Improving the Fiscal Health of Indian Cities: A Pilot Study of Hyderabad

Draft Report Submitted by the

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Any errors remain with the authors.

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CHAPTER 1: INTRODUCTION

Background

The Hyderabad Urban Agglomeration (UA), the capital city of the state of Andhra Pradesh, is one of the fastest growing metropolitan areas in India, located at the crossroads of the rivers, Krishna and Godavari in the Telengana plains. It is a typical inland city located in the south-eastern part of the deccan plateau with a semi-arid climate. The Hyderabad UA is spread over an area of 778.17 square kilometers (kms) and comprises of the Municipal Corporation of Hyderabad and ten other municipal entities surrounding it.

The constituent urban local bodies (ULBs) of the Hyderabad UA, according to Census 2001, are:

1. Municipal Corporation of Hyderabad (MCH)
2. Secunderabad Cantonment Board (SCB)
3. Kapra Municipality
4. Lal Bahadur Nagar (L.B.Nagar) Municipality
5. Kukatpally Municipality
6. Uppal Municipality
7. Rajendranagar Municipality
8. Serilingampally Municipality
9. Alwal Municipality
10. Malkajgiri Municipality
11. Qutubullapur Municipality.

As of 2007, all local bodies in the Hyderabad UA, with the exception of Secunderabad Cantonment Board, have been merged into a single entity, the Greater Hyderabad Municipal Corporation (GHMC). However, for the period for which our study spans, these 11 ULBs were independent entities, so we are able to collect and examine data for each local body individually.

Overview of Chapter

This chapter is organized as follows. First we describe the population growth rates and the socio-demographic characteristics of the local bodies in the Hyderabad UA, following which we present their economic base. After this, we describe some physical characteristics of the Hyderabad UA, given their impacts on public services. In the following section, we present a summary of some locally provided public services for all ULBs in the UA from the Census 2001

town directories. Following this, at the end of this chapter, we provide a road map and describe the layout of this report.

Population and Socio-Demographic Characteristics

According to 2001 census, the total population of the Hyderabad UA was 5,556,723. The main city is administered by the Municipal Corporation of Hyderabad (MCH). According to 2001 census, the central city (MCH) alone contains 66% of total population among eleven ULBs, with the second largest ULB being Kukatpally which contains 5.26 percent of the UA's total population.

Table 1.1 summarizes the growth rates of population during 1991-2001 for the local bodies in the Hyderabad UA. Clearly the MCH, representing the central city, is the largest local body, accounting for over two thirds of the UA's population. We observe that while the decadal population growth rate of the central city, MCH, was 23.40 percent during 1991-2001, a few of the ULBs such as Qutubullapur and Srilingampally experienced more than 100 percent population growth during the period. These growth rates are well above the national average for the growth rate of urban population over 1981-91 and 1991-2001 (which were respectively 3.1% and 2.7%). This supports the notion that we are looking at relatively well-performing cities as population is usually attracted by what they perceive to be better economic opportunity in any given area.

Table 1.1: Total Population and Growth Rate, Hyderabad UA, All ULBs, 1991 and 2001

Number	Local body	Population, 1991	Population, 2001	Population growth rate, 1991-01 (%)
1	Municipal Corporation of Hyderabad	2,964,638	3,658,510	23.40
2	Secunderabad Cantonment Board	171,148	206,102	20.42
3	Kukatpally Municipality	186,973	292,289	56.32
4	Lal Bahadur Nagar Municipality	155,514	287,781	85.05
5	Malkajgiri Municipality	127,178	193,863	52.43
6	Qutubullapur Municipality	106,591	231,108	116.8
7	Kapra Municipality	87,747	159,002	81.20
8	Rajendranagar Municipality	84,520	163,115	92.98
9	Uppal Kalan Municipality	75,644	117,217	54.95
10	Serilingampally Municipality	72,320	153,364	112.0
11	Alwal Municipality	66,471	94,372	41.9
	Hyderabad Urban Agglomeration	**4,098,744**	**5,556,723**	**67.0**

Sources: Census of India Primary Census Abstract (PCA), 1991 and 2001, and Authors' Computations.

We observed from the Census 2001 town directory that in Qutubullapur, drugs are the most important good manufactured and are exported. In Srilingampally, aluminium cables are the most

important in their manufacturing and export base (see Table 1.3). An expanding manufacturing base could be one reason for their high population growth. Rajendranagar is another local body which experienced high population growth of nearly 93 percent during 1991-2001 (Table 1.1). We found many educational institutions and research institutes are located in this area, and a few of them were established during the 1991-01 period, which is one reason for population growth in this ULB. In Alwal, population growth during 1991-2001 (at 42 percent), was the lowest among all the ULBs in the UA, but still well above the national average growth rate of urban population. Alwal is located quite far from the central city and is yet to be developed.

In general, taking the evidence regarding population growth in the local bodies, we find that those areas which have had some manufacturing base (aluminium cables in the case of Srilingampally, TV sets in the case of Kapra, mechanical parts in the case of Kukatpally) (see Table 1.3), have grown relatively faster during the period. For instance, Alwal has no manufacturing base, but relies only on vegetables, which have poor linkages with the rest of the economy. Hence its growth also has been relatively slow.

We examined a variety of socio-demographic indicators such as population, households, household size, literacy rate, and workforce participation rate, for ULBs in the UA, for 1991 and 2001, with and without the central city, the Municipal Corporation of Hyderabad (MCH), given that it is the largest, and these characteristics for the UA, which have impacts on public services, might be influenced to a considerable extent by the MCH. Table 1.2 summarizes these data for the Hyderabad UA with and without the MCH for 2001. For 1991 there are no significant differences hence we do not report them. From Table 1.2 we can see that on average, the population, households and household size, for all ULBs with MCH included, is higher than they are without MCH. This emphasizes what we have already learnt, i.e., that the MCH covers most of the UA. The workforce participation rate of 37 percent for the UA (with or without the MCH) is below than that for the nation as a whole, 41 percent, as of the 2001 Census. The literacy rate is well above that for all India, which is 65 percent, but below that for urban India, which is 80 percent, according to the 2001 Census.

Economic Base

To corroborate our observations earlier, Table 1.3 summarizes the economic base of the ULBs in the Hyderabad UA.

Table 1.2: Socio-demographic Characteristics of ULBs, Hyderabad UA, 2001

Summary of Socio-demographic Data, All Local Bodies, Hyderabad Urban Agglomeration					
	Population	**Number of households**	**Household size (persons/HH)**	**Literacy Rate**	**Workforce participation rate**
Average	505,157	97,305	4.74	77.71%	37%
Maximum	3,658,510	660,363	5.54	82.98%	40%
Minimum	94,372	19,748	4.39	63.19%	33%
Standard deviation	1,047,733.60	187,290.74	0.37	5.68%	0.02
Number of observations	11	11	11	11	11
Socio-demographic Data, Hyderabad Urban Agglomeration, Without Municipal Corporation of Hyderabad					
	Population	**Number of households**	**Household size (persons/HH)**	**Literacy Rate**	**Workforce participation rate**
Average	189,821	40,999.40	4.66	77.61%	37%
Maximum	292,289	65,211.00	5.31	82.98%	40%
Minimum	94,372	19,748.00	4.39	63.19%	36%
Standard deviation	66,211.67	15,058.02	0.27	5.98%	0.01
Number of observations	10	10	10	10	10

Sources: Census of India Primary Census Abstract (PCA), 2001, and Authors' Computations.

This table, extracted and computed from the Census of India's 2001 town directories, summarizes the most important commodities manufactured, exported and imported by ULBs in the Hyderabad UA. Tables 1.1 and 1.3 juxtaposed together, corroborate that the fast growing areas are those which have manufacturing bases.

Physical Characteristics

Next, we reviewed the physical characteristics of the UA, since the relative dryness of an area has implications for public services such as water supply. For example, the semi-arid regions of Saurashtra have always been rain deficient and are water starved. Such conditions can raise the cost of providing water supply. Given that we are unable to control for these conditions econometrically, we review a summary picture of these characteristics, to enable us to make an assessment.

When we compare the physical features of the Hyderabad UA with that of the country, we do find that they are water deficient. While the average rainfall for all towns and cities in the country is about 1,138 mms (based on data from the Census 2001 town directory), ULBs in the Hyderabad UA receive only 845 mms (Table 1.4). To accentuate this, the average maximum

temperature (of 42 degrees Celsius) for these ULBs is higher than the average maximum temperature for the country, which is around 37 degrees Celsius. The average minimum temperature (being 17 degrees) is also higher than the national average minimum temperature (about 15 degrees, based on data from the 2001 Census town directories). All these factors in combination indicate the relative dryness of the area in which the Hyderabad UA is situated. Hence it is likely that the cost of providing services such as water and sewerage is also higher.

Table 1.3: Economic Profile of ULBs, Hyderabad UA, 2001

Most Important Commodities Imported	Number of ULBs	Most Important Commodities Exported	Number of ULBs	Most Important Commodities Manufactured	Number of ULBs
RICE	3 (L. B. Nagar, Alwal, Qutbullapur)	COMPUTER SOFTWARE	1(MCH)	METAL PRODUCTS	1(MCH)
T.V.SPAREPARTS	1 (Kapra)	ALUMINIUM CABLES	2 (Secunderabad, Serilingampally)	ALUMINIUM UTENSILS	2 (Secunderabad, Serilingampally)
GARMENTS	1 (Kukatpally)	T.V.SETS	1 (Kapra)	T.V.SETS	1 (Kapra)
COAL	1 (Malkajgiri)	GARMENTS	1 (Kukatpally)	GARMENTS	1 (Kukatpally)
FERTILIZERS	1 (Rajendranagar)	RICE	1 (L. B. Nagar)	RAWWA	1 (L. B. Nagar)
		BATTERY CELLS	1(Malkajgiri)	WINE	1(Malkajgiri)
VEGETABLES	1 (Serilingampally)	PLASTIC MATERIAL	1 (Rajendranagar)	VEGETABLES	1 (Alwal)
		VEGETABALES	1 (Alwal)	DRUGS	1 (Quthbullapur)
Data not available	3 (MCH, Secunderabad, Uppal)	DRUGS	1 (Quthbullapur)	OIL	1 (Rajendranagar)
		CIGARETTES	1 (Uppal)	CIGARETTES	1 (Uppal)

Source: Census of India Town Directory, 2001, and Authors' Computations.

Table 1.4: Pysical Features, Hyderabad UA

Summary Statistic	Average rainfall (in millimeters)	Average maximum temperature (in centigrade)	Average minimum temperature (in centigrade)	Difference between maximum & minimum temperature
Average	845.49	41.64	17.23	24.41
Maximum	1,679.20	46.00	31.00	37.00
Minimum	542.60	32.20	9.00	11.00
Standard Deviation	312.36	3.47	7.77	9.15
Number of observations	11	11	11	11

Source: Census of India Town Directory, 2001, and Authors' Computations.

Education

The provision of primary, secondary, middle and high schooling in Andhra Pradesh is the responsibility of the state government, and other local bodies (such as the district governments), not that of the ULBs. In any case, given that education determines the demand for public services, and the ability to discern their quality (dirty versus clean streets, safe versus unsafe drinking water or the reliability of its supply), we review the state of these services briefly for ULBs in the Hyderabad UA. We review the state of primary education and schooling, higher education and the status of water supply, sewerage, municipal roads and street lights.

Table 1.5 shows that the extent of population coverage with schools is much better in the ULBs when MCH is excluded, than when MCH is included.

Table 1.5: Availability and Coverage of Primary, Secondary and High Schools, Hyderabad UA, 2001

	With MCH		Without MCH	
	Total number of all (primary, secondary and high) schools	**Population covered by a school**	**Total number of all (primary, secondary and high) schools**	**Population covered by a school**
Average	446.64	1307.49	194.20	1059.89
Maximum	2,971	3783.47	342	2192.57
Minimum	94	601.10	94	601.10
Standard deviation	840.69	928.07	80.26	455.77
Number of observations	11	11	10	10

Source: Census of India Town Directory, 2001, and Authors' Computations.

This is because, when all ULBs are taken into account, on average, there is a school (primary, middle or high) for approximately every 1,300 persons, whereas without the MCH, there is a school roughly for every 1,060 persons.[1] Both these indicators are indeed much better for this UA when we compare similar data for the country as a whole. For the country's 5,179 towns, on average, based on our computations from the 2001 Census town directories, there is a school approximately for every 1,800 persons. Indeed the norm set for the *Sarva Siksha Abhiyan* by the Government of Andhra Pradesh (http://ssa.ap.nic.in/financialnorms.html) is that there be a school or alternative schooling facility within one kilometre of every habitation. We are unable to assess

[1] It would have been relevant to observe the number of schools and colleges for children in the school going age group, 6-14. While the number of persons below the age of 6 by town is available in the Census PCA, the entire age distribution of population by town was not available in the 2001 Census town directory. These data are typically published as part of migration tables, which are not yet published by city by the Census. Hence we had to satisfy ourselves with this broader measure indicating population coverage by schools and colleges.

this against the data we have, but the coverage in this UA is better than what we observe for the country.

While primary, secondary and high schools give an indication of the spread of literacy, higher education plays a more decisive role in the ability of residents to discern between good and poor quality public services. We examined the availability of the number of colleges (including arts, science, commerce, law, engineering, polytechnic and medical colleges), universities, and other colleges offering degrees, in the ULBs of the Hyderabad UA. Here population coverage with colleges (approximately 59,000 persons per college) is much better in the MCH than without it (63,930 persons per college) (Table 1.6). However, this is inadequate when we consider that nationally, there is a college (includes all categories mentioned above) roughly for every 29,110 residents. Thus there are constraints on the availability of institutions of higher education in this UA. This could affect current and future residents' (especially those that are not footloose) education and their awareness in the long run regarding the delivery of public services in their area.

Table 1.6: Availability of Institutions of Higher Education, Hyderabad UA, 2001

	With MCH		Without MCH	
	Total number of all colleges	**Population covered by a college**	**Total number of all colleges**	**Population covered by a college**
Average	21.09	59,920.97	5.00	63,928.22
Maximum	182	163,115.00	11	163,115.00
Minimum	1	19,170.50	1	19,170.50
Standard deviation	53.48	47,791.72	3.68	48,389.74
Number of observations	11	11	10	10

Source: Census of India Town Directory, 2001, and Authors' Computations.

Local Public Services

Here in this section, we make an attempt to present a brief overview of locally provided public services such as water supply, sewerage, municipal roads and street lights, in the Hyderabad UA, based on our analyses from the 2001 Census town directories.

Table 1.7 summarizes primary sources of water supply to ULBs in the Hyderabad UA. The tap is the most common source of water to a majority (6) of the ULBs, which implies the existence of a water supply network there. The other ULBs rely on a combination of tubewell and tap for their water supply. Given the UA is at the crossroads of rivers, the RIG (river infiltration gallery) is the most common system of storage for water found in half of the ULBs. Overhead tanks and reservoirs are used by others. The existence of storage systems for water everywhere

indicates that water supply from the network is intermittent, possibly of short duration, and unreliable.

Table 1.7: Sources of Water Supply and Storage Systems, ULBs, Hyderabad UA

Source of supply		System of storage	
Source Type	Number of ULBs	Storage System	Number of ULBs
T	6	RIG	5
		OHT	2
		SR	2
TW, T	5	OHT,BWP	1
		SR,RIG	1

Source: Census of India Town Directory, 2001, and Authors' Computations.

Notes: T=Tap; TW=Tubewell; RIG= River infiltration gallery; OHT=Overhead tank; SR=Service reservoir; BWP=Borewell pumping system;

Given the Census of India's town directories are a valuable source of information on a variety of public services, Table 1.8 summarizes the sewerage systems prevalent in the Hyderabad UA. While a closed sewerage network is the most superior, only 3 of the ULBs (including the MCH) have this side by side with open surface drains, whereas the majority (7) of them have only open surface drains to dispose their wastewater. Later in the chapter on expenditure needs and gaps, we study whether the ULBs' finances are a constraint in provision of a closed sewer network.

Table 1.8: System of Sewerage, ULBs, Hyderabad UA

Sewerage System Type	Number of ULBs
Open Surface Drains	7
Sewer and Open Surface Drains	3
Block Surface Drains	1

Source: Census of India Town Directory, 2001, and Authors' Computations.

We made an attempt to understand the municipal road infrastructure in the ULBs of the Hyderabad UA, through a cursory examination of relevant data from the Census 2001 town directory. Table 1.9 summarizes the road length, in terms of *kaccha* (semi-paved) and *pacca* (fully paved) roads separately for the ULBs, with and without the MCH. Obviously MCH has a superior road network compared with the other ULBs. The *kaccha* road length is indeed higher for the set of ULBs without MCH, whereas the *pacca* road length is higher for the MCH (Table

1.9). This is broadly consistent with what we would expect. Henderson, Shalizi and Venables (2000) indeed argue that public investments in infrastructure are usually biased in favor of capital cities where policymakers live.

Table 1.9: Municipal Road Infrastructure, Hyderabad UA

	All roads, with MCH		All roads, without MCH		Kaccha and Pacca Roads, with MCH		Kaccha and Pacca Roads, without MCH	
	Total road length (in Km.)	Road length per '000 Population	Total road length (in Km.)	Road length per '000 Population	Kachcha Road length (in Km.)	Pacca Road length (in Km.)	Kachcha Road length (in Km.)	Pacca Road length (in Km.)
Average	905	9	282.6	1.42	87.82	817.64	96.2	186.4
Maximum	7134	80	600	2.05	400	7,130.00	400	425
Minimum	42	0	42	0.45	0	32	0	32
Standard Deviation	2071.78	23.65	166.16	0.56	137.71	2,095.96	142.17	105.48
Number of Observations	11	11	10	10	11	11	10	10

Source: Census of India Town Directory, 2001, and Authors' Computations.

Table 1.10 summarizes and presents the street lighting points and the extent of coverage of households by street lights. International norms specify that there should be one street light for every 30 meters. While we do not have information on distance between lamp posts, we calculated the number of households in each ULB covered by a street lighting point.

Surprisingly, when MCH is taken into account, the extent of coverage of households with street lights is poorer when compared with that without the MCH, where, on average, there is a street lighting point for every 12 households. With the MCH included, on average, there is a street light only for every 14 households. However, when compared nationally, where there is a street light for every 67 households (calculated from the 2001 Census town directory), the service in these ULBs is well above average. We note a caveat of this finding. It is possible that if 67 housing units refer to apartment houses all in one building complex, then nationally also the coverage is adequate, given that there are several thousands of houses in apartment buildings. However if the housing units refer to individual houses, the coverage is clearly inadequate.

Summarizing, the ULBs in the Hyderabad UA are fairly covered in terms of water supply networks. However, water supply is unreliable and intermittent, which is explained by the existence of storage systems everywhere. As far as sewer networks are concerned, only few of the ULBs have a closed one, with most ULBs being covered by open surface drains. Municipal road infrastructure is certainly better in the MCH than in the surrounding ULBs, which is natural to

expect. Finally street light coverage is much better on average in the ULBs of the Hyderabad UA when compared nationally.

Table 1.10: Street Lighting and Household Coverage by Street Lights, ULBs, Hyderabad UA

Summary Statistic	With MCH		Without MCH	
	Number of street lighting points	Number of households per street light	Number of street lighting points	Number of households per street light
Average	7,545.60	14.23	6,368.67	11.82
Maximum	18,138	44.51	10,300	44.51
Minimum	1,465	2.55	1,465	2.55
Standard deviation	4,824.72	14.88	3,256.45	13.55
Number of observations	10*	10*	9	9

Source: Census of India Town Directory, 2001, and Authors' Computations.
* Data from Alwal were not available, hence the number of observations is 10 even with MCH.

Overview of Report

The rest of this report is organized as follows. Given that it is not the GHMC or other ULBs which provide water supply to their residents, but the Hyderabad Metropolitan Water Supply and Sewerage Board (HMWSSB) which is entrusted with this responsibility for the erstwhile MCH and few other ULBs, chapter 2 focuses on the HMWSSB, its service delivery and finances. Chapter 3, which follows that of the HMWSSB, focuses on expenditure needs, comparing the actual expenditures of the local bodies to widely accepted norms, and presents expenditure gaps for all individual services and total expenditures. Chapter 4 deals with a detailed analysis of different components of revenues of the ULBs, and Chapter 5 attempts to estimate the revenue capacities and makes an assessment of fiscal health for the Hyderabad UA, considering both revenue capacities and expenditure needs, contains data caveats and concluding remarks.

CHAPTER 2: WATER SUPPLY IN HYDERABAD UA

The provision of water supply in the Hyderabad metropolitan area is not the responsibility of the municipal body, but that of the Hyderabad Metropolitan Water Supply & Sewerage Board (HMWSSB). In this sense, Hyderabad is similar to Delhi and Chennai where the Jal Board and the Metropolitan Water Supply and Sewerage Board respectively provide water supply to their residents.

The HMWSSB was constituted in November 1989 under the provisions of Hyderabad Metropolitan Water Supply and Sewerage Act 1989 (Act number 15 of 1989), with the following functions and responsibilities in the Hyderabad metropolitan area (http://www.hyderabadwater.gov.in).

- The supply of potable water including planning, design, construction, maintenance, operation and management of the water supply system.
- Sewerage, sewerage disposal and sewerage treatment works including planning, design, construction, maintenance, operation & management of all sewerage and sewerage treatment works.

