to impose benefit taxes if a clear link can be established between such taxes and the services provided. In case of inter-jurisdictional spillovers and when corrections with respect to vertical and horizontal imbalances are desired, inter-governmental transfers prove to be appropriate. Borrowing may be resorted to in case of infrastructures requiring lumpy investments, long gestation periods and whose benefits are spread over generations.

The ‘growth pays’ paradigm in the ‘generalised benefit principle’ suggests several innovative tools for financing development. Some of these tools are discussed below:

- *Tax Increment Financing (TIF)*

In this financing model, the entire or part of the increment resulting from a value-creating initiative/infrastructure is earmarked for financing the debt needed to finance such an initiative/infrastructure. USA has extensively adopted the tax increment financing approach. Under the TIF mechanism, a public authority or a private sector business proposes the establishment of a TIF district. At this stage, a general estimation of the land and property values in the designated area and the current tax revenues therein is undertaken. The authority assesses whether the proposed TIF district meets the legal criteria for its establishment. It sets up a TIF authority to undertake urban development or renewal. The TIF authority delineates the TIF district and prepares TIF development plan with cost estimates, adhering to planning norms. The plan is prepared in consultation with local and state governments, community groups, private developers and other stakeholders. The TIF authority then issues bonds or raises other forms of debt towards meeting the upfront costs. TIF bonds are often ‘infrastructure revenue bonds’, tied to future tax increments in the TIF district. Rating of these bonds to meet the capital market requirements ensures that the TIF project is subjected to rigorous scrutiny. Over a period of time, TIF results in property development, higher property values and rise in tax bases in the district. The increments over and above the pre-TIF tax revenues are used to service the debt. The total tax revenues of the TIF district revert to the original taxing authority at the end of the TIF term, which may range from 5 to 25 years. The advantages of TIF are: (i) development pays for itself; (ii) value-creating and resource-generating investments are promoted; (iii) lacunae in collecting upfront contributions from developers through development charges or impact fees, which discourage development, is avoided; (iv) a market test for infrastructure funding through debt contributes to rigorous project selection; (v) long-term spatial planning and funding are facilitated; (vi) authorities attempt to avoid time- and cost-overruns in project implementation as debt-payment is linked to revenue generation; (vii) an equitable approach is promoted by spreading cost over generations and making beneficiaries pay; and (viii) current fiscal problems of ULBs do not act as a stumbling block to the financing of new projects.

- *Developer Exactions*

Developer exactions are based on land use regulations aimed at making a land developer or builder contribute towards on- and off-site infrastructure facilities warranted by new development without burdening the local body of planning authority. They are levied for protecting public health, safety and welfare of residents and guarding against the negative impacts of new development such as pollution, congestion, sprawl and environmental degradation. They are aimed at protecting the existing urban community from increased cost of infrastructure through the sharing of costs with residents of new development areas. Exactions allow local authorities to pass on the cost of public facilities to the developer or builder who collects the same from new residents. They are collected when development begins rather than waiting until property taxes, user charges or betterment levies are imposed and collected from residents of new development areas. These are widely used in the USA, China, Thailand etc.

- *Development Impact Fees*

Development impact fees are charges paid by new development towards the cost of construction or expansion of infrastructure facilities which are located outside the boundaries of such development (off-site) and which are required to serve the new development. Impact fees are very common in the United States and are levied under State laws. These are “one-time” charges levied by local governments to make the developer or builder pay a “fair share” of the cost of public facilities and services that are warranted by new development. Impact fees aim at offsetting the impact of additional development and residents on the existing municipal infrastructure facilities and services. They shift a part of the burden of providing public facilities required by new development from municipal general revenues to developers. The principal characteristic of impact fees, which differentiates them from conventional developer exactions, is the financing of the required “off-site” infrastructure facilities to support new development. Their merits are: new developments pay their “fair share” of infrastructure costs; pressure on municipal financial resources of local authorities is reduced as development pays its cost; and the use of impact fees can provide a politically attractive alternative to increase in land and property taxes on existing residents. The demerits of impact fees are: impact fees tend to be regressive as they penalise new development while the older areas gain due to agglomeration economies and reduced congestion; they increase the market price of new

housing; they may reduce the supply of housing; and impact fees have the potential for misuse by government functionaries through discretion unless limited by carefully drafted legislation.

- *Lease/Sale of Development Rights*

Higher value land uses – urban versus rural, industrial, commercial, retail and hospitality use versus residential, high density versus low density use, etc. – lead to unearned gains to a lucky group of landowners from the spatial planning process undertaken by local authorities in public interest. Further, constraints imposed on land uses create monopoly rents. Keeping these considerations in view, cities may resort to sale or lease of development rights in areas benefitting from public infrastructure to raise funds for development or debt servicing. E.g. Brazil has been implementing the scheme of *Outorga Onerosa do Direito de Construir* (OODC) or sale of development rights. This adopts a basic FSI cap on the landowner's building rights beyond which a fee is levied. Between 2002 and 2004, Sao Paulo has reduced FSI in most parts of the city to 1 as a right to landowner. It permits additional FSI up to 5 through a system of incentive zoning and transferable development right (TDR), taking into account access to public transport. In 2012, Sao Paulo generated US\$175 million through OODC payments. These are deposited in a special urban development fund called FUNDURB and earmarked for capital projects, including transportation, parks and green areas, historic preservation, drainage and slum regularisation (Smolka 2013).

- *Special Assessment District*

Special assessment districts are widely used in the United States as a value capture mechanism. Local governments set geographical boundaries or 'districts' within which differential taxes are imposed on land and property whose value is expected to increase due to proximity to new infrastructure and planning. The special assessments are used to repay debt, including that secured through municipal bonds, for development projects in the district. These are widely used in the United States, Canada and Europe.

- *Betterment Taxes and Charges*

Betterment refers to increase in land values due to development of infrastructure, spatial planning and other government policies and actions. Betterment levy instruments have included: i. tax or charge on land value increment in the designated benefit area;

- ii. uniform land tax paid annually without differentiation or discrimination; iii. tax on transaction of land or buildings in the designated benefit area; iv. recoupment from purchase of land adjoining projects and re-sale after development of infrastructure; v. rent from long-term lease of publicly owned or acquired land; vi. sale of land use and development rights along infrastructure alignments, with value-enhancing re-zoning; vii. set-off or reduction in compensation payable for land acquired for public purpose.

Drawing lessons from the above principles the financing strategy for the 18 functions assigned to the municipalities in the Twelfth Schedule, inserted into the Constitution of India vide the 74th Amendment Act 1992, is discussed below:

- ***Planning-related***

1. Urban planning, including town planning

This is an ‘essentially municipal’ function and should be met out of ‘own’ revenue. A Tax Increment Financing strategy would be appropriate for financing it. Further, a portion of property tax may be considered appropriate for financing urban planning. The benefits of urban planning, including town planning, mostly accrue to the local residents and thus it is appropriate to tax them for the increase in property values they reap due to planned development undertaken by local authorities.

2. Planning for economic and social development

This is a ‘shared’ function and thus higher level of governments must bear a part of the financing burden. A portion of stamp duties may be devolved to the municipalities for financing economic and social development. As far as ULBs are concerned, they may resort to TIF or property tax for financing socio-economic development. Since, the benefits mostly accrue to the local residents, taxing them seems sound.

- ***Infrastructure and Services***

3. Roads and bridges

Roads, including state and national highways, and bridges are considered important for economic development. Good infrastructure not only helps to reduce travel time and cost but also improves fuel efficiency and mitigates pollution and congestion. However, these require lump-sum investments, have long gestation periods and their benefits spread over generations; thus, it is sound to resort to borrowing for financing such infrastructure. Further, the benefits of these are not just reaped locally but over different jurisdictions as roads are spread over different jurisdictions and thus, inter-governmental transfers may be resorted to. A portion of motor-vehicles tax may also

be devolved to ULBs to finance roads and bridges; since, it is the vehicles owners who benefit the most out of good roads and bridges. As a corollary to the benefit principle, those who create dis-benefits should pay for mitigating such dis-benefits. Thus, a congestion charge may be imposed to finance these. Congestion charges are widely resorted to in London and Singapore.

4. Water supply for domestic, industrial and commercial purposes

The users of water supply are easily identifiable and the amount of water supplied (i.e. benefit) can also be measured; so, we may resort to the first-best principle of imposing user charges. User charges based on universal metering will help to meet operation and maintenance costs and recover capital costs to some extent. Presently, there is a water-tax component in property tax which may be replaced by graded water charges. Increasing block tariff may be resorted to. There should be low rates up to some level, and beyond this level, higher rates may be imposed for higher slabs progressively. It is feasible to cross-subsidise the poor by imposing higher charges on commercial structures and residents coming under higher slabs. Poor may also be directly subsidised by the public authorities. Additionally, water connection fees may be collected for new connections, source and transmission lines. For instance, Mumbai imposes a water benefit tax. Sewage generated and water use are closely linked, so, sewerage charges may be piggy-backed on water user charges. For new sewerage systems, a sewerage connection fee may be charged like the sewerage benefit tax of Mumbai.

5. Public health, sanitation, conservancy and solid waste management

These services are collective services for which identification of beneficiaries as well as measurement of amount of benefit is not possible. So, as per the golden rule of public finance, it is advisable to finance these through a generic benefit tax on the local residents. The cost of providing these services may be met through a composite city services tax. This tax may be calculated on a 'unit area' basis linked to the location, usage, type of construction and the plinth area of building. It is essential to differentiate commercial and non-commercial usage while finding such an average. Till such a composite generic benefit tax on city services is designed, a cess on property tax calculated in accordance to the 'unit area' system may be considered useful.

6. Fire services

Presently, property tax includes a fire-tax component. Identification of beneficiaries as well as measurement of amount of benefit is not possible in this regard. Thus, fire services may also be included in the composite city services tax as discussed above.

7. Provision of urban amenities and facilities such as parks, gardens and playgrounds

There are two dimensions to this function. Though it is not easy to measure the amount of benefits they derive, the users of these amenities can be easily identified. Thus, user charges may be imposed in the form of entry fees. Secondly, there is an increment in the value of the properties having these amenities in their proximity. So, a generic benefit tax may be imposed or these amenities may be accounted for while estimating the 'unit area value' for property tax calculation.

8. Public amenities including street lighting, parking lots, bus stops and public conveniences

There is currently a lighting component in the property tax. A generic benefit tax, like the composite city services tax discussed above may cover the cost of lighting, since the beneficiaries cannot be readily identified. User charges may be imposed at parking lots and bus stops, since, the users can be identified easily. Increasing block tariff may be imposed at parking lots. With the rates increasing for longer hours of parking. Users of public conveniences can be easily identified and the duration of usage may be considered as a proxy for the benefits derived. A monthly pass or ticketing system may be considered appropriate in this regard.

9. Promotion of cultural, educational and aesthetic aspects

It is a 'shared' function. State government may share a portion of entertainment tax with local bodies to finance aesthetic aspects. Educational and aesthetic pleasure are marked by positive externalities which spread across several jurisdictions and thus, inter-governmental transfers may be considered appropriate to finance them. Wherever the users can be identified and benefits can be measured, a user charge may be levied. And in cases where benefits and beneficiaries cannot be readily identified, a generic benefit tax may be imposed.

- ***Environment-related***

10. Urban forestry, protection of the environment and promotion of ecological aspects

Environment protection and ecological improvements are marked by positive externalities spread over several jurisdictions, so inter-governmental transfers are appropriate for financing such activities. Such improvements take longer duration and benefits of these are

spread over generations, and thus, borrowing may be resorted to. The debt arising from financing such interventions may be met by a tax increment financing strategy. Finally, once the desired outcomes have been achieved, a generic benefit tax may be imposed in the form of a simplified composite city services tax.

- ***Redistributive functions***

11. Safeguarding the interests of weaker sections of society, including the handicapped and the mentally retarded

This is an ‘agency’ function, where local government merely acts as an agent in implementing the programmes which are planned, financed and regulated by the higher tiers. So, inter-governmental transfers must be resorted to. However, in order to induce ‘ownership’ on the part of local government, a part of such programmes may be met through Development Impact Fees. Since, the developers of several mega-projects largely benefit from the infrastructure provided by the local governments, it is feasible to make them pay for these services. Such proceedings may be used to finance the needs of the weaker sections.

12. Slum improvement and upgradation

Similar to the above function, slum improvement and upgradation is also an ‘agency’ function and should be met by inter-governmental transfers. However, a part of the function may be financed through vacant land taxes. Un-used or under-used land must be taxed at a rate higher than fully built properties, in order to prevent speculation in land and to put them to their best possible use or in use in accordance to the master plan. Such proceedings may be used for upgradation of slums as well as development of affordable housing.

13. Urban poverty alleviation

Urban poverty alleviation is yet another ‘agency’ function and should be funded by inter-governmental transfers. Several instruments based on the ‘growth pays’ paradigm as discussed above may be explored to finance urban poverty alleviation programmes. A portion of these proceedings must be earmarked for urban poverty alleviation.

- ***Regulatory and Miscellaneous***

14. Regulation of land use and construction of buildings

Municipalities provide infrastructure and services which benefit land or building owners in the form of higher premiums for their properties. A portion of proceedings from Tax Increment Financing/ Value Increment Financing may be earmarked for such regulations.

Further, Development Impact Fees may be appropriated for off-site developments including construction of buildings.

15. Burials and burial grounds, cremations, cremation ghats/grounds and electric crematoria

It is easy to identify the users of such services. A user charge in the form of entry fees may be imposed. It is important to keep the charges nominal so as to meet the requirements of economically poorer section. At such a place it may not be appropriate to verify the economic status of a user, thus, the rate may be uniform and nominal.

16. Cattle pounds, prevention of cruelty to animals

Development Impact Fees may be used for financing such interventions. Since, the benefits and beneficiaries of such developments cannot be identified it is difficult to impose user charges or benefit taxes. However, if stray cattle are not kept in cattle pounds, they may cause traffic congestion and might also lead to accidents. A generic city services tax may cover this component as it benefits local residents by reducing congestion and preventing accidents.

17. Vital statistics including registration of births and deaths

The beneficiaries can be easily identified and thus, a user charge may be imposed. The poor may be subsidised if need be.

18. Regulation of slaughter houses and tanneries.

Since the beneficiaries and benefits can be identified in this case, a user charge may be imposed. Trade licensing fees may also be adopted while setting up new slaughter houses and tanneries. Both of these create pollution and harm the environment, thus, a polluters charge may be imposed drawing lessons from the ‘polluters pay’ paradigm of the generalised benefit principle.

The suggested financing strategies for the 18 functions designated to the municipalities in India are summarised in table 6.2 given below:

Table 6.2*Financing Tools for Municipal Functions*

Sl. No.	Function	Financing Tool
<i>Planning Related</i>		
1	Urban planning, including town planning	Tax Increment Financing/ Property Tax
2	Planning for economic and social development	Tax Increment Financing/ Property Tax/ Sharing of stamp duties
<i>Infrastructure and Services</i>		
3	Roads and bridges;	Inter-governmental Transfers/ Sharing of Motor vehicles tax/ Congestion Fees/ Borrowing
4	Water supply for domestic, industrial and commercial purposes;	User Charges (Poor may be subsidised)
5	Public health, sanitation, conservancy and solid waste management;	Generic Benefit Taxes (Poor may be subsidised)
6	Fire services;	Property Tax/ Generic Benefit Taxes
7	Provision of urban amenities and facilities such as parks, gardens and playgrounds;	User Fees/ Generic Benefit Taxes
8	Public amenities including street lighting, parking lots, bus stops and public conveniences;	Generic Benefit Taxes/ Cess on property tax for street lighting/ User Fees
9	Promotion of cultural, educational and aesthetic aspects;	User Fees/ Generic Benefit Taxes/ Inter-governmental

		Transfers/ Sharing of Entertainment Tax
<i>Environment-related</i>		
10	Urban forestry, protection of the environment and promotion of ecological aspects;	Generic Benefit Taxes /Inter-governmental Transfers/ Tax Increment Financing/ Borrowing
<i>Redistributive functions</i>		
11	Safeguarding the interests of weaker sections of society, including the handicapped and the mentally retarded;	Inter-governmental Transfers/ Development Impact Fees
12	Slum improvement and upgradation;	Inter-governmental Transfers/ Vacant Land Tax
13	Urban poverty alleviation;	Inter-governmental Transfers/ Land based financing tools
<i>Regulatory and Miscellaneous</i>		
14	Regulation of land use and construction of buildings;	Tax-Increment Financing/ Development Impact Fees/ Value Increment Financing
15	Burials and burial grounds, cremations, cremation ghats/grounds and electric crematoria;	User Fees (Poor may be subsidised)
16	Cattle pounds, prevention of cruelty to animals;	Development Impact Fees
17	Vital statistics including registration of births and deaths;	User Fees
18	Regulation of slaughter houses and tanneries.	Trade Licensing Fees/ User Fees/ Tax on Polluters

Source: Author's Compilation

6.5. Summary and Conclusion

Chapter 1 introduces the topic and makes a brief case on the importance and relevance of the benefit principle. It discusses the urbanisation trends in India and the prospects thereof. It discusses the emergence of the third tier and its subsequent decline over the years. The decline may be largely attributed to the poor finances of local bodies owing to poor revenue mobilisation, lack of autonomy and excessive dependence on the higher tiers of government. The fiscal decline of the third tier has been accentuated with the establishment of the GST regime which subsumed important buoyant local taxes like octroi and entry tax. This chapter highlights the paradox in the municipal set up of India. Though there is an elaborate arrangement of the functions of the local bodies, little (close to nothing) has been said about the financing of these functions. It discusses the current revenue structure of the ULBs of different states of India. The financing requirements as laid down by the HPEC is also discussed. Then the importance of the Benefit Principle and its relevance in establishing the Wicksellian Connection is discussed. Basically, this chapter sets the context for the thesis and lessons for implementing the benefit principle.

Chapter 2 is a review of literature on the local public finance and benefit principle. It discusses the principles of correspondence, fiscal equivalency, decentralisation theorem, Stigler's menu and subsidiarity principle in order to bring forth the importance of the third tier. Concept of public good and local public good is discussed in this chapter. While public goods are identified as non-rival and non-exclusive, local public goods reflect some degree of rivalry due to congestion diseconomies. The chapter discusses the evolution of the benefit principle. Though it was introduced by Adam Smith, he did not formalise the concept. The credit of being the founder father of the Benefit Principle goes to Wicksell. The subsequent development of the principle is described in this chapter. The credit of broad-basing the benefit principle goes to Stiglitz who talks of agglomeration rents, monopoly rents and natural resource rents based on the benefit principle. Thus, this chapter discusses the lessons drawn from the works of "Wicksell to Stiglitz". Further, it discusses the golden rule of public finance with benefit principle at the crux to establish the Wicksellian Connection.

Chapter 3 is dedicated to Property Tax, the 'sole' major municipal tax, and vacant land tax, the grossly neglected municipal tax. This chapter establishes both the taxes as benefit taxes. The importance of property tax is brought out in this chapter. Despite its importance as a major municipal tax, it is in a highly neglected state. Data reflects over-reliance on property tax in India and also the poor revenue mobilisation. This chapter discusses the property tax reform of

Bogota and draws lessons from international best practices of property tax. The different views of property tax, the traditional view, the capital tax view and benefit views are discussed in this chapter. The superiority of the benefit view is established. The attempts at property tax reform by Patna, Bengaluru, Hyderabad and Mumbai is discussed. Property tax, being a benefit tax, has a key role to play in the scheme of financing urban public services and infrastructure. It has a major role according to the golden rules of urban public finance. It acts as a price for collective services for which user charging is not feasible due to benefits not being measurable or beneficiaries not being identifiable. Land value taxes, especially vacant land taxes hold a high revenue potential but have been ignored by ULBs. This chapter suggests that a holistic and robust approach to property tax and vacant land reforms must consider and sort-out issues related to systemic design and collection.

Chapter 4 presents a case-study on the finances of Bhubaneswar, an emerging city of eastern India. A comparison is made with the leading municipalities of Mumbai, Hyderabad and Bengaluru. Comparisons have also been made with Thiruvananthapuram because of similarities with Bhubaneswar with regards to city density. This is followed by a set a recommendation for municipal finance reforms in Bhubaneswar. However, these recommendations can be easily extended to other municipal corporations as they are drawn upon the ‘general benefit principle’ and best practices. The chapter suggests property tax reforms based on the capital value method, as suggested by the 15th Finance Commission. It also suggests strengthening the other taxes like advertisement tax, entertainment tax and profession tax which have been grossly neglected by ULBs. The chapter advocates a share for ULBs in stamp duty, motor vehicles tax and GST, rather than ad-hoc assignment of transfers. A case is made for user fees and charges as an important source of revenue for ULBs. Hyderabad has established itself as a pioneer in this regard with an array of town-planning related charges and fees. Betterment charges and impact fees largely draw upon the benefit principle and capture the induced benefits accruing from infrastructure development and city services. Such levies ought to be adopted by other ULBs.

Chapter 5 is dedicated to developing a model based on the benefit principle. It draws up on the lessons of Henry George theorem, Mohring theorem, Small-Verhoff condition and the unaddressed issues of these theorem. It brings forth the contributions of Stiglitz. Stiglitz has broadened the tax base for the benefit principle by advocating for benefit tax and charges on rents (including agglomeration rent and monopoly rent), congestion toll, land-based taxes etc. The model developed in this chapter calls for broad-basing the benefits so as to finance

infrastructure and services. Further, it develops a tool box for financing infrastructure responsibilities of municipalities.

The benefit principle guides us to a bundle of economically attractive and successful source of municipal revenues. Exploring such sources are not complex and simply revolve around the power to fix tax rates and availability of requisite tax handles. However, these resources have not been explored and municipalities continue to struggle for meeting the growing expenditure requirements. The lessons drawn from Wicksell to Stiglitz indicate towards the golden principle of local public finance. They indicate towards a bundle of taxes based on the benefit principle. These include, user charges wherever benefits and beneficiaries can be identified (Wicksell and Lindahl), benefit charges as surrogate user charges when such identifications are not accurate (Bird), inter-governmental transfers when benefits spread over jurisdictions (Musgrave), borrowing and earmarking when benefits are spread over generations (Buchanan) and innovative tools to capture induced and externality benefits like agglomeration rents, natural resource rents, monopoly rents and congestion charges (Stiglitz).

6.6. Directions for Future Research

Currently, India is about 35 percent urbanised and United Nations projects India will be more than 50 percent urbanised by 2050. Urban India is expected to grow by leaps and bounds with about 820 million people residing in urban areas by 2050. According to the Williamson's hypothesis, agglomeration economies and agglomeration-augmented GDP growth tend to be stronger at the lower stages of urban transition (Williamson, 1965). Brulhart and Sbergami (2009), have validated the Williamson hypothesis by taking data for 105 countries spanning the period from 1960 to 2000. Thus, India has an opportunity to harness agglomeration economies to enhance economic growth with structural transformation as a resource. Such a process needs to be supported by adequate infrastructure and services required by firms and households in order to prompt them to co-locate so as to unleash the forces of agglomeration and network externalities. Covid-19 has emphasised the need for a strong focus on public health and disaster resilience at the local level. The ULBs shoulder the responsibility of providing basic civic services and they must be placed on a strong financial footing to sustain the process of agglomeration-augmented and knowledge-driven economic development. Economically efficient, environmentally sustainable, socially equitable, financially viable and liveable cities need a strong, durable and flexible urban public finance system in order to be the engines of inclusive growth.

