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Simanti Bandyopadhyay  
*Shiv Nadar University*

Aishna Sharma  
*Shiv Nadar University*

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**Simanti Bandyopadhyay**  
**Aishna Sharma**



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Municipal Corporation: Implications for  
Service Delivery**

**Simanti Bandyopadhyay  
Aishna Sharma**

**March  
2020**

International Center for Public Policy  
Andrew Young School of Policy Studies  
Georgia State University  
Atlanta, Georgia 30303  
United States of America

Phone: (404) 413-0235  
Fax: (404) 651-4449  
Email: paulbenson@gsu.edu  
Website: <http://icepp.gsu.edu/>

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# Assessing the Performance of Kolkata Municipal Corporation: Implications for Service Delivery

Simanti Bandyopadhyay<sup>1</sup> and Aishna Sharma<sup>2</sup>

March 2020

## Abstract

We assess the fiscal health of KMC by estimating the gap between revenue and expenditures over a period of last 10 years. It is found that the own revenues generated by the KMC are not sufficient to meet its expenditures. Even when we account for PPP and grants from the government the expenditures exceed the revenue receipts. The revenue receipts have registered a greater fall than the fall in the revenue expenditures. This gap has been filled up by raising loans, which is not a sustainable solution in the long run. While the revenue expenditures on services already fall short of the expenditure norms and comprise of only 45.4 percent of the total revenue expenditure of the KMC, we identify a further burden on it in the form of other major yet unavoidable components like pension funds, electricity charges, and administration and support. We estimate the revenue capacity and estimate the best-case scenario using certain simulation exercises. It was found that if we raise the own revenue to GCP to 2 percent, the KMC is unable to meet the revenue expenditures. However, when we push the own revenue to GCP ratio further to 4 percent, to equate it to revenue expenditure to GCP ratio, the KMC is comfortably able to meet all its revenue expenditures. When we compare the own revenue to revenue expenditure on all the services (that is water supply, sewerage and drainage, streetlights, roads and solid waste management), we estimate that the desired own revenue to GCP ratio is 1.72 percent. The ratio is almost the same, 1.7 percent of the GCP, when we consider expenditure needs on all the services. In conclusion, we suggest to either tap better the existing revenue handles like property tax, car parking fees, road charges, etc. or develop new non-tax handles/ user charges like charges from cable operators or mobile towers. At the same time, it is important that KMC diverts most of its expenses towards providing basic services to its populace.

**Keywords:** municipal finance, revenue capacity, expenditure needs, fiscal gap

<sup>1</sup> Associate Professor Economics and Public Policy Area, School of Management and Entrepreneurship, Shiv Nadar University, India

<sup>2</sup> Assistant Professor Economics and Public Policy Area, School of Management and Entrepreneurship, Shiv Nadar University, India

## Introduction

The Urban Local Bodies (ULBs) shoulder a crucial responsibility of providing basic services like water, street lighting, solid waste management, sewerage and drainage and roads to their populace. The ULBs fund these services using either their own sources of revenue receipts like tax and non-tax revenue or they can take grants from upper tier governments or borrow loans. Ideally a ULB should be able to self-finance its expenditures on service delivery without having to depend too much on grants or loans. It is important that a ULB is self-sufficient, can raise their own revenues and spend enough to provide basic services. To estimate the fiscal health of ULB, we compare the revenue receipts with the revenue expenditures of the ULB. We further undertake certain simulations, to compare the revenue capacity of the ULB with the revenue expenditures. Revenue capacity is the maximum own revenue that a ULB can raise, which depends on the vibrancy of the city, measured by its Gross City Product (GCP). We peg the ratio of desired own revenue to GCP as same as the share of revenue expenditure to the GCP<sup>1</sup>, which is then multiplied by the GCP to find the desired own revenue of the ULB. This desired own revenue is then compared with the revenue expenditure to see if raising the revenue capacity can help meet the revenue expenditure.

While looking at the revenues of the ULBs is one side of the story, we must also assess as to whether the ULB is spending enough to provide the minimum level of basic services. We compare the actual expenditures with the norm expenditure. If the ULB is spending below the norms, there is a possibility of poor service delivery. The objective of this paper is to assess the performance of Kolkata Municipal Corporation (KMC) on the basis of the methodology outlined

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<sup>1</sup> Such an exercise is done to know as to how much should the own revenue be such that revenue expenditures can be met.

above. KMC is amongst the largest ULBs in India. KMC is spread over an area of 207 sq. km and sustains a population of around 4.5 million. With the population density of 21,739 persons per square kilometers, it remains to be seen as to whether the KMC is in a position to provide the basic services. We undertake this objective by measuring the fiscal health of the KMC by comparing its revenues with the expenditure. We measure the fiscal gap by comparing its revenue capacity with its actual expenditure as well as the expenditure needs. The revenue capacity tells us about the maximum revenue that a local body can raise. The expenditure needs are the minimum expenditures which a local body should incur to provide basic level of services. We use this estimate of fiscal gap along with assessing the components of revenue receipts and expenditure to suggest way forward for the KMC to improve its fiscal health and thereby improve the service delivery.

The paper is structured as following: We first provide a background of the paper, discussing of the fiscal health of the urban local bodies in India and its measurement in the literature. We then provide a comparative picture of Indian ULBs and local bodies in other countries highlighting the poor performance as compared to other countries, which is followed by a brief snapshot of the KMC. The next section analyses the finances of KMC, providing an in depth understanding of the composition of revenue receipts and expenditures, their trends and growth rates over time. We then estimate the fiscal gap of the KMC, by presenting some simulations to compare a) the actual expenditure with the maximum possible revenue generation, b) expenditure needs with the maximum possible revenue generation and c) revenue expenditure on all services with the maximum possible revenue generation . We conclude by proposing the ways forward for KMC to raise its revenue capacity and ensure better service delivery.



## **Background**

The early 1990s saw the constitution of the 74<sup>th</sup> Amendment Act, which empowered the Urban Local Bodies by devolving them with more functions and finance handles, rendering them a greater autonomy. While such an autonomy was supposed to better the fiscal health of the ULBs, there has not been much improvement in the last more than two and a half decades. The ULBs in India have continued to suffer from dwindling finances, which has been a matter of concern over the years (Bagchi, 1999, 2001; Chattopadhyay, 2006; Pethe and Lalvani, 2007; Sridhar, 2007; Sridhar et al., 2008; Bandyopadhyay and Rao, 2009; Bandyopadhyay and Bohra, 2010; Bandyopadhyay et al., 2011; Mathur, 2011; Bandyopadhyay, 2013a, 2013b; Bandyopadhyay and Bagchi, 2013; Mathur, 2013; Bandyopadhyay, 2014b, 2015; Gandhi and Pethe, 2017). Most of the cities in India generate revenues which are below their potential and at the same time their expenditures fall short of their requirements (Bandyopadhyay, 2014a).

There have been only a few studies which have estimated the fiscal health of the Indian cities. We identify different ways of estimating fiscal health of the ULBs over years in the literature. Sridhar et al. (2008) undertake an estimation of expenditure gap by comparing actual expenditure with the expenditure needs in five Urban Agglomerations (UAs) in India and then estimate the fiscal gap by finding the difference between expenditure needs and revenue capacity. It was found that even if UAs achieve maximum revenue capacity, they cannot provide better services. A similar exercise was performed by Bandyopadhyay and Rao (2009). In a different method, Bandyopadhyay (2013a) undertakes a two-stage method by regressing expenditure needs to revenue capacity ratio on different kinds of indicators like cost, demand, resources, infrastructure, and services. It was found that for bigger cities the own source revenues can also play an important role in bringing down the fiscal ratio. In the smaller cities the role of the

demand indicators is not that prominent, but the cost indicators play an important role. For the present paper, we could not get all these indicators for KMC and thus the exercise could not be replicated.

More recently, there has been estimations done for measuring the efficiency of ULBs (Bandyopadhyay, 2014b; 2015), but since we are looking at only one ULB (decision making unit) using this technique is also not plausible for the present work.

The literature offers a myriad of causes for the poor fiscal health of the ULBs in India. The autonomy of ULBs has been found to be limited (Pethe and Lalvani, 2006). The property tax collection suffers due to low assessment and low tax rates imposed by higher levels of governments (Bird and Slack, 2007). In India, some local bodies have either failed to revise the property taxes, which is a major source of revenue for local bodies, or have outrightly abolished the property taxes, further worsening their own revenues (Rao and Bird, 2012). The property tax continues to remain an under-tapped revenue handle due to difficulty related to estimation, unorganized property market, limited information available to the authorities, etc. (Rao, 2013). The local bodies often get entangled in a vicious circle where paucity of resources causes poor service delivery, which in turn affects revenue generation (Bandyopadhyay and Bagchi, 2013). Given the limited resources, many metropolitan areas are dependent on para-statal agencies for providing services and often resort to selling off land to raise revenues (Gandhi and Pethe, 2017).

Against this backdrop the objective of the paper is to analyze the fiscal health of the Kolkata Municipal corporation. There has been a handful of work done on KMC (Sridhar et al., 2008; Bandyopadhyay and Rao, 2009). This paper not only gives an update on the latest data but provides a more nuanced and in-depth analysis of different components of finances of KMC.

This policy paper seeks answer the following pertinent questions:

- a) Is KMC able to generate enough resources to fund their expenditures?
- b) Is KMC spending enough to provide basic services to its populace?
- c) Can we estimate the fiscal gap of the corporation?
- d) How can the fiscal health of the Kolkata Municipal Corporation be improved?
- e) How can we augment the revenues such that they can meet their expenditures?

To answer these questions, we undertake a descriptive analysis to understand the composition and their trends over time, along with certain simulations to estimate the maximum revenue that KMC can generate and what the fiscal gap therefore is. Before that, we present a comparison of finances of Indian local bodies with the other countries followed by a description of the Kolkata Municipal Corporation.

### **Urban Finances in India: A comparative picture with other countries**

The Indian cities are suffering due to poor fiscal health, disabling them to finance the burgeoning demand for infrastructure. The local bodies suffer from poor revenue generation, coupled with lack of financial autonomy granted by the upper tiers of the government. Many local bodies have not yet been devolved with certain functions and finances.

When we compare the Indian urban local bodies with the other OECD countries, we find that we are lagging behind. The share of the Indian urban local bodies revenue<sup>2</sup> as a percentage of GDP (from 2010-11 to 2017-18) stands at 1 percent of the GDP on an average (Ahluwalia et al., 2019). The share of grants and transfers combined stands at 0.4 percent of GDP on an average

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<sup>2</sup> This comprises of own revenue, grants, transfers and other sources of revenue.

and own revenue at average 0.5 percent of the GDP. We see in Table 1 that all the countries have a higher share of local bodies revenues in their GDP as compared to India.