The HMWSSB supplies water to an area of approximately 688.2 square kilometers, covering roughly 80-90 percent of the UA. This area includes 172.6 sq. km. area of Municipal Corporation of Hyderabad, 418.56 sq. km. of surrounding municipalities (Kukatpally, L.B.Nagar and Serilingampally), 43.02 sq. km. of Osmania University and Cantonment area and some panchayat areas.[2] The population in the service area is about 55.33 lakhs as per 2001 census.[3] Once the GHMC comes into full existence, all ULBs will be covered by the HMWSSB.

The water sources for HMWSSB are:

(i) Osman Sagar

(ii) Himayath Sagar

(iii) Manjira phases 1, 2, 3 and 4.

With the Krishna river about 140 kilometres away, the HMWSSB is now dependent on Kodandapur, another river nearby. As the HMWSSB's website (http://www.hyderabadwater.gov.in) documents, the distance of water source from the city is increasing with each new project, with this, not only the cost but also the concomitant distribution and transmission losses tend to increase.

[2] While the HMWSSB lays the water supply networks, the other ULBs (Kukatpally and Serilingampally) purchase the water in bulk from the HMWSSB and maintain these networks on their own. This explains the O&M and revenue expenditures incurred on water supply (and sewerage) incurred by ULBs such as Kukatpally, and Serilingampally.

[3] Source: http://www.hyderabadwater.gov.in

Table 2.1 summarizes the water supply scenario in the Hyderabad UA, during 1996-2005. There are variations in the supply of water in the initial years of our study (especially during 1997 and 1998 when the supply decreased). Based on our discussions with the HMWSSB, we found that this decrease in water supply was due to the fact that there was an increase in water supply connections during those years, which resulted in substantially reduced force and flow of water supply, leading to greater leakages and distribution losses, which explains the decreased supply during 1997 and 1998. Thus, in essence, the HMWSSB has had to supply a smaller quantity to a larger number of connections, as also evident by the litres per capita daily consumed during 1997 and 1998 (Table 2.1).

Table 2.1: Availability of Potable Water Supply, Hyderabad UA

Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Supply in liters (MLD)	658	545	510	658	695	695	713	735	820	840
Duration of supply (hours per day)	2 ½ Hrs.	2 ½ Hrs.	2 ½ Hrs.	2 ½ Hrs.	2 ½ Hrs.	2 ½ Hrs.	2 ½ Hrs.	2 ½ Hrs.	3 Hrs.	3 Hrs.
Flow of Supply (Intermittent / Continuous?)	Intermittent	Intermittent	Intermittent	Intermittent	Intermittent	Intermittent	Intermittent	Intermittent	Intermittent	Intermittent
% of losses due to Leakages and thefts	35	25	20	20	20	20	20	20	20	20
*Demand (in MLD)	NA	NA	NA	NA	NA	862	908	998	1044	1089
Gap between Demand and supply	NA	NA	NA	NA	NA	167	195	263	224	249
Number of metered connections	223,899	247,082	258,624	275,351	308,575	332,362	358,703	380,749	431,843	469,507
No. of House Hold Connections	247,876	270,859	282,095	298,490	331,260	354,516	379,973	401,823	452,545	489,813
Number of Commercial Connections	8,871	9,067	9,370	9,680	10,091	10,585	11,437	11,604	11,815	11,999
Number of Industrial connection	521	525	528	550	593	630	662	691	852	1064
% of city's house hold covered with water connection	35.49	33.41	34.21	35.63	38.81	38.63	41.05	42.54	47.11	50.08
% of city's population covered with water connections	80	80	80	80	80	80	85	85	90	90
Water consumption (in litres per capita daily)	150	130	125	150	145	135	130	125	125	120

Source: HMWSSB.

We observe that for every year during 2001-05, water supply is lower than the demand, and the gap between demand and supply is continually increasing (Table 2.1). In 1996, per capita daily consumption of water was 150 litres, but since then has been declining steadily. The per capita daily water consumption was only 120 litres in 2005, is the lowest in the last 10 years of our study, and lower than the norm of 135 LPCD recommended by the National Commission on Urbanization. Based on our informal discussions with HMWSSB during our visit, the city-wide average consumption of water is 135 LPCD, but there are variations across areas, some areas receive more, and others, less. This means HMWSSB needs to either improve its water supply capacity or settle for higher volume of supply with full force for existing connections. As described, the tradeoffs are clear.

Several other points are worth noting from Table 2.1. The water supply, with a daily duration of 2.5 hours, has been intermittent always, never continuous. The HMWSSB has been successful in reducing distribution losses in the supply of water considerably over time. Quite consistent with the idea of phased cost recovery, the proportion metered connections have formed of the total number of connections (including household, commercial and industrial) has constantly increased from 87 percent in 1996 to nearly 93 percent of all connections in 2005, with 95 percent of household connections metered, out of which 70 percent work, and about 30 percent are faulty. As of 2005, at 90 percent, the coverage of population and the UA's land area with water supply is not yet complete. A larger portion, i.e., 95 percent of the core city is covered. The most striking finding during our visit to the HMWSSB was that none of the households boil or filter the water before consumption, which is a test of its potability.[4]

Table 2.2 summarizes financial information from the HMWSSB. In real terms, both revenue and capital expenditures are steadily increasing over time, except in 2004-05 when there is a spurt in capital expenditure which increased almost 11 times, when compared with that in the previous year. Given the capital expenditures are financed from loans and grants from multilateral institutions such as the World Bank and the state government respectively, variations in capital expenditures are explained by variations in the flow of these sources. Based on our discussions with HMWSSB, we found that this jump in capital expenditure in 2005 is because of commissioning of the Krishna project as part of which a 180 kilometre water line was laid.

Figure 2.1 summarizes the trend in income and expenditure of the HMWSSB. We observe from Figure 2.1 that expenditure has always been above revenues, with the last year's gap aggravated because of the steep rise in capital expenditure that year.

[4] In fact, we were also treated to some tap water which was unfiltered or boiled, and we were keeping good health after consuming it, which presumably testifies for its safety.

Water charges are the main component of the HMWSSB's revenues to finance their revenue expenditures, given capital expenditures are met out of loans and grants from the state government. Table 2A.1 in the Appendix to this chapter summarizes the details of water charges levied by the HMWSSB.

To summarize that information, first, there are water charges levied by the HMWSSB based on the amount of water consumed where water meters are installed and are functional. The metered charges are between Rs.6 to Rs.25 per kilo litre of water consumed. This rate structure has an incentive to control the use of water.

Table 2.2: Expenditure on, and Revenues from Water Supply

Year	Capital Exp. (In Rs., 1999-00 constant prices)	O&M Exp(In Rs., 1999-00 constant prices)	Revenue Exp(In Rs., 1999-00 constant prices)	Total Exp (In Rs., 1999-00 constant prices)**	Revenue	Total revenue (In Rs., 1999-00 constant prices)
					User charges (In Rs., 1999-00 constant prices)	
1999	441,847,000.00	471,930,000.00	568,149,000.00	1,481,926,000.00	1,105,894,000.00	1,105,894,000.00
2000	529,368,538.18	493,241,123.00	644,216,058.96	1,666,825,720.14	1,109,108,228.95	1,109,108,228.95
2001	316,027,233.62	580,086,660.40	683,037,941.92	1,579,151,835.94	1,266,408,144.45	1,266,408,144.45
2002	540,708,251.64	627,434,371.71	657,863,982.62	1,826,006,605.97	1,165,314,917.18	1,165,314,917.18
2003	307,493,398.72	775,102,832.90	663,137,391.64	1,745,733,623.25	1,756,649,179.41	1,756,649,179.41
2004	3,518,325,496.52	781,945,585.99	746,966,901.02	5,047,237,983.53	1,743,850,170.17	1,743,850,170.17

Source: HMWSSB.

**Total expenditure is the sum of capital, O&M, and revenue expenditures.

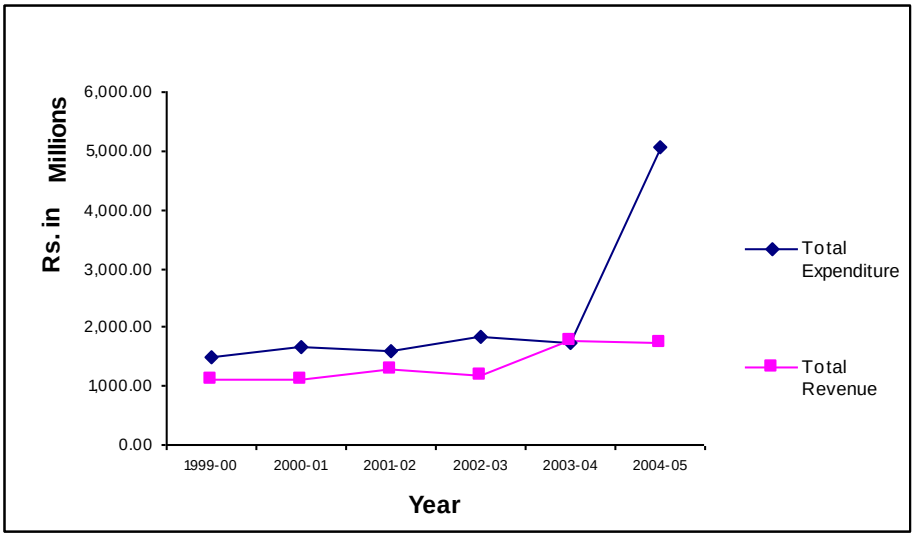
Notes:

1. O&M expenditure excludes depreciation.
2. Capital expenditures are met from term loans and capital grants from the state government (Government of Andhra Pradesh).
3. Segregation of both revenues and expenditures for water supply and sewerage is currently not being done.
4. Revenue deficits are met out of other funds available.

Second, where metered connections are not there, different water charges are levied. Here, two types of water charges are imposed. Minimum charges are levied at 60 percent of total water consumption, or a flat Rs.90 per month. It is not clear how the consumption of water is assessed in households where metered connections are not there. It is also not clear what the basis of these charges is. But it is presumably the cost of production of water. Tariff revisions are dependent on the board of governors, which is chaired by the Chief Minister of the state, and the concerned Minister is the vice-chairman. This does give rise to a number of problems of political economy to recommend frequent tariff revisions.

Third, lump sum charges are levied for other services where water cannot be supplied through pipe lines.

Figure 2.1: Trend in Total Expenditures and Revenues of HWS&SB



Apart from the above rate structure, if water is supplied through different sources then different charges are levied (see Table A.1). Based on our discussions with the HMWSSB, the cost of supplying 1 kilolitre of water is Rs.18, and nearly 70 percent of O&M charges incurred are recovered through water charges. It is important to note that sustainable service delivery requires full cost recovery, with a differential pricing mechanism for those users that cannot afford to pay.

The volume of waste water has been increasing continuously as has the water supply. Waste water approximately constitutes 80 percent of water that is supplied into the system. Table 2.3 summarizes the status of service delivery with respect to sewerage in the Hyderabad UA. Based on our informal discussions, the extent of population coverage with sewerage networks is less than that of water supply, at 65 percent. In 2005 the volume of waste water generated was 670 million litres daily. Given that storm water drain construction and maintenance is a function of the Municipal Corporation of Hyderabad, it is outside the purview of the Board and hence the relevant data summarized in Table 2.3 are from the MCH. The storm water drainage coverage area has been continuously increasing. In 1996, 62 percent of total MCH's population was covered by storm water drainage, which, in 2005 increased to 70 percent of MCH's area. We did

not have information on storm water drainage in the other ULBs, hence are unable to assess those. We also did not have information on water supply and sewerage, in ULBs not covered by the HMWSSB, and are unable to assess the status of service delivery there. Chapter one contains a few more details regarding the sewerage systems present in the ULBs of the Hyderabad UA.

Table 2.3: Status of Waste Water, Drainage and Storm Water, Hyderabad UA

Year	Volume of Waste Water (MLD)	% of population covered by drainage and storm water drainage system
1996	530	62
1997	435	62
1998	410	62
1999	530	62
2000	560	62
2001	560	65
2002	570	65
2003	590	65
2004	655	70
2005	670	70

Sources: HMWSSB and MCH.

Finally, we examined the total workforce in the HMWSSB to enable us to determine the extent of efficiency or inefficiency with which its services are delivered. Ideally, in an econometric framework, one can assess the effect of the total number of employees on the cost (here measured by expenditure) of providing the service. However, we do not have enough time-series or historical data to pursue econometric work, hence our observations here are merely anecdotal or qualitative.

Table 2.4 presents the workforce status of the HMWSSB. It summarizes the number of employees, skills of the majority of workers, their starting pay scale and their educational levels. Based on this information, we did some preliminary computations to assess HMWSSB's bill being spent on workforce, in revenue expenditure. For instance, for 2004, the total number of workers (with engineering, accounting, secretarial and other skills) was 5,206, and we computed at the higher end of the salary scale, their annual salaries according to the ranges provided (Table 2.4). This turns out to be Rs.588 million for 2004 (in nominal terms) for all employees. This is approximately 63 percent of HMWSSB's total revenue expenditure for that year (which was Rs.928 million in nominal terms). We did a similar computation for 2005 and found that salaries

formed 61 percent of its total revenue expenditure (which was Rs.949 million in current year prices), leaving 39 percent for establishment and other expenses. Thus revenue expenditure as a whole is roughly equal to that spent on O&M in terms of magnitude.

The next chapter 3 presents expenditure gaps, comparing the actual expenditure on all services including water supply, against widely accepted norms, so that the above may be assessed.

Table 2.4: Summary of Workforce Status and Characteristics, HMWSSB

Year	Total Number of Permanent Workers employed in the Board (Please exclude those on contract)	Skills of majority of permanent workers (E.g., accouts secretarial, engineering, so forth)	Starting pay scale of the majority of permanent workers (in Rs)	Minimum educational level of the majority of the permanent workers
1996	5392	Accountants: 832	1745-3420	Degree
		Secretarial: 25	1745-3420	Degree
		Engineering : 250	2600-5580	Degree in Engineering
		Skilled Workers : 4285	1375-2375	10th class
1997	5350	Accountants: 820	1745-3420	Degree
		Secretarial: 25	1745-3420	Degree
		Engineering : 240	2600-5580	Degree in Engineering
		Skilled Workers : 4265	1375-2375	10th class
1998	5330	Accountants: 810	1745-3420	Degree
		Secretarial: 25	1745-3420	Degree
		Engineering : 240	2600-5580	Degree in Engineering
		Skilled Workers : 4255	1375-2375	10th class
1999	5311	Accountants: 800	3290-6550	Degree
		Secretarial: 23	3290-6550	Degree
		Engineering : 238	5000-10600	Degree in Engineering
		Skilled Workers : 4250	2550-4550	10th class
2000	5288	Accountants: 788	3290-6550	Degree
		Secretarial: 20	3290-6550	Degree
		Engineering : 235	5000-10600	Degree in Engineering
		Skilled Workers : 4245	2550-4550	10th class
2001	5265	Accountants: 781	3290-6550	Degree
		Secretarial: 18	3290-6550	Degree
		Engineering : 231	5000-10600	Degree in Engineering
		Skilled Workers : 4235	2550-4550	10th class
2002	5246	Accountants: 776	3290-6550	Degree
		Secretarial: 15	3290-6550	Degree
		Engineering : 227	5000-10600	Degree in Engineering
		Skilled Workers : 4228	2550-4550	10th class
2003	5220	Accountants: 776	3290-6550	Degree
		Secretarial: 15	3290-6550	Degree
		Engineering : 227	5000-10600	Degree in Engineering
		Skilled Workers : 4228	2550-4550	10th class
2004	5206	Accountants: 765	4825-10845	Degree
		Secretarial: 13	4825-10845	Degree
		Engineering : 223	9285-19775	Degree in Engineering
		Skilled Workers : 4205	3850-8600	10th class
2005	5190	Accountants: 760	4825-10845	Degree
		Secretarial: 10	4825-10845	Degree
		Engineering : 220	9285-19775	Degree in Engineering
		Skilled Workers : 4200	3850-8600	10th class

Appendix

Table 2A.1: Water Tariffs, HMWSSB

Category	Consumption of water in kilo Liters per month	Rates in Rs. Per kilo Litres
1. All water supply connections other than covered by category below		
(A) where the monthly consumption is 500 kl or less	Upto 30	6
	Above 30 up to 200	10
	Above 200	25
(B) where the monthly consumption exceeds 500 kl	Entire consumption	25
2. Group Housing**	Upto the agreed quantity	6
	Above the agreed quantity	25
Monthly Minimum Charges for Categories (1) and (2) above		
a) Where individual agreements are entered into with the customer for water supply, the minimum charges agreed to in the agreement or the charges applicable to 60% of the agreed quantity.		
b) Other cases		Rs.90 per month
c) In case where the customer's meter is not working for more than 3 months continuously, or if the meter is found to be removed or if the customer is not allowed fixing of meter by the HMWWSB:	**WS Connection Pipe Size**	**Rs./Month**
	15mm (1/2")	90
	20mm (3/4")	270
	25mm (1")	600
	40mm (1-1/2")	1500
	50mm (2") and above	3200
3. Other Services		
a) Water supply through tankers	Tanker of 5 KL Capacity	250
	Tanker of 9KL Capacity	350
b) Disconnection and Restoration Charges (200+200)		400
c) Change of Bore		1500
d) Meter Testing Charges		75
e) Change of Name		200
f) Meter Service Charges per month (where the meter is provided by HMWSSB)	15mm (1/2")	15
	20mm (3/4")	30
	25mm (1")	50
	Above 25mm per each 5mm of total diameter	15
g) Service Charges (Charges for meter reading, billing collection, etc)	Per inch diameter per month	6
h) Charges for clearing sewerage chokages within customers' premises	Individual Domestic	25
	Apartment Complexes & non-domestic	250
	Corporate Hospitals & Star Hotels	750
	Septic Tank Cleaning	750

** Municipalities, panchayats, local authorities, cantonment and housing colonies (other than industrial housing colonies owned and maintained by industries) and multi-storied residential apartment complexes.

CHAPTER 3: EXPENDITURE NEEDS AND GAPS

In the case of Hyderabad which consists of eleven local governments, given the absence of reliable, time-series data for a reasonably long period of time for all the ULBs, it was not possible to adopt an econometric approach to estimate expenditure needs. Hence, as with Delhi and Pune, we had to adopt a structured case study approach in the case of Hyderabad as well, in which we computed expenditure gaps by comparing actual expenditures of the local governments over time, to relevant norms for various services recommended to attain a certain physical level of the service.

In this chapter, we summarize expenditure gaps for water supply and sewerage, solid waste and sanitation, municipal roads and street lighting, comparing the Hyderabad UA ULBs' actual expenditures on these services, with those generally accepted as norms for cities and towns of their size. Finally, we compare the total expenditure needs with the total actual spending on these services, to arrive at expenditure gaps or needs on a per capita basis. We do this keeping in mind the expenditure responsibility of the ULBs. We study expenditure gaps first including water supply and sewerage, and then excluding them, given that the provision of water supply & sewerage is the responsibility of the HMWSSB. The chapter concludes by summarizing caveats.

When the objective is to assess actual expenditures for the provision of water supply or sewerage, or any other service, it is necessary to compare it with some benchmark expenditure required to meet a certain physical level of these services. For purposes of doing this, we examined and studied various norms for the provision of all relevant services including water supply and sewerage. After a detailed examination during our field visits, discussions with relevant officials, and a review of existing studies relating to this area, we found that very few studies deal with ideal expenditure norms. Our discussion with officials in all cities indicated that while a physical requirement of 135 liters per capita daily (LPCD) (proposed by the National Commission on Urbanization) is broadly followed with respect to water supply, no expenditure norms are actually used. For other services such as solid waste, sanitation/sewerage, roads and street lights, no expenditure or financial norms were being followed in any of the cities where we visited.

Based on our discussion, we found one study which summarizes various norms for most public services with which we are concerned, a National Institute of Urban Affairs (NIUA) Working Paper, by Mathur et.al. (2007). For water supply and sewerage, solid waste and

sanitation, we used norms summarized in Mathur et.al. (2007). These are national norms for these services expressed in per capita terms.[5]

Water Supply and Sewerage

For the eleven local governments in the Hyderabad UA, for all services including water supply and sewerage, we used different norms for cities of different sizes, corresponding to the size of the respective local governments. For the Municipal Corporation of Hyderabad (MCH), for water supply, the norm we use is summarized in Mathur et.al. (2007) and is based on a 1995 study by NIUA on the costs of urban infrastructure. Given that the MCH is a large city, with Census 2001 population of 3.6 million, we used the norm suggested by the 1995 NIUA study of Rs.1,043.06 per capita (in 2004-05 prices) for the cost of provision of water supply in *large cities*, and the costs of O&M to be Rs.315.93 (in 2004-05 prices) per capita in *large cities*, in order to meet an average of 115-210 litres per capita daily (LPCD).[6]

The remaining local governments in the Hyderabad UA are much smaller than the MCH. Given that it is unfair to apply the same norm for the smaller ULBs as for the MCH, for all services, for the other, much smaller ULBs, we used the norms corresponding to *small cities* summarized in Mathur et al (2007), which had Census 2001 populations of 1-3 lakhs, with only one ULB (Alwal) being in the less than 1 lakh population category as of the 2001 census (as described in Chapter 1).