This thesis draws attention to the lessons from urban economics and local public finance literature to establish the “benefit principle” as the foundation for urban finance reforms in developing countries like India. Further, it makes the case for broad-basing the urban tax structure extending the definition of benefits to include direct, indirect and induced benefits. This would also make the public authorities more accountable, service delivery more transparent and taxpayers more willing to pay for the services, thereby establishing the Wicksellian Connection. The thesis makes a case for a financially strong, vibrant and independent third tier based on the subsidiarity principle and benefit taxation framework. Designing a basket of benefit-based taxes and charges, with focus on land-based instruments and taxes on monopoly rents and other forms of unearned increments, calls for urgent research. The saying goes: think globally and act locally.

Theory and international best practices have been utterly neglected while designing municipal finance framework in India. Theory and practice are also not linked. Ideally, first the nature and size of expenditures at the local level should be estimated and then matched with necessary revenue including taxes, charges and transfers. However, in reality, both sides of the budget (revenue and expenditure) are determined independently. Further, little reference is made to the local inputs and decisions are taken by state authorities on an ad-hoc basis. In such a backdrop there is a proliferation of the vicious cycle of poor civic service delivery, poor finances resulting in poor service quality; poor service quality discourages tax payments which in turn results in poor finances. The poor state of municipal finances questions the very existence of the third tier. While the decentralisation, subsidiarity principles and good governance based on the Wicksellian Connection establish the importance of local governments, the lack of finances renders them mere puppets at the hands of the state government. The unanswered question remains: “why are ULBs in a position far weaker than that obtained under the 1919 Government of India Act in spite of substantial urbanisation spanning over a century and phenomenal contribution of cities to GDP?” The answer is deeply rooted in the political-economy of the third tier. The Thirteenth Finance Commission of India had, in fact, unambiguously observed that the municipalities must have access to the buoyancy in the economy that cities create. This has not happened. Future research may focus on politics of local government, fiscal federalism reforms and ways to create revenue buoyancy in cities, including assignment of benefit charges and taxes to ULBs and a strong focus on capacity building in local tax administration towards designing and collecting revenues to match the expenditures needed. Design of users pay, beneficiaries pay (especially those deriving windfall

gains on account of urban planning, public goods provision and government policies), “congesters pay”, “polluters pay”, “exacerbaters pay” and “growth pays” is a fertile area for scholarly work in the future.

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What Ails Property Tax in India? Issues and Directions for Reforms

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Property tax is the most important municipal tax in India. Theoretically, property tax subscribes to efficiency, ability to pay, benefit and equity principles of public finance. However, it is grossly under-exploited. The reasons why the potential of property tax is far from being realized include systemic problems and inefficiency in municipal tax administration. Considering the importance of property tax for municipal autonomy and its huge unexploited potential, property tax reform in India assumes critical significance. This paper attempts to look to theory and international practice, including innovative initiatives launched by select cities and states in India in the past for designing and pursuing a robust agenda of property tax reforms. In particular, it critically examines the property tax performance of two pioneering municipal corporations: Hyderabad and Bengaluru. We suggest municipal reforms with a focus on user charges for measurable services, move to capital value-based property tax with land tax component linked to the market value of land, tax mapping and benchmarking, addressing tax base, exemptions, coverage, valuation and collection efficiency.

1 | INTRODUCTION

Cities drive economic growth by catalyzing agglomeration and network externalities. These externalities are responsible, among other things, for cities being the engines of growth and structural transformation. The importance of cities in India can be gauged from the fact that the contribution of urban areas to GDP rose from 29% in 1950–1951 to 62–63% in 2007. The figure is projected to rise to about 75% by 2021 (Planning Commission, Government of India, 2008). 70% of new employment and 85% of public finance will be generated by cities (McKinsey Global Institute, 2010). Cities will not be able to perform their fundamental roles as agents of socio-economic transformation unless they are in a position to finance infrastructure and civic services needed by firms and households. It is important to have in place a comprehensive framework addressing planning, governance and finance simultaneously.

Cities in India are struggling to provide adequate infrastructure and civic services to the citizens. Prasad and Chary (2014) observe in their study on the state of urban services that against the service level benchmark of 100% for water connection in premises, the national average stood at 53.6%. The figure was as low as 17% in Bihar. While the benchmark for coverage of toilets was 100%, the national average

was 71.1%. Sewerage network coverage wore a dismal look with the national average being only 49.5% and a meagre 9.7% in Chhattisgarh. Only 57.2% of the households had solid waste management (SWM) coverage. Their study reveals that urban India has a long way to go in order to achieve proper service delivery. It is the municipalities who have to shoulder the responsibility of making these services available. It is estimated that cities will require 9.74 million crores by 2030 to address their needs (McKinsey Global Institute, 2010). While the financing requirement is gigantic, the resources available with municipalities—to meet the cost of salaries, O&M and capital expenditure—were estimated at less than Rs. 1 lakh crores for the country as a whole for 2012–2013.

Indian Urban Local Bodies (ULBs) suffer from a “rich city-poor city government” syndrome. Fiscal dependency is a defining characteristic of Indian municipalities. They are mostly dependent on the higher levels of Government. The sources of own revenue of the ULBs are also limited. Octroi, which was a major source of municipal revenue, has been phased out. The options of user charges and borrowing have not been explored properly. Property tax remains the single-most-important source of “own revenues” of ULBs. The own taxes constituted only 32% of total municipal revenues nationally in 2012–2013 and property tax accounted for 50% of municipal taxes in 2012–2013

and 60% in 2017–2018. Ironically, cities in India have not exploited even a fraction of the property tax, the most important municipal tax in the country.

According to the report of the Thirteenth Finance Commission, property tax-GDP ratio in India ranged between 0.16 and 0.24% in 36 largest municipal corporations in 2006–2007 (Finance Commission of India, 2009). Data submitted by State Governments to the Fourteenth Finance Commission indicate that this ratio was 0.18% in 2007–2008 and 0.16% in 2012–2013 (Administrative Staff College of India (ASCI), 2014; Mohanty, 2016). The figure is very small compared to state tax-GDP ratio of 6.8% and central tax-GDP ratio of 10.3% in 2012–2013. Corporation tax-GDP, income tax-GDP and service tax-GDP ratios in the same year were 3.52%, 1.94% and 1.31% respectively (Finance Commission of India, 2015). A study prepared by ICRIER for the Fifteenth Finance commission showed that property tax as percent of GDP declined from 0.086 in 2012–2013 to 0.084 in 2017–2018 for 37 largest Municipal Corporations of India (Indian Council for Research on International Economic Relations (ICRIER), 2019a, 2019b).

Various studies like those of Bird (1993) and Oates (1972) establish the importance of local governments and the ability to raise revenue has always been believed to be indispensable in order to maintain a strong local government. Property tax is the most important source of “own” revenue and can be considered as a reflection of the strength and autonomy of any ULB in India. There is a wide range of theoretical and empirical literature on property tax at an international level. This includes Bird and Slack (2015), Kelly (2013), Claudia (2012), Slack (2011), Walters (2011), Bahl, Martinez-Vazquez, and Youngman (2008), and Mikesell (2007) among others. For India, the literature on property tax includes the works of Mohanty (2014, 2016), Mathur, Thakur, and Rajadhyaksha (2009), Rao (2013), Bandyopadhyay (2013), Gnaneshwar (2009), and all and Lall and Deichmann (2006) to name some. However, the studies in India do not combine lessons from theory and practice. This paper aims at integrating lessons from theory and practice including the experiences of two pioneering municipal corporations of the country namely, Greater Hyderabad Municipal Corporation (GHMC) and Bruhat Bengaluru MahanagarPalike (BBMP). This is the major contribution of the paper.

The paper is organized as follows: Section 2 highlights the state of property tax in India and brings forth the need for property tax reforms. Section 3 explores the reasons behind the poor state of property tax in India. Section 4 presents the international practices on property tax and describes in details the successful property tax reforms undertaken by Bogota, Colombia. Section 5 deals with the reforms attempted by the cities of Bengaluru, Hyderabad and Mumbai. Section 7 is the study on property tax performance of Bengaluru and Hyderabad. Section 8 suggests a reform agenda based on theory and successful national and international practices. The faults in the Unit Area Method (UAM), practiced widely in India, are analyzed in this section and Section 8 concludes.

2 | STATE OF PROPERTY TAX IN INDIA

An analysis of the trends in municipal revenues of India (Table 1) reveals that municipal revenue as a percentage of GDP has

declined from 1.08 in 2007–2008 to 1.03 in 2012–2013. The figure stands at 1.00 for 2017–2018. A decline in the “own sources” of revenue of municipalities has also been observed. In 2017–2018, municipal own revenue stood at 0.43% of GDP, which was the lowest in 8 years (ICRIER, 2019a, 2019b). The own taxes constituted only 32% of total municipal revenues nationally in 2012–2013. Property tax accounted for 50% of municipal taxes in 2012–2013 and 60% in 2017–2018. The municipalities are increasingly dependent upon the higher levels of government for funds. Property tax is the single-most-important tax and “own” source of revenues of ULBs in India. On an average, property tax constituted 16% of total municipal revenues and 30% of “own” municipal revenues in India in 2012–2013. However, property tax revenue as a share of GDP in India stood at a meagre 0.15% in 2017–2018 (ICRIER, 2019a, 2019b).

Average per capita property tax collected in 36 largest cities in India in 2006–2007 was of the order of Rs. 486 as against the demand of Rs.1,229 (Mathur et al., 2009). Based on data furnished by state governments to the Fourteenth Finance Commission of India, per capita property tax for the country in 2012–2013 is estimated at Rs. 517, ranging from Rs. 70 for Nagar Panchayats to Rs. 206 for Municipalities and Rs. 813 for Municipal Corporations (ASCI, 2014). The figures are very low compared to the revenues critically needed for financing the massive needs of core urban infrastructure and services. They are also very low in terms of international comparisons. Bahl et al. (2008) reveal that for the 2000s, property tax-GDP ratio was 2.12% for developed countries, 0.68% for transitional countries and 0.60% for developing countries (Table 2). However, this ratio was merely 0.16 for India in 2012–2013, which shows that property tax collection in India is way behind its revenue potential.

2.1 | As the economic survey 2015–2016 observes

The very fact that systematic data on property taxation across the country is so sparse is a measure of just how little attention has been given to this tax. Property taxes are especially desirable because they are progressive, buoyant (at least in the Indian context) and difficult to evade, since they are imposed on a nonmobile good, which can with today's technologies, be relatively easily identified. Higher rates (with values updated periodically) can be the foundation of local government's finances, which can thereby provide local public goods and strengthen democratic accountability and more effective decentralization. Higher property tax rates would also put sand in the wheels of property speculation. Smart cities require smart public finance and a sound property taxation regime is vital to India's urban future. (Vol. 1, p. 117).

The Economic Survey 2016–2017 has also laid emphasis on the large potential of property tax and suggests proper exploitation of the

TABLE 1 Trends in Municipal Revenues in India by Source: 2007–2008 to 2017–2018

Sl. No.	Sources of revenue	2007–2008 Total (Rs. Crore)	% of Total municipal revenue	2012–2013 Total (Rs. Crore)	% of Total municipal revenue	2017–2018 Total (Rs. Crore)	% of Total municipal revenue	
A. Own sources								
1.	Total taxes	18,366	37.20	30,912	32.00	42,954.3	25.02	
	Property tax	8,159	16.53	15,110	15.64	25,551.9	14.88	
	Other taxes	10,207	20.68	15,801	16.35	17,402.4	10.14	
2	Nontaxes	9,134	18.50	19,002	19.70	30,377	17.69	
	Total own source revenues	27,501	55.70	49,913	51.60	73,331.3	42.71	
B. Other sources								
1	Government of India transfers		3,515	7.10	5,387	5.60	8,244.9	4.8
2	Central finance commission transfers		986	2.00	3,760	3.90	12,324.5	7.18
3	State assignment/devolution		9,342	18.90	18,537	19.20	55,573.9	32.367
4	State Grant-in-aid		6,653	13.50	14,809	15.30		
5	Others		1,355	2.70	4,234	4.40	22,222.5	12.943
	Total other source revenues		21,851	44.30	46,727	48.40	98,365.8	57.29
C. Total revenues			49,351	100.00	96,640	100.00	171,679.1	100.00
Gross domestic product at factor cost in current prices (GDP)			45,82,086		93,88,876		1,70,95,005 (at market prices)	
Municipal revenue as a % of GDP				1.08		1.03		1.00

Source: ASCI (2014)—based on data furnished by state governments to the Fourteenth Finance Commission of India; Indian Public Finance Statistics 2013–2014; Mohanty (2016), ICRIER (2019a, 2019b).

TABLE 2 Property tax revenue as percentage of GDP: groups of countries

	1970s	1980s	1990s	2000s
OECD countries	1.24 (9.70)	1.31 (9.90)	1.44 (13.65)	2.12 (12.40)
Developing countries	0.42 (18.70)	0.36 (15.97)	0.42 (13.49)	0.60 (18.37)
Transitional countries	0.34 (3.67)	0.59 (4.92)	0.54 (7.75)	0.68 (9.43)
All	0.77 (14.49)	0.73 (12.89)	0.75 (11.63)	1.04 (3.40)

Note: Figures in parenthesis show property tax as a percentage of total revenues of municipalities.

Source: Bahl et al. (2008).

tax in order to generate additional revenues for the city government (Ch.14, pp. 314).

Mathur et al. (2009) provide estimates of the potential of property tax in India as presented in Table 3, indicating that the mobilization from property tax could be increased by 2–3 times. There is thus a need to look to theory and international practice, including innovative experiments adopted by Indian cities for designing an agenda for property tax reforms in India.

3 | TAX REFORM: ANALYTICAL FRAMEWORK

Property tax is an ideal form of benefit tax. It also satisfies many characteristics of a good “local tax” with the property being immobile. It is nondistortionary in nature as it does not have any significant impact on productive behavior. It has high visibility and thus, prompts municipal authorities to be accountable to taxpayers and promotes transparency. Residents must pay for local services and administration. Since the value that owners of property attach to municipal services and infrastructure is reflected in property price and rent, property tax is regarded as a suitable instrument for financing local government expenditures.

Though property tax has several theoretical merits, it suffers from many practical difficulties. It may be difficult to find the market-determined property value. The pinch of property tax is higher as it is raised in one or two big tranches in a year. It may be influenced by subjective biases if not designed properly. This is reflected by the large prevalence of several exemptions and preferential treatments. Sometimes it is difficult to measure the “benefits” and free-riding on local public service becomes common. These factors make it unpopular among taxpayers and need to be kept in mind while designing property tax reforms.

While designing property tax reforms it is important to consider the factors, which influence property tax collection. A broad multi-pronged approach involving all such factors is desirable for improving

TABLE 3 Estimates of property tax potential in Urban Local Bodies of India (Rs. Crores)

Estimates	Estimates of the current property tax yields (Rs.)	Estimates of property tax potential (Rs.)	Property tax-GDP ratio (%)
Estimate 1	8,416	29,346	0.708
Estimate 2	6,274	21,877	0.527
Estimate 3	9,425	32,864	0.793

Source: Mathur et al. (2009).

revenue collection. In the absence of such an attempt, the improvement in one factor may be offset by the limitations of another. An analytical framework to understand the problem and furnish reform mechanisms is to analyze the following equation (Bahl & Linn, 1992; Mohanty, 2014, 2016):

$$R = t \times c \times v \times e \times (B - E) \quad (1)$$

Where, R = revenue mobilized from property tax in a jurisdiction, t = average property tax rate, c = coverage ratio, that is, ratio of taxable properties captured in the tax registry relative to all properties in the tax base, v = valuation ratio or ratio of assessed to the actual value of properties, e = enforcement rate or collection efficiency measured by actual tax collection as a percentage of total tax liabilities or invoices, B = legally defined property tax base and E = exemptions/concessions granted.

As the equation shows, the property tax revenues raised by a city depend on revenue base, the extent of access to the base, exploitation rate and collection efficiency. Local taxes are highly visible, and unduly high tax rates are vehemently resisted by tax-payers. Thus, expanding the tax base and enhancing collection efficiency are key directions for enhancing the revenues of ULBs.

The Thirteenth Finance Commission Report informs that assessed values of properties were estimated at 8–10% of prevailing market values, and on an average 30% in 36 largest municipal corporations of India in 2006–2007. Only 63% of the assessed properties and 56% of the universe of properties were paying property tax. Further, as against the house properties actually assessed, collection efficiency was as low as 37% (Finance Commission of India, 2009). Except in the case of a few cities like Bengaluru, systematic property tax reforms have not been carried out in India. Even the Bengaluru model requires improvement. The potential of property tax in most of the cities is not harnessed. At this juncture in India's urban evolution, the country has a significant opportunity to augment municipal revenues by improving the legal framework, design, assessment, collection and enforcement of property tax.

Strengthening urban governance was one of the objectives of the Jawaharlal Nehru National Urban Renewal Mission (JNNURM). In order to achieve this objective, the mission envisaged 23 major reforms at the state and ULB levels. Property tax reforms featured as one of the suggested reforms. The target was to improve the collection efficiency to at least 85% over the mission period 2005–2012. However, the property tax-GDP ratio declined from 0.18% in 2007–2008 to 0.16% in 2012–2013 and further to 0.15 in

2017–2018 (ASCI, 2014; Mohanty, 2016; ICRIER, 2019a, 2019b). Presently, property tax along with its components is an appropriate and feasible means of meeting the expenditures of ULBs. It is an ideal instrument to “leverage” resources to meet the costs of undertaking planned urban development. It is estimated that the collection of property tax in India could be increased by 2–3 times with relatively modest reforms (Mathur et al., 2009).

The main reason behind the failure of Property tax reforms under JNNURM was the lack of a scientific method to estimate the property tax base. The poor yield from property tax in many cities is largely due to under-coverage and leakages in the tax base, apart from inefficiency in the collection due to poor tax administration. Vacant land, under-used lands and unauthorized constructions do not feature in the tax register despite benefiting from municipal services. The database is also outdated as data on new construction, additions and alterations to existing buildings are not accounted for. Bengaluru is the only city, which has adopted a GIS-enabled database for property tax on a city-wide scale.

The potential of property tax in most of the cities is not harnessed. At this juncture in India's urban evolution, the country has a significant opportunity to augment municipal revenues by improving the legal framework, design, assessment, collection and enforcement of property tax.

4 | PROPERTY TAX REFORM: INTERNATIONAL PRACTICE

Property tax is considered to be an important source of subnational revenue in many countries, and more so in developing than in developed or transition countries (Bird & Slack, 2004). The practice of property tax varies widely among different countries and between different cities of the same country. The property tax regimes followed worldwide reflect diversity in terms of determination of tax base, fixation of the tax rate, methods for valuation of property and efficiency of collection. While some countries follow a single property tax to cover all kinds of properties, some follow different taxes for different types of properties. For instance, a separate tax may be levied on residential and nonresidential property; or land and building components of a property; or city center and urban fringe.

The property valuation method adopted differs from country to country. The major ways of valuation include area-based assessment, capital value-based assessment and rental value-based assessment. In

the area-based assessment method, a charge is fixed per square meter of property and the value of the property is the per-unit charge multiplied by the size of the property. The “per unit” rate is adjusted according to the location of the property in a specific zone, nature of the building, type of use and other factors. The capital value (or market value) assessment is based on the actual market price of individual properties. The rental value assessment method takes into account the estimated rental value or net rent of the properties. The estimated and not actual rents are used for the assessment.

Different countries in the world have undertaken property tax reforms at different points of time. The objective of the reforms varied between increasing revenue collection, simplifying the tax regime, promoting fairness and as a decentralization attempt. The reforms adopted also varied significantly. While some countries focused on changing the tax base and rate, some others tried to improve the tax administration; yet others devised methods to improve collection efficiency and improvise valuation techniques. The common features of the reforms attempted in several countries include a move toward the capital value assessment method, improving collection efficiency and simplification of the taxation system by introducing a single tax. For example, Colombia introduced one unified property tax to replace four taxes (the property tax, park and forest tax, tax on socio-economic strata and surcharge on the formation of the cadastre; Bird & Slack, 2004).

Bogota, Colombia provides a good example of a city that embarked upon a comprehensive program for property tax reforms in 2008. Bogota updated physical records and taxation values of 2.1 million properties, leading to an increase in the share of property tax in municipal “own” revenues to 40% by 2010—from 20% in 2008 (Mohanty, 2016).

Bogota adopted a self-assessment approach for property tax reforms. The experience of Bogota proved that with technical expertise, critical investment and political will, it is possible to significantly increase the property tax yields. In 2008, the Mayor of Bogota initiated a major updating of physical records and taxation values of 2.1 million properties. As a result, property tax revenue increased by US \$171 million and reached 40% of own revenues by 2010. However, the cost of the improvement was less than US\$15 million.

Bogota was experiencing a boom in the real estate market and not updating the property tax base meant that the city was forgoing important revenues. In order to capture those gains, the city refurbished tax administration and revaluated the properties. The cadastral value marked an increase of 47%, from US\$ 66.5 billion in 2008 to US\$98 billion in 2010. The reassessment exercise led to dramatic increases in cadastral values and property tax bills.

International practice in property taxation suggests that a holistic approach is necessary for property tax reforms to be successful. Several key issues must be taken into consideration; they relate to tax base, tax rate, tax coverage, exemptions, valuation, assessment, billing, collection, enforcement, dispute resolution, record-keeping and capacity building. International experiences in property taxation and property tax reforms suggest the following lessons for designing and implementing property tax reforms in India (Mohanty, 2016):

- i. A robust yet simple framework for property tax makes the tax easy to understand and enforce;
- ii. Expansion of property tax base and minimization of exemptions and concessions;
- iii. Adopting techniques of GIS, GPS and geo-informatics to prepare land cadastres;
- iv. Indexation of property tax to market value or inflation between comprehensive revisions of property tax;
- v. Avoiding an increase in property tax rates;
- vi. Use of e-tools and other techniques like CAMA (computer-aided mass appraisal) and GIS-enabled mapping and MIS to undertake, update and track property valuation, assessment, billing, collection and enforcement;
- vii. Close involvement of local political leaders as well as taxpayers' associations in the levy and collection of property tax;
- viii. Demonstration of visible links between tax payment and improvement in civic services and infrastructure, both city-wide and area-specific to garner support from tax-payers; and
- ix. The strong political will to undertake property tax reforms.

Property taxation should be viewed with a “systems” approach rather than as a combination of disjointed initiatives. Systemic reforms must go hand-in-hand with efforts to improve collection efficiency through improvement in tax administration.

5 | PROPERTY TAX REFORM INITIATIVES IN INDIA

Since 1993 some states and cities in India have resorted to experiments in property tax reforms. Patna was the first city to undertake property tax reforms in 1993 by shifting toward an area-based valuation system. Around the same time, Andhra Pradesh also adopted a similar system, becoming the first State in the country to embrace the UAM. In 1999, Ahmedabad also undertook property tax reforms by adopting the essential elements of the Patna model.

Bengaluru is considered to have the best property tax model in the country while Mumbai's model is ideal for replication in future. The initiatives undertaken by Hyderabad, Bengaluru and Mumbai are presented below.