**Table 1. Local Bodies Revenue as a Percentage of GDP**

Country		Local bodies revenue as a percentage of GDP
Federations and quasi-federations	Australia	2.4
	Austria	8.5
	Belgium	7.3
	Canada	8.6
	Germany	8.1
	Mexico	2.2
	Spain	6.4
	Switzerland	7.4
EU28-Total		10.9

*Source: OECD Statistics (2018)*

Such a low share of grants and/or transfers for India could reflect lack of support rendered by the upper tiers of the government. Similarly, the low own revenue generation is attributed to a myriad of factors like limited devolution of functions and finances by the upper tiers of the government, the already poor service delivery by the ULBs, lack of proper assessment of properties and limited handles for non-tax revenue, to name a few.

The cities in India are witnessing alarming pollution levels, along with the perennial issue of poor water supply and solid waste management. In order to address this issue, the recent 15<sup>th</sup> finance commission has suggested an allocation of Rs 4,829 crore for million plus cities for conservation, supply and management of water and efficient solid waste management. For cities other than million-plus an allocation of Rs. 20,021 crore has been recommended, of which 50 percent grant would go specifically for drinking water harvesting and recycling and solid waste management. A separate grant of Rs 4,400 crore has been allocated for improving air quality in

million plus cities (GOI, 2019). However, given the limited autonomy with the local bodies these grants might fail to make any dent.

The situation is equally gloomy on the expenditure side. The Indian local bodies are spending way below the expenditure norms (Ahluwalia et al., 2019). When we compare the expenditure of the Indian urban local bodies with the local bodies of the other countries, we see that we are not spending as much. The municipal expenditure (from 2010-11 to 2017-18) as a percentage of GDP stands at 0.82 percent on an average. We see, however, that the other countries are performing better than India in this regard as well (Table 2). The poor revenue expenditure by the ULBs gets reflected in poor service delivery.

**Table 2. Local Bodies Expenditure as a Percentage of GDP in OECD Countries**

Country		Total expenditure as a percentage of GDP
Federations and quasi-federations	Australia	2.3
	Austria	8.5
	Belgium	7.1
	Canada	8.6
	Germany	8.0
	Mexico	2.1
	Spain	5.8
	Switzerland	7.4
EU28-Total		10.8

*Source: OECD Statistics (2018)*

### **Kolkata Municipal Corporation: A brief snapshot**

The KMC spans an area of 207 sq. km as per the Census of India, 2011 data, which was 186 sq. km in 2001. While the area has increased, we witness a fall in the population from 4,580,546 in 2001 to 4,496,694 in 2011. Despite this, the KMC has a population density as high as 21,739 persons per sq. km. Of its population 80 percent people are literate. The literate population is

expected to be more aware about their demand for different services and their quality and this factor can be expected to play a crucial role in service delivery by the ULBs. Another indicator of development is given by the percentage of people living in the permanent houses<sup>3</sup>, which stands at 93 percent. Approximately 88 percent of the households have access to tap water and 96 percent households have access to electricity as a source of lighting. The percentage of households who have access to closed drainage stands at 81 percent. When it comes to sewerage the situation is deplorable as only 43 percent households have piped sewers (Source: Census of India, 2011). The five water treatment plants, namely, Indira Gandhi Water Treatment Plant (Palta), Garden Reach Water treatment plant, Jai Hind Jal Prakalpa (Dhapa), Jorabagan Water Treatment Plant and Watgunge Water Treatment plant, are also supplying less than their capacity; whereas the total capacity is 488 million gallons per day, the supply was 448 million gallons per day (Source: Field Survey in Kolkata Municipal Corporation).

When we compare some these service delivery indicators with physical norms for IB cities established by the High Powered Expert Committee (HPEC) (GOI, 2011) we find that KMC falls short of the desired service levels. (See Table 3.)

**Table 3. Physical Norms for Different Services**

Service Type	Physical Norms
Water Supply	100% piped water supply
Sewerage	100% treatment/ underground sewerage network for all cities
Storm Water and Drainage	100% coverage/ coverage on both sides

Source: GOI (2011)<sup>4</sup>

<sup>3</sup> Permanent houses refer to those houses whose walls & roofs are made of pucca materials, i.e., where burnt bricks, G.I. Sheets or other metal sheets, stone, cement, concrete is used for wall and tiles, slate, shingle, corrugated iron, zinc or other metal sheets, asbestos sheets, bricks, lime and stone and RBC/RCC concrete are used for roof.

<sup>4</sup> We consider only those services for which we could find the Census data for KMC. We did not find a comparable indicator mentioned for street lighting in the HPEC norms.

The level of service delivery could be improved only when the ULB is enjoying a sound fiscal health. We now try to understand more about the fiscal health of the KMC, which goes into explaining the overall service delivery in the local body and its development.

### **Finances of KMC**

Let us have a look at the finances of Kolkata Municipal Corporation. The paper undertakes a historical analysis from 2007-08 to 2017-18<sup>5</sup> and highlights the recent scenario of municipal finances in KMC. It goes beyond the assessment of fiscal health of KMC to propose measures to bring in self-sufficiency by augmenting their revenues to their maximum capacities and improved service delivery.

Estimating fiscal health of the local bodies requires studying its revenues receipts and expenditure, their components and having a comparative analysis of the both, revenue receipts and expenditures.

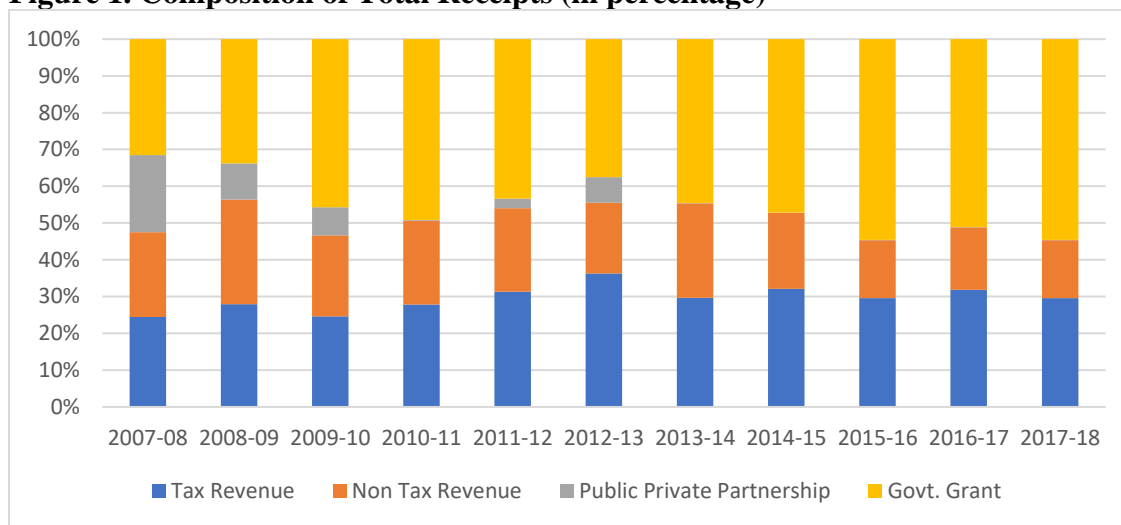
The financial data taken from the budget of KMC over the years was converted to 2011-12 prices.

Let us look at the composition of revenues receipts (Figure 1).

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<sup>5</sup> We had data the available for broad heads like tax revenue, non-tax revenue, grants, PPP and revenue expenditure from 2007-08 to 2017-18. However, the data for the sub-heads for these broad heads was available only from 2009-10 onwards. The data for Gross District Domestic Product (GDDP) was available from 2007-08 till 2012-13.

**Figure 1. Composition of Total Receipts (in percentage)**



*Source: Annual Budgets, KMC, Various years*

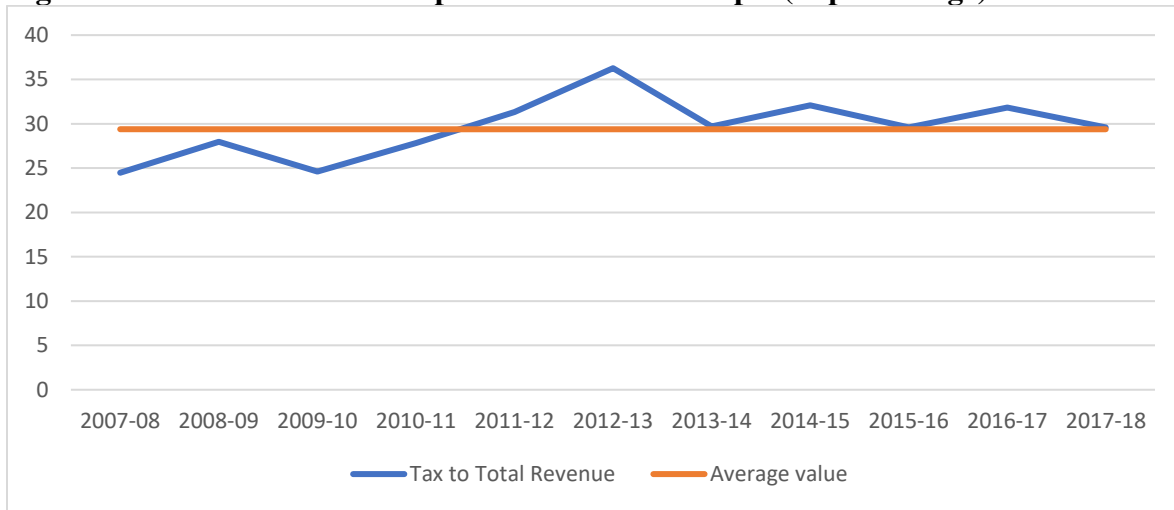
The own revenue, which comprises of tax and non-tax revenue, signal about the self-reliance of the ULBs. Of the total revenue receipts, on an average the own revenue comprises only around 51 percent of the receipts for the period 2007-08 to 2017-18. The tax revenue constitutes about 59 percent of the own revenue, with non-tax revenue having a share of 40 percent on an average. As can also be seen from Figure 1, the dependency on grants was found to be quite high, comprising 44 percent of the total revenue receipts. Let us look at each component of Total receipts in details.

### *Tax Revenue*

When we look at the tax revenues (Figure 2) we see that average share of tax revenue in total receipts stands at 29 percent over the years. Since 2011-12 we see that the actual proportion remains above, albeit slightly, the average value of this proportion. A further breakup of the tax revenue shows that from 2009-10 till 2017-18 it was the property tax which occupied a major share, of average 95 percent.