Given the fact that we had data on O&M and revenue expenditures on water supply and sewerage from the HMWSSB, we compared these with the per capita O&M requirement of Rs.315.93 (expressed in the NIUA study in 2004-05 prices per capita) recommended for water

[5] This paper by Mathur et al (2007) also summarizes state-specific norms adopted by State Finance Commissions (SFCs) by some states whose cities are included in this study. While Andhra Pradesh is one of these, estimation of expenditure needs for municipal councils in the state by grade was done based on data regarding anticipated expenditure and anticipated revenues for five years. These per capita requirements for municipal councils in Andhra Pradesh were computed as Rs.62, Rs.92, Rs.111, Rs.125 and Rs.130 for selection grade, special grade, first grade, second and third grade respectively. It was not clear if these are in current or constant prices. The grades are not defined. However these were not done for municipal corporations. Further, norms on the basis of simple projections do not take into account the needs of the future and also assume that existing deficiencies will continue. Further, the state-specific norms summarized by Mathur et. al (2007), applicable to Hyderabad, are also not disaggregated for various public services such as water supply, sanitation and so forth. In many cases, actual allocations by states for these services are summarized as norms. Given we are not interested in actual spending by the states, but in a desired norm, we decided to use the national norms which are disaggregated for various public services and for which expenditures are stated separately for the cost of provision and of operations and maintenance (O&M) in (2004-05 constant prices) summarized by Mathur et.al. (2007).

[6] It is interesting to note from the NIUA (1995)'s norms that the per capita requirements both for cost of provision and O&M keep declining with size of city, reflecting scale economies. For instance, the norm summarized by this study for metropolitan areas is Rs.372.37 per capita for the cost of provision of water supply, and Rs.139.83 (both in 2004-05 prices) for meeting the costs of O&M per capita, both lower than they are for *large cities*.

supply. Since all our data are in real terms with 1999-00 as the base, we converted the O&M norm from 2004-05 prices as the base, to 1999-00 as the base. In per capita terms, this norm for water for *large cities* turns out to be Rs.254.19 in 1999-00 prices, using the deflator for the district of Hyderabad (in which MCH is located), and Rs.207.96, using that for Rangareddy for all the other ULBs (in which they are located).

In the case of water supply, given that it is provided by the HMWSSB, and the service area of the HMWSSB for the time period for which we were able to obtain the data, spans several ULBs, we had to have a way of apportioning HMWSSB's expenditure among the ULBs. Our discussions with the HMWSSB's finance department indicated that revenues from ULBs are directly related to HMWSSB's expenditures on them. Hence we obtained from HMWSSB, the extent of water supplied and their revenues to determine the apportionment of its expenditure. Based on an examination of revenues, the MCH generates about 81 percent of HMWSSB's revenues, and the remaining ULBs together account for 19 percent of the HMWSSB's revenues. Hence we allocated HMWSSB's (revenue, O&M, and capital) expenditure across the ULBs also in the same fashion.[7]

Further, we had data on actual capital expenditures on water supply by some ULBs (not all of them), hence we used norms for the *cost of provision* of water supply in *large cities* (which is Rs.1,043.06 (in 2004-05 terms, per capita), Rs.839.21 per capita in 1999-00 prices), to compare against the estimated cost of provision in the MCH. We deflated both the capital (cost of provision) and O&M norms for smaller cities and for the MCH using the price index for water, gas and electricity for the districts in which the ULBs are located.

Table 3.1 summarizes the various norms we have used for water supply, for cities of varying sizes, for the cost of provision and O&M, in 1999-00 prices. Given that the MCH and most other ULBs maintained their financial records combined for water supply & sewerage, we had to add the norm for sewerage to that for water supply, to compare the ULBs' and the HMWSSB's expenditures on these services in the ULBs. For sewerage/drainage, we used the norm developed by NIUA (1995) for the cost of O&M on sewerage/sanitation and divided the norm equally between sewerage and sanitation. The norm for sewerage was added to that for water supply, and used for comparison against actual expenditures on water supply and

[7] We had information from the HMWSSB regarding its allocation of revenues from other towns (census towns such as Patancheru, Ramachandrapuram, and a few others which are not independent ULBs in the sense we have used here), in addition to the ULBs we study. However, given that these other towns account for a very small proportion (3 percent) of HMWSSB's revenues, we distributed this and allocated HMWSSB's revenues (expenditures) overall among our set of ULBs as follows: MCH: 81 percent; Serilingampally: 4 percent; L.B.Nagar: 5 percent; Kukatpally: 3 percent; Qutubullapur: 2 percent; Kapra, Uppal and Alwal: 1 percent each; Malkajgiri: 2 percent; Rajendranagar: 0.19 percent.

sewerage/drainage, and the sanitation part of the norm was added to that on solid waste (explained in a later section).

Table 3.1: Norms for Water Supply and Sewerage Used, by City Size

Size of city→ Capital/O&M Norm↓	**Large cities (Rs. Per Capita, in 1999-00 Prices)**	**Small cities (Rs. Per Capita, in 1999-00 Prices)**
Water Supply:		
Capital	839.21	715.21
O&M	254.19	207.96
Sewerage:		
Capital	88.59	113.12
O&M	15.19	19.57

Sources: NIUA (1995) study on "Costs of Urban Infrastructure" obtained from Mathur et al (2007), Directorate of Economics and Statistics, Government of Andhra Pradesh, and Authors' Computations.

The norm summarized by NIUA (1995) for sewerage, is Rs.36.82 per capita for O&M on sewerage/sanitation in *large* cities (in 2004-05 prices). We converted this to 1999-00 prices, using the appropriate price index for the district in which the MCH is located, and the O&M norm turns out to be Rs.30.38 in 1999-00 prices. The relevant norm for sewerage is half of this (with the other half allocated to sanitation), Rs.15.19 per capita. The relevant norm for the cost of provision of sewerage in large cities (cities of MCH's size) is Rs.177.18 per capita (in 1999-00 prices). As with O&M, we divided Rs.177.18 into half and allocated Rs.88.59 for the cost of provision of sewerage (with the remaining Rs.88.59 allocated as the norm for the cost of provision of sanitation). For the smaller ULBs, the sewerage (or sanitation) O&M norm turns out to be Rs.19.57 each (per capita, in 1999-00 prices). For smaller ULBs, the cost of provision (of sanitation or sewerage) turns out to be Rs.113.12 (per capita real terms, in 1999-00 prices).

We compared actual expenditures on water supply & sewerage against these norms combined. Table 3.2 summarizes the per capita expenditures on, and expenditure gaps, when compared with the relevant norms (summarized in Table 3.1) for water supply and sewerage O&M expenditures) by all local governments in the Hyderabad UA for which reliable data are available.[8]

[8] We did get data on the Secunderabad Cantonment Board's expenditures from a secondary data source from a study a consultant did for the SCB, but some data did not seem reliable. We tried following up many times with the SCB regarding this, but were unable to reach them, hence decided to exclude from our analysis. While L.B.Nagar and Qutubullapur provided data on *total* revenues, they did not provide any expenditure data. So overall, for the expenditure computations, we were able to cover 8 out of the 11 ULBs in the Hyderabad UA.

Table 3.2: Summary of O&M/Revenue Expenditures on Water Supply & Sewerage, All ULBs, Hyderabad UA

ULB	Year	Per capita O&M exp on Water supply & Sewerage	Per capita Exp.Gaps, WSS
MCH	1999-00	108.97	-160.40
MCH	2000-01	111.55	-157.83
MCH	2001-02	128.44	-140.93
MCH	2002-03	136.02	-133.35
MCH	2003-04	164.56	-104.81
MCH	2004-05	162.58	-106.79
Kukatpally	2001-02	83.83	-143.70
Kukatpally	2002-03	97.08	-130.45
Kukatpally	2003-04	126.13	-101.40
Kukatpally	2004-05	70.19	-157.34
Malkajgiri	1999-00	154.10	-73.43
Malkajgiri	2000-01	112.82	-114.71
Malkajgiri	2001-02	137.45	-90.08
Malkajgiri	2002-03	153.62	-73.91
Malkajgiri	2003-04	194.85	-32.68
Malkajgiri	2004-05	225.13	-2.40
Serilingampally	2003-04	372.15	144.62
Serilingampally	2004-05	393.45	165.92
Uppal	1999-00	43.95	-183.58
Uppal	2000-01	43.96	-183.57
Uppal	2001-02	49.49	-178.04
Uppal	2002-03	182.91	-47.30
Uppal	2003-04	211.56	-18.88
Uppal	2004-05	291.71	61.61
Kapra	1999-00	167.92	-78.94
Kapra	2000-01	146.47	-94.16
Kapra	2001-02	150.98	-92.42
Kapra	2002-03	160.61	-70.42
Kapra	2003-04	189.31	-38.84
Kapra	2004-05	249.36	21.83
Alwal	2001-02	61.47	-166.06
Alwal	2002-03	64.20	-163.34
Alwal	2003-04	76.57	-150.96
Alwal	2004-05	74.59	-152.94
Rajendra Nagar	2002-03	40.48	-187.05
Rajendra Nagar	2003-04	60.52	-167.13
Rajendra Nagar	2004-05	52.83	-180.29
Average, all		**141.94**	**-94.17**
Average, MCH		**135.36**	**-134.02**
Average, non-MCH ULBs		**143.22**	**-86.45**

Sources: HMWSSB, MCH, Other ULBs, and Authors' Computations.

It should be noted that the actual (per capita) expenditures include expenditures incurred by the HMWSSB as well as the individual ULBs on their water supply and sewerage (O&M). In the case of MCH, the water supply expenditures refer to O&M only (both ULB's own expenditure and that of HMWSSB). In the case of the other ULBs, their own ULB expenditure on water supply and sewerage includes both O&M and revenue expenditures, whereas HMWSSB expenditure on other ULBs refers only to O&M. Further, since expenditure on water supply and sewerage are combined from the HMWSSB, for the MCH and other ULBs, we combined their expenditures on these two services where they were separately maintained. The O&M expenditure norms for water supply and sewerage, as with capital expenditure norms, were combined, given the actual expenditures on these two services were combined as well. Keeping these caveats in mind, Table 3.2, which summarizes the expenditure gaps for water supply & sewerage, presents some interesting issues.

On average, the per capita O&M norm, taking into account both water supply and sewerage, is Rs.234 for all ULBs, controlling for their size. However, after accounting for expenditure of the HMWSSB and that of the ULB, in some cases, taking into account both O&M and revenue expenditures, on both water supply and sewerage, the average real per capita expenditures of roughly Rs.142 by the ULBs, including that of the MCH, are well below the norm, recommended in order to attain a water supply standard of anywhere between 115-210 LPCD. When all ULBs in the Hyderabad UA are taken into account, the per capita expenditure gap on water supply and sewerage (Rs.94.17) translates to an additional Rs.704 million, at the average population (748,012) for all ULBs (including the MCH), we projected during 1999-2005.

Surprisingly, the average expenditure in per capita real terms on water supply and sewerage (WSS) by the MCH (being Rs.135) is lower than that by the non-MCH set of ULBs, which spent nearly Rs.143 per capita in real terms (in 1999-00 prices). The expenditure gap (of Rs.134) for the MCH translates into an additional Rs.495 million (in real terms) on water supply and sewerage, over and above what it and the HMWSSB are currently spending. For the non-MCH ULBs, the expenditure gap is lower, at Rs.86 per capita. At their average population, the additional expenditure gap for water supply turns out to be Rs.15 million in real terms, in 1999-00 prices, for the non-MCH set of ULBs.

We noted that only a few ULBs (Serilingampally during both the years of our study, Uppal (during one year) and Kapra (during just one year) among the eleven ULBs of the Hyderabad UA had a positive expenditure gap for spending on WSS, when compared with the norm. It is worthwhile noting that during the period of our study, 1999-2005, while Serilingampally was part of the HMWSSB service area, the other ULBs were not. Even after we

had hypothetically allocated HMWSSB's expenditure to these other ULBs during our study period (when they were not part of the HMWSSB service area), we found that the share of the own ULBs' expenditure on WSS by these two ULBs (Uppal and Kapra) is more than 80 percent, with the remaining contributed by the HMWSSB (hypothetical). Hence the own spending of these ULBs on WSS, well above the norm, is commendable. It is a different question if the level of water supply is also better in these two ULBs about which we did not have information.

We had information on the actual *capital* expenditures by the HMWSSB in MCH and the other ULBs on water supply and sewerage for all years, which on average, was only Rs.154 per capita (in constant 1999-00 terms) (Table 3.3), when compared against the norm specified by the NIUA (1995) study for the (capital) cost of provision of water supply being Rs.735 (Table 3.1) (in 1999-00 prices) for large cities, and a norm of Rs.109, on average, for the cost of provision of sewerage. Thus the capital expenditure gap for water supply and sewerage is an additional Rs.690 per capita on average, or a total of Rs.516 million, over and above what the HMWSSB is currently spending on the cost of provision of water supply and sewerage in MCH and the surrounding municipalities. So with the GHMC having come into existence now, and with HMWSSB's service area spanning all the ULBs, these expenditure gaps are bound to remain.

Solid Waste and Sanitation

We performed a similar exercise for other services as we did for water supply, to arrive at expenditure gaps. For solid waste, we relied upon an Operations and Research Group (ORG) (1989) study which suggested norms for waste collection and transportation. For sanitation, we relied on the NIUA (1995) study for norms. Given the actual expenditures of the ULBs were combined for solid waste and sanitation, we had to combine the norms for these services as well. In the case of each of these services, we made an attempt to distinguish between ULBs of various sizes.

The national norm suggested by ORG (1989) is Rs.60-183 per capita (in 2004-05 prices) for waste collection (depending on the quantity of waste collected) and Rs.165 per capita for transportation of the waste. This assumes average waste generation level of 380 grams per capita per day.[9] The generation of solid waste in the MCH is 600 grams per capita per day. Given this is higher than the higher end of the ORG's estimates, we used the upper end of ORG's estimates for norms relating to solid waste for MCH.

[9] The approach used by ORG (1989) to arrive at these norms, relies on the estimation of waste collected, and estimates vehicle demand based on transport options in terms of trucks, compactors or matador and trips, with the compactor being the most expensive.

Table 3.3: Capital Expenditure and Expenditure Gaps, Water Supply and Sewerage, ULBs, Hyderabad UA

ULB	Year	Per capita Cap exp on Water supply & Sewerage	CapExp.Gaps, WSS
MCH	1999-00	102.03	-825.77
MCH	2000-01	119.69	-808.11
MCH	2001-02	69.97	-857.83
MCH	2002-03	117.22	-810.58
MCH	2003-04	66.41	-861.39
MCH	2004-05	732.05	-195.76
Kukatpally	2001-02	169.30	-659.03
Kukatpally	2002-03	315.28	-513.06
Kukatpally	2003-04	285.61	-542.73
Kukatpally	2004-05	413.27	-415.07
Malkajgiri	1999-00	64.02	-764.32
Malkajgiri	2000-01	142.01	-686.33
Malkajgiri	2001-02	49.22	-779.12
Malkajgiri	2002-03	76.08	-752.26
Malkajgiri	2003-04	65.88	-762.46
Malkajgiri	2004-05	351.27	-477.07
Serilingampally	2003-04	69.00	-759.33
Serilingampally	2004-05	732.37	-95.96
Uppal	1999-00	41.15	-787.19
Uppal	2000-01	47.18	-781.16
Uppal	2001-02	26.96	-801.38
Uppal	2002-03	44.15	-784.19
Uppal	2003-04	24.03	-804.31
Uppal	2004-05	263.20	-565.14
Kapra	1999-00	87.94	-740.40
Kapra	2000-01	77.80	-750.54
Kapra	2001-02	155.40	-672.93
Kapra	2002-03	100.44	-727.90
Kapra	2003-04	165.65	-662.69
Kapra	2004-05	219.15	-609.18
Alwal	2001-02	33.49	-794.85
Alwal	2002-03	55.32	-773.02
Alwal	2003-04	30.38	-797.96
Alwal	2004-05	335.61	-492.73
Rajendra Nagar	2002-03	5.90	-822.44
Rajendra Nagar	2003-04	3.14	-825.20
Rajendra Nagar	2004-05	33.65	-794.69
Average, all		**153.82**	**-690.65**
Average, MCH		**201.23**	**-726.57**
Average, non-MCH		**144.64**	**-683.70**

Sources: HMWSSB, MCH, Other ULBs, and Authors' Computations

The norm for solid waste alone (generation, collection and transportation) in a city of MCH's size is Rs.348 per capita (in 2004-05 prices), which is Rs.289.84 per capita (in 1999-00 prices), using appropriate deflators for the district in which the MCH is located.

For the smaller ULBs, for solid waste, we used the lower end of the norm summarized above, i.e., Rs.60 per capita, and included the cost of transport, Rs.165 per capita, making for a total of Rs.225 per capita for solid waste management in the smaller ULBs (in 2004-05 prices) or Rs.187.39 in 1999-00 prices, using the deflators for the respective districts in which these other ULBs are located.

The *actual* expenditures on solid waste in most of the ULBs were combined with that on sanitation, whereas the *norms* on solid waste were separate (from the ORG (1989) study), and the *norms* for sanitation and sewerage were combined in the NIUA (1995) study. Hence our approach was to divide the norm from the NIUA (1995) study on sewerage and sanitation equally and separate them out. Then we added the norm on sanitation with that for solid waste, to arrive at norms which would be comparable to the combined actual expenditure by all ULBs on solid waste and sanitation.

For sewerage/sanitation, the norm suggested by the NIUA (1995) study is Rs.214.77 per capita (in 2004-05 prices) for the cost of provision, and Rs.36.82 (in 2004-05 prices) for O&M, both for *large cities*. In 1999-00 prices, these respectively turn out to be Rs.177.18 and Rs.30.38 per capita. Given that we would like to separate sewerage from sanitation, and add sanitation to solid waste, we divided equally the sewerage/sanitation norm for O&M expenditures (from the NIUA (1995) study) of Rs.30.38 and took Rs.15.19 per capita each for sewerage and sanitation. We added Rs.15.19 to the norm for solid waste, which is Rs.289.84 per capita (also in 1999-00 prices). This gave us a norm of Rs.305.03 for solid waste and sanitation for MCH per capita (in 1999-00 prices). This norm applies to the costs of O&M of sewerage, and both capital and O&M of solid waste (since in the case of solid waste it is difficult to separate the capital from O&M expenditures). We arrived at norms for solid waste and sanitation for all ULBs, using the appropriate city sizes for generation of solid waste per capita. The smaller city norm for solid waste and sanitation based on a similar method turns out to be Rs.206.96 (Rs.187.39 per capita for solid waste (for collection and transportation) and Rs.19.57 per capita for sanitation (O&M), in 1999-00 prices).

We compared the norms thus constructed, to the actual expenditures of the local bodies on solid waste and sanitation. In the case of smaller ULBs such as Serilingampally and Rajendranagar, we had information only on sanitation expenditure, but no information on solid waste. With these caveats in mind, Table 3.4 summarizes the actual per capita expenditures on

these urban services by the various ULBs and the expenditure gap, when actual per capita expenditures are compared with the norms summarized above.

Table 3.4: Summary of Revenue Expenditures and Expenditure Gaps on Solid Waste and Sanitation, ULBs, Hyderabad UA

ULB	Year	Per capita Exp on SW & Sanitation	Exp. Gaps, SW & Sanitation
MCH	1999-00	149.30	-170.91
MCH	2000-01	148.21	-172.00
MCH	2001-02	153.05	-167.17
MCH	2002-03	NA	NA
MCH	2003-04	159.12	-161.09
MCH	2004-05	146.04	-174.17
Kukatpally	2001-02	32.83	-193.71
Kukatpally	2002-03	31.59	-194.95
Kukatpally	2003-04	50.22	-176.32
Kukatpally	2004-05	37.04	-189.50
Malkajgiri	1999-00	15.18	-211.36
Malkajgiri	2000-01	21.64	NA
Malkajgiri	2001-02	30.63	-195.91
Malkajgiri	2002-03	76.19	-150.35
Malkajgiri	2003-04	37.95	-188.59
Malkajgiri	2004-05	44.18	-182.36
Serilingampally	2003-04	10.68	-8.90
Serilingampally	2004-05	7.02	-12.56
Uppal	1999-00	NA	NA
Uppal	2000-01	43.98	24.41
Uppal	2001-02	NA	NA
Uppal	2002-03	63.10	43.53
Uppal	2003-04	72.03	52.46
Uppal	2004-05	86.91	67.34
Kapra	1999-00	17.98	-208.56
Kapra	2000-01	12.28	-214.26
Kapra	2001-02	32.34	-194.20
Kapra	2002-03	69.20	-157.34
Kapra	2003-04	94.46	-132.09
Kapra	2004-05	90.20	-136.35
Alwal	2001-02	1.60	-17.97
Alwal	2002-03	39.25	19.67
Alwal	2003-04	49.29	29.71
Alwal	2004-05	33.27	13.70
Rajendra Nagar	2002-03	4.37	-15.20
Average, all		**58.16**	**-108.87**
Average, MCH		**151.14**	**-169.07**
Average, non-MCH ULBs		**40.94**	**-97.30**

Sources: MCH, Other ULBs, and Authors' Computations.