5.1 | Hyderabad self-assessment scheme

The municipal corporation of Hyderabad introduced the UAM based property tax with a self-assessment scheme (SAS) in 1999–2000. The self-assessment system was chosen to prevent delays in formulating a new law. Properties were assigned unique property tax identification number and the taxpayers were given the option to determine their tax and file returns while revealing all property related details,

including plinth area. Resident Welfare Associations (RWAs) were closely involved, linking taxes to civic services area-wise. Some smart RWAs articulated three benchmark rents per sq. ft.—for high-rent, middle-rent and low-rent areas and proposed a minimum of 1 month of market rent as the benchmark for filing of tax returns. These views were articulated to other RWAs. These benchmarks were accepted by the municipal corporation to accept tax returns without going in for property-to-property verification to bring all taxpayers to one level.

The Hyderabad SAS was a resounding success. About 1,30,000 taxpayers filed self-assessment returns within 4 months of launching of the Scheme. A 123% increase in property tax was marked between 1999–2000 and 2001–2002 (70% in 1999–2000). The sources of the increase in yield have been a correction of historic inequities in the tax system, better coverage and record-keeping and computed-based decision-support systems leading to better guidance to the tax administrators.

The self-assessment of property tax scheme introduced in Hyderabad in 1999–2000 is continuing. However, property tax rates have not changed over the last 18 years. Between 2012–2013 and 2013–2014 the corporation has achieved remarkable success in property tax collection with a growth of 32% by strengthening enforcement and focusing on tax administration.

5.2 | Bengaluru self-assessment scheme

The municipal corporation of Bengaluru provides a good example of property tax reforms, adopting the unit area value (UAV) method. It launched the optional SAS in 2000. The city was divided into six zones: A, B, C, D, E and F based on the guidance values notified by the Stamps and Registration Department of Karnataka Government. Residential use properties are classified into five categories and non-residential use properties into 13 categories. For each zone, rental rates per square foot were determined linking buildings to location, type of construction, built-up area, use and age. Tax rates for rented buildings in Bengaluru were fixed at levels much lower than prevailing rates under the SAS. Owner-occupied buildings were given a concession of 50%. Two months deduction in annual rental value (ARV) was provided for repairs and so on. Further, the concession was given in accordance with the age of the building. The tax was levied at 20% of ARV for residential use and 25% for nonresidential use. Vacant land exceeding three times the built-up area is assessed at 30% of the rate fixed for the built-up area. To facilitate political acceptability, a cap on the property tax increase was set at 2.5 times the existing liability. The process was transparent and backed by political leaders. More than 60% of taxpayers filed their declarations within the prescribed 45-days period. Due to the SAS, property tax collection in Bengaluru increased by 33% during 2000–2001.

Learning from the optional SAS-2000, Bengaluru has shifted to a mandatory scheme by amending the Karnataka Municipal Corporations Act 1976 to provide for self-assessment based on UAV.

SAS-2008 has shifted to the concept of UAV from ARV in SAS-2000. Filing of annual property tax returns in Bengaluru is now mandatory. Up to 10% of the returns filed are required to be verified

randomly. The municipal corporation has supplied a handbook to taxpayers at a nominal cost, explaining how self-assessment property tax can be calculated. An online tax calculator is also made available. Then, 360 help centers were organized to propagate the features of SAS to citizens and clarify their doubts. Now property tax can be paid online, at computerized kiosks in “Bangalore One” centers, municipal offices or banks. Credit card payments facilities are also available with no user charges to citizens. Property-owners who make payments in full before April 30 can avail a rebate of 5%. Penalty at 2% per month is levied on defaulters after 60 days from the date property tax is due—April for first half-year and October for second half-year. It is mandatory for all properties, including unlawful properties and those in unauthorized layouts to pay property tax without any assurance of regularization. Over a 3-year-cycle, the value increase must be at least 15%, resulting in steadily increasing property tax collection.

Bengaluru adopted GIS-enabled database for property tax on a city-wide scale, identifying 1.7 million properties and assigning them unique numbers for Property Identification and became the first city in India to do so. Due to SAS-2008, property tax collection in Greater Bengaluru Municipal Corporation increased by 39% between 2009–2010 and 2010–2011. The tempo of property tax growth in the city is continuing. It has reportedly reached about Rs.1,800 crores in 2015–2016.

5.3 | Mumbai capital value-based property tax

The municipal corporation of Greater Mumbai has shifted from the ARV-based property tax to a capital value-based system in 2010. Under the new scheme, the market value of the property is determined based on the stamp duty ready reckoner, revised by the Government of Maharashtra every year. The market value is then multiplied with the carpet area of the property (land area in the case of open land) and weight factors notified by the corporation, including nature and type of construction, age of the building, floor characteristics and use of the property. This gives the property's capital value, which multiplied with the property tax rate notified by the city council, determines the property tax payable. Property tax rates are notified by the municipal corporation of Greater Mumbai from time to time under various components: general tax (including fire tax), street tax, municipal education cess, water tax, water benefit tax, sewerage tax, sewerage benefit tax and tree cess. The combined tax rates for various user categories ranged from 0.316% to 2.296% in 2013. However, the capital value-based system in Mumbai is yet to be firmly established.

6 | A COMPARATIVE ANALYSIS BETWEEN HYDERABAD AND BENGALURU

A study was undertaken to make a comparative analysis of the property tax collection performance of GHMC and BBMP. As reported by the Census of India, the population of the GHMC area recorded 6.7

million in 2011; the population of the BBMP area stood at 8.4 million in the same year. While GHMC spreads over an area of about 650 km², the BBMP area is reported to be about 800 km². In terms of both population and geographical area, GHMC is 0.8 times the size of BBMP. Both the corporations have introduced the Self-Assessment of Property Tax scheme.

GHMC collects property tax, vacant land tax (VLT) and other minor taxes. BBMP collects property tax and advertisement tax. Both GHMC and BBMP undertook reforms in the property tax through the adoption of the UAM and SAS – GHMC in 1999–2000 and Bengaluru in 2000 and 2008 (Mohanty, 2016). While GHMC adopted a collection led mechanism of property tax reforms, BBMP went forward with alterations in the system related to tax base and valuation. Table 4 provides a comparative picture of property tax between GHMC and BBMP for 2008–2009, and 2012–2013 to 2019–2020 Budget Estimate (BE). Considering that GHMC is about 0.80 times the size of BBMP, GHMC seems to have performed better in property tax mobilization between 2008–2009 and 2014–2015 (Figure 1). However, it may be noted that BBMP also collects cesses on property tax – beggary cess, health cess and library cess. When cess revenues are added to property tax, the performances of GHMC and BBMP appear to be similar over this period. This is surprising because GHMC undertook reforms long back and has not taken up GIS mapping of properties. On the other hand, BBMP has recently executed well-acclaimed reforms by adopting the UAV method and taking up a massive exercise of GIS mapping. However, the performance of GHMC seems to have worsened since the 2015–2016. All available evidence indicates that property tax performance needs to be improved in both GHMC and BBMP significantly. BBMP set a huge target for property tax collection in 2019–2020 BE although its performance fell significantly below the target set in 2018–2019 BE. Ironically, the Economic Survey 2016–2017 has estimated that Bengaluru and Jaipur are currently collecting no more than 5–20% of the potential for property tax. In other words, there is a potential to increase revenue collection through property tax by 5–20 times (Ch. 14, p. 312).

The analysis reveals that both GHMC and BBMP can improve the collection of property tax significantly by adopting a systemic approach and benchmarking. Similar properties located in similar areas with similar characteristics and similar uses must pay similar taxes. Per capita and per square feet tax rates could be arrived for zones/circles/wards by type of property to identify where improvement is needed. Those properties paying less than the benchmarked rates may be made to adopt such rates. The inequities continuing in the tax system need to be corrected as a matter of priority.

Arbitrary formulae such as that adopted by BBMP to limit property tax hike by not more than 2.5 times the existing property tax may be avoided. There are large historic inequities in the property tax system. Some property owners have enjoyed very low taxes for years for several reasons, including collusion with lower-level tax officials. Instead of fixing an arbitrary limit, a floor or minimum rate for each particular area/category of the property may be considered, even if it means that the tax would increase by more than 2.5 times. Income from “own” properties has not been a major source in either GHMC

TABLE 4 GHMC and BBMP: Trends in property tax revenues (Rs. In Crores)

Municipal corporation	2008–2009 actual	2012–2013 actual	2013–2014 actual	2014–2015 actual	2015–2016 actual	2016–2017 actual	2017–2018 actual	2018–2019 RBE	2019–2020 BE
GHMC property tax	363.11	753.35	982.35	1,012.97	1,129.30	1,311.10	1,392.70	1,472	1,694
BBMP property tax	386.76	1,085.02	727.41	1,031.76	1,403.50	1,724.50	1,777.40	1800	3,500
GHMC: BBMP ratio	0.94	0.69	1.35	0.98	0.80	0.76	0.78		
BBMP property tax + Cess	474.17			1,305.25	1,733.56	2,095.70	2,158.70		
GHMC: BBMP (with Cess) ratio	0.77			0.78	0.65	0.63	0.65		

Source: GHMC and BBMP budgets and accounts for various years.

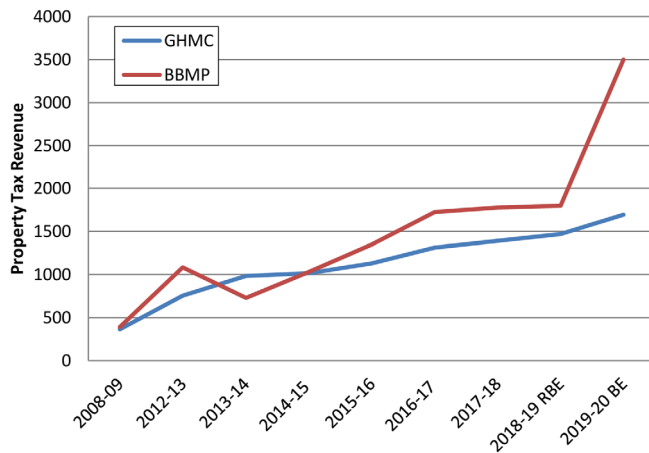


FIGURE 1 Time series plot of property tax revenue: GHMC and BBMP

or BBMP. Both the Corporations may consider having a robust plan of action to monetize unused or underused land and property so as to generate lump sum revenues or an annual stream of income.

GHMC may reintroduce the Self-Assessment of Property Tax scheme of 1999–2000 which yielded excellent results. A key problem with that scheme was that it did not provide for automatic revision of property tax linked to an inflation index. GHMC may adopt the BBMP formulation of 15% increase every 3 years or 5% increase annually. GHMC may consider shifting to UAV method to ensure that it benefits from the ongoing increases in property values.

The classification of Zones adopted in Bengaluru may perhaps be considered for adoption in GHMC. In Bengaluru, the basic value of a property set by the Registration Department is taken as the basis for the division of the city into zones. Mumbai has also gone for a similar model. However, currently, every Circle in GHMC is having its classification of properties and tax rates. This does not allow a comparison between Circles or overtime for different categories/sub-categories of properties. The “type of building” and “type of use” classifications in GHMC also need to be rationalized—made simple as in Bengaluru.

GIS mapping of properties may be taken up as was done in Bengaluru. While mapping properties, property tax, water charges, electricity charges, trade licensing, advertisement tax, public health institutions, town planning, shops and establishments, registration and stamps and commercial tax databases may be linked seamlessly.

BBMP collects different types of cesses: health cess at 15%, beggary cess at 3%, library cess at 6% and SWM cess linked to plinth area of the building. In fact, BBMP intends to collect SWM cess of Rs.120 crores in 2019–2020. There is a proposal in BBMP to levy SWM cess at 15% of property tax. GHMC may consider a SWM cess to ensure that instruments such as property tax—conservancy tax component, bulk garbage collection charges, SWM cess and tipping fee for sanitary landfill sites together are able to meet the cost of street cleaning, garbage removal and sanitary disposal of waste. The BBMP has improved performance of property tax significantly in recent years. However, it may revisit the present SAS to make it simpler, without artificial restriction on the revised tax.

VLT is a major local tax in many countries outside India. It is a separate tax in GHMC. However, the collection performance of the tax in GHMC is not up to mark. The BBMP could also collect VLT as vacant lands come under the definition of property. Generally, Latin American countries impose a tax on vacant land at a rate higher than that on built-up property to prevent speculation in urban land market and promote land development and housing. This fact may be kept in mind while fixing VLT rate.

7 | LESSONS AND DIRECTIONS FOR REFORMS

Despite the reforms attempted by the Indian cities, the results are not as expected. The reasons for the sub-optimal results, are rooted in the very form and nature of reforms attempted in the Indian Cities. Many of the Indian cities are still following the rental value method, which limits the scope of generating higher revenues from property taxes. Under the rent control regime, property taxes based on the rental value method are underestimated figures. There can be a significant difference between market value and rental value; especially when properties are not put to “highest and best” use. Vacant lands cannot be taxed under this method because they generate no rent.

The UAM is also laced with several disadvantages. To begin with, the size of a property is not an appropriate measure of the benefits drawn from the provision of civic services. A better proxy for the benefits drawn is the value of the property. The area-based method is criticized for being unfair to low-income groups. The reason is that in a specific zone there are high-value as well as low-value neighborhoods and properties of the same size have to pay the same amount. Average household incomes are higher in high-value neighborhoods than in low-value neighborhoods. Thus, it is considered regressive. Older houses with large floor area may be in a bad shape, but such structures are also subjected to relatively high taxes. Due to certain changes like a new transit facility or a new school, the value of a zone increases. However, such increases do not reflect in higher property tax revenue due to the lack of proper revision of property values. Over a while, it results in an iniquitous assessment system. Allocation of shared facilities like lobby, common entrances and exits, halls etc. among the owners is yet another problem.

The UAV method may be critically evaluated. The method does not seem to be yielding desirable results in the case of nonresidential properties. Although unit value may be easier to administer for single-family residential properties, it is difficult to use for multi-residential rental, residential condominium, commercial and industrial properties (Bird & Slack, 2004). Such properties are highly heterogeneous and the method of “averaging” inherent in the UAM may be leading to the subsidization of high-end commercial properties and penalization of those at the lower ends. Larger and more prosperous cities are not necessarily adopting higher unit area rates. Commercial properties in wealthier cities are not necessarily paying property tax at higher rates than less well-off cities.

UAM rates are not revised from time to time. This has led to a lack of buoyancy in the collection of property tax in all cities. Unit area rates have not kept pace with the rise in land and property values due to urbanization and economic growth. This means that Indian cities are not able to capture these gains and are foregoing important revenues. There is no built-in provision under the UAM to index property tax to inflation.

Even the self-assessment method is not free from drawbacks. Compliance and litigation are two issues associated with self-assessment. If all the owners do not comply then it is difficult to determine the number of taxpayers or taxable properties. Generally, random sampling is adopted to verify if the self-assessment forms submitted reflect the tax liability accurately. For example, in Bengaluru, up to 10% of the returns filed are verified randomly. There may be cases of underestimation of tax liability in the absence of property inspection by qualified personnel. It is understood that without a reliable verification technique, it is not possible to encourage people to tax themselves. Inaccurate assessments and underestimation can result in significant loss to municipalities by eroding the tax base.

7.1 | Directions for reforms

With a property tax-GDP ratio of 0.16% at present, the potential of property tax in the country remains grossly under-exploited. Mathur et al. (2009) suggests that property tax-GDP ratio in India has the potential of increasing to 0.8%. This calls for an agenda of property tax reforms in India to be pursued with conviction, commitment and consistency. In this regard, the principles of urban public finance, good international practices and lessons from experiments with unit area-based property taxation in cities such as Hyderabad and Bengaluru provide useful directions for reforms in property tax in India. Slack and Bird (2015) have identified the major impediments to property tax reforms. Some of the obstacles relevant in the Indian case are discussed below:

- **Salience:** Property taxes are usually paid in one or two large tranches in a year and have high visibility, unlike other taxes. Being highly visible, they incite resistance among the taxpayers in the absence of proper service delivery.
- **Liquidity:** Homeowners income may not be perfectly related to property tax liability. People may be “property-rich but cash poor.”
- **Regressivity:** Housing consumes a major portion of a poor household's income. Some evaluation techniques are regressive and face opposition from citizens.
- **Inelasticity:** Property taxes are not very elastic. Unless the tax base or rate is changed, property taxes do not increase automatically with growth.
- **Presumption:** Property tax is highly presumptive because there may not be a consensus regarding the tax base. It is based on the value of a property, which may not be very clear unless the property is sold.

Developing the property tax reform strategy calls for looking at all the elements in the property tax equation:

$$R = t \times c \times v \times e \times (B - E)$$

As the equation shows, property tax collection by a municipality can be raised by increasing B , e , v and c and decreasing E . The first step in property tax reform in a city is to estimate these variables and make realistic projections for them. This can be done by adopting benchmarking, referring to state, national and international best practices. Maintenance of a robust, online property tax base is thus a basic requirement. The inadequacy of data needs to be addressed by adopting a GIS-enabled Management Information System (MIS) or GIS-enabled MIS. Bengaluru provides a good example of a comprehensively designed property tax database system.

The ideal form of property valuation is the capital value method in which the value of the property is the same as its market value. However, this method has not been adopted in India. Even Mumbai which has attempted the capital value method is not having a firm mechanism in place. Property tax can be split into a land component and a building component. The land component should be evaluated based on the capital value method. The building component should be valued according to the civic services consumed by it. A composite city services tax should be levied meant for meeting the cost of collective services for which the levy of user charge is not feasible. Every municipality should publish an annual report on the cost of service delivery under different heads like water supply, street cleaning, public lighting and so on. This will help to study the relation between the cost of delivering services and the resources mobilized through user charges and benefit taxes. Services should be segregated to different kinds based on the possibility to identify the benefits and beneficiaries. Wherever benefits and beneficiaries can be identified, user charges should be levied. For example, water user charges. Other services where benefits cannot be exactly measured may be hooked on to other benefits. For example, sewer benefit charges can be determined by the water user charges.

In Bengaluru, owner-occupied properties are given a concession of 50% despite using the same level of services as rented properties. Such a practice should be avoided since it widens the gap between resources generated and costs of service delivery. In accordance with the 14th Finance Commission recommendations if state government grants concession to any property under the jurisdiction of local government, then they need to be properly compensated.

The value of a property increases over a period of time due to city economies. However, the UAM fails to take into account such increases. This is coupled with an increase in the cost of service delivery and worsens the financial health of ULBs over time. There should be a regular revaluation of property values. Pending such revaluations, the UAM rates should be at least indexed to inflation.

As property tax is a highly visible tax and high rates are vehemently resisted, low tax rate and expansion of tax coverage are the desirable directions for property tax reforms. All major properties, especially vacant and under-used lands, additions and alterations to

the property and unauthorized constructions ought to be brought to the tax base. Unauthorized constructions may be made to pay service taxes or charges exceeding the property tax payable for similar properties since they benefit from municipal services. The inadequacy of data needs to be addressed by adopting a GIS-enabled MIS.

Transparency is the key to enhance property tax collection. Tax bills should be reliably delivered; taxpayers' inquiries must be heard and responded to by the administrators. Formal appeals should be promptly processed and those who fail to make timely payment of taxes must be appropriately followed up. Taxpayers will feel taxation is fair only when they understand how the calculation is done and their tax amount is equal to their neighbors with similar properties. The willingness to pay taxes will increase if they see a connection between the taxes paid and the services received.

8 | CONCLUSION

The importance of property tax for municipalities manifests itself in the form of huge revenue potential. It represents the autonomy and strength of local "self-government" and participatory democracy. It has tremendous potential to raise revenues for city services and development. However, the tax has been grossly neglected by cities in India for decades. Property tax has been subjected to under-exploitation due to systemic problems as well as inefficiencies in municipal tax administration. Property tax collection in India has not kept pace with the demands of urbanization and economic growth.

This paper suggests that a comprehensive approach to property tax reforms must address systemic design as well as collection-related issues. A system without collection is meaningless and collection is not sustainable without a proper system in place. The systemic reforms require a robust regulatory framework which covers the various dimensions of the tax base, tax rate, tax liability, property valuation, revaluation, exemptions, billing, collection and dispute resolution. Professionalization of the tax administration with expertise, technology, tools, GIS mapping and MISs is also required. Seamless integration of multiple databases can improve record-keeping and reduce tax evasion. E-collection of property tax: online and through computerized kiosks, service centers or banks, as in Hyderabad and Bengaluru, can save a lot of time and effort. Improved collection mechanism is the key to a well-functioning property tax system.

At present, property tax is the only major municipal tax and its reform is mandatory to pull Indian cities out of the "rich city-poor city government" phenomenon. Property tax reforms will bring with it revenues to undertake planned urban infrastructure development projects, apart from meeting the costs of collective civic services. Cities have agglomeration economies and this leads to a substantial increase in land and property values, rents, number of commercial properties etc. If property tax is designed properly and collected efficiently then it can prove to be a revenue-productive and buoyant tax to finance India's urban transformation.

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Intergovernmental transfers to urban local bodies in India

Issues and directions for reforms

Shibani Mishra, Alok Kumar Mishra and Prerna Panda

Introduction

Indian municipalities are amongst the weakest globally in terms of access to resources and fiscal autonomy in relation to their mandates. The precarious state of municipal finances in the country is a cause of serious concern as urbanisation is increasing, and so too is the contribution of cities to Gross Domestic Product (GDP). Indian cities are the drivers of economic growth as seen elsewhere in the world. In 2007, 62–63 per cent of the country's GDP was generated by cities and towns, with an estimated 3 per cent of geographical area and 30 per cent of the population. This contribution is projected to rise to 75 per cent by 2021 (Planning Commission, 2008). In this projection, urban areas will generate 70 per cent of net new jobs through 2030. About 80–85 per cent of India's tax revenues will come from cities in the next two decades (McKinsey, 2010). However, unless cities are in a position to meet the 'backlog', 'current' and 'growth' demands of households and firms for civic services and infrastructure, they will not be able to sustain their contribution to growth, employment and public finance for socio-economic development, including rural development and poverty alleviation. This consideration alone underscores the importance of strengthening the financial position of Indian Urban Local Bodies (ULBs) through meticulous reforms. The rich literature in fiscal federalism, starting with Tiebout (1956), Musgrave (1959) and Oates (1972) and in urban economics, including Henderson (1974), Duranton and Puga (2004), Rosenthal and Strange (2004), Brueckner (2011) and Glaeser (2011) present lessons for designing reforms, apart from practices followed internationally.

Intergovernmental transfers to ULBs constitute an important source to finance city infrastructure and services in both developed and developing countries. Such transfers take the form of sharing the tax base, tax yield and general or special revenues of higher levels of government with local bodies. They are often built into the constitutional framework of fiscal federalism in countries. They have a significant importance in the framework of urban public finance. The key arguments in favour of intergovernmental transfers to ULBs include correcting for vertical and horizontal imbalances; compensating municipalities for inter-jurisdictional spill-overs of benefits and costs of public services; funding national goals and priorities including merit goods; core infrastructure facilities impacting growth, human development

and poverty alleviation and enhancing the efficiency in collection of taxes. In the Indian context, vertical imbalance is deeply rooted in the very structure of fiscal federalism; horizontal imbalance is also conspicuous as a result of many state-specific reasons, including historic, geographic and economic factors. Core urban infrastructure needs to be developed to catalyse the agglomeration of externalities and growth. The reasons which justify fiscal transfers from the central government to state governments also call for intergovernmental transfers to municipalities. Within India's current framework of fiscal federalism, intergovernmental transfers to municipalities will continue to play an important role in financing urban infrastructure and services.