**Figure 2. Tax Revenue as a Proportion of Total Receipts (in percentage)**

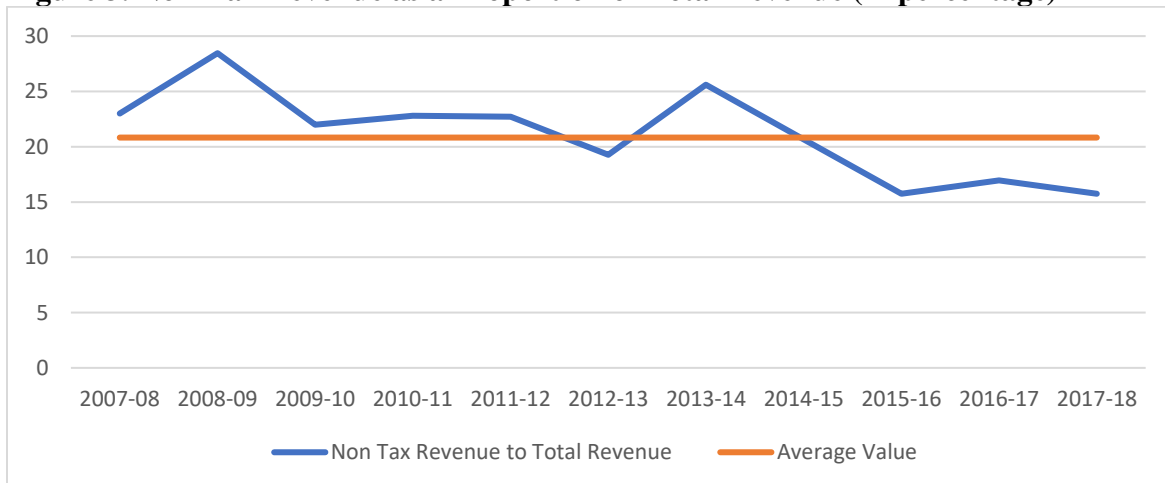


*Source: Annual Budgets, KMC, Various years*

### *Non-Tax*

When we look at the non-tax revenue, we see that its average share is 21 percent of the total revenue, only a little less than the tax revenue. Since 2015-16 we see the non-tax revenue below the average, registering a consistent fall until 2017-18 (Figure 3).

**Figure 3. Non-Tax Revenue as a Proportion of Total Revenue (in percentage)**



*Source: Annual Budgets, KMC, Various years*

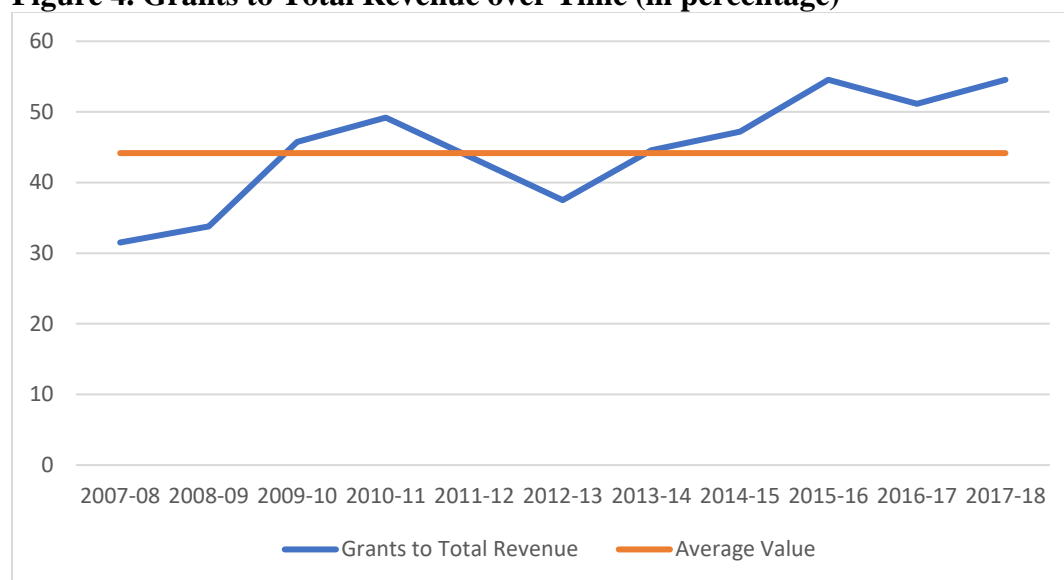
When we look at the composition of the tax revenue, we find that the major chunk of the tax revenue comes from property tax, which was on an average 95 percent of the tax revenue and

forms 50 percent of the own revenue. Thus, property tax constitutes an important source of funding in KMC.

### *Grants*

The grants comprise on an average 44 percent of the Total Revenue receipts of the KMC. As we can also see in the figure below (Figure 4), there has been a consistent increase in the grants from 2014-15 onwards, featuring much above the average value. It was as high as 55 percent in 2017-18.

**Figure 4. Grants to Total Revenue over Time (in percentage)**



*Source: Annual Budgets, KMC, Various years*

### *Growth of Revenue Receipts*

The problem of already lower self-sufficiency is compounded by a negative growth rates of both tax and non-tax revenues. We found that from the year 2009-10 to 2017-18 the revenue receipts registered a negative annual growth of 0.85 percent. Of this fall, a greater reduction was seen in the non-tax revenues, which registered a negative annual growth rate of 6.4 percent; the tax revenue fell by only 0.88 percent annually on an average during the same period.

We also witnessed that while average fall of property tax was 0.96 percent per annum, the property tax saw a sharp decline of 30 percent in just one year from 2016-17 to 2017-18. A possible reason could be a shift from rent based assessment to unit area assessment since 2017. Either the property owners are unable to self-assess under the new method of assessment so implemented or the properties are not mapped on GIS.

We compare the municipal revenue in KMC with other municipal corporations in India. We find that the KMC fares better than the all India municipal corporations put together in case of revenue receipts; while the all India average was rupees 3,408.66 per capita (from 2011-12 to 2017-18) (Ahluwalia et al., 2019), it was rupees 4,204.6 per capita on an average for KMC. Similarly, in case of own revenue, KMC performed better than all India average. It was rupees 2,119 per capita for KMC and rupees 2081.4 per capital for all other municipal corporations put together. However, the negative growth rates of the revenue receipt might be a cause of concern for KMC for years to come.

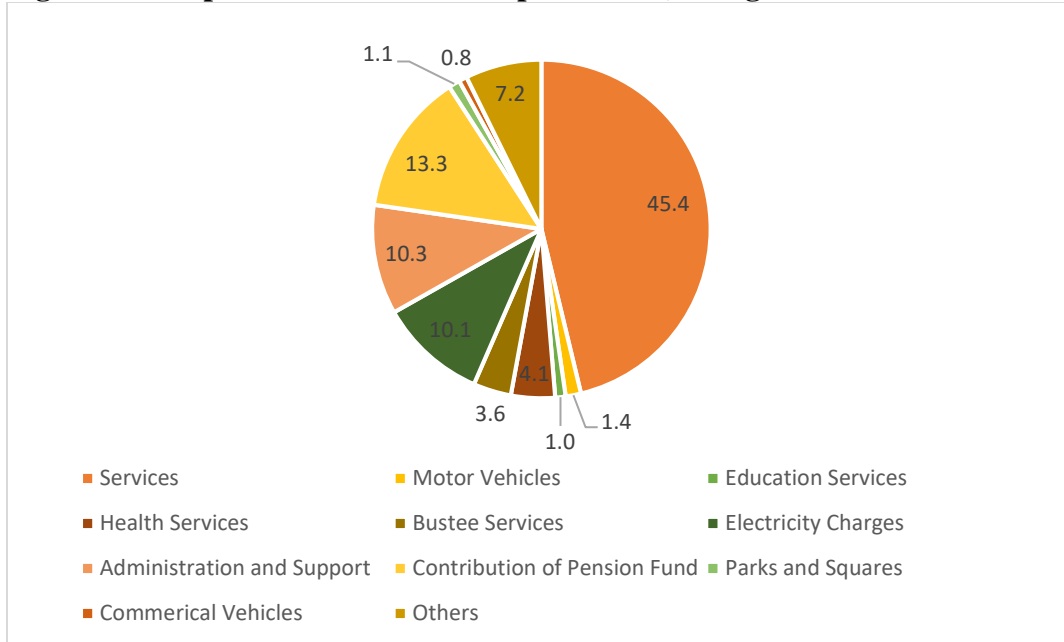
### *Revenue Expenditures*

To have a comprehensive picture of the fiscal health of KMC, we look at revenue expenditures to see a) the composition of revenue expenditures, b) if KMC is spending enough to provide the minimum service levels and c) IF the existing revenues receipts of KMC are sufficient to finance the revenue expenditures.

Let us look at the composition of revenue expenditures (Figure 5). We see that services (that is water supply, sewerage and drainage, roads, streetlights and solid waste management) have a share of only 45.4 percent on an average (from 2009-10 to 2017-18) in the total revenue expenditure. Of the total revenue expenditure KMC spends as high as 33.7 percent of the total revenue expenditure on electricity charges, pension funds, and administration and support

combined together. Such a huge burden of these expenditures can also act as a constraint on the expenditure that KMC incurs on services.