On average, there is a clear shortfall in spending on these basic services, when compared against the norms. Even a large municipal corporation like the MCH is unable to spend adequately on solid waste and sanitation. The average expenditure gap by the MCH alone is roughly Rs.169 per capita, while it is only Rs.97 per capita (all in 1999-00 prices) for the non-MCH set of ULBs. This means that the MCH is unable to spend according to the recommended norms for a city of its size. In contrast, much smaller ULBs such as Uppal and Alwal are able to spend above the norm recommended to ensure 100 percent solid waste collection efficiency. As with water supply & sewerage, we did not have information on the physical level of solid waste collection efficiency in these ULBs, hence are unable to relate their spending above the norm to physical level of the service.

The fiscal implication of the gap for the GHMC is nearly an *additional* Rs.82 million on solid waste and sanitation, at the average expenditure gap and average population of the MCH we projected for the period 1999-2005. In the case of several smaller ULBs, as summarized earlier, we had information regarding expenditure just on sanitation or solid waste, so these estimates of expenditure gaps should be viewed as being quite conservative.

Municipal Roads

In the case of municipal roads and street lights, nationally recommended expenditure norms were not readily available. Mathur et.al (2007) is silent regarding these services.[10] Based on our consultations with cities and various local governments, for these services, no state-specific or city-specific norms are being used. Hence, as the only resort, we used expenditure norms developed by PricewaterhouseCoopers (2000) for these services for towns of various sizes, for a study they did for the Government of Chhattisgarh. These norms basically refer to the Zakaria committee norms for O&M expenditure, updated to 2000-01 prices. These norms for municipal roads, for towns with population greater than 20 lakhs (MCH's size), population between 1-5 lakhs (all ULBs except MCH and Alwal), those with population between 0.5-1 lakh (Alwal's size) are respectively Rs.43.45, Rs.26.67 and Rs.23.71 per capita (in 2000-01 prices). In 1999-00 prices, these norms respectively are Rs.36.19 (for MCH), Rs.22.21 (all ULBs except MCH and Alwal), and Rs.19.75 (Alwal).

Municipal roads are another service for which we had data on both capital and O&M expenditure. However, for lack of relevant norms for capital expenditures on roads, we are not in a position to assess ULBs' capital expenditure on roads. Hence we compared the norms for O&M

[10] We tried very hard, but were unable to get a copy of the NIUA (1995) draft report on the costs of urban infrastructure.

expenditures roads to actual O&M expenditures on the service. The comparisons of the actual expenditure to the relevant norms are summarized in Table 3.5.

Table 3.5: Summary of O&M Expenditures and Expenditure Gaps for Municipal Roads, All ULBs, Hyderabad UA

ULB	Year	Per capita Exp on Roads (Rs. Per Capita, in 1999-00 prices)	Exp. Gap, Roads (Rs. Per Capita, in 1999-00 prices)
MCH	1999-00	96.03	59.85
MCH	2000-01	78.85	42.66
MCH	2001-02	86.63	50.44
MCH	2002-03	NA	NA
MCH	2003-04	55.15	18.96
MCH	2004-05	69.38	33.20
Malkajgiri	2000-01	1.44	-20.77
Malkajgiri	2001-02	1.00	-21.21
Malkajgiri	2002-03	7.45	-14.76
Malkajgiri	2003-04	1.35	-20.87
Malkajgiri	2004-05	1.58	-20.63
Serilingampally	2003-04	9.07	-13.14
Serilingampally	2004-05	8.41	-13.80
Uppal	2000-01	14.75	-7.46
Uppal	2001-02	9.90	-12.31
Uppal	2002-03	2.61	-19.60
Uppal	2003-04	2.59	-19.62
Uppal	2004-05	2.21	-20.01
Kapra	1999-00	10.50	-11.71
Kapra	2000-01	9.89	-12.33
Kapra	2001-02	5.50	-16.72
Kapra	2002-03	2.35	-19.86
Kapra	2003-04	8.76	-13.46
Kapra	2004-05	2.80	-19.42
Alwal	2001-02	5.36	-14.39
Alwal	2002-03	1.28	-18.47
Alwal	2003-04	1.58	-18.16
Alwal	2004-05	4.36	-15.39
Rajendra Nagar	2002-03	4.80	-17.41
Rajendra Nagar	2003-04	6.43	-15.78
Rajendra Nagar	2004-05	3.91	-18.30
Average, all ULBs		**17.20**	**-7.02**
Average, MCH		**77.21**	**41.02**
Average, non-MCH ULBs		**5.20**	**-16.62**

Sources: MCH, Other ULBs, and Authors' Computations.

On average, only MCH appears to spend adequately on municipal roads, in comparison to the norms. All other ULBs spend well below the norm at least as far as O&M is concerned, on municipal roads. Indeed this comes as no surprise if we recall evidence from the 2001 town directories (summarized in Chapter 1) that it is only the MCH that has road length superior to that of the other ULBs in the UA. Recall that the *kaccha* road length is indeed higher for the set of ULBs without MCH, whereas the *pacca and total* road length is higher for the MCH (Table 1.9, Chapter 1). In the case of roads, there does seem to be a direct relationship between spending and the level of infrastructure.

If the MCH were to be excluded, then the average per capita spending by other ULBs on municipal roads turns out to be only Rs.5.20, when compared with a norm of Rs.21.89 for towns of their size, leaving a gap of Rs.16.62. At the average, taking into account just their population (which is 176,743, leaving the MCH), this gap translates into an additional Rs.2.9 million (in constant 1999-00 prices).

On average, taking into account all the ULBs, the average expenditure per capita on municipal roads is only Rs.17.20, as against the average norm of Rs.24.21. Overall, there is an expenditure gap of Rs.7.02 per capita (in constant 1999-00 prices) on municipal roads, which is, of course, much lower than what we observe for the other core civic services. At the average population we projected for all ULBs (748,012, based on data from the Census PCA and our projections), this gap translates to an additional Rs.5.25 million. Given the MCH has a surplus spending of Rs.41.02 per capita, it is possible that with the GHMC now in existence, the under-spending by other ULBs on their roads can be corrected.

Street Lights

As described in the previous section, we did not have national norms with respect to spending on street lights as well. Hence we used the PWC norms, which are the inflation-adjusted norms of the Zakaria Committee for towns in Chhattisgarh of various sizes. For street lights, these norms respectively are Rs.59.26 (for towns the size of MCH), Rs.49.39 (for towns with population between 1-5 lakhs), Rs.45.44 (for towns of Alwal's size), all in per capita terms, and in 2000-01 prices. These per capita norms in 1999-00 prices respectively are, Rs.49.36, Rs.41.14 and Rs.37.85, for towns of the sizes we are concerned with here.

Table 3.6 summarizes the differences between actual and required O&M real expenditures on street lights in all the local governments from which data were available, in per capita terms (in constant 1999-00 prices). Here we observe a story similar to that on municipal roads. On average, it is the MCH that is the highest spender on street lights in per capita real terms, spending Rs.53.55 per capita on O&M alone, when compared with a norm of Rs.49.36.

Table 3.6: Summary of O&M Expenditures and Expenditure Gaps for Street Lights, ULBs, Hyderabad UA

ULB Name	Year	Per capita O&M exp on Street Lights	Exp.Gaps, Street Lights
MCH	1999-00	31.05	-18.31
MCH	2000-01	49.65	0.30
MCH	2001-02	43.59	-5.76
MCH	2002-03	NA	NA
MCH	2003-04	68.57	19.21
MCH	2004-05	74.91	25.55
Kukatpally	2001-02	2.84	-38.30
Kukatpally	2002-03	4.19	-36.95
Kukatpally	2003-04	4.34	-36.79
Kukatpally	2004-05	5.02	-36.11
Malkajgiri	1999-00	0.72	-40.42
Malkajgiri	2000-01	1.28	-39.86
Malkajgiri	2001-02	1.85	-39.29
Malkajgiri	2002-03	1.72	-39.41
Malkajgiri	2003-04	2.91	-38.23
Malkajgiri	2004-05	2.67	-38.47
Serilingampally	2003-04	4.38	-36.75
Serilingampally	2004-05	4.44	-36.69
Uppal	2000-01	0.12	-41.01
Uppal	2001-02	0.38	-40.75
Uppal	2002-03	0.65	-40.49
Uppal	2003-04	2.78	-38.35
Uppal	2004-05	3.07	-38.06
Alwal	2002-03	0.63	-37.21
Alwal	2003-04	0.03	-37.82
Alwal	2004-05	0.01	-37.84
Average, all ULBs		**12.47**	**-29.91**
Average, MCH		**53.55**	**4.20**
Average, non-MCH ULBs		**2.20**	**-38.44**

Sources: MCH, Other ULBs, and Authors' Computations.
Note: No data were available from the Kapra and Rajendranagar municipalities for expenditures on street lighting.

However, when the MCH is excluded, none of the ULBs are able to spend according to the norms. There is an expenditure gap of nearly Rs.39 per capita for O&M spending on street lights alone for the non-MCH set of ULBs. At their average population, this translates to an *additional* required spending of Rs.6.8 million. Given the MCH has a surplus spending of Rs.4.20 per capita on street lights, when compared with the norm, it is possible that the formation of the GHMC now might facilitate pooling of resources and better levels of infrastructure in the region as a whole.

While international norms specify that street lighting points have to be spaced every 30 metres, we did not have information on the average spacing between street lights in any of the ULBs, hence difficult to assess the spending with the physical level of the service.

Indeed we recall from Chapter 1, based on data from the Census town directories, that the coverage of households with street lighting is much better in the non-MCH set of ULBs than in MCH. Hence the O&M expenditure on street lights is not probably the constraint here. It is possible that the MCH is not spending enough on the provision of *new* street lights, but only on fixing old ones. Since street lights are used as an indicator of safety, low spending by the other ULBs means that either the lighting there is of good quality and does not need to be replaced often, but it could also mean that not enough defective street lights are replaced, or that the other ULBs are unable to afford enough engineers/technicians to fix defective lights. If the latter were to be the case, low spending on street lighting would cast doubt on the other ULBs' ability to provide safety to their residents.

Total Expenditure

The next and final step was to compare total actual expenditures on relevant services – water supply and sewerage/drainage, solid waste and sanitation, roads, street lighting -- to that specified by the expenditure norms for the services. Given that expenditure on all services was not available for all the local governments, we computed *total expenditure norms* only for those civic services for which we had data on *actual expenditures* from the ULBs. The total expenditures (in per capita real terms) are based on O&M and revenue expenditures on these services, and exclude capital expenditures of any kind.

For the MCH and all other ULBs except a few ULBs (Serilingampally and Rajendra Nagar), we had data on water supply and sewerage, solid waste & sanitation, municipal roads and street lights, which was compared to the total of norms for these services. For these two other ULBs, we had data on all services including sanitation, but not on solid waste management. Hence for these two ULBs, we excluded norms on solid waste, to be consistent with their actual expenditures.

With these caveats in order, Table 3.7 summarizes the total expenditure gaps for all services we computed for the ULBs in the Hyderabad UA.

Table 3.7: Summary of O&M Expenditures and Expenditure Gaps for All Relevant Urban Services, ULBs, Hyderabad UA

ULB	Year	Per capita Exp, All Relevant Services	Exp.Gaps
MCH	1999-00	385.36	-289.77
MCH	2000-01	388.26	-286.87
MCH	2001-02	411.71	-263.42
MCH	2002-03	136.02	-539.10
MCH	2003-04	447.40	-227.73
MCH	2004-05	452.91	-222.22
Kukatpally	2001-02	119.50	-397.92
Kukatpally	2002-03	132.85	-384.57
Kukatpally	2003-04	180.69	-336.73
Kukatpally	2004-05	112.26	-405.17
Malkajgiri	1999-00	170.00	-343.04
Malkajgiri	2000-01	137.18	-375.85
Malkajgiri	2001-02	170.94	-342.10
Malkajgiri	2002-03	238.98	-274.06
Malkajgiri	2003-04	237.06	-275.98
Malkajgiri	2004-05	273.57	-239.46
Serilingampally	2003-04	396.28	85.83
Serilingampally	2004-05	413.33	102.87
Uppal	1999-00	43.95	-473.47
Uppal	2000-01	102.82	-414.60
Uppal	2001-02	59.77	-457.65
Uppal	2002-03	249.27	-268.15
Uppal	2003-04	288.96	-228.46
Uppal	2004-05	383.90	-133.52
Kapra	1999-00	196.40	-321.02
Kapra	2000-01	168.64	-348.78
Kapra	2001-02	188.81	-328.61
Kapra	2002-03	232.16	-285.26
Kapra	2003-04	292.53	-224.89
Kapra	2004-05	342.35	-175.07
Alwal	2001-02	68.43	-443.23
Alwal	2002-03	105.35	-406.31
Alwal	2003-04	127.47	-384.19
Alwal	2004-05	112.23	-399.44
Rajendra Nagar	2002-03	49.65	-260.80
Rajendra Nagar	2003-04	66.96	-243.49
Rajendra Nagar	2004-05	56.74	-253.71
Average, all		**214.61**	**-299.08**
Average, MCH		**370.28**	**-304.85**
Average, non-MCH		**184.48**	**-297.96**

Sources: HMWSSB, MCH, Other ULBs, and Authors' Computations.

On average, these ULBs spend only about Rs.215 per capita (in 1999-00 real terms) on the relevant public services we have studied here. This appears grossly inadequate while taking

into account the average spending norm of roughly Rs.515 that is required on these services, leaving a gap of nearly Rs.300 per capita. The surprising finding is that the MCH is no better as far as spending on these basic services is concerned. Indeed it has a higher expenditure gap of Rs.305 per capita with its spending of only Rs.370 per capita on all the relevant services put together.[11] Given that the MCH is a large city (with 2001 population of 3.6 million, its required norms at Rs.675 per capita (on O&M expenditure for water supply & sewerage, solid waste, sanitation, municipal roads and street lighting) are also higher. One reason for larger cities to also require higher O&M spending is because of the continual pressure on and demand for public services and the need for their continued maintenance.

The only ULB that has a positive expenditure gap when compared with the norms is Serilingampally, which spends above the required norms with respect to water supply & sewerage. We studied its expenditure on water supply and sewerage, and found that the ULB's spending on this service is the larger proportion (being 53 and 51 percent respectively in 2003-04 and 2004-05 respectively), with the HMWSSB footing the remaining part of the total expenditure on WSS. The HMWSSB's contribution is one reason why it is able to spend more than the norms, but the same applies to other ULBs (such as Kukatpally, L.B.Nagar which were part of the erstwhile service area of the HMWSSB)[12] as well. Hence we examined revenues for Serilingampally, and found that this ULB also has the highest per capita revenue from all sources, the biggest contribution being from other taxes such as duties on transfer of property, registration fee and so forth. So it does appear that there is a systematic relationship between a ULB's revenues and its spending. However, with respect to other services, this ULB (Serilingampally) is a low spender when compared to the recommended norm, similar to others of its size.

Taking all ULBs into account, the fiscal implication of the average expenditure gap for the now GHMC (consisting of all ULBs) is an *additional* Rs.224 million on all the civic services considered here, at the average of the population we projected for the ULBs, over 1999-2005.

Given that the provision of water supply and sewerage are the primary responsibility of the HMWSSB, we examined total expenditure gaps by excluding water supply & sewerage, so that we can throw light on the actual spending by the ULBs, according to their expenditure responsibility. Table 3.8 summarizes per capita spending on relevant services excluding WSS, and the associated expenditure gaps.

[11] In this average per capita estimate, we note the caveat that during 2002-03, MCH's expenditure on many services, apart from WSS, was not available.

[12] With the GHMC now in place, all ULBs are now covered by the HMWSSB.

Table 3.8: Summary of O&M Expenditures and Expenditure Gaps for Relevant Urban Services Excluding WSS, ULBs, Hyderabad UA

ULB	Year	Per capita Exp on Relevant Services, Excluding WSS	Exp.Gaps Excluding WSS
MCH	1999-00	276.38	-129.37
MCH	2000-01	276.71	-129.04
MCH	2001-02	283.26	-122.49
MCH	2002-03	NA	NA
MCH	2003-04	282.84	-122.92
MCH	2004-05	290.33	-115.42
Kukatpally	2001-02	35.67	-254.22
Kukatpally	2002-03	35.77	-254.11
Kukatpally	2003-04	54.56	-235.33
Kukatpally	2004-05	42.07	-247.82
Malkajgiri	1999-00	15.90	-269.60
Malkajgiri	2000-01	24.36	-261.14
Malkajgiri	2001-02	33.48	-252.02
Malkajgiri	2002-03	85.36	-200.14
Malkajgiri	2003-04	42.21	-243.30
Malkajgiri	2004-05	48.44	-237.07
Serilingampally	2003-04	24.13	-58.79
Serilingampally	2004-05	19.87	-63.05
Uppal	2002-03	66.36	-223.53
Uppal	2003-04	77.40	-212.49
Uppal	2004-05	92.19	-197.70
Kapra	1999-00	28.48	-261.41
Kapra	2000-01	22.17	-267.72
Kapra	2001-02	37.83	-252.05
Kapra	2002-03	71.55	-218.34
Kapra	2003-04	103.21	-186.68
Rajendra Nagar	2003-04	6.43	-76.49
Rajendra Nagar	2004-05	3.91	-79.01
Average, all		**88.18**	**-191.53**
Average, MCH		**281.91**	**-123.85**
Average, non-MCH		**44.15**	**-206.91**

Sources: MCH, Other ULBs, and Authors' Computations.

The interesting finding is that when water supply & sewerage are excluded, all ULBs incur expenditure gaps, with this gap being Rs.192 on average. While the ULBs are able to spend on average Rs.215 per capita (in 1999-00 prices) on all services (including water supply & sewerage), the ULBs on average are able to spend only Rs.88 per capita on average, when water supply & sewerage are excluded. Indeed water supply & sewerage must be the single largest component of their spending, especially so for the non-MCH set of ULBs. For most of them, it is also the case that HMWSSB funds their water supply and sewerage projects, hence their

responsibility is minimal. So it is a question worth exploring if ULBs should be given greater expenditure responsibilities for provision of basic services, so that they can be persuaded to reduce their expenditure on redundant items (such as cost of collection of tax revenues, unnecessarily huge expenditures on land and housing for municipal officials, and so forth, regarding which we discuss in the last part of this chapter, next section) and increase their spending on necessary and basic services.

At the average population we projected for all ULBs (including the MCH), the expenditure gap of Rs.192 per capita translates into a fiscal gap of an *additional* Rs.65 million (in 1999-00 prices). Of course with the GHMC in existence now, it would be artificial to make a distinction between the expenditure gap of the MCH and that of the other ULBs. The additional gap of Rs.65 million is applicable to the GHMC which it needs to finance.

All Expenditure with Other Services

All expenditures include all revenue and O&M expenditures on the relevant services, and spending on "other" services such as city planning, spending on municipal elections, census work, general administration, public relations, land acquisition, and so forth. We examined total expenditures per capita for all ULBs during 1999-00 to 2004-05, on the relevant services (water supply, sanitation & solid waste, sewerage, municipal roads and street lights), plus other expenditures described above. We examined this with and without MCH. The descriptive statistics are summarized in Table 3.9.

First, we note from Table 3.9 that the total per capita expenditure (all services including those not studied here) in real terms has been continuously increasing on average in all the ULBs, with a few variations. Second, while the number and composition of ULBs are not the same every year, we observe that on average, the per capita total expenditures of the ULBs other than the MCH are only slightly lower than those when MCH is included. We would have expected the capacity to spend of the smaller ULBs to be significantly lower than that of the MCH. One reason for this finding could well be the fact that HMWSSB is a major contributor of expenditure for smaller ULBs' water supply and sewerage projects. In the absence of HMWSSB, one would imagine that the ULBs (other than MCH) would have little resources to spend in general, except if they are tied to specific projects.

"Other" (referring to the services excluded from this study) expenditure would be roughly the difference between total expenditure (summarized in Table 3.9), which is, on average, Rs.530 (the average of the first averages row, Table 3.9) in per capita real terms, and the expenditure by ULBs on "relevant" services which is Rs.215 per capita in real terms (Table 3.7). Based on these

two tables, we find that on average, "other expenditure" is much higher than it is for basic services such as water supply & sewerage, solid waste and sanitation, roads and street lighting, being Rs.315 per capita (Rs.530-Rs.215).

Table 3.9: Per Capita Total Expenditure, ULBs, Hyderabad UA

Per Capita Total Expenditure All ULBs (MCH included)						
Summary Statistics	**1999-00**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**
Average	446.79	395.16	725.53	495.10*	562.63	560.69
Maximum	760.97	565.36	2,566.51	935.15*	935.25	1,055.89
Minimum	229.91	200.62	177.32	193.54*	223.62	207.28
Standard Deviation	232.85	177.74	914.05	262.02*	229.98	269.81
Number of observations	4	4	6	6	8	8
Per Capita Total Expenditure All ULBs (MCH excluded)						
Summary Statistics	**1999-00**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**
Average	436.99	351.90	764.94	495.10	539.95	527.97
Maximum	760.97	565.36	2,566.51	935.15	935.25	1,055.89
Minimum	229.91	200.62	177.32	193.54	223.62	207.28
Standard Deviation	284.17	190.15	1016.23	262.02	238.54	273.75
Number of observations	3	3	5	6	7	7

Notes: * As summarized elsewhere, MCH data on several services were not available for 2002-03, hence the data with and without MCH for this year are the same.
Sources: HMWSSB, MCH, Other ULBs, and Authors' Computations.