While the theory and practise of intergovernmental transfers to local bodies underscore the importance of objective principles and criteria for the design of such transfers, the systems practised in India are largely *ad hoc*. They are in a highly unsatisfactory state (Mathur, 2013). Even after two and half decades of enactment of the historic Constitution (74th Amendment) Act 1992, municipal corporations and municipalities continue to have a gross imbalance between their finances and functions. In many states, they even depend on the state government for disbursing staff salaries and pensions, and discharging their most basic functions. India is unique in that its Constitution provides for two review channels to address the problem of responsibility-revenue mismatch in local bodies – the State Finance Commission (SFC) and the Central Finance Commission (CFC). However, the institutions of SFCs and CFC have not been able to make the desired impact on municipal finances. India is far from an objective, formula-based, efficient and equitable structure of fiscal transfers to local bodies. The issues of intergovernmental transfers to ULBs in India are closely linked with the country's fiscal federalism framework.

This research suggests that the country needs a robust municipal finance framework, including 'own' taxes, sharing of tax base or tax yield at state level, sharing of the divisible pool of taxes at central level and a partnership-based approach to finance urban infrastructure. We suggest that a statutory sharing of at least 25 per cent of state Goods and Services Tax (GST) with urban local bodies could perhaps be the most appropriate alternative to strengthen municipal finance in the present context. The intergovernmental transfer system in vogue needs to be reformed. The design of such a transfer will be critical for its success. An objectively determined intergovernmental transfer formula with weights assigned to fiscal needs, fiscal capacity and fiscal effort could, apart from meeting the grant objectives, ensure predictability, a key factor necessary for any transfer programme to be effective. SFCs may consider formula-based sharing of a state's own tax, as was the case with the third SFC of Karnataka. The Fifteenth CFC may significantly contribute to the development of a robust municipal finance framework, including intergovernmental transfers in the GST era based on the 'principles' of public finance. India needs to shift from the present *ad hoc* system of city financing to a robust framework rooted in theory and international practice of city financing in the interest of economic growth and resource mobilisation for socio-economic development.

The aim of this research is to develop a foundation paper on the theoretical and practical issues of reforming intergovernmental transfers to ULBs in India and suggest directions for action. This chapter recognises that reforms in the system of fiscal transfers to municipalities need to be designed in the overall contexts of urban public finance and fiscal federalism in India. The research is guided by the limited data available on the transfers to local bodies.

To the best of our knowledge, the present research is unique in its approach as it considers theory as well as practices so as to suggest reforms in the intergovernmental transfer system keeping in view the need to develop a vibrant third tier in India in the interest of economic growth. It is also useful for policy-makers at the state and central levels to implement reforms in the system of intergovernmental transfers to municipalities in India in the context of the new

GST regime. Our research pools together the practices and experiences from many sources, and examines their implications for Indian ULBs.

This chapter is organised as follows. The next section depicts the state of municipal finances in India; it focuses on the sources of municipal revenue and challenges of resource mobilisation. The third section provides a broad picture of intergovernmental transfers to ULBs, including transfers from state and central governments. It highlights the key issues in such transfers. The fourth section discusses the theory of intergovernmental transfers; it outlines the key principles for the design of fiscal transfers to local bodies in a federation. The fifth section deals with the approaches adopted by State Finance Commissions to address the precarious municipal finances in India. The sixth section presents the recommendations of the Central Finance Commissions regarding fiscal transfers to municipalities. The seventh section presents international practises on fiscal transfers to local bodies from higher levels of government. The penultimate section, by drawing lessons from theory and practise, presents a roadmap for reforms in the system of intergovernmental transfers to municipal bodies in India. The final section concludes.

State of municipal finances

The state of municipal finances in India is precarious. The 'own' revenue base of municipalities is not only narrow but also non-buoyant. It is also shrinking. Municipal fiscal autonomy is facing progressive erosion. In 2002–2003, 'own revenues' constituted 63 per cent of total municipal revenues in India. The share went down to 55.7 per cent in 2007–2008, and 51.6 per cent in 2012–2013. The share of tax revenues decreased from 37.2 per cent to 32 per cent between 2007–2008 and 2012–2013. Non-tax revenues accounted for an 18.5 per cent share in 2007–2008 and 19.7 per cent in 2012–2013. The share of central transfers increased marginally from 9.1 per cent to 9.5 per cent. That from state government sources went up from 32.4 per cent to 34.5 per cent between the two years. Key municipal fiscal autonomy ratios – including own revenues–GDP, own taxes–GDP and property tax–GDP – declined between 2007–2008 and 2012–2013. Table 18.1 depicts the trends in municipal revenues in India by source.

India is far behind both developed and comparable developing countries with regards to fiscal decentralisation to local bodies. Municipal expenditure–GDP ratio in India is estimated at 1.0 per cent in 2012–2013. In contrast, local expenditure–GDP ratios in predominantly–urbanised Organisation for Economic Co-operation and Development (OECD) countries in 2010 were as follows: Belgium (7.0), Germany (7.9), Austria (8.2), France (11.8), United Kingdom (14.0), Italy (15.9), Finland (22.6), Sweden (25.1) and Denmark (37.3). The ratio of municipal revenue to GDP in India is estimated at 1.03 per cent for 2012–2013 – compared to Poland (4.5), Germany (7.3), South Africa (6.0), Brazil (7.4), United Kingdom (13.9), Austria (7.8), Italy (15.3), Norway (14.2), Denmark (37.1) and Finland (22.4) (Mishra and Mohanty, 2018). Municipal revenue–GDP ratio in India declined from 1.08 in 2007–2008 to 1.03 in 2012–2013 (Mishra, 2017). In contrast, local revenue–GDP ratio in many OECD countries in 2010 exceeded 6 per cent, with the figure at 37.1 per cent in Denmark (Table 18.2).

Fiscal transfers to municipalities

Fiscal transfers to ULBs in India come from both the state and the centre. These were artificially divided into plan and non-plan grants in the past. Plan grants included centrally sponsored schemes, Planning Commission dispensations and state plan programmes. Non-plan grants cover (i) assigned revenues and compensations from state government; (ii) grants from state government

Table 18.1 Trends in municipal revenues in India

Sl. No.	Sources of revenue	2007–2008		2012–2013	
		Total (Rs. Crore)	% of total municipal revenue (%)	Total (Rs. Crore)	% of Total Muni cipal Revenue (%)
A. Own sources					
1.	Total taxes	18,366	37.20	30,912	32.00
	Property tax	8,159	16.53	15,110	15.64
	Other taxes	10,207	20.68	15,801	16.35
2	Non-taxes	9,134	18.50	19,002	19.70
	Total own source revenues	27,501	55.70	49,913	51.60
B. Other sources					
1	Government of India transfers	3,515	7.10	5,387	5.60
2	Central finance commission transfers	986	2.00	3,760	3.90
3	State assignment/devolution	9,342	18.90	18,537	19.20
4	State grant-in-aid	6,653	13.50	14,809	15.30
5	Others	1,355	2.70	4,234	4.40
	Total other source revenues	21,851	44.30	46,727	48.40
		49,351	100.00	96,640	100.00
C. Total revenues					
	Gross Domestic Product at Factor	4,582,086		9,388,876	
	Cost in Current Prices (GDP)				
	Property tax as % of GDP		0.18		0.16
	Own taxes as % of GDP		0.40		0.33
	Own revenues as % of GDP		0.60		0.53
	Govt. of India/Central Finance Commission transfers as % of GDP		0.10		0.10
	State Government/State Finance Commission transfers as % of GDP		0.35		0.36
	Municipal revenue as a % of GDP		1.08		1.03

Source: 2007–2008 to 2012–2013; ASCI (2014) – based on data furnished by state governments to the Fourteenth Finance Commission of India; Indian Public Finance Statistics 2013–2014.

Table 18.2 Distribution of local government revenues: Select OECD countries 2010

Country	Local government revenues as % of GDP	Taxes and user fees as % local spending	As % of total local government revenues			
			Taxes	User fees	Transfers	Other revenues
Austria	7.8	68.7	62.0	10.2	18.7	9.1
Czech Republic	11.6	55.3	40.7	16.1	41.7	1.5
Denmark	37.1	39.1	34.3	4.9	57.5	3.2
Estonia	10.4	54.6	44.6	9.0	44.6	1.8
Finland	22.4	66.9	46.2	21.4	29.6	2.8
Germany	7.3	51.3	40.0	15.5	40.6	3.9
Hungary	11.5	28.6	21.2	10.2	67.1	1.5
Ireland	6.7	23.7	13.4	9.2	67.2	10.1
Italy	15.3	45.3	40.1	7.0	50.9	2.0
Luxembourg	5.2	49.2	31.2	18.1	49.2	1.5
Norway	14.2	50.1	41.1	12.7	42.2	4.0
Portugal	6.3	40.7	34.3	12.6	43.2	9.9
Slovenia	9.9	51.3	42.0	11.4	45.3	1.3
Spain	6.4	47.5	45.1	8.9	44.4	1.6
United Kingdom	13.9	25.4	12.7	12.9	71.8	2.6

Source: OECD (2012): 'General Government Accounts: Public Finance and Employment: Revenues', *OECD National Accounts Statistics*

based on the State Finance Commission (SFC) recommendations and (iii) grants from the central government based on the Central Finance Commission (CFC) recommendations.

Table 18.3 shows the major sources of assigned revenues and compensations and Table 18.4 shows general and specific-purpose transfers to municipal corporations in India. As the tables indicate, there are significant interstate differences in the pattern of intergovernmental transfers.

Table 18.3 Major sources of shared revenues and compensations in municipal corporations of India

Name of state	Name of municipal corporation	Shared municipal taxes/compensations in lieu of taxes
Gujarat	Ahmedabad	Entertainment tax, octroi compensation
Karnataka	Bengaluru	Entertainment tax, surcharge on stamp duty, octroi compensation, motor vehicle tax compensation
Maharashtra	Greater Mumbai	Non-agricultural assessment tax, entertainment tax
Orissa	Bhubaneswar	Compensation in lieu of octroi, duty on transfer of property, entertainment tax
Punjab	Ludhiana	Excise auction amount, excise tax on alcohol
Tamil Nadu	Chennai	Duty on transfer of property, entertainment tax, assignment from state tax revenues
Telangana	Hyderabad	Surcharge on stamp duty, Profession tax, entertainment tax, octroi compensation, property tax compensation, motor vehicles tax compensation
West Bengal	Kolkata	Motor vehicles tax, entertainment tax

Source: Budgets of municipal corporations

Table 18.4 Major sources of general and specific transfers in municipal corporations of India

Name of state	Name of municipal corporation	General/specific-purpose transfers
Gujarat	Ahmedabad	Education grant, family planning grant, small savings grant
Karnataka	Bengaluru	Family planning scheme grant
Maharashtra	Greater Mumbai	Primary education grant, secondary education grant
Orissa	Bhubaneswar	Salary and dearness allowance grant, primary education grant, secondary education grant
Tamil Nadu	Chennai	Health grant, family welfare grant, flood grant
Telangana	Hyderabad	Per capita grant, road grant
Uttar Pradesh	Kanpur	Salary grant, education grant, medical grant, road grant
West Bengal	Kolkata	Grant for increased cost of pay, dearness allowance grant, grant for payment of dues to Kolkata Electricity Supply Corporation, pension relief

Source: Budgets of municipal corporations

These have evolved over time in an *ad hoc* fashion – without regard for the principles of inter-governmental transfers.

Fiscal transfers from central government sources accounted for 9.5 per cent of municipal revenues and transfers from state government sources, 34.5 per cent on an all-India basis in 2012–2013. The pattern of fiscal transfers, however, varies drastically between states and cities. Table 18.5 presents data on the distribution of municipal revenues by source in 18 states of India in 2012–2013. Except Maharashtra and Punjab, the dependency of ULBs on intergovernmental transfers is very substantial, exceeding 70 per cent in Himachal Pradesh, Jammu and Kashmir, Kerala, Bihar, Madhya Pradesh, Uttarakhand, Odisha and Karnataka. The Maharashtra case is explained by the presence of Octroi in Mumbai and Local Body Tax (LBT) in other municipal bodies in 2012–2013; the LBT has since been abolished. In the case of Punjab, the municipalities have access to excise revenues.

Like municipal ‘own’ revenues, the system of municipal ‘transfer’ revenues in India remains grossly deficient. Transfer revenues constituted only about 0.46 per cent of India’s GDP in 2012–2013, comprising 0.36 per cent from state sources and 0.10 per cent from central sources. In contrast, transfers to local bodies amounted to 21.3 per cent of GDP in Denmark, 9.9 per cent in the United Kingdom, 7.8 per cent in Italy, and 6 per cent in Norway.

In contrast to the estimated municipal revenue–GDP ratio of about 1 per cent, municipal own tax–GDP ratio of 0.33 per cent and municipal own revenue–GDP ratio of 0.53 per cent, the central own tax–GDP ratio stood at 10.41 per cent and state own tax–GDP ratio at 6.83 per cent in 2012–2013. The combined central and state taxes–GDP ratio in 2012–2013 is estimated at 17.25 per cent (Table 18.6). While the municipalities in India are statutorily required to balance their budgets, the central and state governments can resort to debt and have budget deficits. In fact, the combined central and state government expenditures–GDP ratio for India as a whole stood at 26.62 per cent in 2012–2013.

These comparisons amply demonstrate that municipal finances are in a deplorable state. This is a cause of serious concern as urbanisation is increasing and so too is the contribution of cities to GDP. It calls for urgent reforms and concerted actions at many levels, including the State

Table 18.5 Distribution of municipal revenues by source in India (%): 2012–2013

Sl. No.	State	Taxes	Non-Taxes	Central Transfers*	State Transfers**	Others
1	Andhra Pradesh	33.5	24.3	7.5	34.7	-
2	Assam	14.9	14.7	11.9	23.3	35.2
3	Bihar	13.2	5.2	28.4	52.5	0.8
4	Gujarat	18.8	12.1	5.4	57.1	6.5
5	Haryana	18.5	24.3	14.9	37.6	4.9
6	Himachal Pradesh	-	-	55.8	44.2	-
7	Jammu & Kashmir	6.1	5.5	31.5	56.9	-
8	Karnataka	20.2	8.8	17.8	53.2	-
9	Kerala	9.8	5.9	39.1	45.1	-
10	Madhya Pradesh	10.0	8.6	8.8	69.2	3.4
11	Maharashtra	53.2	29.9	3.8	9.8	3.4
12	Odisha	10.2	9.2	41.4	33.7	5.5
13	Punjab	69.2	16.8	8.9	2.8	2.3
14	Rajasthan	7.0	32.1	12.0	47.7	1.3
15	Tamil Nadu	21.6	12.0	6.6	56.6	3.2
16	Uttar Pradesh	10.8	5.6	10.4	54.7	18.6
17	Uttarakhand	5.9	3.4	7.6	69.3	13.8
18	West Bengal	20.1	19.1	13.7	46.2	0.8
	All India	32.0	19.7	9.5	34.5	4.4

Source: ASCI (2014) – based on data furnished by state governments to the Fourteenth Finance Commission of India.

* Government of India transfer + Central Finance Commission transfer

** Assigned revenues from state governments + devolution through State Finance Commission + state government grants-in-aid

Table 18.6 Central and state tax–GDP ratios 1950–1951 to 2015–2016

Ratio	Rs. Crore					
	1951–52	1991–92	2002–03	2007–08	2012–13	2015–16 BE
Gross central tax–GDP ratio	4.63	10.00	8.51	11.89	10.41	10.27
State share in central taxes–GDP ratio	0.48	2.55	2.21	3.08	2.96	3.75
Net central tax–GDP ratio	4.15	7.44	6.30	8.81	7.46	6.52
State own tax GDP ratio	2.05	5.32	5.53	5.56	6.83	6.87
State total taxes GDP ratio	2.53	7.87	7.75	8.64	9.79	10.63
Total tax–GDP ratio	6.69	15.31	14.05	17.45	17.25	17.15

Source: Indian Public Finance Statistics 2015–2016.

Finance Commission, Central Finance Commission as well as municipality, state and central governments. In India – a large country and one that is under-urbanised – the ULBs are bound to play a crucial part in the structural transformation of the country. India needs to have a vision of fiscal decentralisation and take all the necessary steps to achieve it.

Fiscal transfers to municipalities: Theory

The need for intergovernmental transfers primarily arises due to local bodies not having access to buoyant ‘own’ revenue base commensurate with their expenditure needs.

Why intergovernmental transfers?

Intergovernmental transfers to local bodies in a federal country like India are necessary to meet a number of objectives. These include (i) correction of vertical imbalances between tiers of government, (ii) correction of horizontal imbalances between jurisdictions in the same tier, (iii) internalisation of intergovernmental externalities and addressing inter-jurisdictional spillovers of benefits and costs, (iv) encouragement of activities of national importance such as economic growth, human development and poverty alleviation and (v) establishment of an efficient and equitable tax system with centralisation of tax collection to exploit scale economies in administration and revenue sharing (Oates, 1972).

Types of intergovernmental transfers

Internationally, three principal mechanisms are adopted to address the functions–finances mismatch for local bodies. These are (i) the sharing of the tax base; (ii) sharing of tax yield; and (iii) sharing of revenue. Transfers can be ‘general purpose’ or ‘special purpose’.

Sharing of the tax base

The sharing of the tax base provides local bodies with an access to buoyant tax bases of higher levels of government. Typically, taxes are collected at a higher level and municipalities are allowed to ‘piggyback’ or levy a ‘city surcharge’ on such taxes. The proceeds are shared between levels of government depending on prior arrangements. This method aims at according the financial autonomy to local bodies.

Sharing of tax yield

In the case of tax yield sharing, the higher levels of government (centre or state) collect the shared taxes and assign a predetermined percentage of the collected amount to municipalities. Tax-by-tax sharing is widely practised internationally. This promotes collection efficiency, while ensuring transparency and predictability in transfers.

Sharing of revenues

Revenue-sharing enables municipalities to have access to a predetermined share of state or central government revenues as a grant. Usually, not all revenue sources of a higher level of government are shared with ULBs. Only some sources are drawn into a distributional pool and a percentage of the same devolves on local bodies. The advantage of revenue-sharing lies in that transfers to municipalities automatically increase as the yields from revenue sources increase due to economic growth.

Revenue-sharing instruments are divided into general-purpose or unconditional or non-earmarked, and specific-purpose or conditional or earmarked grants.

General-purpose transfers

General-purpose or unconditional transfers take the form of budgetary support. They aim to preserve the autonomy of local government. They increase the resources of the recipient and may be used to provide any local service, or be used to reduce local taxes.

Specific-purpose transfers

Specific-purpose transfers (also called conditional transfers) aim at incentivising local bodies to undertake pre-defined activities. They specify the expenditures eligible for grant financing

(input-based conditionality): capital expenditures, operating expenditures, or both. Some transfers also require the attainment of specified results in service delivery (output-based conditionality).

Matching and non-matching transfers

Conditional grants can be matching or non-matching. Matching grants require municipalities to finance a certain part of expenditures from their own revenues. Non-matching grants provide funds without any matching by the recipient government, so long as amounts are spent for the specified purpose. Conditional non-matching transfers are called 'block' grants when used to provide broad support in a general area of expenditure (e.g., health, education, transport, etc.) rather than a specific programme.

Open-ended and closed-ended transfers

Matching transfers can be open-ended or closed-ended. In open-ended transfers, the grantor government matches whatever resources a municipality provides. In closed-ended transfers, the grantor matches the funds of the recipient only to a specified limit.

Principles of intergovernmental transfers

Box 18.1 presents some guidelines for the design of intergovernmental transfers to local bodies, based on the literature on public finance. As expected, some criteria are likely to conflict with others. Rarely will any fiscal transfer programme subscribe to all the principles advocated by theory. In particular, a trade-off exists between the autonomy of the local body and its accountability to the grantor government and the public for utilisation of grant funds. In this regard, it is the grant objective that should guide the grant's design.

Box 18.1 *Principles of design of intergovernmental transfers to local bodies*

Clarity in objectives: Grant objectives should be clearly and precisely spelt out to guide the design of the grant programme.

Autonomy: Local governments should have complete independence and flexibility in setting their priorities, and not be constrained by the categorical structure of grant programmes.

Revenue adequacy: Local governments should have adequate revenues, including intergovernmental transfers to discharge their assigned responsibilities.

Efficiency: The grant design should be neutral with regard to the choices by local governments for the allocation of resources to different sectors or types of activities.

Equity: Allocated funds should vary directly with fiscal needs and, inversely, with the fiscal capacity of each jurisdiction.

Predictability: The grant programme should ensure predictability and stability in the revenues of local governments so that they can budget and plan for future expenditures.

Simplicity: The grant allocation should be based on objective factors over which individual units have little control. The formula should be easily understood by all stakeholders.

Incentive: The grant design should incentivise sound fiscal management and resource mobilisation effort. There should be no specific transfers to finance local government deficits or bailout non-performing entities.

Accountability: The grantor must be accountable for the design and operation of the grant. The grant recipient must be accountable to the grantor and citizens for financial integrity, service performance, achievement of grant objectives and adherence to grant conditionalities.

Sources: Bird and Smart (2002); Shah (2013), authors

AU: Please indicate the text "authors" in the source.

Role of the State Finance Commission

Provision for the organisation of State Finance Commissions (SFCs) every five years is made by the Constitution of India in Articles 243(I) and 243(Y). Similar in its role to the Central Finance Commission (CFC), the objective of the SFCs is to evaluate the financial position of the local bodies, both rural and urban, and recommend the framework or degree of resource devolution to local governments from the state governments. The primary role of SFCs is to review the processes and principles behind the revenue system and resource distribution between the state and local bodies. They review the resources, taxes, duties, tolls, fees to be assigned to or raised by local governments. They also evaluate and make recommendations regarding the grants-in-aid to be made available to the local bodies from the state's consolidated fund. The SFCs are further vested with the responsibility of recommending reforms or directions to strengthen the local bodies financially.

Based on a study of reports of the first-, second-, third-, fourth- and fifth-generation SFCs, the SFC recommendations can be divided into three broad groups: (i) global sharing, i.e. sharing a percentage of state revenues with local bodies; (ii) assignment or sharing of a percentage of specific taxes; and (iii) *ad hoc* or lump-sum transfers. SFCs of states like Tamil Nadu, Karnataka, Andhra Pradesh and Madhya Pradesh have recommended global sharing. In Maharashtra and Punjab, SFCs have recommended the sharing of specific taxes. SFCs of Gujarat, Odisha and most other states have recommended *ad hoc* transfers, adopting a gap-filling approach. Most SFCs have not paid attention to reforms in the system of municipal finance, including intergovernmental transfers. As they have not relied on a normative analysis, the transfers recommended by them turn out to be highly unpredictable as a source of municipal finance.

Almost all SFCs have stressed that local bodies need to mobilise their own resources. They have suggested measures to incentivise local bodies to promote resource mobilisation. Incentives in the forms of matching grants, performance grants or cash awards may be given to local bodies. SFCs have further recommended the formation of IT-enabled databases on municipal finances and regular updating of the same, for informed decision-making. Additionally, transparency can be ensured by providing public access to this database.

