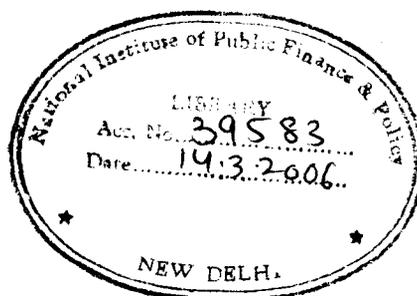
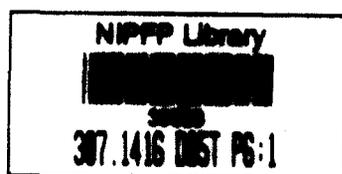


TOWARD URBAN RESTRUCTURING
AN ASSESSMENT OF REFORM POTENTIAL IN
TWO MID-LEVEL INDIAN CITIES

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Preface

Are cities in India ready to respond to incentives for undertaking institutional, structural, and fiscal changes that are necessary to improve service provision and delivery? This question forms the subject-matter of this study, "Toward Urban Restructuring: An Assessment of Reform Potential in two Mid-level Indian Cities", where we review the levels of infrastructural services in two mid-level cities, *viz.*, Ludhiana and Rajkot, and examine the extent to which the inefficiencies therein are attributable to existing institutional and financial arrangements. The review of the service levels is, in fact, a rapid assessment of the demographic and economic trends, analysis of the major issues with regard to municipal boundaries, functional jurisdiction between city-level agencies involved in the provision or regulation of urban public services, the legal and operational framework governing the establishment of these agencies, and the design and performance of inter-governmental relations between city and state governments. The study identifies the key strategic issues and opportunities facing the two cities, in a medium-term perspective. It also offers provisional suggestions for improving fiscal sustainability.

In conducting this study which was supported by the World Bank Water and Sanitation Programme (WSP), the principal authors received gratuitous assistance from M. Govinda Rao, Director, the city governmental officials, experts from the WSP, and of course, a dedicated team of research associates. We thank every one of them, without attributing any of the deficiencies in the study to them for which the authors alone are responsible.

January, 2006

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Thanks are due to the current municipal commissioners of Ludhiana and Rajkot, and their staff, the respective water utilities in the cities for their time in answering our questions and providing us with the data relating to various aspects of service delivery. In addition, we met many stakeholders in the two cities including the faculty of Punjab Agricultural University (Ludhiana), former commissioners of the cities, representatives of industry, managers of cities' improvement trusts, and researchers such as Mr. Anadkat (Rajkot) who worked on various aspects of the city for their academic work. We thank all of them. The Ministry of Urban Development (MoUD) arranged for a workshop to discuss the reports. We thank the MoUD for facilitating interaction with the cities' staff members and other stakeholders. The views in this report do not represent that of the WSP, the cities of Ludhiana and Rajkot, or NIPFP. Any errors remain the authors' responsibility.

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**AN ASSESSMENT OF REFORM POTENTIAL IN
LUDHIANA**

Objectives

This report is the outcome of our field visits, desktop research regarding earlier studies dealing with service delivery and urban management issues in Ludhiana, and feedback from WSP. In this, we have examined the following:

- Economic base and demography of the city;
- The need for reform;
- Any potential bottlenecks;
- Triggers for reform;
- Reform agenda.

This report is organised as follows. First, in section 1, the demography and the economic base of Ludhiana are described. Section 2 contains an analysis of whether there is a need for financial and/or institutional reform in the city, using some broad outcome measures. Section 3 explores any potential bottlenecks to the reform process. Section 4 analyses possible triggers of the reform process. Section 5 describes what a reform agenda should look like for the city and summarises investment options for the Government of India. The annexures contain the list of groups with whom we have had meetings during our field visit, our local meetings with various resource persons for the study, and the databases that have been our sources of secondary data. Further, we have included in the annexures various detailed budgets.

Economic base and demography

Background

Ludhiana, the largest city and the only metropolis of Punjab and the youngest metropolis of India as per 1991 census, is located 95 kilometre north of Chandigarh, and 300 kilometre northwest of New Delhi. Ludhiana is strategically located in the middle of Punjab, and offers access to Amritsar from Delhi. It acts as a corridor between Punjab and the rest of the country for transport of agricultural and industrial products. The city is well known for its industrial growth and is frequently called as the Manchester of India. There is considerable industrial activity in the city consisting of cycles, machine tools including sewing machinery and auto spare parts, and hosiery units. Ludhiana produces a large number of bicycles with Hero, Avon being the most popular brands. In hosiery, the city is exporter to Russia, Europe, and other parts of the world.

Demography

Ludhiana is one of the three municipal corporations in Punjab with its 2001 Census population of 14 lakh (precisely 13,98,467, out of which 56% are male, the remaining being female, this proportion has remained roughly constant over 1991-2001). The MC covers a total area of 135 square kilometre yielding a 1991 density of 7,743 per square kilometre. The 2001 population of Ludhiana (urban) is 16,93,653, with a land area of 250 square kilometre, yielding a density lower than that for the MC, being 6,766 per square kilometre in 2001. The population density of the MC increased from roughly 5,519 square kilometre in 1981 to 7,743 in 1991, with the inner part of the city more densely populated (500 persons per hectare) than the outlying areas (80 persons per hectare in some places).