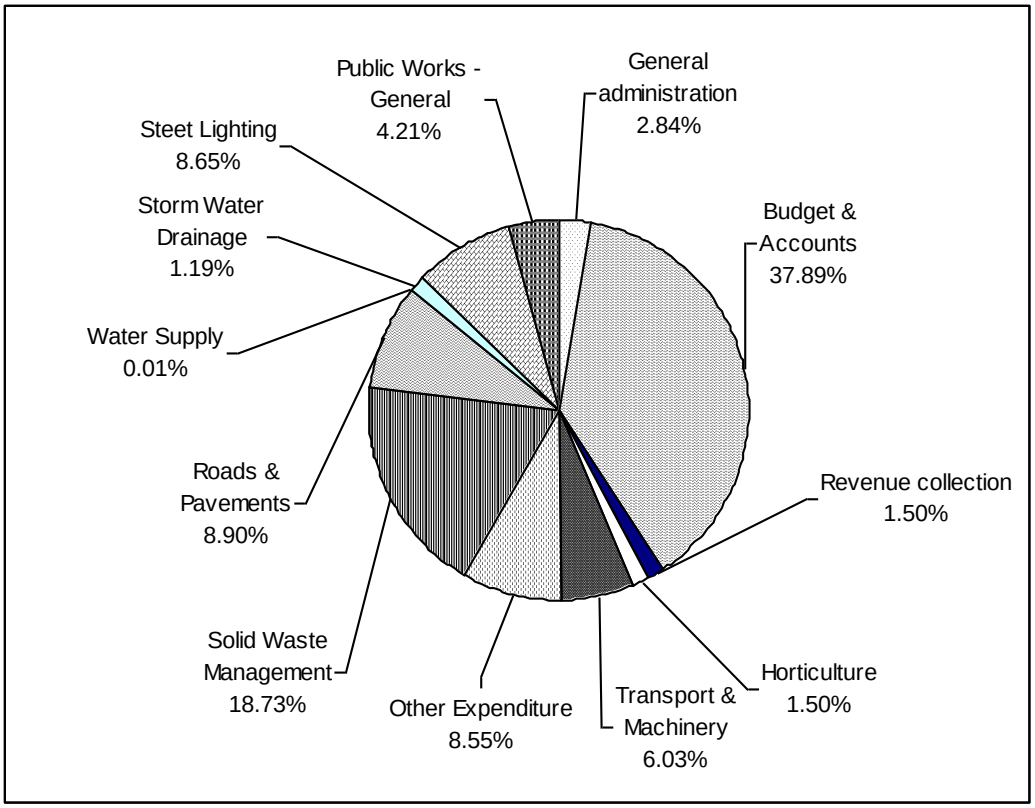
Given this, we examined ULBs' revenue expenditures on "other services" which includes general administration, acquisition of land and buildings, salaries, allowances and other benefits, among others. Figures 3.1-3.4 present a disaggregation of all revenue expenditure for four ULBs (respectively MCH, Uppal, Rajendra Nagar and Kapra) for which we had the relevant information for the most recent year (2004-05 which we were able to deflate).[13] While we have studied expenditure on relevant services, it makes sense for us to understand what proportion of the pie is spent on these services, and what is spent on "other" services, to assess the quality of spending.

Figure 3.1 which summarizes the categories of revenue expenditure for the most recent year for MCH, is quite revealing because it shows that MCH spends almost the same (38 percent) on "budget and accounts" as it does on water supply, drainage, roads, solid waste, and street lighting (all combined). Budget & accounts include personnel cost (salaries, benefits & other

[13] "Other" expenditure in MCH refers to services not studied here. It refers to expenditure on municipal council elections, general administration, public relations, general administration, public relations, census, legal, budget & accounts, advertisement, information technology, quality control, audit, town planning, estates & land records, land acquisition, house numbering, traffic engineering, transportation planning, multi model transport, horticulture, urban forestry, playgrounds & sports, health, burial grounds, vital statistics, family welfare, prevention of food adulteration, entomology, veterinary, trade licensing, transport & machinery, buildings, bridges & flyovers, public works – general, urban community development.

allowances), terminal benefits (pensions and leave salary contributions for deputationists), operational expenses, program expenses, administrative expenses, finance expenses, provisions & write off, depreciation, and revenue transfers. It does seem that employee strength has a big role to play in this expenditure of the MCH, and raises a number of interesting questions regarding outsourcing. For instance, if outsourcing were to be practiced, is it possible that ULBs' revenue expenditures on "other" services could be reduced, and expenditure on actual delivery of basic services could be increased?

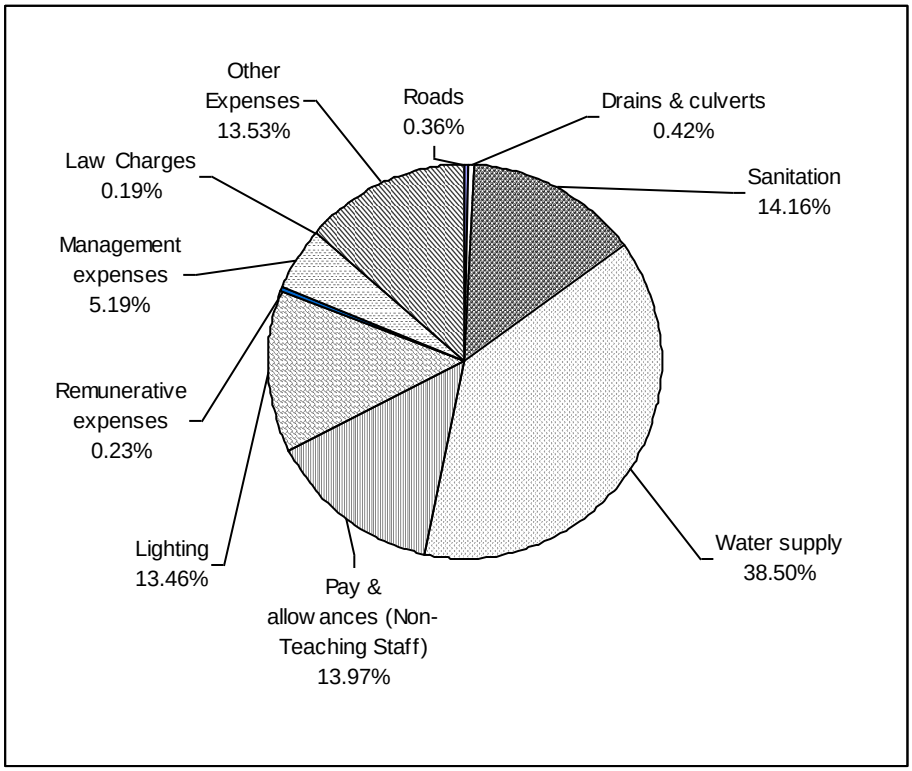
Figure 3.1: Revenue Expenditure (in Real Terms) by Category, MCH, 2004-05



Sources: MCH, Directorate of Economics and Statistics, Government of Andhra Pradesh and Authors' Computations

In fact the situation in Uppal is slightly better than it is in MCH with more than two-thirds of its revenue expenditures being incurred on services such as water supply (39 percent), sanitation (14 percent), lighting (13 percent), roads and drains (1 percent). Roughly only one-third of its expenditure in real terms at least in 2004-05 was on "other" services such as salaries and related benefits (Figure 3.2).

Figure 3.2: Revenue Expenditure (in Real Terms) by Category, Uppal, 2004-05



Sources: Uppal, Directorate of Economics and Statistics, Government of Andhra Pradesh and Authors' Computations

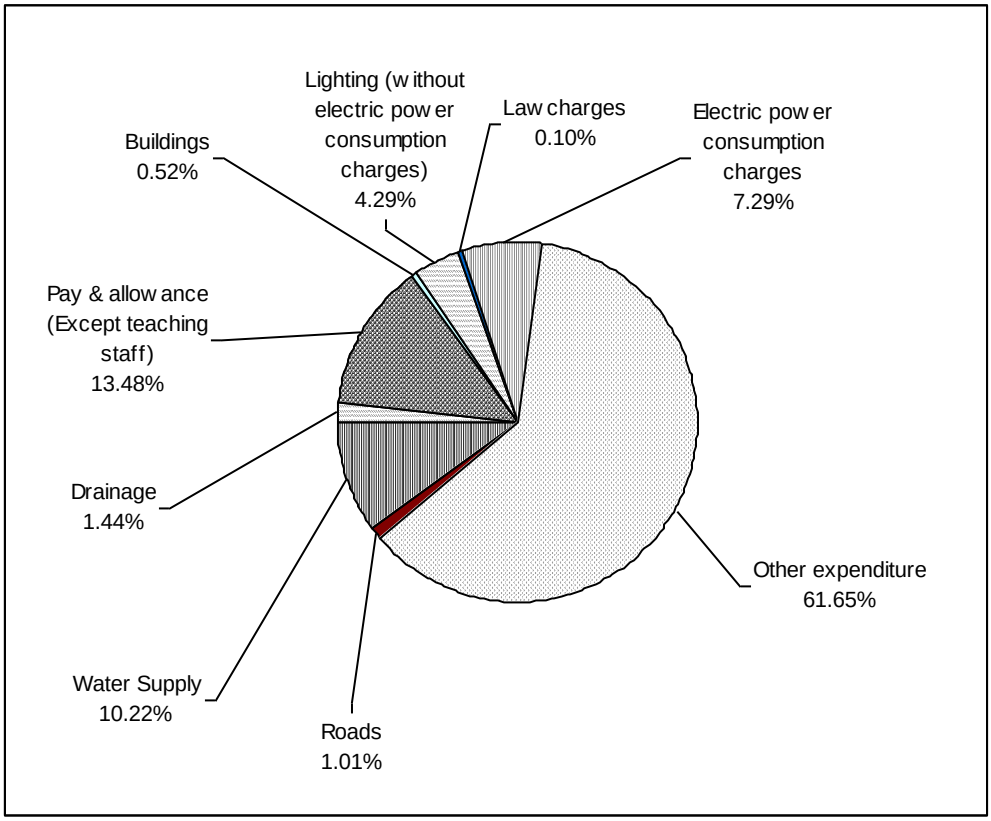
The one ULB that spent a significantly large proportion of its revenue expenditure on "other" services, to a much greater degree than the MCH, is Rajendra Nagar (Figure 3.3). Most of this was actually spent on acquisition of land, based on our informal discussions with those officials. Such behavior on the part of public officials to allocate expenditure in favor of less important services is not new, but it doesn't make rational sense for a ULB to have a poor state of public services, and still spend disproportionately on services not requiring immediate attention. While in the case of MCH we are fairly sure that its expenditure on other services is related to employee strength, in the case of this ULB, we are not quite sure if this "other" expenditure is related to employee strength or it is merely the political economy of decision making.

In Kapra (Figure 3.4), approximately 35 percent of its revenue expenditure is spent on water supply, roads and lighting, with the remaining two-thirds on "other" services. Other expenditures here refer to law charges, pension-related benefits to employees, parks & play grounds, grave yards, junction improvement, and so forth. Again, it is possible that the ULBs,

despite having an expenditure gap on the services studied here, might be spending adequate amounts on other, equally important, services which are beyond the scope of our study.

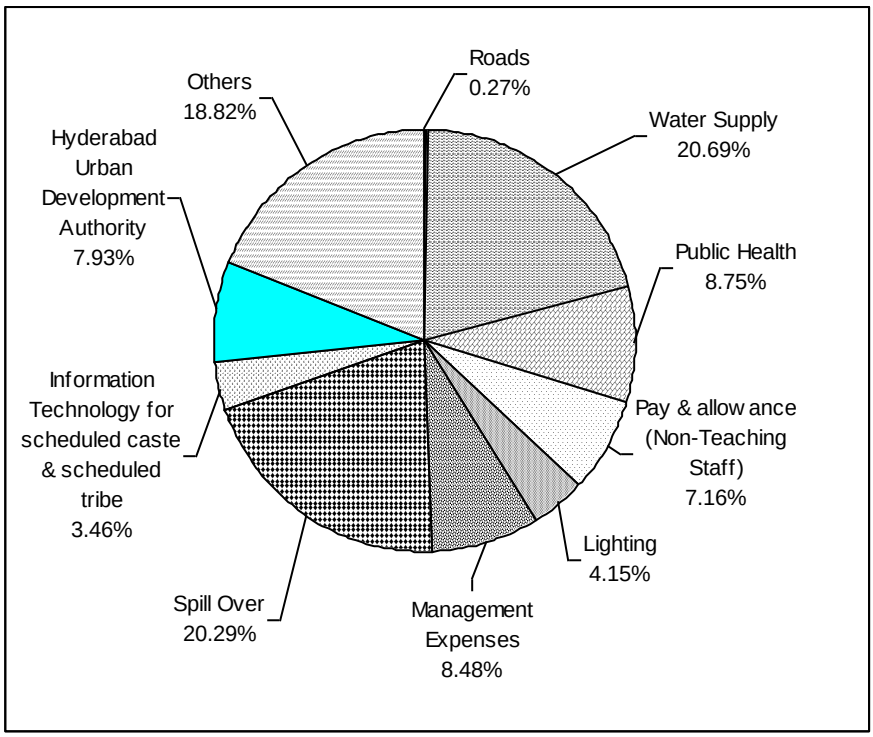
Chapters 4 and 5 focus respectively on revenue capacities and fiscal gaps, providing an assessment of fiscal health, based on expenditure needs and revenue capacities.

Figure 3.3: Revenue Expenditure (in Real Terms) by Category, Rajendra Nagar, 2004-05



Sources: Rajendra Nagar, Directorate of Economics and Statistics, Government of Andhra Pradesh and Authors' Computations

Figure 3.4: Revenue Expenditure (in Real Terms) by Category, Kapra, 2004-05



Sources: Kapra, Directorate of Economics and Statistics, Government of Andhra Pradesh and Authors' Computations

CHAPTER 4: ANALYSIS OF REVENUES

This chapter focuses on the revenues of the ULBs in Hyderabad urban agglomeration. We would analyse time series data for a period of six years (99-00 to 04-05) for all the ULBs excepting L.B Nagar for which no data was available. Data for all the years on the variables of analysis are not available for all the ULBs. All the financial variables are expressed in 99-00 constant prices. We would start with the different components of revenues in the municipalities and study their behavior over time across municipalities. We would use the descriptive statistics generated from the data on all the ULBs to base our analysis for Hyderabad urban agglomeration. To make valid comparisons across ULBs we would use the financial variable in per capita terms[14].

The total revenue of a ULB is composed of the own source and the external assistance as grants and assigned revenues. The own source is composed of the tax and non tax revenues. Property tax is the main component of tax revenues. Other taxes come from taxes on carts and carriages, taxes on advertisement and taxes on animals. Non tax revenues come from the user charges levied by the ULBs like licensing fees, empanelment and registration charges, fees for grant of permit, fees for certificates, administrative charges, contingencies, penalties, compounding fees and regularization fees and rents and leases of municipalities' properties. The main components of grants include grants on per capita basis, election grants and road maintenance grants. Assigned revenues come from surcharge on stamp duty on transfer of immovable properties, entertainment tax, profession tax and various compensations for alteration in the taxing power of the ULBs.

Tax Revenues

In the state of Andhra Pradesh property tax reforms started earlier and all the districts followed the valuation of properties taking into account the characteristics of the locality and quality of the properties since the sixties. Each municipality is divided into zones based on a set of factors related to civic amenities of the locality. The valuation of properties is done on the basis of 'unit area values' determined by the authority on the basis of the qualitative aspects of the properties. These numbers are published in the local gazettes and thus are in the public domain. So, these assessments have an objective basis. Table A 4.1.1 in the Appendix gives as an example the details of the calculation of unit area valuation for Malkajgiri ULB for one zone.

[14] See Figures A 4.1-A4.6 for the year wise per capita revenue figures for MCH and some of the smaller ULBs in Hyderabad.

The assessment of payable taxes on properties is done on the basis of annual rental value using the unit area values. The rates applied do not differ much across ULBs. Table 4.1 below gives the property tax rates for different slabs of property values for MCH.

Table 4.1 Property Tax Rates for MCH

Range of Annual Rental Value	General Tax	Conservancy Tax	Lighting Tax	Drainage Tax	Total
Up to Rs. 600/-	Exempted from payment of property tax				
Rs. 601/- to Rs. 1200/-	2%	9%	3%	3%	17%
Rs. 1201/- to Rs. 2400/-	4%	9%	3%	3%	19%
Rs. 2401/- to Rs. 3600/-	7%	9%	3%	3%	22%
Above Rs. 3600/-	15%	9%	3%	3%	30%

Source: MCH Budget, 05-06.

A positive effect of an objective basis of the rental value calculation is reflected in the collection efficiency figures for smaller ULBs in Hyderabad. Tables A 4.1.2-A4.1.8 summarise the year wise Demand and collection figures on property taxes of some of the smaller ULBs in Hyderabad. It is interesting to note that many of them have collection efficiencies higher than 90 per cent which is very high compared to Indian city standards. Since data from the budget documents are mostly reliable and Andhra Pradesh has a record of better performance in terms of property tax reforms than other Indian states, we can infer that the collection efficiency is higher in Hyderabad than in other urban agglomerations in India.

A close look at the per capita property tax revenues of the ULBs in Hyderabad reveals that excepting for the year 2004-05, MCH has the highest per capita property tax collection. The average values including MCH are higher for all the years than the average values for the smaller ULBs. This is a clear indication to the fact that MCH has higher taxable capacity, given its size and higher development indicators. Table 4.2 gives the details of the descriptive statistics on per capita property taxes while Table A 4.2 gives the detailed values of the per capita property tax across ULBs over the years. Overall, there has been a steady increase over the years, with a considerable variation across ULBs[15]. Other taxes constitute a smaller share as a result of which we find similar trends for per capita tax revenues.

[15] There is a problem with the time series averages. The number of observations are not the same for all the years. This leads to problems in comparability across time. We would however consider these values for comparisons.

Table 4.2 Descriptive Statistics for Per capita Property Tax Revenues in ULBs of Hyderabad (Rs, 99-00)

With MCH	**1999-00**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**
Average	119.86	141.70	123.96	134.94	178.20	236.16
Maximum	222.30	232.75	310.22	208.86	370.13	357.20
Minimum	49.69	72.17	60.33	47.28	52.67	74.88
Standard Deviation	75.57	72.44	84.50	53.85	86.17	96.50
No. Of Observation	4	4	7	7	9	9
Without MCH	**1999-00**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**
Average	85.71	111.36	92.91	134.94	154.21	223.29
Maximum	128.16	165.51	120.91	208.86	200.45	357.20
Minimum	49.69	72.17	60.33	47.28	52.67	74.88
Standard Deviation	39.63	48.43	21.74	53.85	50.65	94.55
No. Of Observation	3	3	6	7	8	8

Source: ULB Budgets, Author's Computations

Non-Tax Revenue

It is interesting to note that in relative terms, smaller ULBs have higher per capita non tax revenues. This is reflected in their average values with and without MCH. We find an overall increasing trend in the per capita average values with a considerable variation across ULBs (Table 4.3). Table A 4.3 gives the ULB wise details of per capita non tax revenues.

Table 4.3: Descriptive Statistics for Per capita Non-Tax Revenue in ULBs of Hyderabad (Rs, 99-00)

With MCH	**1999-00**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**
Average	157.78	189.86	223.19	337.71	307.59	294.07
Maximum	326.71	341.75	440.17	1,013.18	660.05	788.70
Minimum	41.36	27.43	9.38	10.06	45.42	45.67
Standard Deviation	121.81	128.65	145.97	335.69	224.73	221.88
No. Of Observation	4	4	8	8	10	10
Without MCH	**1999-00**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**
Average	174.16	190.94	232.81	337.71	323.94	304.13
Maximum	326.71	341.75	440.17	1,013.18	660.05	788.70
Minimum	41.36	27.43	9.38	10.06	45.42	45.67
Standard Deviation	143.70	157.55	154.90	335.69	231.97	232.91
No. Of Observation	3	3	7	8	9	9

Source: ULB Budgets, Author's Computations

Own Source Revenue

Own source revenue averages mainly consisting of the tax and non tax components[16] have shown an overall increasing trend over the years. Till 02-03, the averages including MCH

[16] There are some other irregular incomes which are not included in any of the heads like income from sale of scraps, library cess, incomes from special schemes etc which are included in own source revenues

record higher values but for the two most recent years the smaller ULBs on an average records a higher per capita value than that recorded for all ULBs including MCH (Table 4.4). This indicates that the revenue raising capabilities of the smaller ULBs are improving which is expected given the growth of economic activities in these ULBs. However, in both the cases the variations across ULBs are considerably high. Table A 4.4 gives the details of the per capita own source revenues across ULBs over time.