SFCs were required to address the revenue-responsibility mismatch among the state governments and ULBs. However, after two and half decades of the enactment of the 74th Amendment Act, this objective is yet to be fulfilled. While prior to the Act, the resource distribution system between state and local bodies was unsystematic, subjective and dependency-promoting, most SFCs have failed to address these shortcomings. Transfers recommended by many SFCs are not based on robust principles. They are inadequate apart from being poorly designed and targeted, leading to large unfunded mandates to municipalities.

Due to the vast differences between states with regard to the timing of constitution of SFC, submission of report by SFC, 'action taken' report presented by the state government to the legislature, approach adopted by SFC, nature of recommendations and many other factors, the CFCs in the past were not in a position to make recommendations based on the SFC reports.

Hence, suggestions regarding *ad hoc* grants for local bodies prevailed. A study of CFC and SFC reports and research papers on the subject leads to the following observations:

- **Constitution of SFCs**
The constitution of SFC has been time-consuming due to the lengthy process followed by state governments, with many stages and each stage involving delay. There is a lack of synchronisation of the periods covered by state and Central Finance Commission reports.
- **Composition of SFCs**
The Constitution of India does not lay down the guidelines regarding the composition of the SFC. In some states, serving officers of the state government machinery were inducted into the SFC. This renders the recommendations for devolving state resources to local bodies biased, and often superficial.
- **State support to SFCs**
Many states have not taken action to provide logistic support, including qualified staff, to make the SFC fully operational. The lack of updated and reliable data on the receipts, revenue and expenditure of the local governments adversely affect the studies and recommendations of SFCs.
- **Approach towards study**
Most SFCs in the past adopted a gap-filling approach. They did not dwell on the key principles of municipal finance and state-local fiscal transfers. The criteria recommended for the distribution of state resources to ULBs vary between SFCs reports. While some are simple others are complex; some are straightforward and subjective while others use formula-based measures. SFC reports are not completely transparent. Neither the SFC reports nor the data provided by state governments allow for quantifying the supplementary resources to be distributed to local bodies. Presently, there is no mechanism in place to allow the SFCs to verify the data related to the fiscal performance of local bodies. However, CFCs can cross-check the data related to the finances of state governments.
- **Typology of recommendations**
Not only the approach but also the recommendations of SFCs vary widely between states. They have not adopted comparable approaches to analyse municipal finances so as to enable the CFC to make recommendations. As they have not relied on a normative analysis, the transfers recommended by them turn out to be highly unpredictable as a source of municipal finance. This contrasts with the fact that CFC recommendations on centre states transfers are always based on objective formulae.
The Wicksellian Connection, which emphasises a close link between revenue-raising abilities and expenditure responsibilities, has been completely neglected by the SFCs. The Wicksellian Connection is instrumental in inducing fiscal responsibility. Impositions of a hard budget constraint and fiscal management dimensions have been overlooked. The budgetary and accounting processes of local bodies require a number of alterations. Multiple channels of devolution to local bodies exist, such as line departments, planning commissions, the State Planning Board, district agencies, members of parliament or member of legislative assemblies, centrally sponsored and state plan schemes, SFCs, CFC, etc. No attempt has been made to reduce the number of channels.
- **Action taken reports**
Significant divergence has been observed among the states in terms of submission of SFC reports as well as 'action taken' report, making it difficult for the CFC to derive meaningful inputs to make recommendations. Furthermore, only a few states accepted their SFC recommendations, implemented the awards and released funds as per such recommendations.

The implementation of SFC recommendations has also been adversely affected in the absence of coordination among the finance department and urban and rural affairs departments. The Twelfth Finance Commission made the following observations regarding the implementation of the SFC reports.

1. Several states failed to undertake a follow-up action regarding the recommendations of SFCs;
2. Recommendations were not brought into implementation and thus, met with a 'natural death' eventually;
3. Recommendations made to release additional resources were mostly disregarded;
4. Budgetary provisions on recommendations have fallen short;
5. Despite being enthusiastic to constitute SFCs initially, the states were reluctant in implementing the recommendations since they would have to undergo additional pressure financially.

Issues raised by SFCs

The chairpersons of SFCs had raised two categories of issues before the 14th Finance Commission. The first category included (i) setting up of an independent national agency for the support of a common platform for exchange of information between SFCs; (ii) designing simpler accounts and data formats; (iii) studies on governance issues with respect to local bodies; and (iv) supporting studies on standards of essential civic services to help future SFCs to assess the performance of local bodies in discharging their core functions. In the second category, the 2011 Census data was suggested for use while allocating grants for knowledge transfer and capacity enhancement. There was also a request by the SFCs for taking steps to sensitise the local bodies on the purpose of Finance Commission grants (RBI, 2016).

Successive SFCs have stressed the need for a reliable and up-to-date database regarding local government finances so as to be able to make informed suggestions. This requires compiling and auditing accounts.

A study of the SFC reports reveals that some SFCs did refer to laudable principles covering revenue-sharing, tax-sharing, general grants, special grants, financial management, etc. For example, the third SFC for Karnataka recommended 33 per cent of a state's own revenue receipts to be devolved to Panchayati Raj Institutions (PRIs) and Urban Local Bodies (ULBs) in the ratio of 70:30 based on a sound revenue-sharing principle. While there is a need to study the reports of all SFCs appointed so far to list out the principles they have referred to, a strong case also exists for looking at theories of public finance and international practices of municipal finances and transfers to draw lessons for the development of a robust system of intergovernmental transfers to ULBs in India.

Role of the Central Finance Commission

Following the provisions in the 73rd and 74th Amendment Acts, the Government of India has constituted the Central Finance Commission (CFC), starting with the 10th, with additional terms of reference for considering the recommendations of SFCs for devolving the state resources to local governments. All CFCs, excepting the 13th CFC, have recommended transfers to local bodies through state governments on ad hoc basis – on the grounds that data on local finances and SFC reports are not available. The Thirteenth Finance Commission broke new ground by linking recommendation to a percentage of the divisible pool of taxes (over

Table 18.7 Distribution of grants to states for urban local bodies: Criteria and weights (%) adopted by the Finance Commissions of India

	%			
	<i>Eleventh</i>	<i>Twelfth</i>	<i>Thirteenth</i>	<i>Fourteenth</i>
Population	40	40	50	90
Geographical area	10	10	10	10
Distance from highest per capita income	20	20	20	-
Index of decentralization	20	-	-	-
Index of devolution	-	-	15	-
Index of deprivation	-	10	-	-
Revenue effort	10	20	-	-
Finance Commission ULB grant utilisation index	-	-	5	-

Source: Eleventh, Twelfth, Thirteenth and Fourteenth Finance Commission Reports

and above the share of states) to be transferred to urban and rural local bodies as grant-in-aid through state governments, observing that the local bodies be allowed to benefit from the buoyancy of central taxes and the Constitutional design of supplementing the resources of panchayats and municipalities through grant-in-aid.

The grant-in-aid recommended for municipalities for 2010–2015 amounted to Rs. 23,111 crores. The Fourteenth Finance Commission did not choose to link grants-in-aid for local bodies to a formula. While recommending a quantum jump in the share of states in the divisible pool of central taxes from 32 per cent to 42 per cent, the Commission recommended Rs. 2,87,436 crores as grant-in-aid for local bodies, including Rs. 87,144 crores for municipalities.

As regards the distribution of CFC grants for ULBs between states, different CFCs have adopted different criteria and weights. These are summarised in Table 18.7.

A study of the CFC reports suggests that due to the limitations placed by the Constitution of India under Article 280, the CFCs could not recommend a formula-based share in the divisible pool of central taxes for ULBs. They did recommend some measures to augment the finances of municipalities. However, none of the commissions has dwelt upon a suitable architecture for organising municipal finances in India with a rightful place for central and state fiscal transfers therein.

Fiscal transfers to municipalities: Practices

Countries around the globe assign more expenditures than revenues to their sub-national governments. Vertical imbalance is built into their fiscal federalism. Intergovernmental transfers finance 59.5 per cent of sub-national expenditures in developing countries, 44.1 per cent in transitional countries and 50.3 per cent in developed countries (Alam, 2014). They accounted for more than 40 per cent of the revenues of the local government in 13 out of 15 OECD countries in 2010, the figure being more than 50 per cent for Denmark, Hungary, Ireland, Italy and the United Kingdom (OECD, 2012). As regards metropolitan cities, at one end of the spectrum, Addis Ababa, Tokyo, Pune, Seoul, Pretoria, Melbourne, Copenhagen and Busan finance more than 80 per cent of the budget with their own revenues. At the other end, 81 per cent of revenue in London came from national grants.

Transfers versus own revenues

Table 18.8 presents the picture of intergovernmental transfers versus own-source revenues in select metropolitan areas around the world.

The importance of intergovernmental transfers to ULBs varies between countries depending on their constitutions, contexts, policy priorities, historical evolution and other factors. Internationally, countries can be categorised into two groups in terms of their municipal finance regimes. In a large number of federal and unitary countries, the municipalities have access to high-yielding taxes like income tax and goods and services tax. In a small group of unitary countries like the United Kingdom, where property tax is the dominant local tax, municipalities receive substantial formulae-based grants from the central government. Paradoxically,

Table 18.8 Inter-governmental transfers versus own-source revenues in select metropolitan areas*

<i>Metro area</i>	<i>As % of total municipal revenues</i>				
	<i>Shared taxes*</i>	<i>General – purpose transfers</i>	<i>Specific – purpose transfers</i>	<i>Total transfers</i>	<i>Own – source revenues</i>
Addis Ababa	-	-	-	3.1	96.9
Bangkok	24.0	7.0	20.0	51.0	49.0
Berlin	39.1	18.3	21.9	79.3	20.7
Brussels	36.1	3.0	-	39.0	61.0
Beijing	29.2	16.6	5.2	51.0	49.0
Busan	3.0	2.0	13.0	18.0	82.0
Cape Town	-	20.0	-	20.0	80.0
Canberra	-	27.8	14.6	42.4	57.6
Copenhagen	-	7.0	10.0	17.0	83.0
Istanbul	65.0	-	5.0	69.0	31.0
Jakarta	46.3	-	-	46.3	53.7
London	-	25.6	53.0	80.6	19.4
Melbourne	-	0	0	14.2	85.8
Mexico City	-	38.0	32.0	70.0	30.0
Montreal	-	-	-	24.0	76.0
Prague	40.4	-	-	59.7	40.3
Pretoria	-	-	-	9.9	90.1
Seoul	0.8	-	-	9.1	90.9
Shanghai	32.9	24.7	1.5	59.1	40.9
Tokyo	-	-	-	5.7	94.3
Toronto	-	-	24.0	24.0	76.0
Washington, DC	-	12.0	14.0	26.0	74.0
Chennai	24.0	-	-	34.0	66.0
Delhi	17.9	-	-	26.9	73.1
Hyderabad	25.0	-	-	40.0	60.0
Kolkata	-	-	-	58.4	41.6
Mumbai	-	-	-	20.0	80.0
Pune	-	-	-	9.0	91.0

Source: Shah (2013, pp. 226, 230).

* Data pertain to the period 2001–2010

** May include tax-base sharing

municipalities in India have access neither to a broad-based basket of own taxes nor to a sizable pool of fiscal transfers from central and state governments through general or specific transfers.

Patterns of fiscal transfers

Tax base sharing is highly prevalent in the United States, Eastern Europe and East Asia, but almost non-existent in developing countries of Africa and Asia. Municipalities in the United States can resort to 'piggybacking' on state income, payroll and sales taxes. The Bangkok metropolitan area is empowered to levy origin-based surcharges on central taxes such as Value Added Tax (VAT), excise tax, specific business tax, liquor tax and gambling tax on horse races and gambling license fees. Taxbase sharing is also prevalent in Seoul and Tokyo. Tax revenue sharing is the most significant source of revenue in metropolitan cities of Europe and East Asia. The Bangkok metropolitan area receives a share of 5 per cent of the national personal income tax. In accordance with the Decentralisation Act, 1999, 18.5 per cent of VAT revenues are made available to local governments in Thailand based on a formula. Local governments in Jakarta receive, by origin, 12 per cent of personal income tax and 64 per cent of other taxes. They also get 12 per cent of natural gas and 6 per cent of oil revenues.

In OECD countries, approximately 50 of the grants provided by central governments to sub-national governments belong to the non-earmarked category. About 30 per cent of the earmarked grants are with matching requirements; the rest 70 per cent are non-matching transfers.

Determinants of fiscal transfers

The amount of fiscal transfers to local bodies in a country depends on (i) legal-institutional framework for determining and implementing transfers; (ii) size of distributional pool; (iii) formula for distribution of transfers; (iv) conditionalities for grant utilisation; and (v) mechanisms for compliance. In some countries, the legal-institutional framework is prescribed under the constitution or law. In others, transfers are handled through the annual budgetary process. The distributional pool is determined based on one of the following methods: (i) as a share of the grantor government's total revenues or pre-identified taxes; (ii) on *ad hoc* basis; or (iii) based on cost reimbursement. The distribution of transfers to eligible entities occurs on the basis of one of the following methods: (i) on derivation basis, i.e., retention of a share of taxes collected within the recipient's jurisdiction; (ii) formula-based sharing; (iii) based on cost reimbursement; (iv) subject to the specific design of transfer programme; or (v) *ad hoc*.

The formula for intergovernmental transfers

Most countries allocate some portion of intergovernmental transfers to municipalities on the basis of a formula to ensure objectivity, transparency and predictability of funds being made available to recipients. Fiscal capacity, fiscal needs and fiscal effort are the key ingredients of such a formula as discussed below:

Fiscal capacity

This aims at measuring the grant recipient's revenue capacity relative to expenditure needs, i.e. cost of providing a standardised basket of public goods and services. Revenue capacity is the potential revenue the jurisdiction can mobilise on its own by exploiting taxes, user charges and other revenue sources.

Fiscal needs

These are defined by the funding necessary to discharge the expenditure responsibilities assigned to a local government, adopting some standard levels of service or service level benchmarks.

Fiscal effort

Often used interchangeably with ‘revenue effort’ this is the degree to which a local government utilises the revenue sources assigned to it. Revenue effort reflects the extent to which any local body is exploiting its revenue-raising potential in relation to its revenue base.

In addition to these transfer distribution formulae sometimes include variables representing fiscal management, performance accountability and social objectives. In the United States, the municipalities have the authority to levy property tax, local option income tax, local option sales tax, excise tax, payroll tax, gasoline tax, hotel tax, and a number of impact taxes. Yet, they also receive 20–30 per cent of revenues through fiscal transfers from federal and state governments. Apart from property tax, municipalities in Brazil have access to revenues from state and federal value-added tax, service tax, federal income tax and federal financial transactions tax. In China the municipalities have access to property tax, business taxes, fixed assets capital gains tax, value-added tax, personal income tax, stamp taxes, resource taxes etc.

Not just developed countries, rather many developing countries also have far more robust systems of tax assignment and intergovernmental transfer systems than in India. Table 18.9 bears testimony to this.

*Table 18.9 Distribution of tax revenue sources of select metropolitan cities**

<i>Name of city</i>	<i>Year of data</i>	<i>Composition of municipal tax revenues (% of total)</i>
Barcelona	2009	Property tax (64.7); VAT share (12.0); sales tax (11.8); vehicle tax (8.6); construction tax (2.9)
Beijing	2009	Sales tax (39.3); corporation income tax (22.5); VAT share (9.4); individual income tax (9.3); property tax (8.1); deed tax (5.4); construction tax (3.7); stamp tax (1.7); vehicle tax (0.6)
Buenos Aires	2007	VAT share (78.5); property tax (9.0); vehicle tax (8.7); stamp tax (3.8)
Cape Town	2009	Utilities tax (68.2); property tax (31.8)
Chicago	2009	Property tax (39.3); state sales tax share (9.6); sales tax (8.5); utilities tax (8.3); state income tax share (8.2); gasoline tax (6.7); telecommunications tax (6.0); transportation tax (4.0); amusement tax (3.3); excise tax (2.7); hotel tax (2.0); other taxes (1.0)
Lima	2010	Property tax (58.8); vehicle tax (22.6); excise tax (8.3); gambling tax (7.9); other taxes (2.5)
Sao Paulo	2010	Sales tax (53.9); property tax (38.2); individual income tax (6.6); other taxes (1.4)
Tokyo	2008	Individual income tax (42.4); corporation income tax (23.9); excise tax (5.6); vehicle tax (2.0); other taxes (7.2)
Delhi	2010	Property tax (88.8); utilities tax (11.2)

Source: Martinez-Vazquez (2013), p. 204.

* includes both own and assigned tax revenues.

Reforming intergovernmental transfers

Not only do the ULBs in India have a narrow tax base, they also do not have access to a formula-based sharing in buoyant national and state taxes as in other multi-tier countries. India presents a peculiar case of progressive decline in the fiscal powers of municipalities in spite of increasing urbanisation and the rising contribution of cities to economic growth.

Table 18.10 presents a summary of recommendations of major official Committees and Commissions set up by the Government of India. These expert groups did recommend certain principles that subscribe to the theory of local public finance.

The High Powered Expert Committee Report (2011) examined the issues of revenue assignment to municipalities, including feasible alternatives to octroi. The HPEC proposed

Table 18.10 Recommendations of local finance committees and commissions in India

<i>Report of committee/commission</i>	<i>Principles recommended</i>
Local Finance Enquiry Committee, 1950	Sharing of motor vehicles tax, compensation in lieu of local taxes taken over by the state
Taxation Enquiry Commission, 1953–1954	Basic grant – to be such that after taking into account its own resources, the local body will have fairly adequate finances for discharging its obligatory and executive functions and specific conditional grants linked to specific services and local resource mobilization; sharing of motor vehicles tax
Committee on Augmentation of Financial Resources of Urban Local Bodies, 1963 (Zakaria Committee)	Grants for public health and amenities; sharing of motor vehicles tax and entertainment tax
Rural Urban Relationship Committee, 1966	Sharing of motor vehicles tax and entertainment tax; allocation of receipts from fines to local bodies
Municipal Finance and Financial Administration (High Powered Committee), Government of Andhra Pradesh 1971	Basic grant based on population, sharing of motor vehicle tax, state excise duty and state electricity duty, 5% surcharge on sales tax
Municipal Finance Commission, Government of Maharashtra, 1974	Grant-in-aid in accordance with a code, sharing of entertainment tax and motor vehicles tax
West Bengal Municipal Finance Commission, 1980	Single deficit grant, education grant, other special grants, Madhya Pradesh-type entry tax, sharing of motor vehicle tax and entertainment tax
Gujarat Taxation Enquiry Commission, 1980	Sharing of motor vehicle tax, entertainment tax and Profession tax
Municipal Finance Enquiry Committee, Government of Tamil Nadu, 1980	Sharing of entertainment tax (95%)
Karnataka Taxation Review Committee: Report on Local Finance, 1983	Sharing of professional tax; 10% growth in octroi compensation, entry tax – delinked from octroi compensation
Committee on Urban Local Bodies, Karnataka, 1986	Per capita grant-in-aid, sharing of motor vehicles tax, entertainment tax (90%), duty on transfer of immovable properties (10%), surcharge on sales tax (10%), octroi compensation with a 20% hike annually

Source: Various committee/commission reports.

sharing of all taxes on goods and services levied by the State Government for ULBs. Among the major recommendations, it has proposed the incorporation of a 'Municipal Finance List' in the Constitution of India with the following components:

- Exclusive Taxes which must be levied and collected by the local bodies. This could include tax on property and vacant land. Further, entertainment tax, professional tax and advertisement tax should be part of this list.
- Revenue raised by the State Government by levying taxes on goods and services, must be shared with the local bodies.
- Some non-tax revenue sources like user charges, Floor Space Index (FSI) charge or development charges or impact fees or betterment charges, trade licensing fee etc.

The following are some key lessons from theory and international practice to guide the design of intergovernmental transfers to municipalities in India:

- Municipalities must have clearly-defined functions and revenue sources to match their mandated expenditure responsibilities;
- A good municipal finance system, including a broad-based basket of 'own' municipal taxes, is a fundamental requirement for a well-functioning intergovernmental transfer regime;
- Objectivity, transparency and predictability need to be built into municipal budgeting within medium-term expenditure management and revenue mobilisation frameworks;
- One size does not fit all; a range of fiscal transfer programmes is needed depending upon the context of fiscal federalism and the objective of the grantor government. The predominant emphasis in grant financing should be on closing the vertical gap. The objectives to be served should assume significance;
- Specifying too many objectives in a single programme of intergovernmental fiscal transfers is not desirable. One category of grant is appropriate for attaining one type of objective;
- The design of grants is a critical factor for its success. An objectively determined grant formula with weights assigned to fiscal needs, fiscal capacity and fiscal effort can, apart from meeting the grant objectives, ensure predictability, a key factor necessary for any transfer programme to be effective;
- When the grantor's objective is to promote performance and accountability in local government while preserving autonomy, output-based conditionality is most appropriate. If designed well, output-based transfers can lead to excellence in service delivery and attainment of desired outcomes;
- General purpose transfers, though formula-based, predictable and transparent, often adopt 'one size fits all' formula for all types of local governments. They fail to cater to the special needs of cities, e.g. rail-based mass rapid transit in the case of metropolitan cities;
- A mix of formula-based unconditional revenue grants and conditional capital grants is desirable to address vertical and horizontal imbalances and the much-needed investments in regional and urban infrastructure simultaneously;
- Allocative efficiency ought to be combined with inter-jurisdictional equity. Unless higher transfers are followed and matched with a contribution by local governments – however small that may be in the case of the poorest jurisdictions, the total benefits and objectives of decentralisation are hard to realise;
- Transfers should not allow the incompetent and irresponsible local bodies to escape as in the past. Hard budget constraint should be the rule, and soft financing options must be avoided;

- Fiscal autonomy cannot be developed in a culture of dependency-promoting grants. Thus, municipalities must be enabled to progressively rely on taxes and user charges. They must have an alternative to octroi and adopt land value tax, beneficiaries pay, polluters pay, congesters pay, growth pays and value-capture instruments. If a suitable tax alternative to octroi or a city GST rate is not possible, a formula-based share in the state GST will be most appropriate in the present context of India's fiscal federalism.

Several theories have vouched for a strong role of local government, with well-defined fiscal arrangements, for ensuring efficiency, accountability, manageability, and autonomy in the delivery of public services. The public finance literature suggests that in order to establish strong local governments they should be able to raise adequate revenues on their own without having to depend on the higher levels of government. The principle of benefit taxation presents an elegant strategy to cities to raise resources while also enhancing accountability and transparency in public service delivery and addressing resistance from taxpayers. While the entire municipal revenue system in India in the post-GST era needs to be drastically overhauled, paradoxically, cities in India have not harnessed the instruments of benefit taxation to generate resources for financing planned urban development. In particular, they have not exploited land and property taxes already assigned to them. These are important benefit taxes suitable for local governments to finance collective services and infrastructure facilities in cities, creating direct, indirect and induced benefits to land and property owners and the city residents in general. However, the subject of benefit taxation in India is grossly neglected by research, as is urban public finance. The principle suggests that 'beneficiaries pay'. This includes 'users pay', regarded as the 'first-best' principle to finance public services. By corollary, those who create dis-benefits to the society pay for the mitigation costs; congesters pay, polluters pay and growth pays. The fiscal equivalence, correspondence and subsidiarity principles in fiscal federalism consider the internalisation of benefits and costs in a geographically defined area as a sound basis for local government organisation. If the benefit principle in this sense of a link between taxation and spending – the Wicksellian Connection – is central to achieving the aims of fiscal decentralisation, charging for public services and earmarking revenues to the services provided should be equally central to a sound local finance system. In such a system, expenditure responsibilities would be matched with revenue resources, revenue capacities matched with political accountability, and benefit areas matched with financing areas (Bird and Slack, 2014). Whenever possible, services provided by the public sector should be sold to those who receive them and the revenues yielded by such sales should be sufficient to pay for the cost of providing the service.