**Figure 5. Composition of Revenue Expenditure (average from 2009-10 to 2017-18)**



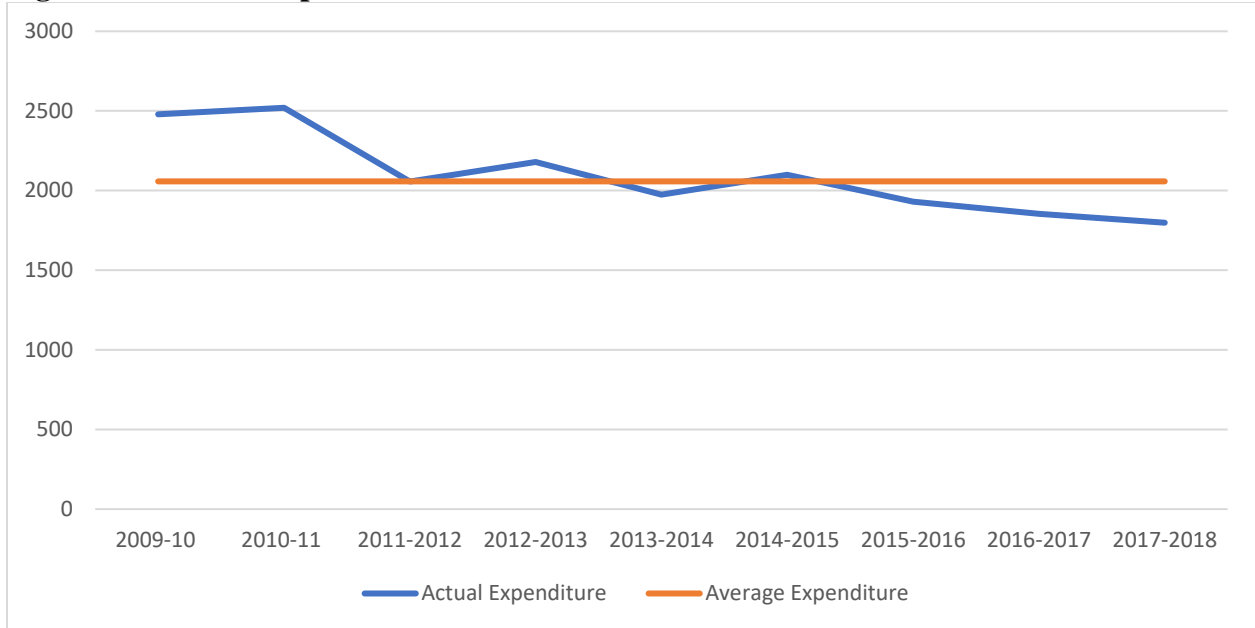
Source: Annual Budget KMC, Various years<sup>6</sup>

We further scrutinize these components to find out their growth over time. We find that over time the revenue expenditure on all services has fallen (Figure 6) and has been less than the average values in the more recent years. But at the same time, we see that the expenditures

<sup>6</sup> Others include commercial services, social sector, loan charges, security arrangements, special programmes, Councilors Elaka Unnayan Prakalpa, Integrated borough scheme, funds at disposal of mayor, funds at disposal of municipal commissioner, contribution from revenue for JNNURM, Reconstruction of Municipal government, Contribution from revenue for abattoir of Tangra, Contribution from revenue for KEIP, Contribution from revenue for Tally's Nallah project, Contribution from revenue for KEIIP, Waiver of H.B.L, Group Insurance, Leave Travel Concession, Promotion of cultural activities, parks and playgrounds, special development works, Grant to charitable and educational institution etc., miscellaneous expenditure of MPLAD/BEUP cell, Renovation and improvement of historical and other building of KMC, Promotion of sports and coaching, cost for special & advisory committee for implementation of KMC Act & rule, programme on environment, contribution from revenue for various abattoirs, PPP (Capital nature), PPP (Revenue nature), Disaster management programme, Contribution to multi sectoral plan for development of minorities, Contribution to river front development project, Special development fund for joka, Contribution to Rajiv Abas Yojana, Contribution to AMRUT, Contribution to Stipend for Trainee Apprentices, Contribution to Green City Mission, Contribution to deal waste water from Basin, Contribution to lease premium for waste disposal, Contribution to Swachh Bharat Mission.

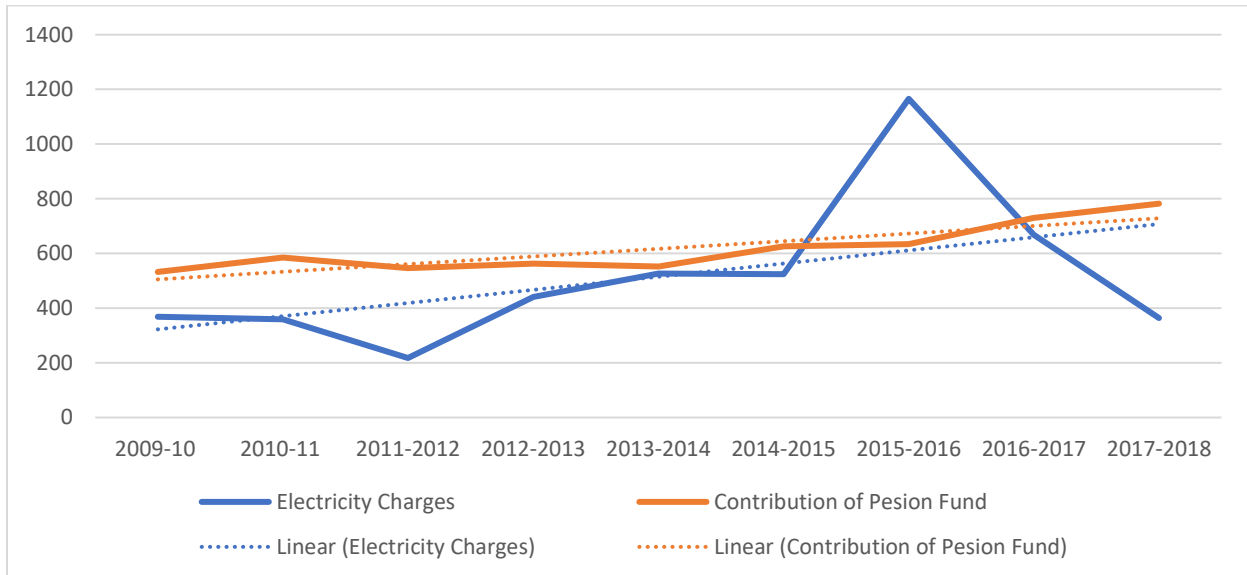
incurred on the other major components like pension funds and electricity charges witnessed an increase (Figure 7).

**Figure 6. Revenue Expenditure on All Services over Time**



Source: Annual Budget KMC, Various years

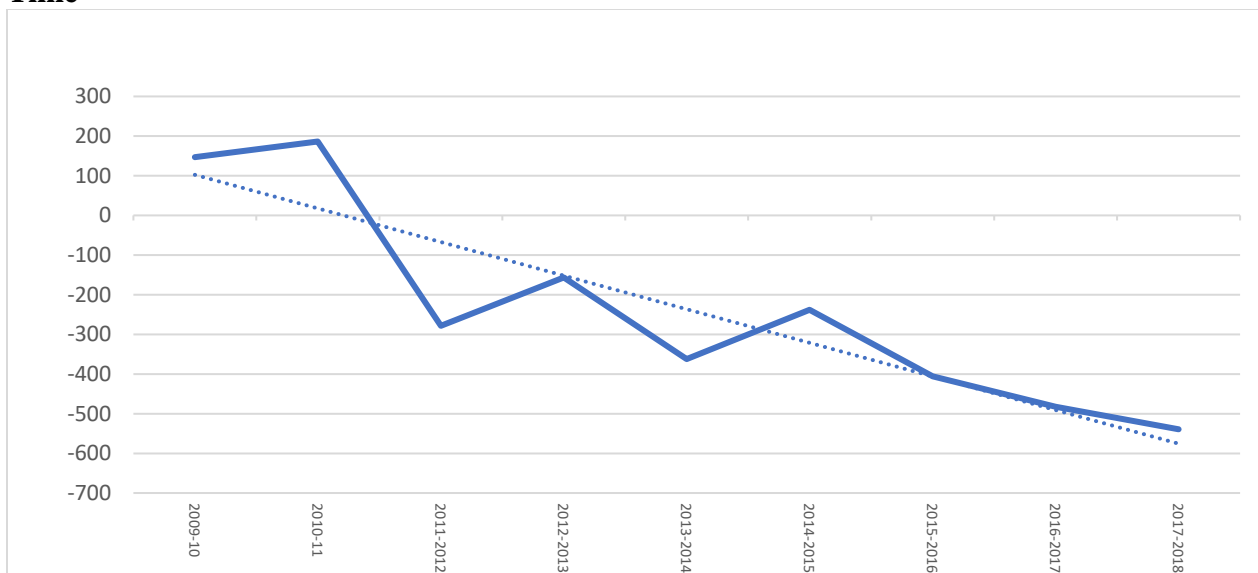
**Figure 7. Trend of Electricity Charges and Contribution of Pension Funds (per capita) over Time**



Source: Annual Budget KMC, Various years

To address b) we compared the existing per capita expenditures with the per capita O&M financial norms given by the High Powered Expert Committee (GOI, 2011). For all the five basic services together (that is water supply, sewerage and drainage, streetlights, roads and solid waste management), the expenditure incurred by KMC was much below the financial norms prescribed, signaling a possible lack of minimum levels of service delivery. Also, when we look at the trend over time, we see (Figure 8) that the gap between actual revenue expenditure and expenditure norms increases over time. While the norms remain the same for each year, we can say that there has been a consistent fall in the revenue expenditure by the KMC over time. We also find that there is an average annual fall of 1.96 percent per annum during the same period.

**Figure 8. Excess of Actual Revenue Expenditure over Expenditure Norms (per capita) over Time**



*Source: Authors' computation, KMC budget various years*

However, KMC was found to be meeting the norms in case of solid waste management and streetlights.