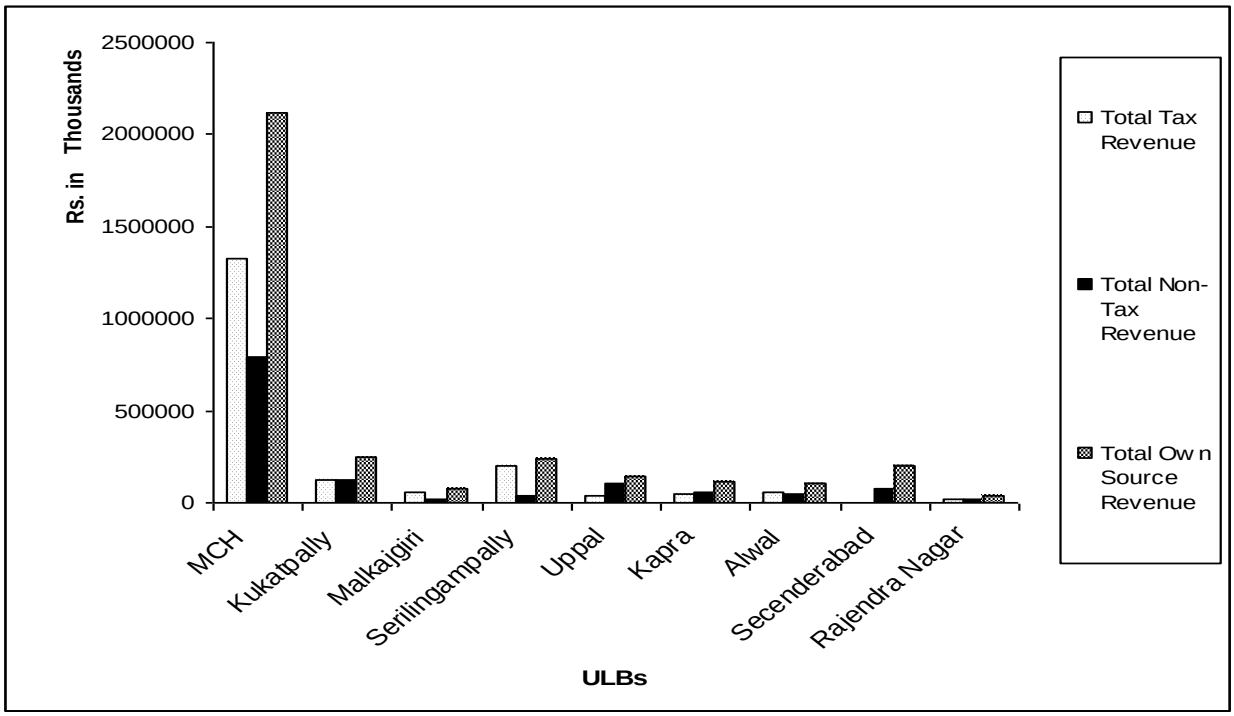
Table 4.4: Descriptive Statistics for Per capita Own Source Revenue in ULBs of Hyderabad (Rs, 99-00)

With MCH	**1999-00**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**
Average	310.92	365.05	443.79	580.56	642.83	676.42
Maximum	427.44	468.26	940.98	1,200.31	1,187.45	1,226.61
Minimum	201.92	203.11	73.71	134.35	157.14	140.94
Standard Deviation	94.33	115.25	254.59	422.75	376.29	377.49
No. Of Observation	4	4	8	8	10	10
Without MCH	**1999-00**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**
Average	303.97	346.93	440.60	580.56	655.30	691.24
Maximum	427.44	468.26	940.98	1,200.31	1,187.45	1,226.61
Minimum	201.92	203.11	73.71	134.35	157.14	140.94
Standard Deviation	114.28	133.99	274.81	422.75	396.91	397.29
No. Of Observation	3	3	7	8	9	9

Source: ULB Budgets, Author's Computations

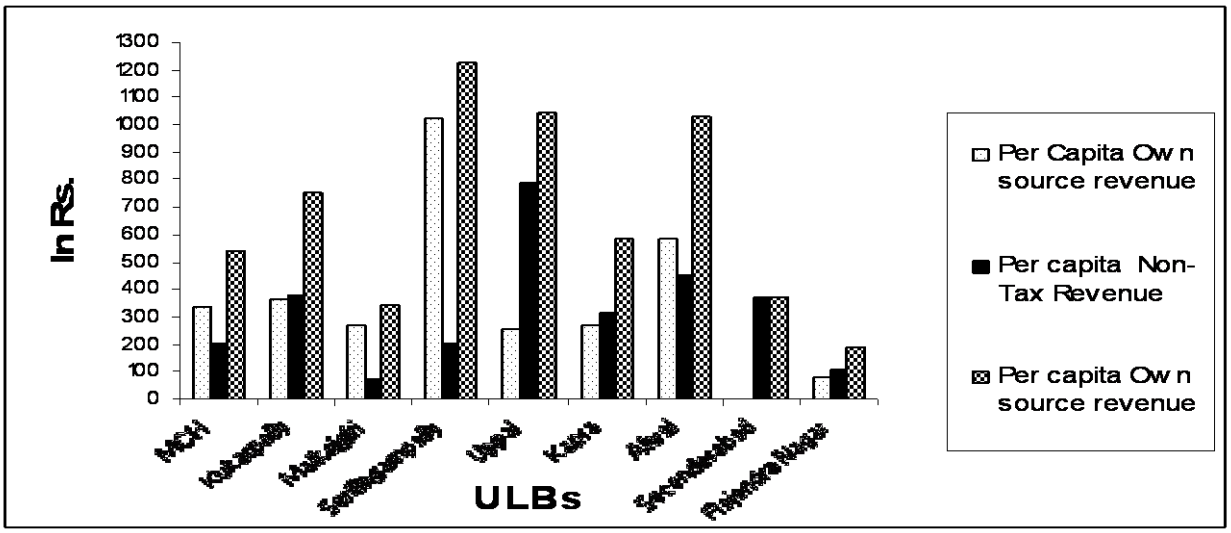
Figures 4.1 and 4.2 gives the ULB wise own source revenues for the most recent year ie 204-05 in absolute and per capita terms respectively. It is clear from these Figures that the own revenues and all its components in absolute terms are much higher in MCH compared to smaller ULBs but in per capita terms due to lower levels of population some of the smaller ULBs record higher per capita own revenues than MCH.

Figure 4.1: Components of Own Source Revenue (Absolute) for ULBs in Hyderabad U A in 2004-05



Source: ULB Budgets, Author's Computations

Figure 4.2: Components of Own source revenue (Per capita) for ULBs in Hyderabad Urban Agglomeration in 2004-05



Source: ULB Budgets, Author's Computations

Grant

It is interesting to note that average per capita grants are higher in the smaller municipalities, reflected both in the average values of the per capita grants with and without MCH and also the individual average value for MCH and the average value for the smaller municipalities over the years. It is interesting to note that the per capita average values of grants have decreased over the most two recent years, reflected in the averages (with MCH and without MCH) and also for MCH individually. For smaller municipalities excepting for Kukatpally and Kapra, all have shown a decrease over this time period (compare Table 4.5 and Table A 4.5). These trends are explained partly by increase in population and partly by political economy factors.

Table 4.5: Descriptive Statistics for Per capita Grant in ULBs of Hyderabad (Rs, 99-00)

With MCH	**1999-00**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**
Average	60.59	79.05	93.55	123.94	225.13	132.77
Maximum	119.34	153.11	222.74	206.32	419.62	202.37
Minimum	8.72	0.22	3.59	85.39	9.67	3.71
Standard Deviation	46.77	65.01	75.37	45.35	143.98	63.70
No. Of Observation	4	4	7	6	8	8
Without MCH	**1999-00**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**
Average	77.88	105.33	108.54	123.94	255.91	151.20
Maximum	119.34	153.11	222.74	206.32	419.62	202.37
Minimum	43.03	59.42	48.26	85.39	96.56	101.78
Standard Deviation	38.58	46.87	70.20	45.35	123.87	39.51
No. Of Observation	3	3	6	6	7	7

Source: ULB Budgets, Author's Computations

Assigned Revenue

A close look at the per capita assigned revenue figures reveals that there is not much difference in the averages of the smaller municipalities and MCH. The averages with MCH are slightly higher than those without MCH excepting for 04-05 (Table 4.6). Detailed year wise per capita assigned revenue figures are given in Table A 4.6[17]. For assigned revenues also we find a decline over the two most recent years.

[17] An observation at the state level for the state of Andhra Pradesh needs to be mentioned. Total revenues from grants are relatively higher than those from assigned revenues (in absolute terms) in smaller municipalities while the reverse is the case for municipal corporations.(Source Annextures XIX and XVI, Second State Finance Commission Report for Andhra Pradesh)

Table 4.6: Descriptive Statistics for Per capita Assigned Revenue in ULBs of Hyderabad (Rs, 99-00)

With MCH	**1999-00**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**
Average	210.30	186.25	223.91	238.49	292.84	278.11
Maximum	249.04	231.74	238.66	337.12	376.72	354.06
Minimum	172.45	153.02	198.62	139.85	188.34	169.79
Standard Deviation	38.30	40.76	17.89	139.49	77.91	82.92
No. Of Observation	3	3	4	2	4	4
Without MCH	**1999-00**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**
Average	210.75	163.51	220.53	238.49	290.91	284.73
Maximum	249.04	174.00	238.66	337.12	376.72	354.06
Minimum	172.45	153.02	198.62	139.85	188.34	169.79
Standard Deviation	54.15	14.84	20.29	139.49	95.30	100.25
No. Of Observation	2	2	3	2	3	3

Source: ULB Budgets, Author's Computations

Total Revenue

Table A 4.7 gives the year wise details of the per capita total revenues for the ULBs. A close look at the descriptive statistics reveals that excepting for Kapra, Kukatpally and Uppal there has been a decline of per capita revenues over the two most recent years. Kapra though records a slight decline in per capita own revenues, there has been an increase in both the grant and assigned revenue components in per capita terms, which explains a rise in per capita total revenue. For Kukatpally there is an increase in grants and own revenues in per capita terms (assigned revenue data are not available) which has caused a rise in total revenue. For Uppal the rise in total revenue is caused by that in own source revenues in per capita terms. Among the municipalities recording a decline in total per capita revenue, for Rajendra Nagar and Serilingampally, both own source and external sources in per capita terms have fallen. For the other municipalities it is the external source per capita revenues which has declined and resulted in a decline in total per capita revenues. The fall in per capita total revenue figures are also reflected in the averages (Table 4.7). The descriptive statistics reveal that the ULBs have moderate variation in terms of per capita total revenue figures.

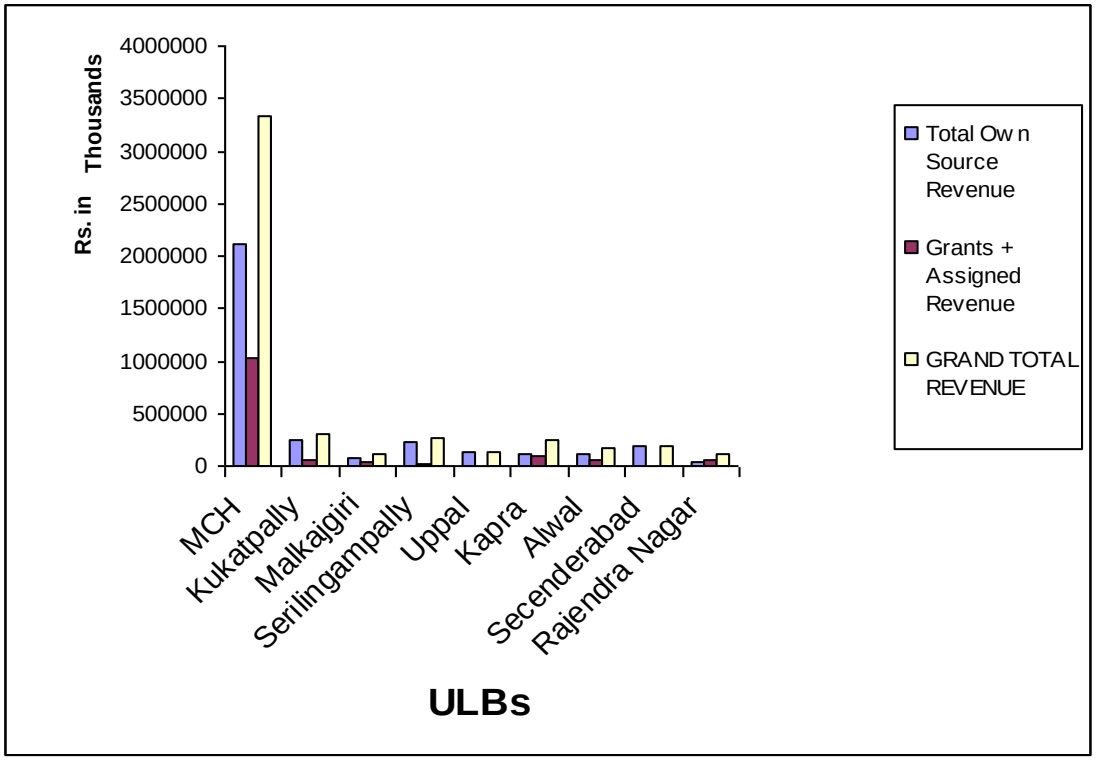
Table 4.7: Descriptive Statistics for Per capita Total Revenue in ULBs of Hyderabad (Rs, 99-00)

With MCH	**1999-00**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**
Average	530.67	594.01	641.26	818.74	983.46	935.76
Maximum	719.23	724.73	967.30	1,246.15	1,617.61	1,586.89
Minimum	245.16	358.06	163.66	260.87	374.30	242.72
Standard Deviation	202.40	165.46	281.73	364.16	372.53	410.86
No. Of Observation	4	4	8	8	10	10
Without MCH	**1999-00**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**
Average	522.42	561.88	628.32	818.74	990.63	944.44
Maximum	719.23	724.73	967.30	1,246.15	1,617.61	1,586.89
Minimum	245.16	358.06	163.66	260.87	374.30	242.72
Standard Deviation	247.06	186.74	301.73	364.16	394.39	434.81
No. Of Observation	3	3	7	8	9	9

Source: ULB Budgets, Author's Computations

Figures 4.3 and 4.4 compares the components of per capita revenues in absolute and per capita terms respectively for the most recent year 2004-05. It is clearly visible that the

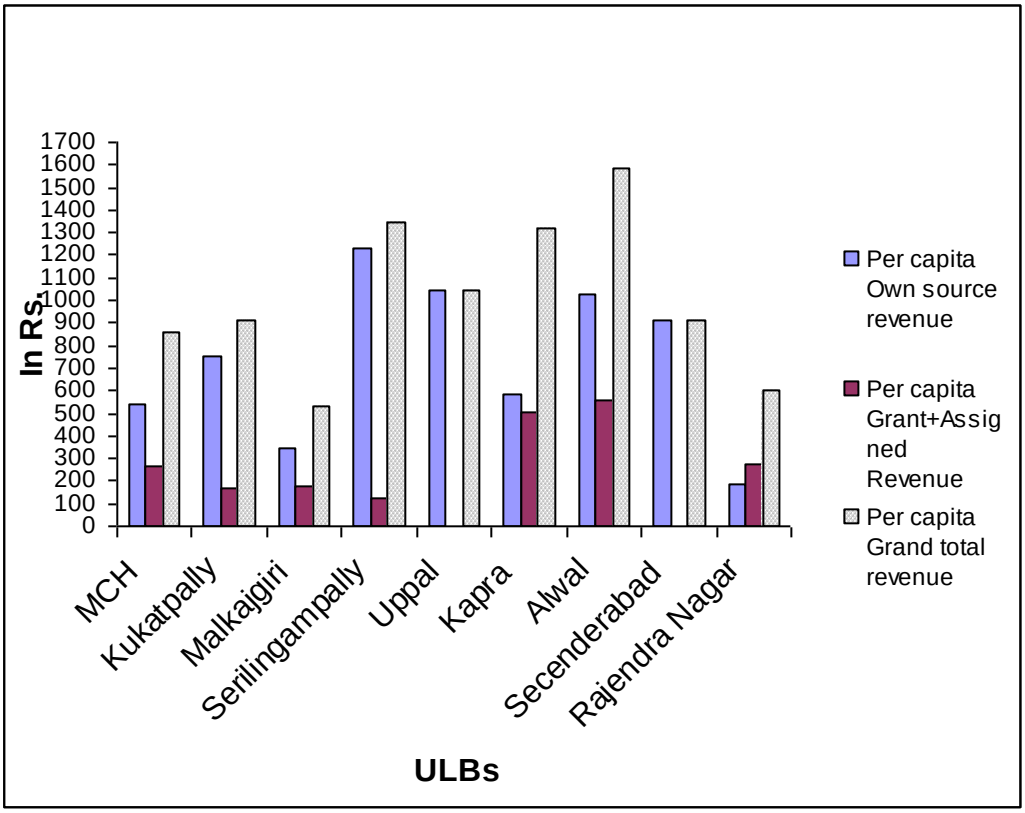
Figure 4.3: Components of Total Revenue (Absolute) for ULBs in Hyderabad UA in 2004-05



Source: ULB Budgets, Author's Computations

magnitudes of revenues in absolute terms are much higher in MCH compared to smaller ULBs but in per capita terms some of the smaller ULBs record higher values of the total revenue components.

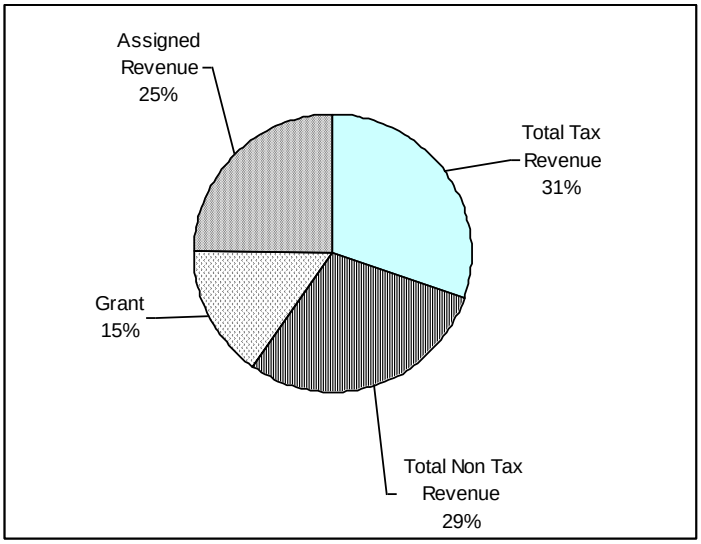
Figure 4.4: Components of Total Revenue (Per Capita) for ULBs of Hyderabad UA in 2004-05



Source: ULB Budgets, Author's Computations

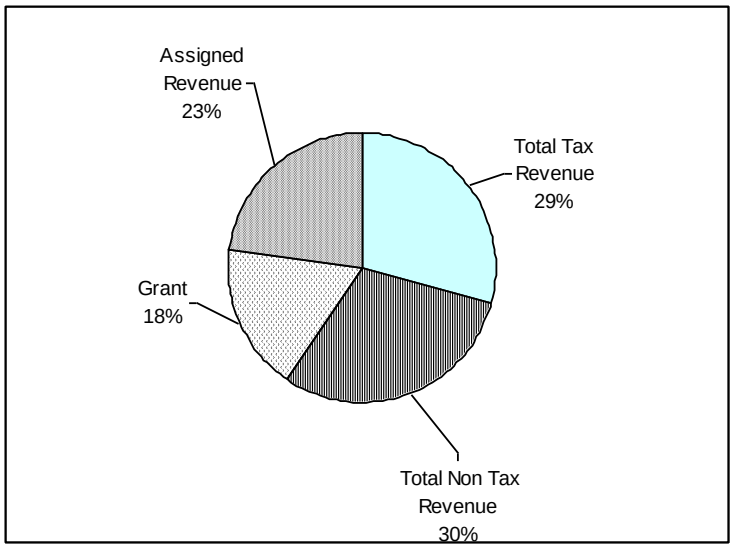
Figures 4.5-4.8 give the average proportions of different component of total revenues in the ULBs of Hyderabad. Figures 4.5 and 4.6 are generated from averages of the individual ULB's per capita total revenue over time, averaged across all the ULBs. It is interesting to note that on an average 57 percent of the total revenues come from own sources whereas 43 per cent comes from external funds for all ULBs. For smaller ULBs the shares of own sources and external sources are respectively 56 per cent and 44 per cent. It is reflected that the extent of dependence on external sources for the smaller ULBs is slightly higher.