International practice on intergovernmental transfers to municipalities suggests that the most effective programmes have simple objectives and transparent criteria, while conditionalities are imposed on outputs or attainment of standards rather than on inputs and processes. The formulae for grant distribution are also simple and well-understood. Clarity of purpose, adequacy of revenue and incentives for own revenue mobilisation are key factors behind the success of fiscal transfers to sub-national governments, including local bodies.

Clarity in objective is a key requirement for the effective design of intergovernmental transfers, including the quantum of grants and formulae for distribution.

Conditional non-matching output-based transfers are more desirable over other categories in order to ensure that local bodies are responsible, accountable and result-oriented. Output-based transfers grant independence along with budgetary flexibility to local bodies. These also incentivise local governments for efficiency in delivery of services. These transfers are suitable for financing infrastructure, education, health and public transit. Conditional capital grants are

good tools to address infrastructure deficiencies; they promote national standards in service quality and access of citizens and businesses to critical infrastructure facilities.

As regards the design of fiscal transfers, a study of the past CFC reports suggests that they have not considered the factors of 'fiscal needs', 'fiscal capacity' and 'fiscal effort' together while recommending fiscal transfers to local bodies. The Fourteenth CFC has confined itself to fiscal needs only. No CFC has dwelt on the issue of fiscal capacity.

India may perhaps set a road map to achieve a 3 per cent 'transfers to municipalities-GDP' ratio by the time the country reaches 50 per cent urban mark – 1 per cent through central channels and 2 per cent through state routes, including city GST rate within state GST rate or a formula-based share in state GST (Mohanty, 2016). Based on a study of ULBs in Maharashtra, a statutory share in state GST for ULBs to the tune of 25 per cent could perhaps be appropriate, to start with.

Conclusion

The chapter argues that a sensible approach to reform the complex intergovernmental transfer system in India revolves around the basic questions: Why transfers are needed and whether the transfer design is capable of addressing the intended objectives? In this regard theory and practice, especially the models adopted by multi-tier countries like Brazil, South Africa, Nigeria, China and the Philippines can be of good guidance.

The theory and practice of urban economics and public finance suggests that the municipal finance system must be viewed as an integrated whole rather than as a bundle of disjointed components. Each component of the system, including user charges, benefit charges, benefit taxes, general taxes, intergovernmental transfers and borrowings has a distinct place and a designated role to play. Direct user charges act as prices for public services. Benefit charges and taxes act as surrogate prices. General taxes are warranted when user charges, benefit charges and benefit taxes are not able to mobilise adequate revenues to meet the costs of public services and infrastructure. Intergovernmental transfers are required to address vertical and horizontal imbalances and correct for externalities. Borrowing is the only practical way to meet the cost of lumpy infrastructure facilities that require huge upfront investment and yield benefits that spread over generations (Bahl and Linn, 1992). These principles provide useful hints for designing the system of municipal finances, including intergovernmental transfers in India in tune with the demands of economic growth and structural transformation.

The systems of fiscal transfers to ULBs in India are not based on known principles or practices. They are dependency-promoting and against the spirit of decentralisation envisaged in the Constitution (74th Amendment) Act 1992. They need to be reformed, taking into account the fiscal federalism framework mandated by the Constitution of India. A bulk of central revenues originates from cities and broader public interest calls for supporting cities as engines of agglomeration-driven and knowledge-led economic growth and generators of public finance for socioeconomic development. Taking these factors into consideration, the profound observation of the Thirteenth Finance Commission that local bodies be allowed to benefit from the buoyancy of central taxes needs to be given due weight. This is an important recognition for the design of municipal finance reforms in India. A formula-based share for ULBs in the national divisible pool of taxes and state revenues is highly desirable. This needs to supplement the strengthening of 'own' taxes and other revenue sources of ULBs. A municipal finance list in the Constitution of India, as recommended by HPEC (2011), is worth considering.

The deepening mismatch between municipal functions and finances is a primary reason justifying intergovernmental transfers in India. However, while systemic reforms need to be

pursued, the reduction of vertical imbalance through internal resource mobilisation and sound financial management ought to be the first resort for the ULBs. Local bodies in India often clamour for more and more resources from the state and central governments without making genuine efforts to exploit the fiscal instruments already available with them or reduce costs. This situation must be avoided and the ULBs must not be subject to a soft budget constraint. Fiscal transfers leading to additional sources (through measures such as sharing of stamp duty, devolution of profession tax, sharing of motor vehicles tax, sharing of GST, general grants, special grants, etc.), if only linked to 'own' source mobilisation or municipal share for capital projects mobilised through measures such as property tax reform, exploitation of land use planning and development as resource, rationalisation of user charges and benefit taxes including impact fees and betterment levies, can play a key role in leveraging the devolved funds. This model can deliver results only under a hard budget constraint for the ULBs.

India needs a robust framework of municipal finance. Octroi, despite being criticised as a bad tax, was a major source of revenue for the local bodies. For example, the compensation from the erstwhile state government of Andhra Pradesh to the Municipal Corporation of Hyderabad for the loss of octroi and toll tax has remained below Rs. 50 lakhs for many years, although the yield from octroi alone could have been Rs.1,000 crores annually had the tax not been abolished. Similarly, octroi constituted about 42 per cent of total municipal revenues for Greater Mumbai, yielding about Rs. 7,000 crores annually. With octroi and entry tax subsumed under the GST, a statutory sharing of at least 25 per cent of state GST with urban local bodies seems to be the most appropriate alternative in the present context. It may be fair to suggest that the central GST rate be reduced by at least 1 per cent and state GST rate be increased commensurately to enable states to effect formula-based sharing of GST with cities and towns, the engines of national and state economic growth. Further, the sharing of state revenues and allocation of state grants to ULBs need to be based on sound principles and practices. India needs to shift from the present *ad hoc* system of city financing to a robust framework rooted in theory and international practice of urban public finance.

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Smart Growth and Transit Oriented Development: Financing and Execution Challenges in India

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Abstract

Cities today face burgeoning personalized vehicles as a consequence of neglected public transport and a spatial planning model isolated from transport planning. Transportation planning has been accorded a residual rank post spatial planning. This has prompted dispersed and automobile-centric growth of cities. The pursuit of more sustainable, liveable, congestion and pollution free cities resulted in the paradigm of New Urbanism and Smart Growth. Transit-oriented Development (TOD), an integral part of Smart Growth, has emerged as a paradigm in urban design. It aims at the concentration of development in or around a transit station or along a transit corridor. TOD could be a befitting reply to sprawl, congestion, pollution and provide an effective way to restructure existing cities. By integrating public transport and land use planning TOD provides ways to intensify agglomeration economies and weaken congestion diseconomies. TOD has several socio-economic and environmental benefits to its credit. The chapter looks at the various advantages of TOD and the challenges faced in its execution and financing. Further, several successful TOD practices from around the globe have been discussed to draw lessons for replication in India.

Keywords: new urbanism, smart growth, transit oriented development, agglomeration economies, congestion diseconomies

1. Introduction

In the urban context, the importance of transport stems from the fact that it contributes to the productivity of workers and competitiveness of firms. It widens labour markets and makes them inclusive. It saves travel time and costs to reach valued destinations – for work, education, shopping and leisure. Urban transport investments augment agglomeration economies by enhancing access to the economic mass, reducing congestion and channelizing residential and non-residential development in desired directions. They balance the location of jobs, housing and common facilities. Urban transport plays an important role in the working of cities, enhancing their efficiency, facilitating economic growth, generating value enhancements to finance planned urban development, and creating livable, competitive and sustainable cities.

In the last four decades, the issues of urban transport have come into sharp focus in many developed countries around the world due to the problems of their

automobile-dependent model of urban development. They have been subject to high levels of traffic congestion, air pollution, accidents, damages to ecosystems and neighborhoods, segregation and adverse impacts on the quality of life in cities.

Rapid motorization has worsened traffic conditions, aggravated congestion and pollution levels in several cities around the globe. Apart from environmental concerns, traffic congestion is also detrimental to the economic health of cities by adding to the wastage of time and fuel and increasing the levels of emissions. It hampers productivity by delaying and hindering the movement of goods, raw materials as well as people.

The proliferation of personalized vehicles, lack of investment in public transport and implementation of a spatial planning model that promoted dispersed, automobile-centric development have been the primary factors behind the urban transport problems in countries. The search for ways of making urban communities provide a better quality of life and promoting sustainable cities led to the emergence of an urban design paradigm called 'New Urbanism' in North America and Western Europe in the 1970s and 1980s. This was followed by a theory of urban planning and transportation called 'Smart Growth'. This theory is founded on the following principles of urban design: (i) mixed land use; (ii) compact design; (iii) increased densities; (iv) housing opportunities and choices; (v) walkable and accessible neighborhoods; (vi) multiple transportation mode choices; (vii) neighborhood centres to foster social interaction; (viii) preservation of open space, farm land, natural beauty and critical environmental areas; (ix) strengthening of and directing development towards existing communities; (x) making development decisions predictable, fair, and cost-effective; and (xi) community and stakeholders' consultation in development decisions [1]. Transit-oriented Development (TOD), a key element of Smart Growth, aims at concentrating development around one or more transit stations or within a transit corridor.

TOD aims at compact, high density and mixed use development within easy walking or biking distance from a transit station, typically about 1 kilometer. Focused around a transit node, TOD facilitates access to public transit, thereby inducing people to walk, cycle and use public transport rather than personal vehicles. The selective concentration of development acts against sprawl, promotes agglomeration economies and mitigates congestion diseconomies. It also leads to increase in property values, reflecting the benefits to residents and businesses of diverse transportation options, and resultant automobile and parking cost savings [2]. Thus, TOD assists in the mobilization of value capture finance by harnessing the windfall gains accruing to land and property-owners. The key factors that support TOD include: land use and development policies promoting dense and compact development around transit nodes and discouraging such development in the areas without good access to public transport; development of public transit and provision of quality transit services; integration of transportation and land use; and application of other mobility management strategies. These factors jointly increase the cost-effectiveness and utility of TOD for consumers as well as businesses. TOD has the potential of becoming a powerful tool for planned development of cities and rural areas in developing countries. It not only improves connectivity between regions, but also saves a lot of time and costs of workers. It augments productivity and efficiency of economic agents. The case for transit-oriented development is well-argued in research [3].

The motivation behind this research is the need for India to move from an automobile-dependent to a public transportation-led and transit-oriented model of planned urban development. The current practice of master planning in India, rooted in the 1947 Town and Country Planning Act in the United Kingdom, has neglected urban transport. The model has not facilitated transportation-land use

integration, transit-oriented development and value capture financing. Land use planning and transportation planning have been pursued as independent exercises, a prime example being Delhi. Cities have thus not been able to benefit from the interaction of transport and land use for sustainable urban development and adopt a robust mechanism of financing public transit. In this context, this paper explores the theory and international practice of New Urbanism, Smart Growth and TOD. It also examines the potential of TOD to raise revenues towards financing public transportation. The objective is to draw lessons from successful practices to strategize TOD policy for cities in India. Finally, the paper analyses the existing practices in Indian cities, identifies its inadequacies and suggests corrective measures.

The study is organized as follows. Section 2 deals with the challenges of urban mobility in India. Referring to the trends of urbanization, metropolitanization and motorization, it highlights the imperative for a public transportation-based strategy of urban development in the country. Section 3 discusses the paradigm Transit Oriented Development (TOD), adopted by several developed countries to address their problems of sprawl, inefficient urban form, excessive energy consumption, greenhouse gas emission, and environmental degradation. It makes a strong case for TOD as a dominant paradigm of urban planning and development in India. Section 4 presents some examples of successful TOD strategies practiced world-wide and draws lessons for urban transport development and land use planning, in general and TOD, in particular. Section 5 focuses on financing and execution practices of TOD internationally in the overall context of urban transport development to present a range of financing instruments that Indian cities could consider to promote TOD. Section 6 presents the emerging approaches towards TOD in India, referring to case studies, including projects, policies and plans in the offing. We specially focus on financing issues. Section 7 brings out the challenges of implementing TOD in India and indicates some directions for the design of a public transportation-led, transit-oriented and value increment financing-based strategy to address India's urbanization challenges. It also calls for an effective institutional structure for the implementation of TOD and suggests reforms in the regional and urban planning model being followed. Section 8 concludes.

2. India's urban mobility challenges

Bourgeoning travel demand, rapid motorization, rise in personalized vehicles, dwindling share of public transport, congestion, degradation environmental quality, rising number of road accidents and fatalities, fragmented institutional arrangements and chronic under-investment in transport infrastructure pose major hindrances to urban mobility. These are linked to the trends and patterns of urbanization, concentration of productive economic activity, income distribution structure in cities and motorization.

2.1 Urbanization trends and patterns

Urbanization in India is characterized by rising urban population and increased density in large cities. This has led to a rapid growth in travel demand. **Tables 1–4** present the trends and patterns of urbanization in India.

While the number of cities/towns in India increased by 3 times, urban population rose by 13 times between 1901 and 2011. This reflects the concentrated pattern of urbanization. In 2011, the number of urban agglomerations (UAs) /towns was 7935 as against 5161 in 2001. While the number of statutory towns rose from 3799 to 4041 between 2001 and 2011, the number of census towns experienced a

Year	Total Population	Rural Population	Percentage Rural	No of Cities / Towns	Urban Population	Percentage Urban
1901	238.4	212.5	89.2	1916	25.9	10.8
1911	252.1	226.2	89.7	1908	25.9	10.3
1921	251.3	223.2	88.8	2048	28.1	11.2
1931	279.0	245.5	88.0	2220	33.5	12.0
1941	318.7	274.5	86.1	2427	44.2	13.9
1951	361.1	298.6	82.7	3060	62.4	17.3
1961	439.2	360.3	82.0	2700	78.9	18.0
1971	548.2	439.0	80.1	3126	109.1	19.9
1981	683.3	523.9	76.7	4029	159.5	23.3
1991	846.3	628.7	74.3	4689	217.6	25.7
2001	1028.7	742.5	72.2	5161	286.1	27.8
2011	1210.7	833.5	68.8	7935	377.1	31.2

Source: *Census of India for different years [4].*

Table 1.
India: Total, rural and urban population (in million) and level of urbanization (percentage) 1901–2011.

phenomenal jump from 1362 to 3894. About 30 percent of urban population growth in the last decade is accounted for by census towns.

Table 2 presents the distribution of urban population between size classes of towns in India from 1901 to 2011. It reflects a top-heavy urban structure, highlighting the increasing density of large cities. **Table 3** presents the trends in metropolitan population in India and reflects a similar trend.

There are large interstate variations in urbanization patterns in India, having differential implications for urban transport demand and strategy. Among the states, Delhi was the most urbanized in 2011, with 97.5 percent urbanization level, followed by Goa (62.2 percent), Mizoram (52.1 percent) and Tamil Nadu (48.4 percent). **Table 4** presents the percentage of urban population in 1971, 1981, 1991, 2001 and 2011, and decadal annual exponential growth in urban population for 1971–81, 1981–91, 1991–2001 and 2001–11.

India’s urban population is projected to more than double between 2011 and 2050 – from 377 million to 814 million. With an estimated rural population of 860 million in 2014, the country would still have 810 million in villages in 2050 [5]. Thus, India would confront the dual challenges of urban and rural development for many decades. The country has to address not only the problems of transportation within cities, it will have to connect villages to cities and towns providing efficient transport services to rural areas.

2.2 Population density in urban areas

Census of India 2011 data reveals that not only many cities, but also urban agglomerations or regions in India have a population density of more than 10,000 – with central city areas being denser than peripheries. **Table 5** provides data on densities of 10 urban districts in India with the highest population density. A simple conclusion from international comparisons relating to population densities of urban regions is that the density patterns of many cities and urban districts in India overwhelmingly support a public transport-led urban development strategy.

Census Year	Number of Agglomerations/Towns						Percentage of Urban Population					
	Class I	Class II	Class III	Class IV	Class V	Class VI	Class I	Class II	Class III	Class IV	Class V	Class VI
1901	24	43	130	391	744	479	26.00	11.29	15.64	20.83	20.14	6.10
1911	23	40	135	364	707	485	27.48	10.51	16.40	19.73	19.31	6.57
1921	29	45	145	370	734	571	29.70	10.39	15.92	18.29	18.67	7.03
1931	35	56	183	434	800	509	31.20	11.65	16.80	18.00	17.14	5.21
1941	49	74	242	498	920	407	38.23	11.42	16.35	15.78	15.08	3.14
1951	76	91	327	608	1124	569	44.63	9.96	15.72	13.63	12.97	3.09
1961	102	129	437	719	711	172	51.42	11.23	16.94	12.77	6.87	0.77
1971	148	173	558	827	623	147	57.24	10.92	16.01	10.94	4.45	0.44
1981	218	270	743	1059	758	253	60.37	11.63	14.33	9.54	3.58	0.50
1991	300	345	947	1167	740	197	65.20	10.95	13.19	7.77	2.60	0.29
2001	393	401	1151	1344	888	191	68.67	9.67	12.23	6.84	2.36	0.23
2011	468	474	1373	1686	1748	424	70.15	8.54	11.11	6.39	3.36	0.45

Note: Class I: 100,000 or more, Class II: 50,000 – 99,999, Class III: 20,000 – 49,999; Class IV: 10,000 – 19,999, Class V: 5000–9999 and Class VI: Below 5000.
Each urban agglomeration, comprising generally a number of cities, towns and outgrowths is considered as one unit.
Source: Census of India for different years [4].

Table 2.
India: Number of agglomerations/towns and percentage of urban population by size classes of towns 1901–2011.

Census year	Number	Population (in Million)	Population per city (in Million)	Percentage of urban population
1901	1	1.51	1.51	5.84
1911	2	2.76	1.38	10.65
1921	2	3.13	1.56	11.14
1931	2	3.41	1.70	10.18
1941	2	5.31	2.65	12.23
1951	5	11.75	2.35	18.81
1961	7	18.10	2.58	22.93
1971	9	27.83	3.09	25.51
1981	12	42.12	3.51	26.41
1991	23	70.66	3.07	32.54
2001	35	108.29	3.09	37.85
2011	53	160.70	3.03	42.61

Source: *Census of India for different years [4]*.

Table 3.
India: Number of metropolitan cities and their share in urban population 1901–2011.

Sl No	States	Percentage of Urban Population					Annual Exponential Growth Rate			
		1971	1981	1991	2001	2011	1971–1981	1981–1991	1991–2001	2001–2011
1	Andhra Pradesh	19.3	23.3	26.8	27.3	33.4	3.9	3.6	1.4	3.04
2	Arunachal Pradesh	3.7	6.3	12.2	20.4	22.9	8.3	9.3	7.0	3.31
3	Assam	8.8	9.9	11.1	12.7	14.1	3.3	3.3	3.1	2.46
4	Bihar	10.0	12.5	13.2	10.5	11.3	4.3	2.7	2.6	3.03
5	Chhattisgarh	NA	NA	NA	20.1	23.2	NA	NA	3.1	3.49
6	Delhi	89.7	92.8	89.9	93.0	97.5	4.6	3.8	4.1	2.37
7	Goa	26.4	32.5	41.0	49.8	62.2	4.4	4.0	3.3	3.01
8	Gujarat	28.1	31.1	34.4	37.4	42.6	3.4	2.9	2.8	3.07
9	Haryana	17.7	22.0	24.8	29.0	34.9	4.7	3.6	4.1	3.68
10	Himachal Pradesh	7.0	7.7	8.7	9.8	10.0	3.0	3.1	2.8	1.45
11	Jammu &Kashmir	18.6	21.1	22.8	24.9	27.4	3.8	3.4	3.4	3.10
12	Jharkhand	NA	NA	NA	22.3	24.0	NA	NA	2.6	2.80
13	Karnataka	24.3	28.9	30.9	34.0	38.7	4.1	2.6	2.5	2.74
14	Kerala	16.2	18.8	26.4	26.0	47.7	3.2	4.8	0.7	6.56
15	Madhya Pradesh	16.3	20.3	23.2	26.7	27.6	4.5	3.7	2.7	2.28
16	Maharashtra	31.2	35.0	38.7	42.4	45.2	3.4	3.3	3.0	2.12
17	Manipur	13.2	26.4	27.7	23.9	32.5	9.7	3.0	1.2	3.70
18	Meghalaya	14.6	18.0	18.7	19.6	20.1	4.9	3.1	3.2	2.70
19	Mizoram	11.4	25.2	46.2	49.5	52.1	11.8	9.6	3.3	2.59
20	Nagaland	10.0	15.5	17.3	17.7	28.9	8.5	5.6	5.3	5.10

Sl No	States	Percentage of Urban Population					Annual Exponential Growth Rate			
		1971	1981	1991	2001	2011	1971–1981	1981–1991	1991–2001	2001–2011
21	Odisha	8.4	11.8	13.4	15.0	16.7	5.2	3.1	2.6	2.38
22	Punjab	23.7	27.7	29.7	34.0	37.5	3.6	2.6	3.2	2.29
23	Rajasthan	17.6	20.9	22.9	23.4	24.9	4.5	3.3	2.7	2.54
24	Sikkim	9.4	16.2	9.1	11.1	25.2	9.6	−3.2	4.8	9.42
25	Tamil Nadu	30.3	33.0	34.2	43.9	48.4	2.5	1.8	3.6	2.39
26	Tripura	10.4	11.0	15.3	17.0	26.2	3.3	6.2	2.5	5.66
27	Uttar Pradesh	14.0	18.0	19.9	20.8	22.3	4.8	3.3	2.8	2.53
28	Uttaranchal	NA	NA	NA	25.6	30.2	NA	NA	2.8	3.36
29	West Bengal	24.8	26.5	27.4	28.0	31.9	2.8	2.5	1.8	2.60
Union Territories										
1	Andaman & Nicobar Islands.	22.8	26.4	26.8	32.7	37.7	6.4	4.1	4.4	2.10
2	Chandigarh	90.6	93.6	89.7	89.8	97.3	5.9	3.1	3.4	2.38
3	Dadra & Nagar Haveli	0.0	6.7	8.5	22.9	46.7	—	5.3	14.6	11.57
4	Daman & Diu	—	—	46.9	36.3	75.2	—	4.9	1.9	11.59
5	Lakshadweep	0.0	46.3	56.3	44.5	78.1	—	4.5	−0.8	6.24
6	Pondicherry	42.0	52.3	64.1	66.6	68.3	4.7	4.9	2.3	2.73
	All India	20.2	23.7	25.7	27.8	31.2	3.8	3.1	2.7	2.76

Note: a) The figures for the states of Uttar Pradesh, Bihar and Madhya Pradesh for the 1970s and 1980s pertain to the undivided states as existed during that time. The figures for the 1990s are, however, for the new states and hence these figures are not temporally comparable.
b) In the absence of the Census data for total and urban population for the year 1981 in case of Assam, the urban and total population growth rates have been assumed to be constant during 1970s and 1980s. The same has been assumed for 1980s and 1990s for Jammu and Kashmir. The percentage of urban population has been arrived for Assam (1981) and Jammu and Kashmir (1991) based on these assumptions.
c) Goa in 1971 and 1981 corresponds to Goa, Daman and Diu.
Source: Census of India for different years [4].