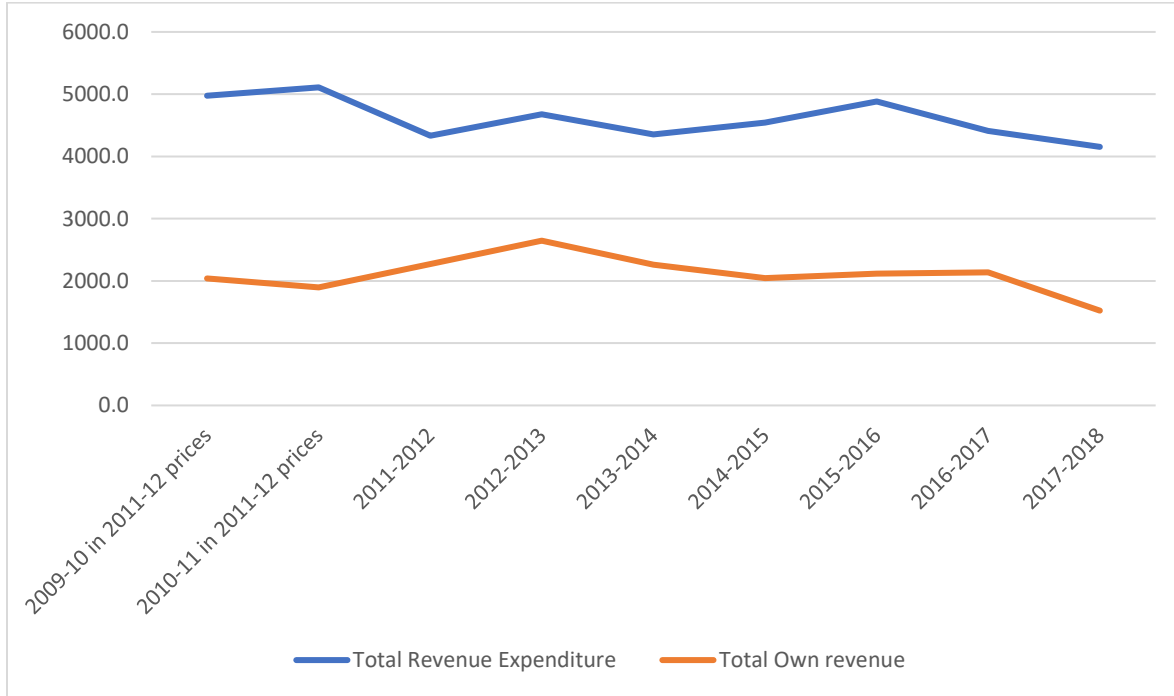
### *Revenue-Expenditure Gap*

As we can see from Figure 9, the per capita revenue expenditure has persistently exceeded the own revenue of the KMC. While the total revenue receipts from 2009-10 to 2017-18 stood at rupees 4594 per capita on an average, the own revenues were much below at average rupees 2084 per capita for the same period. It is ideal of a ULB to depend on its own revenue to meet its expenditures and not rely on the grants or loans; depending on own revenues would help them perform more efficiently while grants can lead to a lax attitude with respect to delivering services. Despite this argument, we take into account the quantum of grants and public private partnerships (PPP)<sup>7</sup> and see if we can still meet the revenue expenditure. We find that even when we take into account the grants and the revenue received from PPP, we find that revenue expenditure exceeded the revenue receipts in KMC (Figure 10). On an average the per capita revenue expenditure stood at rupees 4,594 and per capita revenue receipts stood at rupees 4,141, causing a gap of rupees 453 per capita.

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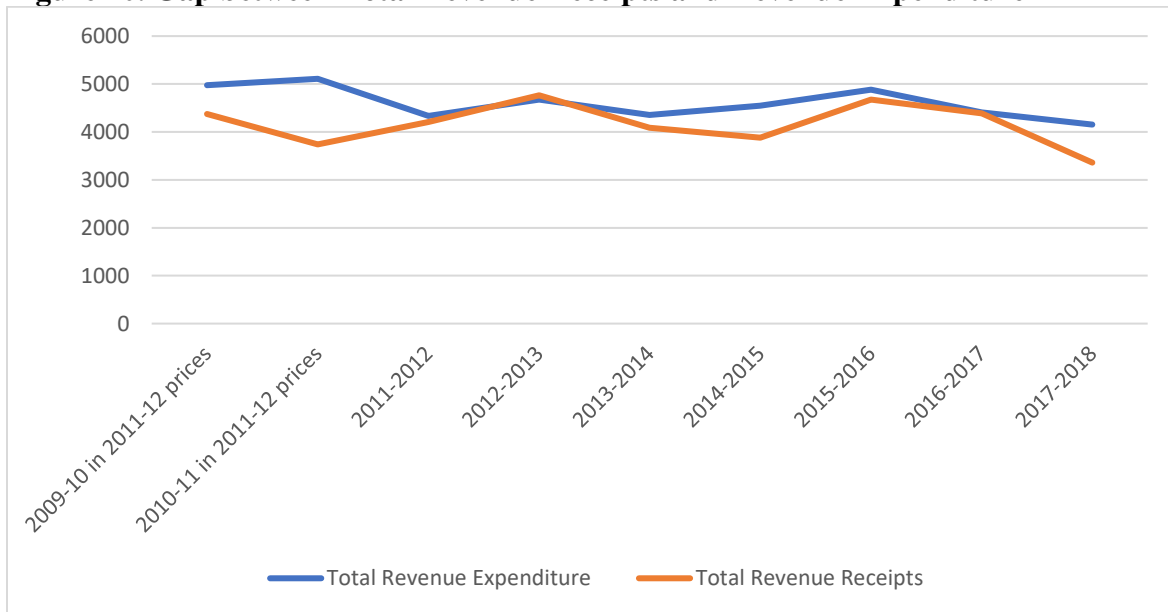
<sup>7</sup> We also need to note here that the share of PPP was high only in the initial years of 2009-10 and 2011-12 standing at rupees 335 and 331 per capita respectively. It fell drastically after that, with average figure of only 4 rupees per capita. Given the inconsistent nature of this component, the ULB cannot rely on PPP as a panacea to its relatively poor revenue receipts.

**Figure 9. Gap between Actual Per Capita Revenue Expenditure and Per Capita Own Revenue**



Source: Authors' computation, KMC budget various years

**Figure 10. Gap between Total Revenue Receipts and Revenue Expenditure**

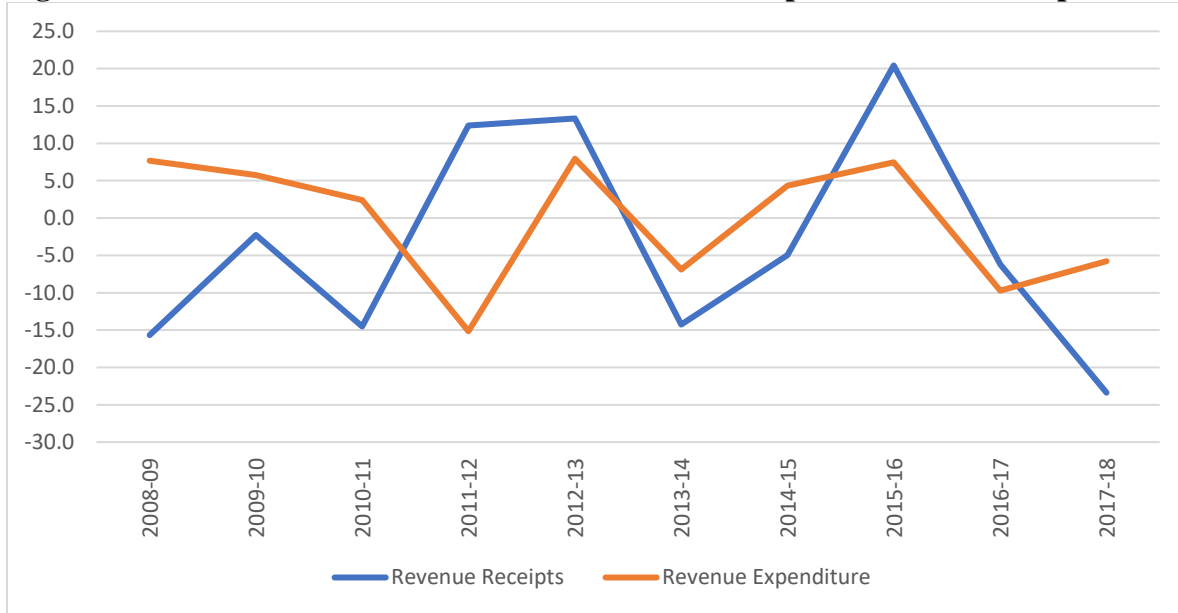


Source: Authors' computation, KMC budget various years



Let us compare the revenue receipts with the revenue expenditure and compare their growth rates together (Figure 11).

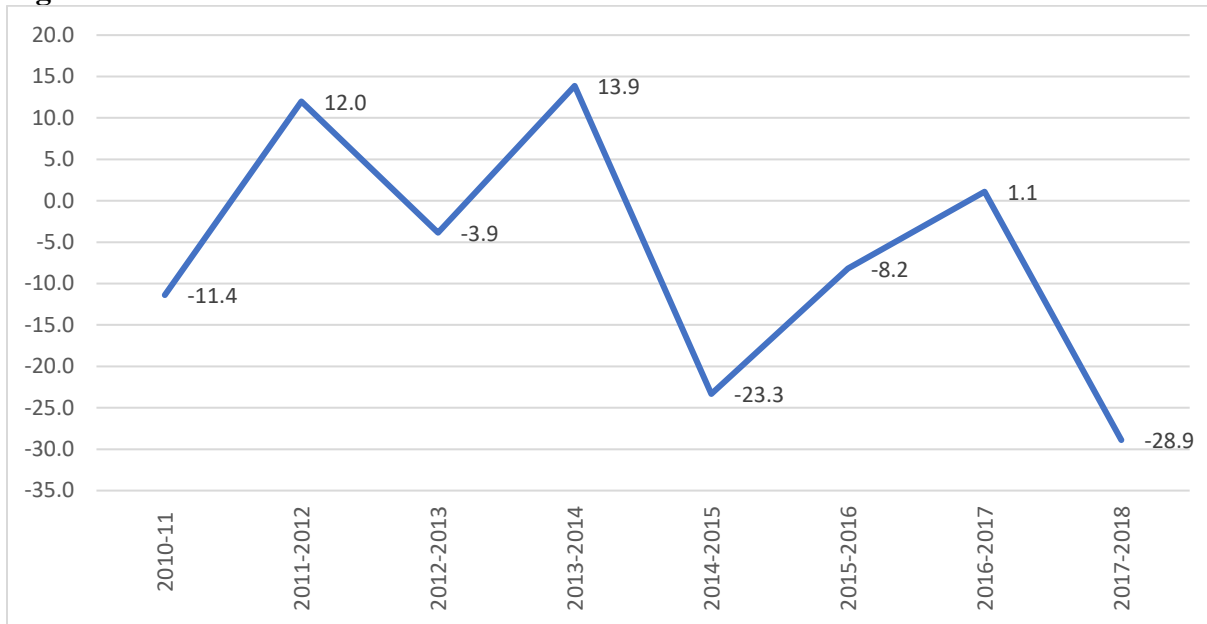
**Figure 11. Year-on-Year Growth Rates of Revenue Receipts and Revenue Expenditure**



*Source: Authors' computation, KMC budget various years*

As we can see from the figure above (Figure 11), the year-on-year growth rate of revenue receipts has been rather erratic, which is similarly true for the revenue expenditure. We can see in most of the years that the year-on-year growth rate of revenue receipts remains below the year-on-year growth rate of revenue expenditure. When we look at the average value, we see that on an average the annual growth rate of revenue expenditure has been negative standing at (0.48) percent, while the average growth rate of revenue receipts has been even less with (4). When we bifurcate different components of the total revenue receipts, we find that the tax revenue fell on an average by only 0.88 percent, the fall was drastic in case of non-tax revenue at 6.4 percent per annum. The figure below (Figure 12) shows us the year-on-year growth rate of the non-tax revenue from 2009-10 to 2017-18, where we see that there has been a negative growth rate for most of the period.