Figure 4.5: Average Proportion of Various Sources Out of Total Revenue (All ULBs)



Source: ULB Budgets, Author's Computations

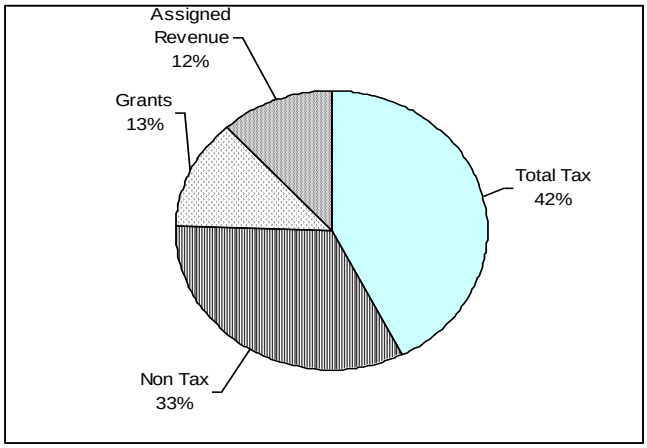
Figure 4.6: Average Proportion of Various Sources Out of Total Revenue (Smaller ULBs)



Source: ULB Budgets, Author's Computations

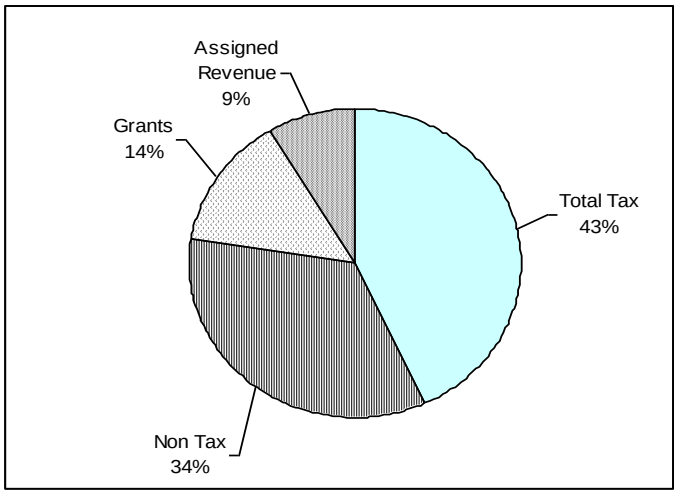
For 2004-05, if all ULBs are taken together, we find that 73 per cent of the total revenues come from own sources while 27 per cent comes from external sources. For smaller ULBs the share of external sources is slightly lower (24 per cent) whereas for MCH the share is around 30 per cent. It is interesting to note that the smaller municipalities have a lower share of external sources in their revenues. However for MCH the share is dominated by assigned revenues and not by grants whereas for smaller ULBs it is the share of grants which dominates.

Figure 4.7: Average Proportion of Various Sources Out of Total Revenue (All ULBs) for 2004-05



Source: ULB Budgets, Author's Computations

Figure 4.8 : Average Proportion of Various Sources Out of Total Revenue (Smaller Ulbs) in 2004-05



Source: ULB Budgets, Author's Computations

It is interesting to note that the share of external assistance has decreased over the years. The absolute figures on grants and assigned revenues clubbed together show a decline in some of the smaller ULBs like Serilingampally, Alwal , Qutubullahpur and Rajendranagar. This does not necessarily imply that the ULBs have become more self reliant in terms of revenue generation however. These trends are linked to the finances of the Central and the state government and are governed by a set of political economy factors. In the chapter that follows we would estimate the maximum revenue capacities in terms of own revenues and total revenues for the Hyderabad urban agglomeration. A comparison of the actuals with these capacities would give an idea about the performance of the city in terms of utilization of its revenue potentials.

Appendix

Table A 4.1.1 Unit Area Values (Rs/sq ft) for Zone 1 in Malkajgiri

Sr. No.	Use / Nature	Classification of Buildings					
		RCC Posh Buildings	RCC Ordinary Buildings	Madras Terrace Buildings	Mangalore Tiles/A.C.C.	Country Tiles	Huts
1	2	3	4	5	6	7	8
1	Residential	9.00	7.00	6.00	5.00	4.00	3.00
2	Shops	18.00	16.00	14.00	12.00	9.00	4.00
3	Offices and Banks	17.00	15.00	13.00	11.00	9.00	4.00
4	Hospitals and Nursing Homes	16.00	14.00	10.00	9.00	7.00	4.00
5	Educational Institutions	10.00	9.00	7.00	5.00	4.00	3.00
6	Hotels, Lodging and Restaurants	14.00	11.00	8.00	7.00	5.00	3.00
7	Godown, Other Business Firms	12.00	11.00	9.00	8.00	6.00	-
8	Industrial Use	12.00	10.00	8.00	6.00	4.00	-
9	Cinema Theatres	18.00	15.00	14.00	12.00	8.00	-
10	Other Uses						
	Marriage and Function Halls	20.00	18.00	16.00	14.00	12.00	-
	Community Halls, Auditorium, Stadium, Association Building, Indian Medical Association and Trade Union etc.	9.00	6.00	6.00	5.00	4.00	-

Source: District Gazzette, Rangareddy District, Andhra Pradesh.

Table A 4.1.2 :Property Tax Collction Efficiency for Kapra (Rs, 99-00)

Year	demand	Collection	Collection efficiency
2001-02	13,459,393.29	11,324,505.99	84.14%
2002-03	26,786,707.98	24,802,675.54	92.59%
2003-04	33,133,346.09	30,487,015.23	92.01%
2004-05	40,128,543.44	39,515,881.07	98.47%

Source: ULB Budgets, Author's Computations

Table A 4.1.3 Property Tax Collction Efficiency for Uppal (Rs, 99-00)

Year	Demand	Collection	Collection efficiency
1999-00	9,454,000.00	8,514,000.00	90.06%
2000-01	11,263,224.89	10,814,221.17	96.01%
2001-02	12,178,645.59	10,729,840.15	88.10%
2002-03	22,963,018.92	21,697,233.46	94.49%
2003-04	24,627,964.11	23,337,324.87	94.76%
2004-05	34,073,453.15	33,225,992.98	97.51%

Source: ULB Budgets, Author's Computations

Table A 4.1.4 Property Tax Collction Efficiency for Alwal (Rs, 99-00)

Year	Demand	Collection	Collection efficiency
2001-02	8,338,966.10	7,261,571.68	87.08%
2002-03	10,607,906.11	9,659,559.30	91.06%
2003-04	14,951,629.57	13,381,708.47	89.50%
2004-05	29,624,702.55	23,788,636.15	80.30%

Source: ULB Budgets, Author's Computations

Table A 4.1.5 Property Tax Collction Efficiency for Kukatpally (Rs, 99-00)

Year	Demand	Collection	Collection efficiency
2001-02	81,945,691.43	35,340,141.33	43.13%
2002-03	108,988,304.58	50,357,194.95	46.20%
2003-04	146,442,450.80	64,064,452.24	43.75%
2004-05	188,298,580.38	119,381,638.27	63.40%

Source: ULB Budgets, Author's Computations

Table A 4.1.6 Property Tax Collction Efficiency for Malkajgiri (Rs, 99-00)

Year	Demand	Collection	Collection efficiency
1999-00	9,837,000.00	8,854,000.00	90.01%
2000-01	14,119,307.98	13,413,866.90	95.00%
2001-02	22,556,672.57	20,752,360.38	92.00%
2002-03	28,373,025.90	25,819,662.42	91.00%
2003-04	36,791,024.64	35,319,973.46	96.00%
2004-05	64,649,344.77	60,124,227.27	93.00%

Source: ULB Budgets, Author's Computations

Table A 4.1.7 Property Tax Collction Efficiency for Qutbullapur (Rs, 99-00)

Year	Demand	Collection	Collection efficiency
2001-02	18,098,525.56	13,943,251.83	77.04%
2002-03	31,826,241.17	29,964,791.97	94.15%
2003-04	37,968,906.42	31,682,244.31	83.44%
2004-05	49,414,417.82	27,172,585.84	54.99%

Source: ULB Budgets, Author's Computations

Table A 4.1.8 Property Tax Collction Efficiency for Rajendra Nagar (Rs, 99-00)

Year	Demand	Collection	Collection efficiency
2003-04	19,082,031.78	9,801,225.41	51.36%

Source: ULB Budget, Author's Computations

Table A 4.2 Per capita Property Tax in ULBs of Hyderabad (Rs, 99-00)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
MCH	222.30	232.75	310.22		370.13	339.07
Kukatpally			120.91	164.76	200.45	357.20
Malkajgiri	49.69	72.17	107.05	127.69	167.46	273.29
Serilingampally					184.70	242.09
Uppal	79.28	96.39	91.54	177.17	182.40	248.56
Kapra	128.16	165.51	100.70	208.86	196.36	270.20
Alwal			76.95	98.83	132.20	226.91
Quthubullapur			60.33	120.00	117.43	93.22
Rajendra Nagar				47.28	52.67	74.88

Source: ULB Budgets, Author's Computations

Table A 4.3: Per capita Non-Tax Revenue in ULBs of Hyderabad (Rs, 99-00)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
MCH	108.65	186.64	155.88		160.43	203.47
Kukatpally			284.16	432.85	332.45	383.11
Malkajgiri	41.36	27.43	53.95	14.76	45.42	71.74
Serilingampally					251.76	207.51
Uppal	326.71	341.75	440.17	1,013.18	654.72	788.70
Kapra	154.40	203.63	267.70	271.07	392.73	311.43
Alwal			218.98	337.12	406.78	449.46
Secenderabad			355.32	541.57	660.05	368.86
Quthubullapur			9.38	10.06	75.92	45.67
Rajendra Nagar				81.09	95.61	110.71

Source: ULB Budgets, Author's Computations

Table A 4.4: Per capita Own Source Revenue in ULBs of Hyderabad (Rs, 99-00)

	Per capita Own Source Revenue					
	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
MCH	331.75	419.39	466.12		530.57	543.00
Kukatpally			417.91	597.61	532.89	749.35
Malkajgiri	201.92	203.11	224.32	194.91	290.75	345.28
Serilingampally					1,168.46	1,226.61
Uppal	427.44	468.26	537.70	1,200.31	847.83	1,044.69
Kapra	282.56	369.43	369.36	482.62	600.28	584.60
Alwal			520.25	808.28	915.71	1,030.45
Secenderabad			940.98	1,090.29	1,187.45	909.29
Quthubullapur				136.08	157.14	189.98
Rajendra Nagar			73.71	134.35	197.21	140.94

Source: ULB Budgets, Author's Computations

Table A 4.5: Per capita Grant in ULBs of Hyderabad (Rs, 99-00)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
MCH	8.72	0.22	3.59		9.67	3.71
Kukatpally			48.26	85.39	96.56	166.50
Malkajgiri	43.03	153.11	164.52	206.32	419.62	180.41
Serilingampally					262.92	122.72
Uppal	119.34	103.46	75.58			
Kapra	71.26	59.42	50.21	136.79	134.99	175.85
Alwal			222.74	100.75	325.17	202.37
Quthubullapur			89.95	126.51	177.08	101.77
Rajendra Nagar				87.89	375.05	108.79

Source: ULB Budgets, Author's Computations

Table A 4.6: Per capita Assigned Revenue in ULBs of Hyderabad (Rs, 99-00)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
MCH	209.41	231.74	234.06		298.61	258.24
Uppal	172.45	153.02	198.62			
Kapra	249.04	174.00	238.66		307.67	330.35
Alwal			224.31	337.12	376.72	354.06
Rajendra Nagar				139.85	188.34	169.79

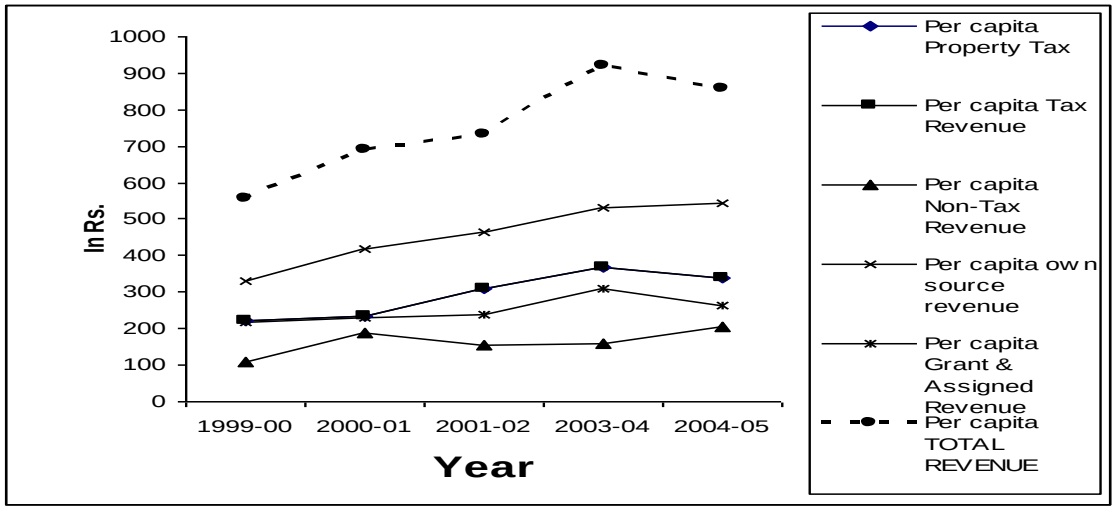
Source: ULB Budgets, Author's Computations

Table A 4.7: Per capita Total Revenue in ULBs of Hyderabad (Rs, 99-00)

	Per capita Total Revenue					
	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
MCH	555.44	690.39	731.82		918.92	857.63
Kukatpally			466.17	683.00	629.45	915.85
Malkajgiri	245.16	358.06	390.04	403.47	711.38	527.28
Serilingampally					1,431.37	1,349.33
Uppal	719.23	724.73	811.89	1,200.31	847.83	1,044.69
Kapra	602.86	602.84	658.23	941.87	1,042.94	1,320.20
Alwal			967.30	1,246.15	1,617.61	1,586.89
Secenderabad			940.98	1,090.29	1,187.45	909.29
Quthubullapur			163.66	260.87	374.30	242.72
Rajendra Nagar				723.92	1,073.34	603.76

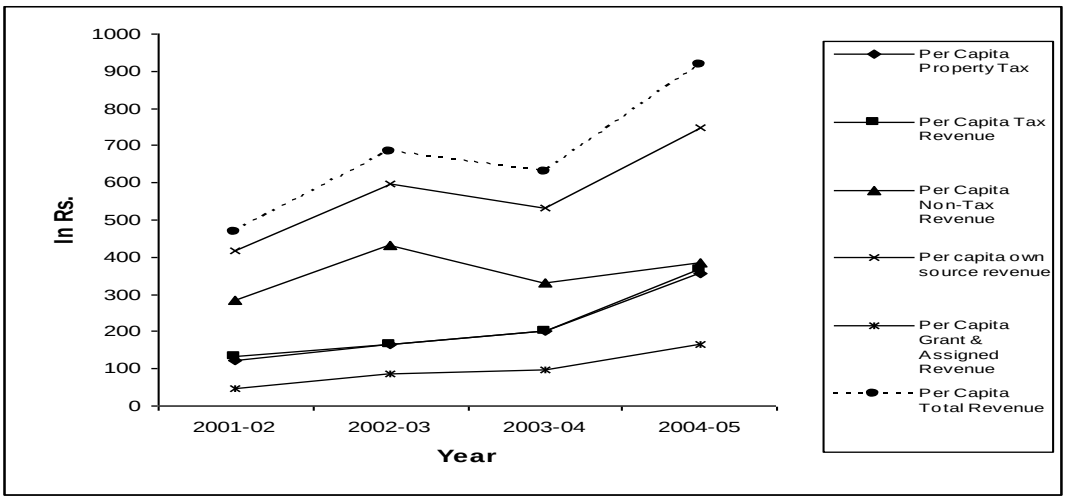
Source: ULB Budgets, Author's Computations

Figure A 4.1:Per capita Revenue from Different Sources in MCH (99-00 prices)



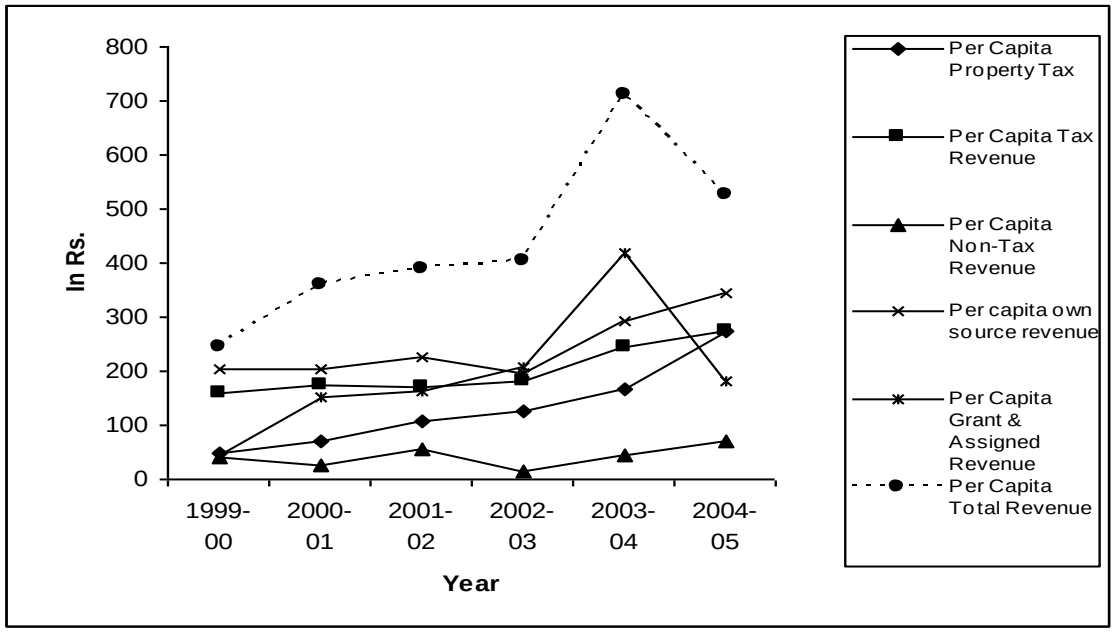
Source: ULB Budgets, Author's Computations

Figure A 4.2:Per Capita Revenue From Different Source in Kukatpally (99-00 prices)



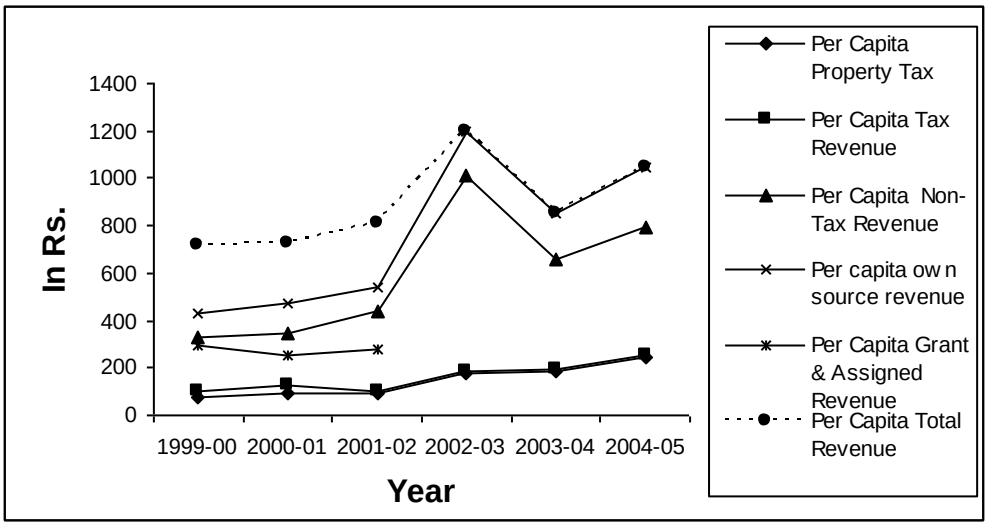
Source: ULB Budgets, Author's Computations

Figure A 4.3: Per Capita Revenue From Different Source In Malkajgiri (99-00 prices)



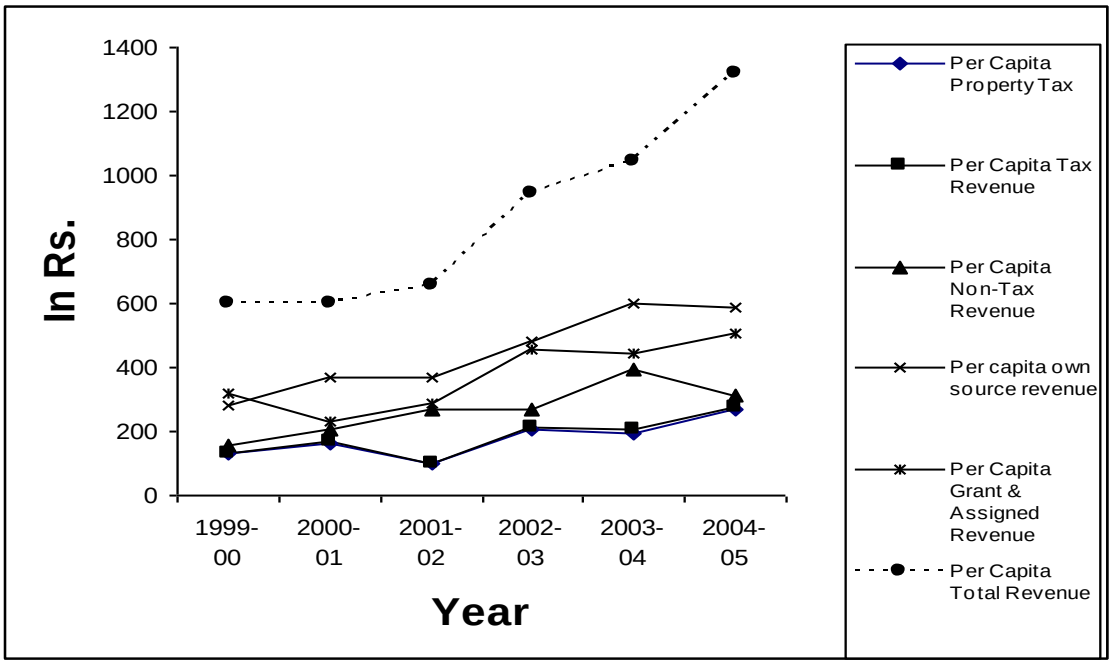
Source: ULB Budgets, Author's Computations