Table 4.
India: Level of urbanization and growth in urban population across states and union territories 1971–2011.

2.3 Composition of urban population

Apart from the trends and patterns of urbanization and population density, the composition of population and income distribution structure in urban India also favors the use of public transport for living and working. An overwhelming majority in cities belongs to the poor, low and lower-middle income groups. The Global Wealth Report 2015 published by Credit Suisse suggests that more than 90 percent of the adult population in India fall below the bottom of the wealth pyramid (less than \$10,000). The middle class population in India, defined as those with annual wealth of about Rs.61,480 or \$13,662 is estimated at 23.6 million [6]. About one-fourth of urbanites have been identifies to be below the poverty line. An equivalent number are slum dwellers. More than 65 percent of urban households lives in two rooms or less.

Table 6 presents a picture of urban poverty vis-à-vis rural poverty in India based on the Rangarajan Committee report. According to the Committee, a person spending less than Rs.1407 per month or Rs.47 a day was considered poor in cities in

Rank	Urban District	Area (Sq. Kms)	2001 Census		2011 Census	
			Population (In Lakhs)	Density	Population (In Lakhs)	Density
1	North East Delhi	56	17.68	31,573	22.42	36,155
2	Central Delhi	23	6.46	28,104	5.82	27,730
3	East Delhi	49	14.64	29,869	17.09	27,132
4	Chennai	174	43.44	24,963	46.47	26,553
5	Kolkata	185	45.72	24,718	44.97	24,306
6	Mumbai Suburban	446	86.40	19,373	93.57	20,980
7	Mumbai City	157	33.38	21,261	30.85	19,652
8	West Delhi	131	21.29	16,251	25.43	19,563
9	Hyderabad	217	38.30	17,649	39.43	18,172
10	North Delhi	59	7.82	13,256	8.88	14,557

Source: *Census of India 2001, 2011* [4].

Table 5.
Most densely populated districts of India 2011.

Year	Poverty ratio (%)			No. of poor (million)		
	Rural	Urban	Total	Rural	Urban	Total
1. 2009–10	39.6	35.1	38.2	325.9	128.7	454.6
2. 2011–12	30.9	26.4	29.5	260.5	102.5	363.0
3. Reduction	8.7	8.7	8.7	65.4	26.2	91.6

Source: *Planning Commission (2014)* [7].

Table 6.
India: Rural and urban poverty estimates 2009–10 and 2011–12.

2011–12. The number of urban poor was estimated at 102.5 million, accounting for 26 percent of the urban population in the same year.

Census 2001 estimated the urban slum population in India at 42.6 million. It reported that 41.6 percent of slum population in the country lived in metropolitan cities. Mumbai had the largest number of slum dwellers, accounting for 54 percent of the population. Census 2011 has placed the number of slum-dwellers in India at 65.5 million. It further reveals that 46 million-plus cities contain 38 percent of the slum households. 9 metropolitan cities have more than 30 percent of households in slums, with Visakhapatnam topping the list at 44.1 percent, followed by Jabalpur Cantonment Board (43.1 percent) and Greater Mumbai (41.3 percent). Among the largest municipal corporations, apart from Greater Mumbai, Kolkata and Chennai have reported more than 25 percent of households living in slums.

The trends of urbanization, patterns of population density and state of slums, poverty and housing in cities suggest that the demographic and income distribution structures of urban India are overwhelmingly suitable for a public transportation-led model of urban development. Transportation planners and traffic engineers advocate the following strategies for urban transportation depending on their peak hour per direction traffic (PHPDT) that significantly depend upon the density of commuters:

PHPDT Recommended strategy
10,000 - 15,000 Bus and Dedicated Busways

15,000 - 30,000 Light Rail Transit
> 30,000 Heavy Rail Mass Transit

Based on the above criteria and other factors, many cities in India qualify for light rail transit and heavy rail transit. The largest metropolitan cities also need high speed rail connecting them to sub-urban centres and regional towns.

2.4 Trends in motorization

The number of registered motor vehicles in India increased from 0.3 million in 1951 to 55 million in 2001 and 210 million in 2015. While the share of two wheelers rose from 8.8 percent in 1951 to 73.5 percent in 2015, the share of busses declined from 11 percent to 1 percent. **Table 7** presents the trends in the number of motor vehicles and the composition of the vehicular population for the period 1951–2015.

The population of motor vehicles reported by million-plus cities in India in 2015 was 66.24 million. Among these, Delhi had the highest number at 88.51 lakhs, followed by Bengaluru (55.60 lakhs), Chennai (49.34 lakhs), Ahmedabad (34.20 lakhs), Greater Mumbai (25.71 lakhs), Surat (24.59 lakhs), Hyderabad (23.69 lakhs), Pune (23.37 lakhs), and Jaipur (22.49 lakhs). The largest number of two-wheelers in 2015 was in Delhi at 56.98 lakhs, followed by Bengaluru (38.41 lakhs), Chennai (35.16 lakhs), Ahmedabad (24.32 lakhs), Surat (19.13 lakhs); Pune (17.65 lakhs); Hyderabad (17.08 lakhs); Jaipur (16.58 lakhs) and Greater Mumbai (14.70 lakhs). Considering the quantum of cars in 2015, Delhi had 27.30 lakhs, followed by Bengaluru (10.89 lakhs), Chennai (8.60 lakhs), Greater Mumbai (7.97 lakhs), Kolkata (5.41 lakhs), Ahmedabad (5.26 lakhs), Hyderabad (4.02 lakhs) and Pune (3.75 lakhs). **Table 8** shows the number and share of two wheelers and cars in the population of motor vehicles for metropolitan cities as of 31st March 2015.

Table 9 presents the growth of motor vehicle population in 22 metropolitan cities in India over the period 2005–15 for which data are available. As the table

Year	Number in Million	Composition (% of Total Vehicle Population)				
		Two Wheelers	Cars, Jeeps and Taxis	Busses	Goods vehicles	Other vehicles
1951	0.3	8.8	52.0	11.0	26.8	1.3
1961	0.7	13.2	46.6	8.6	25.3	6.3
1971	1.9	30.9	36.6	5.0	18.4	9.1
1981	5.4	48.6	21.5	3.0	10.3	16.6
1991	21.4	66.4	13.8	1.5	6.3	11.9
2001	55.0	70.1	12.8	1.2	5.4	10.5
2006	89.6	72.2	12.9	1.1	4.9	8.8
2011	141.8	71.8	13.6	1.1	5.0	8.5
2012	159.5	72.4	13.5	1.0	4.8	8.3
2013	176.0	72.7	13.6	1.0	4.7	8.0
2014	190.7	73.1	13.6	1.0	4.6	7.7
2015	210.0	73.5	13.6	1.0	4.4	7.5

Source: Government of India, Ministry of Road Transport & Highways, New Delhi: Road Transport Year Book (2013–14 and 2014–15) [8].

Table 7.
Total number of registered motor vehicles in India (in million) 1951–2015.

Million Plus Cities	Total Number of Registered Motor Vehicles	Two Wheeler		Cars	
		Number	% of Total	Number	% of Total
Agra	9,05,023	7,41,778	81.96	76,107	8.41
Ahmedabad	34,19,828	24,31,839	71.11	5,25,891	15.38
Allahabad	8,97,035	7,30,758	81.46	72,779	8.11
Aurangabad	4,26,246	3,35,725	78.76	19,591	4.60
Bengaluru	55,59,730	38,41,139	69.09	10,88,587	19.58
Bhopal	10,80,477	8,47,334	78.42	1,36,627	12.65
Chandigarh	7,45,520	3,95,565	53.06	2,61,752	35.11
Chennai	49,34,412	35,16,062	71.26	8,60,932	17.45
Coimbatore	19,01,277	15,47,395	81.39	2,32,751	12.24
Delhi	88,50,720	56,98,242	64.38	27,30,071	30.85
Dhanbad	5,63,426	4,27,714	75.91	58,836	10.44
Durg-Bhillai	7,68,922	6,44,138	83.77	49,569	6.45
Ghaziabad	7,51,603	5,33,808	71.02	1,52,256	20.26
Greater Mumbai	25,71,204	14,70,175	57.18	7,97,267	31.01
Gwalior	6,17,681	4,87,259	78.89	52,685	8.53
Hyderabad	23,68,818	17,07,714	72.09	4,02,334	16.98
Indore	17,12,702	13,01,383	75.98	2,08,005	12.14
Jabalpur	6,38,219	4,93,633	77.35	67,445	10.57
Jaipur	22,49,240	16,58,006	73.71	3,05,445	13.58
Jamshedpur	4,72,051	3,51,696	74.50	55,020	11.66
Jodhpur	9,16,172	6,50,097	70.96	71,972	7.86
Kannur	1,88,497	1,12,851	59.87	43,920	23.30
Kanpur	14,61,530	11,72,577	80.23	1,47,072	10.06
Kochi	6,05,689	3,36,316	55.53	1,71,063	28.24
Kolkata	14,01,638	6,00,156	42.82	5,41,432	38.63
Kollam	2,74,006	1,75,528	64.06	58,097	21.20
Kota	6,54,041	5,12,740	78.40	51,749	7.91
Kozhikode	4,12,304	2,89,801	70.29	70,539	17.11
Lucknow	17,09,662	13,61,787	79.65	2,44,121	14.28
Madurai	9,54,893	7,93,510	83.10	68,804	7.21
Malappuram	2,76,765	1,51,351	54.69	59,297	21.43
Meerut	5,25,235	4,24,975	80.91	63,148	12.02
Nagpur	12,75,575	10,67,160	83.66	1,08,951	8.54
Nashik	6,22,206	4,61,628	74.19	62,473	10.04
Patna	10,18,798	7,05,298	69.23	1,35,638	13.31
Pune	23,37,085	17,65,172	75.53	3,75,267	16.06
Raipur	11,11,745	8,45,861	76.08	84,377	7.59
Rajkot	9,79,423	7,87,608	80.42	93,185	9.51
Ranchi	5,47,036	3,56,067	65.09	65,434	11.96

Million Plus Cities	Total Number of Registered Motor Vehicles	Two Wheeler		Cars	
		Number	% of Total	Number	% of Total
Srinagar	2,35,614	1,00,291	42.57	77,043	32.70
Surat	24,59,111	19,12,715	77.78	3,07,540	12.51
Trichy	7,63,396	6,36,961	83.44	58,712	7.69
Thiruvananthapuram	5,71,956	3,49,657	61.13	1,53,674	26.87
Thrissur	3,55,491	2,26,285	63.65	72,994	20.53
Varanasi	7,68,769	6,09,656	79.30	55,727	7.25
Vijayawada	6,10,321	4,52,403	74.13	53,755	8.81
Vadodara	10,41,818	8,03,969	77.17	1,23,509	11.86
Visakhapatnam	7,30,872	5,74,135	78.55	79,592	10.89
Total	6,62,43,782	4,73,97,918	71.55	1,16,53,035	17.59

Source: Ministry of Road Transport and Highways, Government of India, New Delhi: Road Transport Year Book (2013–2014 and 2014–2015) [8].

Table 8.
Share of two wheelers and cars in total number of registered motor vehicles in million plus cities of India as on 31st March 2015.

Metropolitan City	No. of Motor Vehicles (in Thousands)		Average Annual Growth (%)
	2005	2015	
Ahmedabad	1632	3420	10.96
Bengaluru	2232	5560	14.91
Bhopal	428	1080	15.23
Chennai	2167	4934	12.77
Coimbatore	682	1901	17.87
Delhi	4186	8851	11.14
Greater Mumbai	1295	2571	9.85
Hyderabad	1433	2369	6.53
Indore	705	1713	14.30
Jaipur	923	2249	14.37
Kanpur	425	1462	24.40
Kochi	166	606	26.51
Kolkata	911	1402	5.39
Lucknow	615	1710	17.80
Madurai	330	955	18.94
Nagpur	770	1276	6.57
Patna	378	1019	16.96
Pune	827	2337	18.26
Surat	692	2459	25.53
Varanasi	366	769	11.01

Metropolitan City	No. of Motor Vehicles (in Thousands)		Average Annual Growth (%)
	2005	2015	
Vadodara	586	1042	7.78
Visakhapatnam	435	731	6.80

Source: Ministry of Road Transport and Highways, Government of India, New Delhi: Road Transport Year Book (2013–2014 and 2014–2015) [8].

Table 9.
Growth in number of registered motor vehicles in select metropolitan cities 2005–2015.

shows 16 out of 22 metropolitan cities recorded more than 10 percent annual growth over the period; 3 cities had an annual growth rate exceeding 20 percent.

The car-penetration rate defined as the number of cars per 1000 persons is very small in India compared to that in developed countries and several developing countries. **Table 10** compares data on Gross National Income (GNI) and vehicular penetration rates for select countries with those for India.

The data in the above table suggest that with the rise in GNI, following structural transformation and economic growth, the vehicular penetration rate, with attendant problems of congestion, pollution, noise and carbon emissions in cities, will lead to increased demand for road space and public transport, including rail-based transit.

Ironically, many of India’s urban mobility problems can be traced to the lack of an appropriate planning model and public transport development strategy rooted in the economics of cities. In particular, cities have not exploited the links between

Country	GNI per capita (US\$) for 2013	Number per 1000 persons		
		Passengers Cars	Total Vehicles	Two-wheelers
Developed Countries				
United States	53,470	360	783	27
United Kingdom	41,680	455	517	19
Japan	46,330	466	598	81
Germany	47,270	544	603	50
Australia	63,390	562	711	32
Developing Countries				
Mexico	9940	203	285	15
Malaysia	10,430	358*	396*	356
South Africa	7190	110**	162**	6
Brazil	11,690	227	290	108
China	6560	76	93	70
South Korea	25,920	300	386	42
India	1570	19	167	123

*Data relates to 2012.
**Date relates to 2011.
Source: Ministry of Road Transport & Highways, Government of India, New Delhi: Road Transport Year Book (2013–2014 and 2014–2015) [8].

Table 10.
Vehicular penetration rates in select developed and developing countries 2013.

agglomeration externalities and transportation in their spatial planning and development models. Land use planning and transportation planning have been pursued as disjointed exercises in India. Cities had land use planners, but no transport planners. As a result, they have not been able to harness the power of city externalities to guide transport-land use integration and local economic development, address congestion and raise resources to finance public transport. The trends of urbanization, metropolitanization and motorization; patterns of population composition and densities in cities; abysmal state of urban transport with no robust model of financing in sight; emerging energy security and environmental concerns; and the demands of inclusive economic growth in India call for exploring the principles of New Urbanism, Smart Growth and TOD for restructuring urban planning.

3. New urbanism, smart growth and TOD

New Urbanism and Smart Growth emerged in the last four decades in the United States, Europe and other developed countries in response to their problems of urban sprawl, a consequence of automobile-dependency. They are rooted in a search for alternatives to low-density, single-use and spread-out patterns of urban expansion, increasing traffic congestion and air pollution, and adversely impacting the environment and quality of life.

New Urbanism is a design-oriented with architectural roots. Promoted by architects, it is focused on neighborhood design. Smart Growth is policy-oriented with environmental roots. Spearheaded by planners, it is centered on promoting guided development. Smart Growth is not so much concerned with urban design as it is with growth promotion. It elevates the discourse on urban planning from growth control to issues of how and where growth should be accommodated. It calls for public subsidies for growth, such as infrastructure facilities and land use incentives. Both New Urbanism and Smart Growth advocate TOD.

Transit Oriented Development (TOD) owes its origin to the paradigms of New Urbanism and Smart Growth. It is an urban planning and development approach aimed at creating vibrant, livable and sustainable communities by concentrating growth around one or more transit stations or within a transit corridor. It emphasizes compact, walkable, mixed-use communities with access to high quality transit services within a walking distance. TOD principles are not new; they were introduced by many cities in North America and Australia into their planning models after World War II. However, TOD as a specific policy paradigm has taken root only in the last twenty years.

The concentration of development based on a TOD approach acts against urban sprawl and uneconomic extension of costly infrastructure, catalyzes external economies of agglomeration, mitigates congestion diseconomies, and assists in the mobilization of resources through increases in land and property values and other tax bases. TOD enables lower-stress living without complete dependence on a car for mobility. It is environment-friendly and inclusive. The poor, who do not own automobiles benefit significantly when included under a TOD scheme. As an instrument of inclusive regional and urban planning, TOD promotes the inclusion of the poor in the urban development process. The economic, social and environmental benefits of TOD are briefly presented below:

TOD: Economic Benefits:

The economic benefits of TOD include reduced congestion, agglomeration economies, resource mobilization for financing infrastructure, reduced costs of development, efficiency of investment, etc.

Reduced Congestion: TOD reduces the need to travel and, thus, reduces congestion and stress levels.

Agglomeration Economies: TOD, if designed properly, can augment agglomeration economies by enhancing access to the economic mass and facilitating the collocation of productive economic activities in nodes with potential to engineer growth. These economies lead to benefits of backward and forward linkages, market access, sharing of common infrastructure facilities and resources, specialized labour pooling, human capital accumulation, knowledge spillovers and networking. They lead to economies of sharing, matching and learning; they promote specialization, diversity and competition.

Increased Revenue Yields: Properties around transit hubs are accorded higher values. These higher property values could be converted into revenue for the government through value capture levies.

Efficiency of Investment: TOD directly fosters patronage for growth and helps to optimize existing transit and connectivity infrastructure. It maximizes the efficiency and carrying capacity of the transportation network.

TOD: Social Benefits.

Affordable housing and public transport are key enablers of social inclusion. They increase the accessibility to jobs, health care, education, recreation and socio-cultural interactions.

TOD: Environmental Benefits.

Public transport can help to reduce the proliferation of personal vehicles and thus, reduce the level of emissions. This reduction could be quite significant, especially during the peak hours.

The success of TOD depends on its design. **Box 1** presents some key principles to guide TOD designing.

1. Multimodal Transit Station.

Transit is the focus of TOD. Transit facilities should not be designed in isolation, rather it should connect the neighborhoods. Further, it should include a mix of modes like two wheelers, car, bicycles, BRT, LRT and NMT.

2. Interconnected Streets.

Such a pattern not only decreases congestion but also encourages mixed use development along with enhanced travel choices.

3. Mixed Use Development.

A compact structure involving diverse land use pattern can benefit residents as well as workers to meet their daily requirements including work, shopping and leisure.

4. Walkability.

In order to encourage walking it is important to design a pedestrian-friendly structure. Such a structure must include sidewalks, shaded pedestrian routes, benches to rest and safe crossing points at transit stations.

5. Compact Development.

In order to be successful, the structure needs to be compact. The extent of neighborhoods around transit nodes is based on a comfortable walking distance from edge to centre (approximately 400 to 800 meters in radius).

6. Street-facing Buildings.

Streets can be better defined by placing the buildings near them. Street front retail should be provided to humanize the building wall and activate the sidewalk.

7. Urban Place-making.

A successful TOD design works on developing public spaces in the neighborhood. It is important for improving social interaction and strengthening community bonds and participation.

8. Neighborhood High Street.

Retail streets provide the goods and services of daily life, activate the street, reduce auto reliance, and increase ownership and safety of the pedestrian realm.

9. Streetscape Design.

A beautified street pattern equipped with pedestrian utilities improves the desire to walk and makes it pleasant while shortening the sense of distance.

10. Bicycle-friendly Streets / Parking.

Bicycles are environment friendly and efficient alternatives to automobiles. Bike lanes, bike routes, and secure parking make the bicycle an easy option.

11. Urban Parks & Plazas with Minimized Ecological Footprint.

Open spaces enable public interaction and promote healthy communities.

12. A Well-designed Transit Station for a High Quality User Experience.

The design of the transit station is at the heart of a successful TOD structure. Its design is critical for enhancing customer attraction and ensuring seamless and efficient accessibility to consumers.

13. Reduced Parking Standards.

Reducing parking standards provides increased site area for alternative public amenities.

14. Safety & Security.

Ensuring safety and security of transit users especially pedestrians, not only improves the transit experience but also enhances transit ridership.

15. Market Acceptance and Successful Implementation.

A vibrant and transit supportive space which attracts several jobs and residents is critical for a TOD programme. Flexible strategies along with designs which cater to the needs of the surrounding neighborhood can ensure a successful TOD.

Source: UNDP 2012 [9].

Box 1.

Transit-oriented development: design principles.

While the principles of Smart Growth and TOD originated in developed countries in response to their problems of sprawl, the paradigms make good sense for developing countries like India. However, TOD policies have not been implemented in an appreciable way in India. Only recently Delhi and Haryana have brought out planning guidelines for TOD, calling for the integration of transportation and land use. Bengaluru, Mumbai, Pimpri-Chinchwad, Ahmedabad, Hyderabad, Naya Raipur and Bhubaneswar have embarked on programmes to promote transit-oriented planning and development. TOD presents significant opportunities to India to make the country's urbanization process efficient, inclusive and sustainable. However, the execution of TOD and financing of transit investments are key challenges for Indian cities. Apart from the principles of sustainable development, successful international practices of transport-land use and integration approaches to financing public transport investments can guide the design of TOD in India. Section 4 refers to some oft-cited examples of successful international practices of TOD. Section 5 presents the broad approaches to financing of public transport, including transit to guide Indian cities to draw lessons for TOD.

4. Transit oriented development: international practices

TOD is emerging as a preferred paradigm to plan cities, localities and urban extensions and renew old cities and derelict areas within cities in many countries. Some of the successful TOD models practiced internationally that can provide lessons for Indian cities for the integration of transportation and land use are discussed in this section.

4.1 Hong Kong SAR

Hong Kong is internationally known for its successful integration of rail transit investments and urban development. The integrated "rail-property" development model (R + P), plays a vital role in managing and financing railway expansion,

advancing high-quality urban designs, creating “one-stop” settings for “live-work--shop-play”, guiding regional urban growth, and more. As with all good public-private partnerships, this occurs in a win-win fashion – i.e., the railway corporation reaps financial benefits and society at-large benefits from more sustainable, transit-oriented patterns of development. Maritime Square Residential-Retail Development atop Tsing Yi Station provides a good example of Hong Kong TOD. Maritime Square features hierarchically integrated uses. Shopping mall extends from the ground floor to the 3rd level. Station concourse sits on the 1st floor, with rail lines and platforms above and ancillary/logistical functions (like public transport/bus interchange and parking) at or below. Above the 4th and 5th floor residential parking lies a podium garden and above this, high-rise, luxury residential towers [10].

The Hong Kong Government derives a major proportion of its revenues from land, including premium on new land and modification of existing leases, property taxes, stamp duty, rents, etc. [11]. The Hong Kong MTR has generated many benefits to the community. These include travel time saving, employment gains, environmental health benefits, property value increases and so on. The network obviously generates enormous external benefits as it passes through the densely populated districts, commercial and employment centres and carries large passenger loads.