**Figure 12. Year-on-Year Growth Rate of Non-Tax Revenue**



*Source: Authors' computation, KMC budget various years*

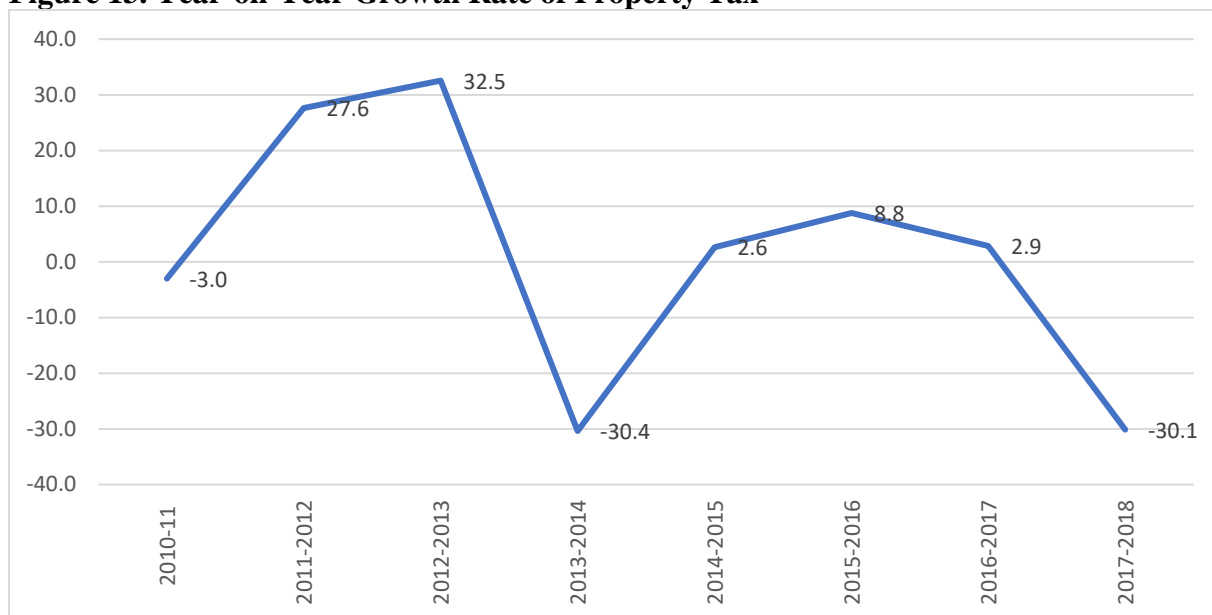
Thus, a large part of the fall in the total revenue receipts can be attributed to a fall in the non-tax revenue, which although has a share of only 21 percent in the total revenue and 40 percent of the own revenue. Thus, the significance of non-tax in determining the growth of receipts cannot be negated despite relatively less share in revenues as compared to the tax revenues.

We looked further into different components of non-tax revenues. We find that the receipts from building plan forms a major component, with an average of 28 percent. While it was on an average 32 percent from 2009-10 till 2012-13, it fell to 25 percent on an average in the period post that. This one source of revenue which could be re-tapped by the KMC. The second major component of non-tax revenue was roads, parks and squares, which an average share of 17 percent. The road condition in KMC becomes vulnerable particularly during the monsoons, causing potholes in the road. If the condition of road is improved, it can justify raising slightly more revenue from this handle. Secondly, over years the KMC has witnessed a growth of private cars, in the wake of insufficient public transport. For instance, private cars increased from 2.6

lakh in 2000 to 6.5 lakh in 2013, which indicates a 2.5 times increase. Such a burgeoning number of cars also poses a strong case for KMCs to increase their parking fees. Another point to be noted is that, off late the KMC has developed a master plan to improve solid waste management in the city in accordance with the Solid Waste Management (SWM) rules of 2016, which can again present a case for raising the non-tax revenue from solid waste management which stands at below 1 percent on an average as of now. We further find that receipt from sewerage and drainage is only on an average 6 percent of non-tax. It is not surprising, given that, only 43 percent households have piped sewerage and 81 percent households have closed drainage. If these services are improved, then KMC can further raise revenue from these handles.

But we must also look at the growth rate of property taxes, which constitute as high as 95 percent of the total tax revenues and 57 percent of the own revenue of the KMC thus play a major source of revenues for the KMC. The figure below (Figure 13) shows the year-on-year growth rate of property tax. We see that there has been a positive growth rate in most of the periods, except from 2012-13 to 2013-14 and from 2016-17 to 2017-18. It was observed that there was change in the assessment method for property tax calculation from 2016-17 to 2017-18 from annual rateable value to unit area assessment. A plausible reason could be lack of understanding of the new method of assessment or no mapping of properties on GIS.

**Figure 13. Year-on-Year Growth Rate of Property Tax**



*Source: Authors' computation, KMC budget various years*

### **Some Simulations: Fiscal Gap**

Thus far we have seen that own revenues are not sufficient to meet the expenditures. The problem is exacerbated by falling receipts of the KMC. We estimate the revenue capacity using the method outlined in the introduction section of this paper. Since we do not have data for the Gross City Product for KMC, we estimate the non-agricultural component of the Gross District Domestic Product (GDDP) by multiplying the share of urban population by the GDDP. We undertake three cases of simulation exercises in this section. In the first case, we present fiscal gap by considering the actual total revenue expenditures. In the second case, fiscal gap is estimated by using the expenditure needs. In the third case, we bring into picture the revenue expenditure on all services to estimate fiscal gap.

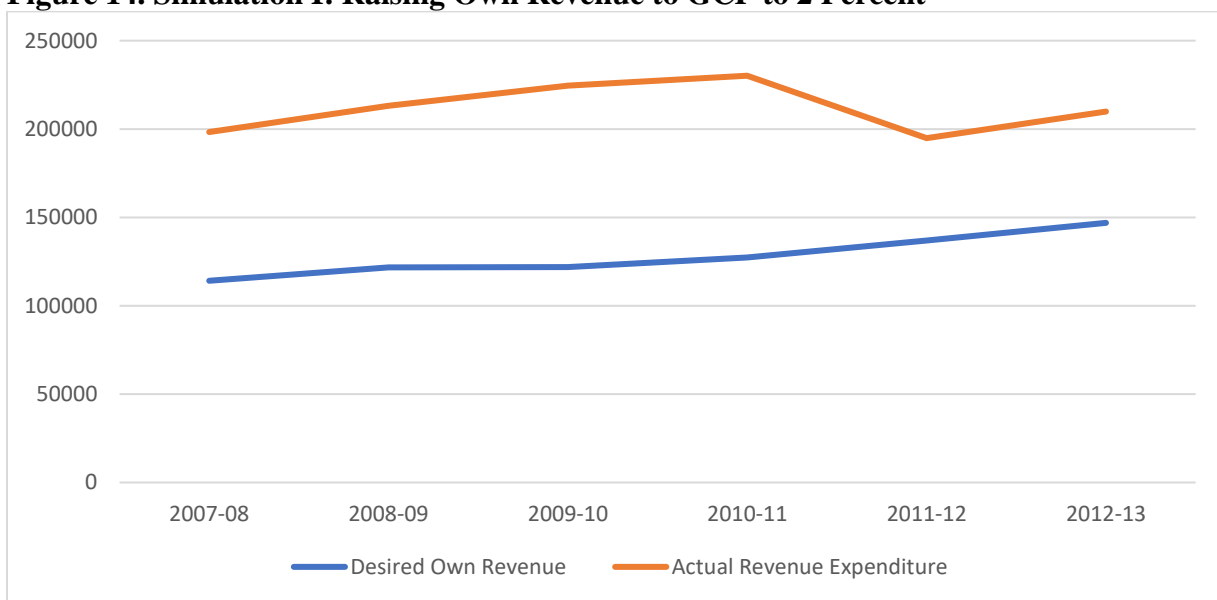
#### *Case I:*

We find that own revenue can fund only on an average 46 percent of the revenue expenditure on an average from the period 2009-10 to 2017-18. We also find that own revenues are on an

average 1.6 percent of the Gross City Product<sup>8</sup> of Kolkata, whereas the revenue expenditures stood at on an average 3.2 percent of the GCP.

Simulation I: We consider the first case where we impute a value of 2 percent to the own revenue to GCP ratio. We then estimate the desirable own revenue for each year and compare with revenue expenditure. Figure 14 shows that even after raising own revenues to 2 percent of the GCP the revenue expenditures exceed the own revenue.

**Figure 14. Simulation I: Raising Own Revenue to GCP to 2 Percent**

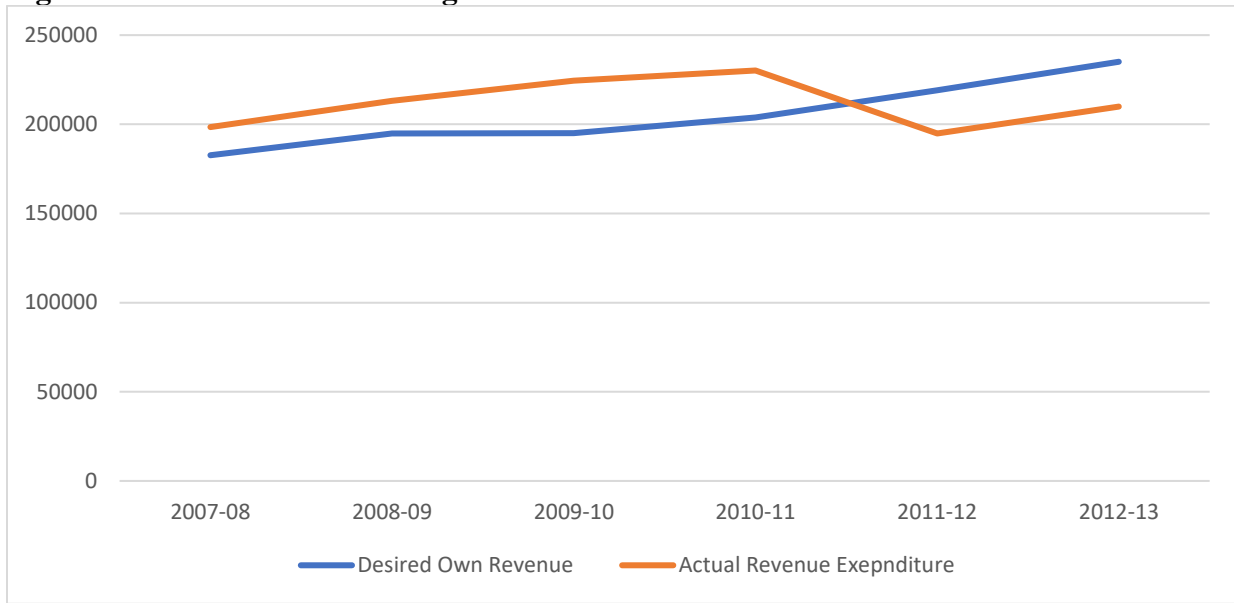


*Source: Authors' computation, KMC budget various years*

Simulation II: After this we raise the own revenue to GCP to 3.2 percent, which is also the ratio of actual revenue expenditure to GCP. We find that it is only in the latest two years that the KMC could meet the revenue expenditure using own revenues (Figure 15).