Figure A 4.4: Per Capita Revenue From Different Source Of Uppal (With 1999-00 constant prices)



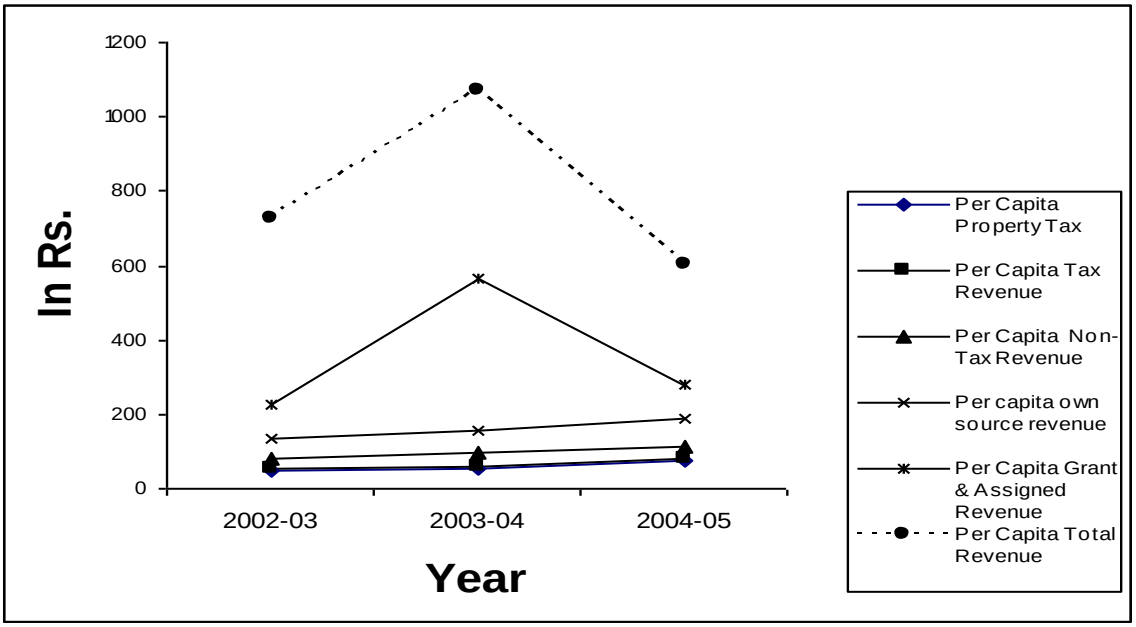
Source: ULB Budgets, Author's Computations

Figure A 4.5: Per Capita Revenue from Different Source of Kapra (99-00 prices)



Source: ULB Budgets, Author's Computations

Figure A 4.6: Per Capita Revenue from Different Source in Rajendra Nagar (99-00 prices)



Source: ULB Budgets, Author's Computations

CHAPTER 5: ASSESSMENT OF FISCAL HEALTH

This chapter brings together different aspects of fiscal health of the ULBs in Hyderabad. For assessing the fiscal health of a city we take into account both the revenue and expenditure sides together and see whether the city is in a position to finance the expenditure requirements. Given the worldwide evidence of underutilization of revenue potentials in cities, mainly reflected in the undervaluation of properties, it would be particularly interesting to know the maximum revenue that the city can generate, referred to as the revenue capacity of the city, and see whether the revenue capacity is sufficient to satisfy the expenditure needs calculated on the basis of a set of norms (Chapter 3).

The first step to approach the problem is to estimate the revenue capacities of ULBs of Hyderabad, both in absolute and per capita terms. We would then assess the fiscal health of these ULBs from different angles. For instance, we can compare the per capita revenue capacities with the actual per capita levels of revenues to see how much the city can gain in terms of resources if it utilizes its true revenue potential. Also we can compare the per capita actual revenues with the per capita expenditure needs of each ULB to get an idea how well each ULB is managing the expenditures in the existing scenario. The conventional 'need capacity gaps' are also estimated which measures the gap between the per capita revenue capacities and the per capita expenditure needs. All the financial variables are expressed in constant 99-00 prices.

Revenue Capacity

Revenue capacity of a ULB refers to the maximum potential revenue that can be generated within its jurisdiction. It is a normative concept. We can use the principles of Representative Tax System for revenue capacity estimations at the ULB level which is a common practice in urban policy research. The task would be to determine the 'city base' for revenue generation and also 'an appropriate rate' which would enable the system to utilize the revenue potential to the maximum extent.

From the detailed analysis of revenues in the preceding chapter it is clear that the heterogeneity of sources and multiplicity of rates applied for generating revenues makes it difficult to estimate the revenue capacities for individual ULBs. A good proxy for the base of a ULB could be the Gross City Product (GCP) data on which are not available in any of the Indian cities. We have used the non agricultural component of District Domestic Products (DDP) of

Hyderabad District for MCH[18] and that of Rangareddy District for generating the GCPs of other ULBs. We have taken the per capita values of DDPs excluding the agricultural sector[19] for the respective years and multiplied it with the population of a ULB to generate the GCP figure of the ULB. Table 5.1 below gives the details of the GCPs of ULBs of Hyderabad, averaged over the years.

The GCP figures for each ULB gives the averages over six years (99-00-04-05), subject to data availability[20]. The highest value of GCP is recorded for MCH followed by Kukatpally, the lowest being recorded for Alwal. The average GCP figure for the Hyderabad urban agglomeration as a whole including MCH is approximately Rs 1395.76 crores (99-00 prices) which is three times as high as the average excluding MCH.

Table 5.1 Estimated Gross City Products and Revenue Capacities of ULBs in Hyderabad (Rs, 99-00)

ULB Name	GCP	Revenue Capacity	Own Revenue Capacity
Alwal	2,312,452,407	92,498,096	69,373,572
Kapra	3,709,453,709	148,378,148	111,283,611
Kukatpally	7,272,453,048	290,898,122	218,173,591
Malkajgiri	4,464,973,709	178,598,948	133,949,211
Quthubullapur	4,408,577,046	242,473,182	181,854,887
Rajendra Nagar	6,243,172,521	176,343,082	132,257,311
Secenderabad	4,921,268,611	196,850,744	147,638,058
Serilingampally	4,430,844,704	177,233,788	132,925,341
Uppal	2,702,893,560	108,115,742	81,086,807
L. B. Nagar	6,724,704,304	268,988,172	201,741,129
MCH	106,343,120,782	4,211,532,396	3,158,649,297
Average All ULBs	13,957,628,582	553,810,038	415,357,529
Average All ULBs without MCH	4,719,079,362	198,653,326	148,989,994

Source: CSO Estimates of DDP, ULB Budgets, Author's Computations

For an appropriate rate which can be used to generate the revenue capacity estimates on the basis of these GCPs, we have referred to the ratios of total revenues to GCPs and own revenues to GCP. We take the year wise average ratios for all the ULBs and find that on an

[18] MCH is a part of two districts Hyderabad and Rangareddy. According to Town Directory 2001, Census of India, the percentage of population and households of MCH in Rangareddy district is only 1.26 and 1.3 respectively, which justifies our choice of using non agricultural component of District Domestic Product of Hyderabad district for calculation of GCP of MCH. All the other ULBs are situated in Rangareddy District.

[19] The simple reason being, the possibility of pursuing agricultural activities in urban areas is minimal.

[20] As mentioned earlier, data on revenue components for all the years are not aavailable for all the ULBs. To make the comparisons valid, for a particular ULB, GCP is estimated on the basis of data on non agricultural DDPs for the same years for which data is available for the revenue components of the ULB.

average the ULBs in Hyderabad collect 3 per cent of the estimated GCPs as total revenues and 2 per cent as own revenues. Table 5.2 gives the year wise details of these ratios.

Table 5.2 Some Useful Ratios for Hyderabad ULBs

Year	Total Revenue To GCP Ratio	Own Revenue To GCP Ratio
1999-00	2.4%	1.4%
2000-01	2.7%	1.7%
2001-02	2.8%	2.0%
2002-03	3.5%	2.5%
2003-04	4.0%	2.6%
2004-05	3.8%	2.8%
Average	3%	2%

Source: ULB Budgets, Author's Computations

We propose to use 4 per cent and 3 per cent on the estimated GCPs for calculating the revenue capacities and own revenue capacities of the ULBs respectively. The estimated figures for revenue capacity and own revenue capacity in absolute terms are given in Table 5.1. We find that on an average the ULBs of Hyderabad are capable of generating total revenues of the order of Rs. 55.4 Crores whereas the own revenue potential average is around Rs 41.5 Crores.

Table 5.3 gives the per capita figures for the estimated revenue capacities (column 2) and own revenue capacities (column 4). We find that on an average the ULBs of Hyderabad have per capita revenue capacity of Rs. 944 and per capita own revenue of Rs 708. On an average in absolute terms per capita total revenue can be increased by Rs 99 if revenue capacities are realized (column 3). For own revenues there is a potential for a rise by Rs 126 in absolute per capita terms (column 5). For the smaller ULBs (on an average) an increase of the order of Rs 128 in total revenues and Rs 123 in own revenues in per capita terms are possible if the revenue potentials are fully utilized. It is to be noted that some of the municipalities which record a higher level of per capita revenues due to smaller size of population have relatively lower revenue capacities. It is interesting to note that for MCH the average difference recorded between actual revenues and revenue capacities are four times as high as that recorded for the smaller ULBs in case of total revenue capacity and three times as high as high as that recorded for the smaller ULBs in case of own revenue capacity

Table 5.3 revenue Capacities and Related Indicators for Hyderabad ULBs (Rs, 99-00)

ULB Name	Average Per Capita Revenue Capacity	Average Difference In Revenue Capacity And Actual Revenue	Average Per Capita Own Revenue Capacity	Average Difference In Own Revenue Capacity And Actual Own Revenue
1	2	3	4	5
Alwal	928	-426	696	-123
Kapra	896	35	672	224
Kukatpally	928	254	696	122
Malkajgiri	896	457	672	429
Quthubullapur	928	668	696	559
Rajendra Nagar	946	145	709	548
Secenderabad	928	-104	696	-336
Serilingampally	957	-433	718	-480
Uppal	896	5	672	-82
MCH	1,137	386	852	394
Average All ULBs	944	99	708	126
Average All ULBs without MCH	922	128	691	123

Source: ULB Budgets, Author's Computations

Table 5.4 records the proportionate increases in own revenues and total revenues that can result if the maximum potential for them are realized. It has been found that if total revenue capacities are fully utilized there can be an increase by 48 per cent in total revenues in relative terms. For own revenues the percentage increase is much higher which is of the order of 110 per cent[21]. For the group of smaller ULBs excluding MCH the proportionate increases in both the total revenue and own revenue are higher, of the order of 57 per cent and 127 per cent respectively. It is clear that the smaller municipalities on an average are going to gain more than MCH in terms of revenue generation though we find that some of them who are actually raising revenues at a rate greater than that specified by us for revenue capacity estimations record lower revenue capacities than their actual revenues.[22]

[21] It is to be mentioned that data for all the years are not available for all the ULBs. For each ULB the average over the years are calculated for all the variables, including proportions and absolute differences, related to revenue capacity. Then the average of these values of a particular variable are computed for each ULB. These values are used to generate the average for Hyderabad, once including and once excluding MCH.

[22] The reason why we do not propose higher rates than 4per cent for total revenue capacity and 3% for own revenue capacity is that for Andhra Pradesh as a whole we find the urban revenue to non agricultural GDP ratio is much smaller that is 1 per cent. Advocating for a rate higher than 4 per cent would have been too high to be politically feasible.

Table 5.4: Proportionate Increase in Revenues

ULB Name	Average Proportion Of Revenue Capacity To Actual Total Revenue	Average Proportion Of Own Revenue Capacity To Actual Own Revenue
Alwal	71%	90%
Kapra	112%	159%
Kukatpally	145%	126%
Malkajgiri	224%	286%
Quthubullapur	385%	570%
Rajendra Nagar	125%	448%
Secenderabad	91%	68%
Serilingampally	69%	60%
Uppal	103%	102%
MCH	154%	189%
Average All ULBs	148%	210%
Average All ULBs without MCH	157%	227%

Source: ULB Budgets, Author's Computations

Fiscal Gaps

Fiscal gaps or need capacity gaps measure the differences between the revenue capacities and expenditure needs of ULBs. A positive fiscal gap is often considered to be indicative of sound fiscal health. Column 3 of Table 5.5 summarises the average fiscal gaps for the ULBs of Hyderabad. We find that on an average these ULBs have a surplus of Rs 734 of revenues over the expenditure requirements in per capita terms if the revenue potential is fully utilized. Column 5 of the same table records the gaps between actual revenues and expenditure needs. We find on an average the ULBs are generating a surplus of Rs 640 per capita in the existing scenario. For smaller ULBs the numbers are slightly higher for gaps calculated on the basis of revenue capacities (Rs 745 per capita) and lower (Rs 619 per capita) for gaps calculated on the basis of actual revenues. For MCH the both the values are lesser: fiscal gap is Rs 731 per capita and the gap between actual revenue and expenditure need is recorded as Rs 345 per capita. The lower gaps in MCH (particularly on the basis of actual revenue) can be explained as a consequence of higher population. Also the higher expenditure needs for service provision is clearly visible which can be a result of the higher demand for quality service provision by the inhabitants of the city.

Table 5.5 Fiscal Gaps and Related Indicators of Fiscal Health for Hyderabad ULBs

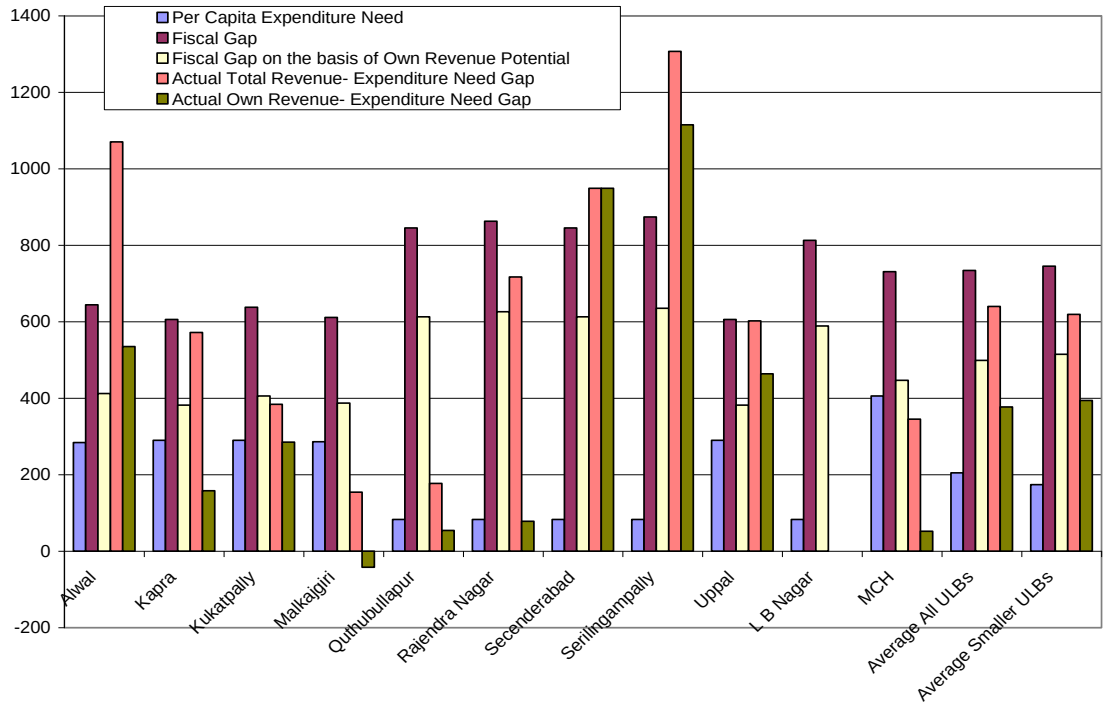
ULB Name	Per Capita Expenditure Need	Fiscal Gap	Fiscal Gap on the basis of Own Revenue	Actual Total Revenue-Expenditure Need Gap	Actual Own Revenue-Expenditure Need Gap
1	2	3	4	5	6
Alwal	284	644	412	1,070	535
Kapra	290	606	382	572	158
Kukatpally	290	638	406	384	285
Malkajgiri	286	611	387	154	-42
Quthubullapur	83	845	613	177	54
Rajendra Nagar	83	863	626	717	78
Secenderabad	83	845	613	949	949
Serilingampally	83	874	635	1,307	1,115
Uppal	290	606	382	602	464
L B Nagar	83	813	589		
MCH	406	731	447	345	52
Average All ULBs	205	734	499	640	377
Average All ULBs without MCH	174	745	515	619	394

Source: ULB Budgets, Author's Computations

We have also calculated the fiscal gaps on the basis of own revenue potentials. We find that the average value of the surplus of actual own revenues of Rs.377 over the expenditure needs (column 6, Table 5.5) can increase to Rs 499 (column 4, Table 5.5) if the own revenue capacities are realized. If we exclude MCH, for the smaller ULBs we find higher absolute differences for both. The fiscal gap measured with respect to own revenue capacities record an average value of Rs 515 per capita and that measured with respect to actual own revenues record a value of Rs 394 per capita. Only for Malkajgiri we find a negative value of the order of Rs 42 in per capita terms, the rest of the ULBs all record surplus of actual own revenues over expenditure needs. For MCH the surplus gap in terms of actual own revenue is very low which is Rs 52 in per capita terms whereas the gap between the own revenue capacity and expenditure need is of the order of Rs 447 per capita. It is interesting to note that there is a wide difference for each category of these gaps between the MCH and the smaller ULBs. The difference is particularly high when we consider own revenue. We can interpret the higher positive gaps as a consequence of the high collection efficiency in property tax collection for the smaller ULBs, which leads to higher collection of own source revenues and also inadequate levels and inferior quality of service delivery in these ULBs. Investigations suggest that the ULBs need to utilize the other tax and non tax potentials by attracting more economic and commercial activities in their jurisdictions that can stimulate the other tax and non tax revenue collections, widening the own revenue base. Periodic revision of

rates of user charges and other taxes also can be taken into consideration. Figure 5.1 gives the ULB wise details for the variables related to fiscal gaps in Hyderabad.

Figure 5.1 Fiscal Gaps and Related Indicators (Per Capita) for ULBs in Hyderabad (Rs, 99-00)



Concluding Remarks: Assessment of Fiscal Health

The above sections throw some light on the different aspects of fiscal health of the ULBs in Hyderabad. We find that there are possibilities of generating surpluses over the expenditure needs if the total revenue and own revenue capacities are realized. Interestingly, on an average, the ULBs are presently generating surplus revenues over expenditure needs; the revenue capacities if realized would generate higher levels of surpluses than the present levels. But are these really 'surpluses'? Can we say that the ULBs are equipped financially to provide quality services levels of which are adequate?

The point can be analysed from different angles. The positive fiscal gaps can be an outcome of the responsibility sharing arrangement between the municipalities and the HMWSSB. A considerable portion of the expenditure is saved by the ULBs since they do not have to provide water supply and sewerage services. Another plausible explanation could be the other

expenditures[23] which the ULBs incur which are not taken into account in our study, nor are there financial norms defined for these services. So it becomes difficult to judge whether the expenditures incurred on those services are justified or not.

We can refer to the expenditure gaps on account of the services taken into account in our study (Table 3.8, Chapter 3) to add a different dimension to the interpretations of positive fiscal gaps. It is interesting to note that in all the ULBs we have actual expenditure levels lower than the expenditure needs which means the ULBs under-spend on account of these services. The average per capita expenditure gap for the Hyderabad UA (without water supply & sewerage) is negative and of the order of Rs.191 per capita. Average expenditure gap for MCH is Rs.124, and average for smaller ULBs excluding MCH is Rs 207, all per capita in 1999-00 prices, both of which are negative. This clearly shows that the extent of 'deficit' in spending on account of these services is much higher for smaller ULBs compared to MCH. This is reflected in the overall differences in the quality and adequacy of services in MCH and the smaller ULBs.

Another way to judge could be to see whether the physical levels of services and their quality is high enough to satisfy set physical norms so that we can be in a position to say whether the expenditures incurred are enough to provide quality services in adequate quantities. Unfortunately we do not have sufficient data to analyse this aspect at the ULB level. But overall inspection through field visits and public opinion in Hyderabad UA suggests that the quality and physical levels of services are not satisfactory because they do not conform to set norms.

If we assume that the fiscal gaps are positive, with the negative expenditure gaps, there is a clear indication of under-utilisation of resources in the urban agglomeration because revenues are raised in excess of the expenditure requirements but adequate amounts are not being spent to provide services. Nor are there concrete evidence on adequacy of service levels and satisfaction in terms of service quality. The proper management of the urban agglomeration calls for wider utilization of revenue raising potentials and optimal expenditure allocations so that the revenues are channelised properly and get translated to desired outcomes in terms of quality and adequacy of services.

[23] See Figures 3.1-3.4, Chapter 3.

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