4.2 Bogota

Bogota, the capital of Colombia, has some of the most progressive public investment initiatives in developing countries, including the first-class TransMilenio BRT; integrated TDM measures; the transit-linked social housing Metrovivienda program; the Alameda Porvenir, the world’s longest pedestrian way; and other public projects that incorporate good urban design and innovative financing schemes [12]. Bogota’s TransMilenio is one of the world’s most successful examples of Bus Rapid Transit (BRT) [13]. It is characterized by dedicated main trunk routes for high speed busses, physically separated from the rest of traffic [14]. The bus stations are well-connected with systematic feeder services. The integrated approach of Bogota addressing affordable housing and affordable transport simultaneously, has improved the access to work, leisure, recreation, shopping.

4.3 Curitiba

Curitiba’s bus system is composed of a hierarchical system of services. Minibusses routed through residential neighborhoods feed passengers to conventional busses on circumferential routes around the central city and on inter-district routes. The backbone of the system is composed of the Bus Rapid Transit, operating on the five main arteries leading into the centre of the city like spokes on a wheel hub [15]. Along each of the five arteries there is a trinary road system, comprised of middle express bus lane with vehicle lanes on each side for local auto traffic and parking.

Curitiba’s Master Plan integrated transportation with land use planning. It limited central area growth, while encouraging commercial growth along the transport arteries radiating out from the city centre. The city centre was partly closed to vehicular traffic, and pedestrian streets were created. Rush hour in Curitiba has heavy commuter movements in both directions along the public transportation arteries.

4.4 Copenhagen

Danish Town Planning Institute created the “Egnsplan” or the Finger Plan in 1947. It was based on a TOD principle, with mixed land use and high-density areas

around the centre [16]. Shopping malls, offices, recreational centres and housing were all planned in pedestrian areas with good bicycle facilities such as cycle lanes and parking and a good connection to public transport. The design includes five fingers or corridors of urban development along the suburban areas which are connected through railway lines and would directly connect the areas to Copenhagen Central Business District (CBD). The neighborhoods around the transit stations were planned to be developed in a TOD fashion with high density housing and amenities. The approach aimed at an ordered and integrated 'green' growth and was developed at the time of extensive and rapid urban development. There were spaces left for the use of farmland and recreational purposes between each finger, known as "green wedges". A ring road was planned at the end of each finger which linked the Copenhagen harbor and inner city to industrial locations. Most of the land was developed by the end of the 1960s and the two southern-most fingers were extended.

Orestadt township is one of the best examples of successful TOD following the Finger Plan. It combines economic activities, housing and amenities – jobs, housing, retail, leisure and education – all based on TOD. It helped Copenhagen to remain competitive and release pressure on CBD.

Unlike the international cities with global best practices on TOD, Indian cities have grossly neglected transportation planning, public transport investments and transport-land use integration for long. Key issues of financing public transit and development integrated with such transit are typically ignored in public discourses. As a result, a coherent strategy for financing public transport has not emerged in India. Section 5 refers to international practices for financing of transit oriented development in the broader concept of financing public transport to guide Indian cities.

5. Financing transit oriented development

The financing of TOD cannot be artificially divorced from the broader issues of financing urban transport and cities. Both planning and economic considerations are important for designing a financing strategy. The approaches to financing of various types of public transport infrastructure, including TOD internationally include the following methods:

- Equity, including public-private partnerships (PPP), special purpose vehicles, infrastructure debt funds, investment funds, infrastructure financing companies.
- Debt tools, including private debt, commercial bank debt, take-out financing, bond financing – infrastructure bonds, municipal bonds (revenue and general obligation), green bonds, etc.
- Foreign Direct Investment and Foreign Portfolio Investment.
- Grant financing, combining central and state grants with local government resource mobilization and using public funds to leverage market resources and PPP.
- Direct fees, including user fees, utility fees, benefit charges and congestion pricing.
- Using land as a resource - value capture and impact instruments such as land and property taxes, land value tax, land value increment tax, betterment levy, developer exactions, impact fees, special assessment districts, land

Sl. No.	Name	Description	Advantages	Disadvantages
1.	Fare increases	Increase fares or change fare structure to increase revenues	Widely applied. Is a user fee (considered equitable)	Discourage transit use. Is regressive.
2.	Discounted bulk passes	Discounted passes sold to groups based on their ridership	Increases revenue and transit ridership	Increases transit service costs and so may provide little net revenue
3.	Property taxes	Increase local property taxes	Widely applied. Distributes burden widely.	Supports no other objectives. Is considered regressive.
4.	Sales taxes	A special local sales tax	Distributes burden widely.	Supports no other objectives. Is regressive.
5.	Income tax	Special income tax for transit or transportation	Progressive with respect to income. Relatively stable.	May be difficult to implement.
6.	Fuel taxes	An additional fuel tax in the region	Widely Applied. Reduces vehicle traffic and fuel use	Is considered regressive.
7.	Vehicle fees	An additional fee for vehicles registered in the region	Applied in some jurisdictions. Charges motorists for costs.	Does not affect vehicle use.
8.	Utility levy	A levy to all utility accounts in the region	Easy to apply. Distributes burden widely.	Is small, regressive and support no other objectives.
9.	Employee levy	A levy on each employee within a designated area or jurisdiction	Charges for commuters.	Requires administration. Encourage sprawl if in city centers.
10.	Road tolls	Tolls on some roads or bridges	Reduces traffic congestion.	Costly to implement. Can encourage sprawl if only applied in city centers.
11.	Vehicle-Km tax	A distance-based fee on vehicles registered in the region	Reduces vehicle traffic.	Costly to implement.
12.	Parking taxes	Special tax on commercial parking transactions	Is applied in other cities.	Discourages parking pricing and downtown development.
13.	Parking levy	Special property tax on parking spaces throughout the region.	Large potential. Distributes burden widely supports strategic goals.	Costly to implement. Opposed by suburban property owners.
14.	Expanded parking pricing	Increase when and where public parking facilities (e.g. on-street parking) are priced	Moderate to large potential. Distributes burden widely. Reduces parking & traffic problems.	Requires parking meters and enforcement, and imposes transaction costs.
15.	Development or transport impact fees	A fee on new development to help finance infrastructure, including transit improvements.	Charges beneficiaries.	Limited potential.
16.	Land value capture	Special taxes on property that benefit from the transit service	Large potential. Charges beneficiaries.	May be costly to implement. May discourage TOD.

Sl. No.	Name	Description	Advantages	Disadvantages
17.	Station rents	Collect revenues from public private development at stations	Charges beneficiaries.	Limited potential.
18.	Station air rights	Sell the rights to build over transit stations.	Charges beneficiaries.	Limited potential.
19.	Advertising	Additional advertising on vehicles and stations.	Already used.	Limited potential. Sometimes unattractive.

Source: Todd Litman 2016 [18].

Table 11.
Potential public transport funding options.

readjustment, town planning scheme, joint development, land monetization including the lease and sale of land and air rights with enhanced Floor Space Index and value-enhancing land use changes in TOD zones, tax increment financing, etc.

- Bullet Bonds and Pooled Finance Fund Scheme.

Land value capture (LVC) instruments take many forms and can be classified into two major types: (i) tax- or fee-based and (ii) non-tax- or non-fee-based, also called “development-based LVC.” Tax- or fee-based instruments capture land value increases through, for example, land and property taxes, betterment charges, special assessments, and tax increment financing. In contrast, development-based LVC instruments capture these increments through land-related transactions such as selling or leasing land, development rights and air rights; making land readjustments; and redeveloping urban areas [17]. If adapted well to local contexts, development-based LVC instruments can be an effective finance and planning mechanism for cities in India.

The issues of financing public transit and TOD are intricately connected. However, as Indian cities are struggling to finance the development of mass rapid transit and bus rapid transit systems, not many have focused on TOD funding linked to LVC and non-LVC instruments. Based on international experience, a combination of financing instruments needs to be considered for adoption in India. These have to be suitably customized to fit the context of cities. A summary of various potential options for funding public transport, including transit is presented in the table below (**Table 11**).

International experience suggests that no one size fits all. But it makes clear that public transit and TOD impact on local, regional and national economies and lead to enhanced tax bases of all governments. Thus, if they are financed by borrowed funds with repayment linked to a value creation, capture and recycling strategy, cities in India can hope to get out of their vicious circles and traverse on a path of planned development. Future tax increments can finance current investment programmes which augments tax bases.

6. Towards TOD in India: case studies

Some state governments and urban local bodies in India have resorted to novel initiatives to plan and implement projects aimed at improving urban mobility

following the TOD principle and Smart Growth framework. Some case studies are presented below.

6.1 Janmarg: Ahmedabad

The city has decided to develop and implement an integrated public transit system including:

- A Suburban Rail Transit System to connect the city with its industrial suburbs such as Kalol, Naroda, Mehmedabad, etc.
- A Metro Rail System to cater to the high intensity movement between Ahmedabad and Gandhinagar.
- A Bus Rapid Transit System (BRTS) to cater to major mobility needs of the city.
- A regular bus system to support BRTS.
- Decentralized Regional Bus & Rail Terminal.
- Integrate different form of transport, i.e., BRT with other regional and urban transport systems, with bicycles and pedestrian facilities.
- Integration of Land Use -Transport elements like increased FSI along BRTS corridor.

The primary objective of the integrated public transit initiative in Ahmedabad is to make the city more accessible – with physical, social and economic accessibility.

Ahmedabad city has developed a Bus Rapid Transit System under the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) with the name “Janmarg” or “the people’s way” and the slogan ‘Accessible Ahmedabad’. Janmarg boasts of an innovative plan and design which includes pedestrian only sections and one-way bus lane etc.

6.2 “Namma” metro: Bengaluru

Bangalore Metro Rail Corporation Limited (BMRCL), a joint venture of Government of India and Government of Karnataka is a Special Purpose Vehicle entrusted with the responsibility of implementation of the Bengaluru Metro Rail Project. “Namma Metro” is an environment friendly initiative as it aims at reducing carbon emissions in the city. The project has an East–West corridor - 18.10 km long, starting from Baiyappanahalli in the East and terminating at Mysore Road terminal in the West and a 24.20 km North–South corridor commencing at Nagasandra in the North and terminating at Puttenahalli in the South.

In connection with the construction of Bengaluru Mass Rapid Transit System, the Government of Karnataka has introduced a number of innovative measures to create a dedicated resource pool, including special cess to capture land value increments due to transit [19]. The Government has taken up several value capture instruments like development ceases, chess on additional FAR, Transferable Development Right (TDR) etc. to finance Bengaluru mass rapid transit system.

6.3 Delhi MRTS

The Delhi Metro system serves Delhi and its satellite cities of Faridabad, Gurgaon, Noida and Ghaziabad in National Capital Region in India. Delhi Metro is the world's 12th largest metro system in terms of both length and number of stations. The network consists of five color-coded regular lines and the faster Airport Express line, with a total length of 213 kilometers serving 160 stations (including 6 on Airport Express line) [20]. The system has a mix of underground, at-grade, and elevated stations using both broad-gauge and standard-gauge. The metro generated an average daily ridership of 2.661 million passengers.

Delhi Metro has been instrumental in reducing vehicular congestion on the roads. According to a study, Delhi Metro has helped in removing about 3.9 lakh vehicles from the streets of Delhi. The Delhi Metro Rail Corporation has been certified by the United Nations as the first metro rail and rail-based system in the world to get "carbon credits for reducing greenhouse gas emissions" and helping in reducing pollution levels in the city by 630,000 tonnes every year, thus helping in reducing global warming [21].

The Delhi TOD Policy 2013 has provided for significant increases in FSI in transit influence zones to promote intensive development so that TOD can be self-financing adopting a land value capture method and even be surplus-generating. The Delhi Development Authority has proposed to take up TOD to build the East Delhi Hub as a signature destination. This includes the development of 75 acres of land in Karkardooma with FSI raised to a maximum of 4 and maximum density of 2000 persons per hectare on the basis of a TOD model. The project is being taken up on a partnership with the National Building Construction Company (NBCC). Some parcels of land are under development, but Delhi is far from achieving the TOD Policy objectives of inclusive development.

6.4 Delhi TOD policy

The salient features of the Delhi TOD Policy are:

- Development/redevelopment in TOD zone will be incentivized by providing significantly higher FAR of 4.0 on the entire amalgamated plot being developed/redeveloped.
- Additional FAR may be availed only through Transferable Development Rights (TDR), for schemes larger than 1 hectare.
- Entire approved layout plan of a scheme will be included in the influence zone if more than 50 percent of the plan area falls in the influence zone.
- It will be mandatory to use a minimum of 30 percent of overall FAR for residential use, a minimum of 10 percent of FAR for commercial use and a minimum of 10 percent of FAR for community facilities. Utilization of the remaining 50 percent FAR shall be as per the land use category designated in the Zonal Plan.
- There shall be a mix of housing types for a wide range of income brackets within communities with shared public spaces/greens/recreational facilities/amenities, which will minimize gentrification and create more community-oriented developments.

- The mandatory residential component covering 30 percent FAR shall wholly comprise of units of 65 m² area or less. Out of the half of the FAR, i.e. 15 percent of the total FAR, has to be used for units of size ranging between 32 and 40 m². Over and above this, an additional mandatory FAR of 15 percent, i.e. FAR of 0.6 (out of 4.0) has to be utilized for Economically Weaker Sections (EWS). The size of EWS units will range between 32 and 40 m².
- 20 percent of land shall be used for roads/circulation areas. 20 percent area for green open space shall be kept open for general public use at all times. Further, 10 percent of green area may be for exclusive use.
- MRTS agencies are exempted from providing the mandatory 30 percent residential component which is part of the TOD norms applicable to all other developer entities (DEs).

6.5 Hyderabad elevated metro rail

Hyderabad has gone for a metro rail transit based on project report prepared by Delhi Metro Rail Corporation (DMRC) which identified 269 acres of land requirement. Originally the project was conceived as a government-funded project. However, subsequently the city went for a metro based on a PPP mode, adopting a Design, Build, Finance, Operate and Transfer (DBFOT) format. Hyderabad is currently implementing the world's largest elevated metro rail project in PPP mode with L&T as concessionaire.

The revenue model of the concessionaire is: 55 percent passenger fare, 40 percent property development and 5 percent advertisement and parking fees. Thus, the project's revenue is partially fare based. But, a significant portion of the revenue is also non-fare based. The concessionaire hugely relied on the potential of development of property or air space above and around transit stations. It has been provided with some valuable government land at vantage transit stations and is undertaking commercial exploitation of property with engineering innovations. It cannot sell property but can enjoy the rentals during the concession period of 35 years.

6.6 Mumbai metro

Mumbai Metro Line 1 – Versova-Andheri-Ghatkopar Mass Rapid Transit System is the first metro project awarded in the country on a PPP basis. It has provided the much needed connectivity in the financial capital of India linking the East and the West. It has ensured connectivity to Western and Central Railways. Providing modern, fast, clean and caring infrastructure, the Line has carried 100 million commuters in the first year of operation. It has reduced the journey time between Versova and Ghatkopar from 71 minutes to 21 minutes.

While Indian cities have making efforts to promote TOD with new policies, projects and plans emerging, especially in the context of Smart Cities Mission, a study of the Indian initiatives so far suggests robust approaches to financing and execution of TOD have not emerged. The approaches to financing transit also vary considerably as shown in **Table 12** below.

A key lesson from the initiatives of Indian cities towards financing transit and TOD, when compared to international best cases, is that urban policy, spatial planning, city development strategy, city financing framework, transit orientation, zoning, land use and development control regulations and institutional framework to integrate land use and transportation planning, raise resources and execute TOD

Funding Approach	Financing Pattern	Practicing Metro Rail
Government-funded	50–50 Central Government: State Government	Delhi, Bengaluru, Chennai, Kochi, Nagpur
	100 percent State Government	Jaipur, Lucknow (initially)
	100 percent Central Government	Kolkata (North –South) Kolkata (East–West)
Public-Private Partnerships	Private provisioning of operation and maintenance	Delhi Airport Express (initially) – Reliance Infra
	PPP-BOT model (Design, Build, Finance, Operate, Transfer)	Hyderabad Metro (Government of India Viability Gap Funding – 10%, L&T – 20% equity and 70% debt)) Mumbai Metro Line 1 (RInfra –69% MMRDA – 26%, Veolia – 5%)
Private Funding	Complete private funding	Gurgaon Rapid Metro Phase I – Equity 75%, DLF 25% Phase II – Senior Debt from Banks/ Financial Institutions – 70%, Sponsor’s Contribution – 30%

Table 12.
Emerging approaches to financing public transit in India.

need to be part of a holistic model of integrated urban development and should not be undertaken disjointedly.

7. Implementing TOD in India: issues and directions

The existing institutional framework in Indian cities is not adequate to tackle the issues associated with planning, financing and implementing TOD. The starting point for successfully implementing TOD in India is to devise an appropriate institutional framework along with clarity in financing mechanisms. Considering the investment and planning efforts demanded by TOD, an effective, extensive and robust institutional framework needs to be put in place. This framework is required at all three levels of governance: centre, state and local. The design, implementation of TOD and enforcement of urban transport pricing and regulatory measures require special attention. Proper co-ordination must be ensured between the several agencies involved at the different levels in order to prevent potential conflicts and delays.

The draft National Transit Oriented Development Policy paper takes into account the above internationally recognized principles and implementation guidelines for TOD. Keeping in view the international best practices and national debate and discussion on TOD as an instrument of sustainable and planned urban development, **Box 2** provides some broad directions for executing TOD in cities and towns of India.

TOD focuses on compact, mixed use development around transit corridors - metro rail, BRTS etc. International best practices have demonstrated that though transit system facilitates transit-oriented development, improving accessibility and creating walkable communities is equally important. Thus, to achieve the goals of TOD, the planning and development principles mentioned earlier in the study need to be adopted. The principles should also be supported by TOD-support policy tools such as right size infrastructure, technology integration, station area planning, land value capture, safety and security, universal accessibility etc. The following key aspects need to be considered for translating TOD principles and policies into practice in India:

1. Approach for TOD Implementation: 1.1 Influence Zone: Influence zone of any transit corridor or station is the area in its immediate surrounding. It is intended to be developed into a compact, high density structure with mixed land use to cater to the residents’ basic needs. It is generally up to a radius of nearly 500–1000 mt of the transit station. 1.2 High Density Compact Development: TOD calls for the densification of the influence zone. This can be done by providing higher Floor Area Ratio (FAR)/ Floor Space Index (FSI) and higher job and population density in the influence areas. To ensure sustainable and financially viable development, the minimum FAR should be 300–500 percent, and can be higher, depending on the city size. 1.3 Mixed Use Development: Mixed land use in the TOD zone reduces the need to travel for work, shopping, leisure, education etc. The basic necessities of the residents can be provided within walking distance. 1.4 Mandatory and Inclusive Housing: The cities should have minimum percentage (30 percent or higher) of allowed FAR for affordable housing in all development/ redevelopment in the influence zones. Housing in the influence zones should have a mix of all economic groups/ sections. The development control regulation should cater housing for EWS as well as LIG and MIG to give an opportunity to the people who depend on public transport for daily commuting to live in walkable neighborhoods. 1.5 Multimodal Integration: An integrated multimodal network is required for availing various facilities in the influence zone. Seamless physical connectivity, integrated information system and fare integration can provide easy first and last mile connectivity. 1.6 Focus on pedestrians, cyclists and NMT users: The influence zone should address the needs of pedestrians and NMT users. Sidewalks and amenities like benches, lighting, shops and information signage etc. should be developed. 1.7 Street Oriented Buildings and Vibrant Public Spaces: Buildings should face the streets so as to define them better. Buildings should be oriented towards facing the pedestrian facilities. Public spaces should be developed to improve social interaction and strengthen community bonds and participation. 1.8 Managed Parking: Use of private vehicles can be discouraged by reducing availability of parking spaces in influence zones and making it expensive. On-street parking should be prohibited within 100 mt of the transit station, except for freight delivery and pick-up or drop-off of the differently abled. 2. Value Capture Financing (VCF) for TOD: The investment in the transit system as well as increase in FAR and provision for mixed use development would result in increase in value of land within the influence zone. Land Value Capture can be used as a mechanism to finance the required upgradation of infrastructure and amenities within the influence zone and expansion of the public transport system. 3. Statutory Framework: TOD policy should be notified as part of the Master Plan/ Development Plan of the city whose vision should be resonated by all the stakeholders, especially those involved in infrastructure development and preparation of development plans. The policy document should clearly outline the importance of the high capacity transit network in the city’s development. 4. Coordination and Implementation: Successful implementation of TOD requires the various agencies involved in planning, design and financing to work in coordination with each other. UMTAs need to be operationalized and strengthened. 5. Communication and Outreach: It is important to create awareness about TOD so as to increase its use. Multiple agencies including both private and public stakeholders must have a collective approach for successful implementation of TOD. Source: National Transit Oriented Development Policy [22].	
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Box 2.
Implementing TOD in India.

Table 13 presents a summary of steps to convert the concepts of TOD to micro level implementation and undertake rapid transit station area and transit corridor development in India:

Existing Land Use	
a. Existing Land Use	• Development of existing corridor and station-area. • Making existing station-area pedestrian friendly, including access for persons with disabilities. • Improving parking supply in existing corridor and station-areas.
Transit Supportive Plans and Policies	
a. Growth Management	• Concentration of development around established activity centres and regional transit. • Greater employment opportunities should be provided close to transit stations. • Managing and conserving land.
b. Transit Supportive Corridor Policies	• Development of station-area and increasing transit corridor. • Plans and policies aiming to increase transit-friendliness of transit stations, corridors and areas. • Designs to improve pedestrian amenities, including facilities for the differently abled commuters. • Parking policies.
c. Supportive Zoning Regulations near Transit Stations	• Policies and regulations which encourage development around transit stations. • Zoning ordinances that provide enhanced accessibility to pedestrians and encourage transit-oriented characteristics of stations. • Zoning allowances to mitigate traffic and reduce parking. • Ensuring provision of affordable housing units close to transit stations.
d. Tools to implement land use policies	• Outreach to government agencies and the community in support of land use planning. • Regulatory and financial incentives to promote transit supportive development. • Higher FSI should be allowed along transit corridors. • Efforts to engage the development community in station area planning and transit-supportive development.

Table 13.
Summary of steps to execute TOD: station area and corridor development.

8. Conclusions

India is going to experience a multifold rise in the demand for urban transport in the coming years. A strategic approach is required to ensure that the growth momentum is maintained without adversely impacting the quality of environment to urban dwellers. A holistic planning mechanism consolidating urban transport and land use planning is essential for Indian cities, especially metropolitan cities, so that synergies between urban form and functions can be channelized. This will further augment the productivity and efficiency of cities. The present challenges of congestion, pollution, accidents, sprawl etc. can be mitigated by investing in public modes of transport and optimizing multimodal mobility patterns. Urban transport influences the spatial organization of cities. So, urban transport must be approached in a holistic manner integrating pricing, financing regulation and comprehensive land use.

This chapter suggests that TOD is a necessity in India in view of the urbanization, metropolitanization and motorization trends in cities, the numbers and densities therein, income distribution patterns and considerations of sustainability. The

country cannot afford auto-centric, sprawling, energy-intensive and an expensive process of urbanization. India needs to move to a public-transportation led, transit-oriented, mixed use, and value capture financing-focused strategy of planned urban development with public transportation investment and transport-land use integration as the key drivers. This also calls for a robust financing strategy. Successful TOD policy requires a robust and integrated framework bestowed with financial independence, responsiveness and competence. TOD policy can be successful by ensuring transparency and accountability towards the users while augmenting the accessibility of Indian cities.

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Conflict of interest

The authors declare no conflict of interest.

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