<sup>8</sup> Since we did not have GCP values for Kolkata, we took the non-agricultural GDDP as a proxy for the same. We had the GDDP value only from 2007-08 till 2012-13.

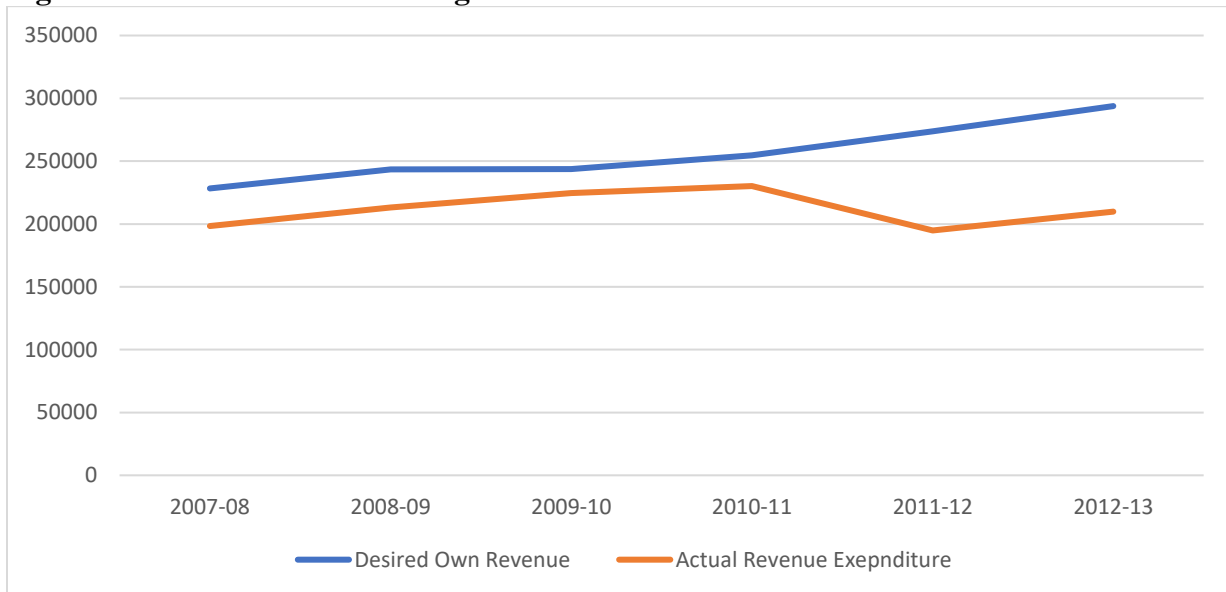
**Figure 15. Simulation II: Raising the Own Revenue to GCP to 3.2 Percent**



*Source: Authors' computation, KMC budget various years*

Simulation III: We create an even better scenario and raise the own revenue to GCP ratio to 4 percent and then find that in all the years the KMC is able to meet the actual revenue expenditures using its own revenue (Figure 16).

**Figure 16. Simulation III: Raising the Own Revenue to GCP Ratio to 4 Percent**

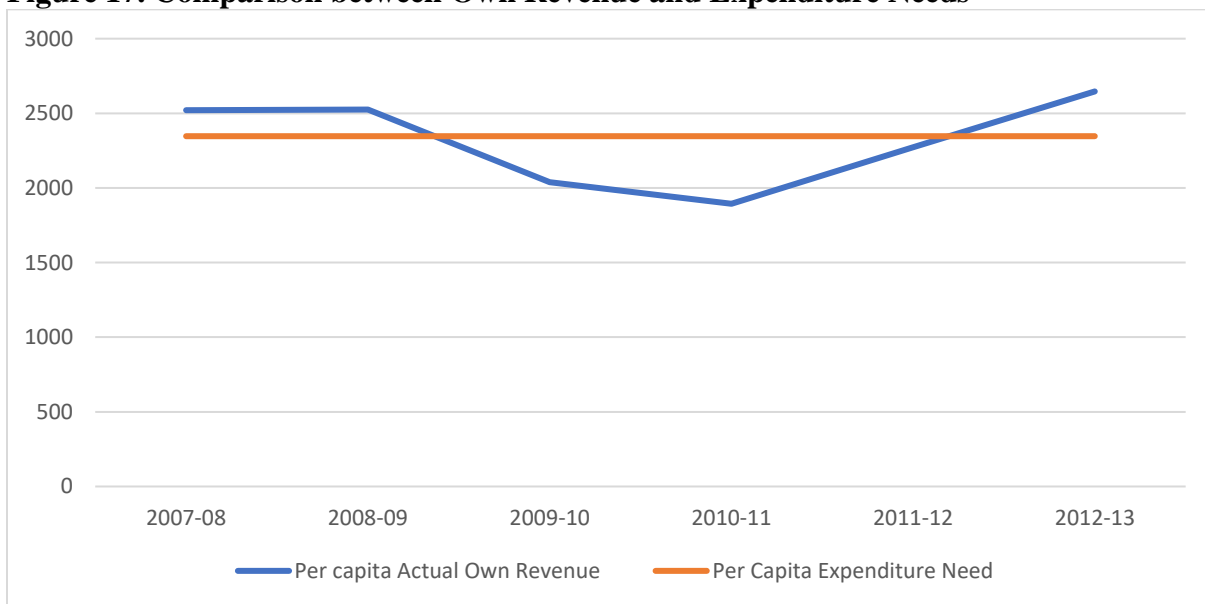


*Source: Authors' computation, KMC budget various years*

## Case II

We then estimate the fiscal gap using the difference between revenue capacity and expenditure needs.<sup>9</sup> When we first compare the own revenue with the expenditure needs, we find an erratic pattern; in some years KMC is able to meet expenditure needs using own revenue, and in some years, it is not able to. On an average the own revenue falls short of revenue expenditure by 3 percent (Figure 17).

**Figure 17. Comparison between Own Revenue and Expenditure Needs**

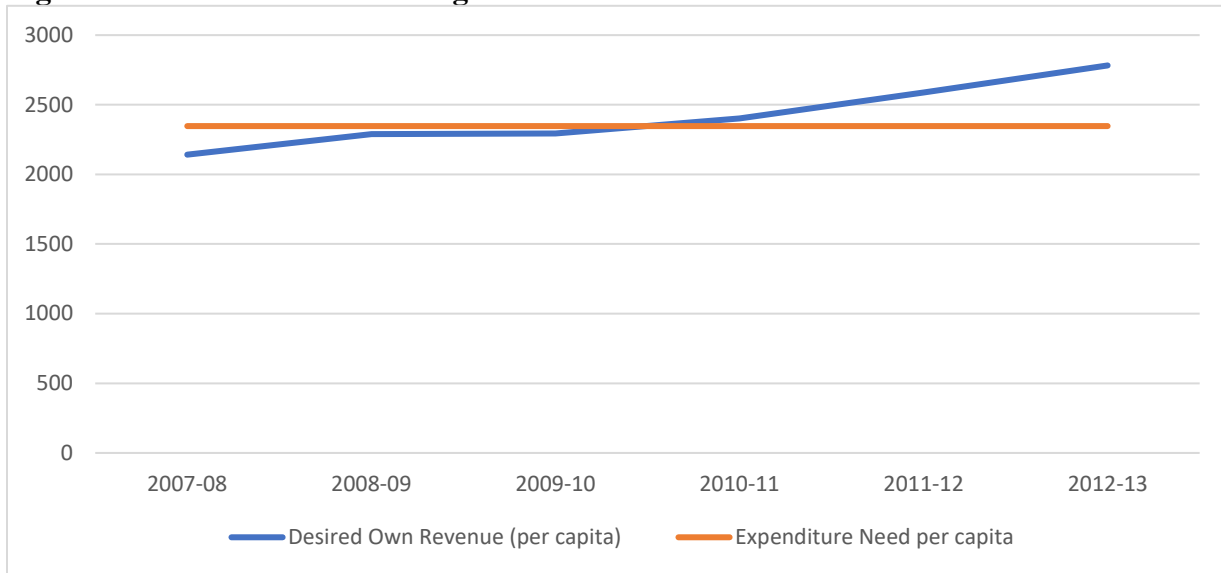


*Source: Authors' computation, KMC budget various years*

Simulation IV: We find that the ratio of expenditure needs to GCP was 1.7 percent. We raise the own revenue to GCP ratio to 1.7 percent and find that KMC can meet its revenue expenditures over time (Figure 18).

<sup>9</sup> In our estimation expenditure needs are less than the actual expenditures because expenditure needs comprise of only the expenditure incurred on the services.

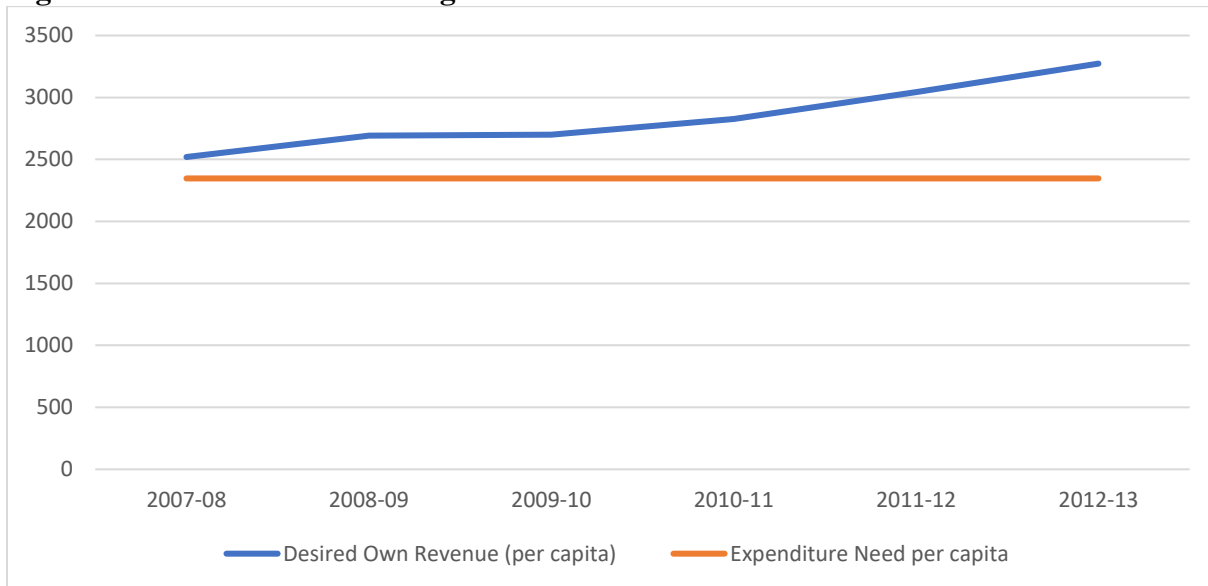
**Figure 18. Simulation IV: Raising the Own Revenue to GCP to 1.7 Percent**



*Source: Authors' computation, KMC budget various years*

Simulation V: We then peg own revenue to GCP ratio to 2 percent, which is an improved scenario as compared to the previous one. The KMC at this level of own revenues can easily meet the expenditure needs, having a positive fiscal gap (Figure 19).

**Figure 19. Simulation V: Raising the Own Revenue to GCP Ratio to 2 Percent**

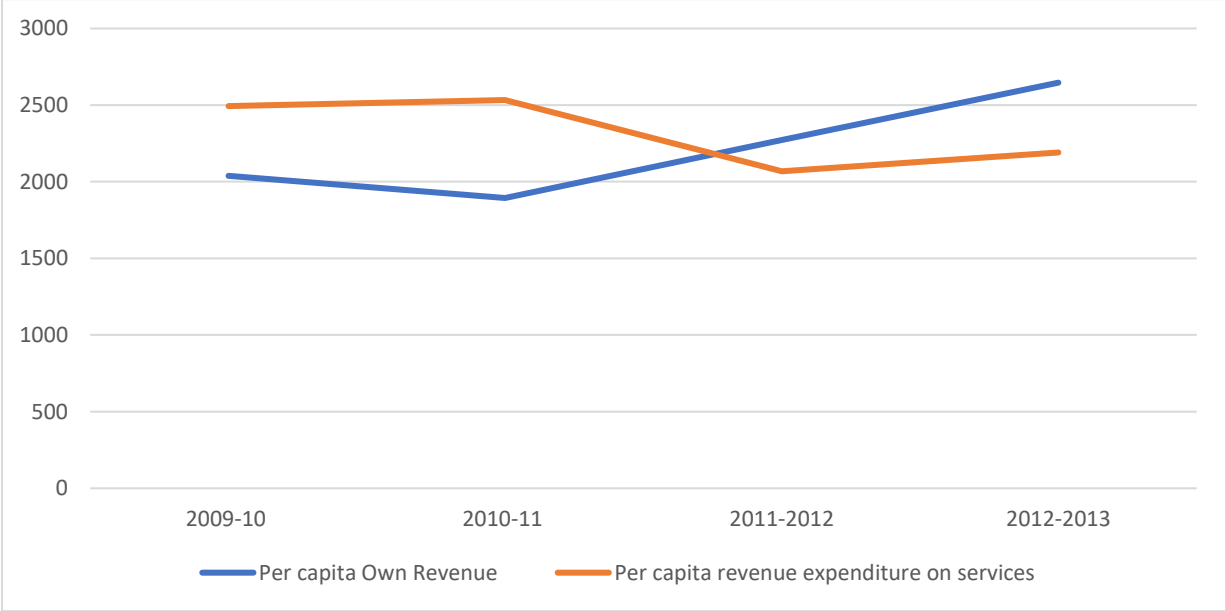


*Source: Authors' computation, KMC budget various years*



We undertake another set of simulations where we compare the revenue expenditure on all the services with the own revenue of the KMC, and then estimate how far should we raise the revenue capacity. We undertake this analysis for only 4 years because we have GCP data only until the year 2012-13 and the breakup of service level expenditure is available from 2009-10 onwards. We find that only in the last two years the own revenue could sufficiently meet the revenue expenditure (Figure 20).

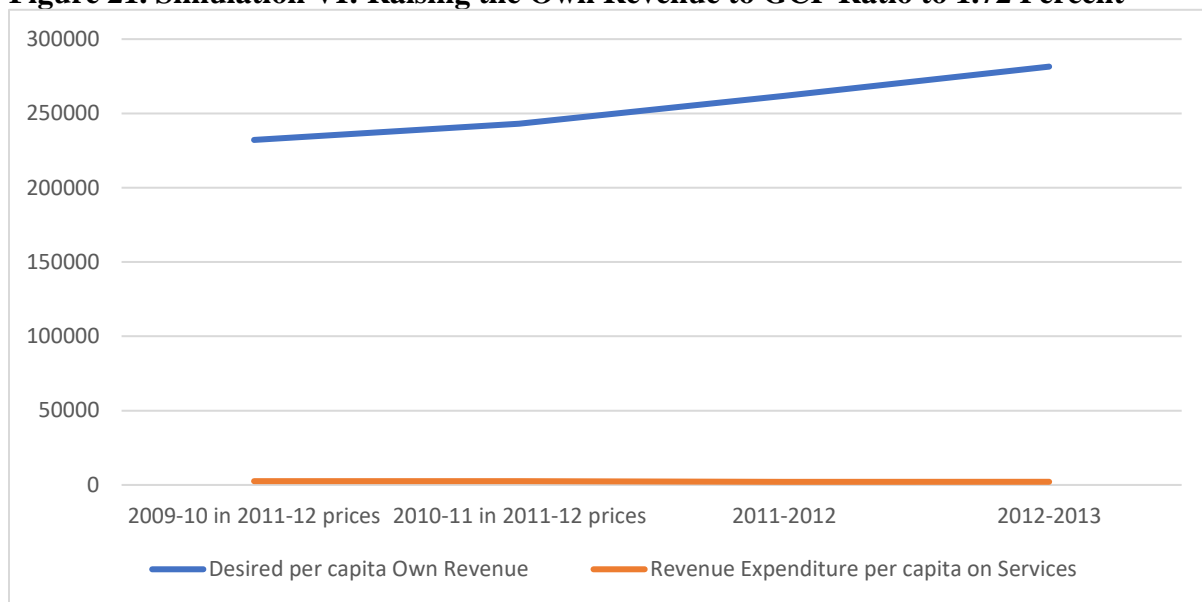
**Figure 20. Comparison between Per Capita Own Revenue and Per Capita Revenue Expenditure on Services**



*Source: Authors’ computation, KMC budget various years*

We find that revenue expenditure on services was on an average 1.72 percent of the GCP. We then raise the revenue capacity by pegging own revenue to 1.72 percent of the GCP. We find that the own revenues are now sufficient to meet the revenue expenditure on all the services in all the years (Figure 21).

**Figure 21. Simulation VI: Raising the Own Revenue to GCP Ratio to 1.72 Percent**



*Source: Authors' computation, KMC budget various years*

In all we saw that the own revenues had to be raised in each simulation such that KMC could meet its total revenue expenditure and also the revenue expenditure on all the services. This is despite the fact that the existing revenue expenditure falls short of the norms. If we need to meet the norms, the revenue capacity of KMC has to be raised even further. In addition to addressing the own revenues, we also saw that a big chunk of revenue expenditures is spent on non-services areas like pension funds, administration and support, and electricity. The next section in conclusion provides the way forwards to achieve self-reliance for KMC by augmenting the own revenues as well as recommendations with respect to managing the revenue expenditures more effectively.

### **Conclusion: The way forward**

We saw that revenue receipts were not sufficient to fund revenue expenditure in the KMC. We identify four problems with respect to the poor performance of the KMC which have direct implications on the service delivery in KMC: a) falling non tax revenues b) a fall in property tax

in recent years and thus, c) a high dependence on grants and loans, d) insufficient expenditures by the KMC as compared to the expenditure norms. In the wake of limited own revenue generation, dependence on loans or grants/transfers is not a sustainable solution in the long run. Bagchi (1999,2001) has suggested for alternatives like capital market or PPP to fund the local bodies in India. However, the private player would be willing to fund the local bodies only if they can recover the cost which is not possible unless local bodies provide quality/ enough services to their populace. As we also saw in case of KMC, the contribution of PPPs to revenue receipts was rather dwindling and given the already poor self-reliance of the KMC, it appears to be an unlikely source for supplementing revenues of the KMC in the long run.

We, therefore, propose that KMC should augment its own revenue. We saw a fall in its receipts which was largely influenced by a deep fall in the non-tax revenue (*vis-à-vis* tax revenues). Thus, it is important that we address primarily this source of revenue so that KMC can raise its own funds (along with tax revenue).

As also argued before, if the own revenue as a proportion of GCP is also around 4 percent, then KMC can fund all its existing expenditures. The own revenue needs to be at least 1.7 percent of GCP such that KMC can fund the expenditure needs in all the years. And if the own revenue is raised to 1.72 percent of the GCP, the KMC can fund all its services. Therefore, own revenue (both tax revenue and non-tax revenue) should increase. For this we propose a) introduction of new handles and b) revision of existing handles. So far as the existing handles are concerned in the non-tax component, we propose that services like roads, sewerage and drainage be improved, which can help KMC raise revenues from these handles. Further, given the plans for improvement in solid waste, it should raise revenue from this handle as well. As also argued by Sridhar (2007), service delivery would be better if user charges reflect cost of service. Raising

such revenues would further improve service delivery. Another such handle is car parking fees, which should be enhanced, given a growth in private cars. While it has been proposed that the car parking fee be raised, it is still on hold. Another potential source are cable operators. The cable operators pay a share of their fees to Multiple System Operators, as prescribed by TRAI and which is found unjustified by the operators. Some portion of this could be diverted to KMC as cable operator charges. There have been instances in the past of unrecorded (illegal) installation of mobile towers over building rooftops, which need to be mapped and charges be levied such that non-tax revenues could be augmented. We also propose that properties should be mapped by GIS to bring all properties under property tax coverage.

So far as the revenue expenditure is concerned, we saw that overall KMC is not spending as desired by the expenditure norms to fund basic services. The problem is exacerbated by a consistent fall in revenue expenditures and siphoning off a major chunk of revenue expenditures for components like pension funds, electricity, and administration and support, which puts an additional burden on the KMC. It is crucial to put some check on these components such that the expenditure could be diverted to spending on basic services.

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