The annual growth rate of Ludhiana's population over 1991-2001 was 2.9 percent compared to that over 1981-91, 5.4 percent. These growth rates are higher than the national average for the growth rate of urban population over 1981-91 and 1991-2001 (respectively 3.1% and 2.7%). This somewhat 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. The growth in the number of households (or housing units) has implications for the provision of various services such as education, water supply, sewerage and sanitation. Over 1991-2001, the number of households in Ludhiana grew at an annual exponential rate of 2.8 percent, up from 193,862 households in 1991 to 257,370 in 2001, compared to 5.8 percent over 1981-91, consistent with national trends.

Along with the rapid increase in its population, the city has also witnessed tremendous expansion in its area recently. In 1981, the municipal area was 110 square kilometre and at the time of the 1991 census it was 134.67 square kilometre. More recently, the city has expanded in all directions mostly along its radial road corridors. The most recent extension of the MC limits took place on 13th November 1995, now occupying an area of 159.37 square kilometre.

In terms of demographic composition, population below 14 years constituted one-third of Ludhiana's population in 1991, demonstrating the burden on the city's primary health care services (corresponding 2001 census data not yet released).

Literacy rate, although quite high in Ludhiana being 60 percent in 1991, is still below the national average of 65 percent. This is frequently attributed to the migratory labour from U.P, and other states that work in various industries of the state as unskilled labour and are frequently illiterate.

Economic base

Non-workers or those outside of the labour force constitute two-thirds of the population of the city, with one-third of population engaged actively in the labour market, more or less an identical trend over 1981-91. In 1991, workers constituted 54 percent of those in the age group 15-60 years (active labour force age group), much higher than the 41 percent national work force participation rate for 2001. There is a decline over 1981-91 in the proportion employed in household industry, manufacturing and processing industry. While 5 percent of the labour force was in household based industries in 1981, their proportion had declined to 0.1 percent in 1991. In 1991, of the one-third employed, roughly half were employed in manufacturing and processing other than household industry. Further, another 40 percent of those employed were in construction, transport, storage, communication, trade and commerce, and other services in 1991.

There are a large number of small, medium and large units in the area¹ that have contributed to total employment and output. Table 1 shows this below for 1996 and 2003:

Table 1: Industry in Ludhiana District

	Small scale units		Medium and large units	
	1996	2003	1996	2003
Number of units	26440	42704	88	168
Investment (Rs. crore)	493	1121	700	3909
Employment	193220	273593	35000	75185
Production (Rs. crore)	2644	8225	3500	NA

Source: District Industries Centre, Ludhiana

While the data shown in table 1 are cumulative, they indicate that small-scale units in the district account for nearly all (99%) of the units established during 1996 and 2003. They accounted for 85 percent of all employment created in 1996, and 78 percent of jobs in 2003. They accounted, however, for only a little above 40 percent of total investment and production in 1996 and only 22 percent of investment in 2003, quite consistent with the idea of small-scale units that are labour rather than capital-intensive.

In 1996-97, sales tax collections from Ludhiana city amounted to Rs.239.62 crore constituting 19 percent of the total sales tax revenue of the state. This is one measure of its overall contribution to economic activity in the state.² It is surprising to

¹ We attempted to get this data for Ludhiana Municipal Corporation as well, only to find that the LMC limits contain only 10-15 percent of units in the area. Hence we report the district-level data here rather than the city-level.

² We attempted, but were unable to find data on any other measures of the city's contribution to state economic activity.

note that there were no marginal workers in Ludhiana in 1991. This means that there were none that were actively looking for work that did not find one. Marginal workers are those who worked for sometime in the year (for less than 183 days or six months) preceding the enumeration but did not work for a major part of the year. This corroborates the idea of the city being a labour-short area, and being able to absorb and provide jobs to a large number of in-migrants from other areas within and outside the state. Supporting this, the 1991 census reports total in-migration of 250,711 over 1981-91 (that accounted for 24% of the city's population in 1991) (all age groups and durations of residence less than 10 years) into the LMC limits. Historically also, the census data show that migrants typically came from other states within the country mostly from poorer, high unemployment states such as Uttar Pradesh, Bihar and nearer states such as Haryana. The 1991 migration data show that roughly 25 percent of the total migrants to Ludhiana did so seeking employment. Further, the data on migration by age into the city show that roughly 40 percent of the migrants were below 30 years of age, quite conducive for the absorptive capacity of the city's labour market.

The city's economic base has implications for various civic services. It is easy to appreciate that while hosiery industry is water-intensive (dyeing), it also is quite polluting. Further, basic knowledge of the inputs and processes of the bicycle, sewing machine and auto spare parts industry demonstrate the need for disposal of waste rubber and scrap metal.

The district's literacy rate, being 76.5 percent in 2000-01, is well above the state's average of 70 percent for that year. The population density in the district in 2000-01, 804 persons per sq.km is the highest of all districts in the state, however, and when compared to the state average of 482.3 per sq.km. This shows the need for cautious land management to optimise city efficiencies.

2. Need for Reform

The need for reform is determined through an examination of various outcome measures such as growth of population and land area, traffic *vis-à-vis* road density, composition of land use, service delivery and its finances.

Growth of population and land area

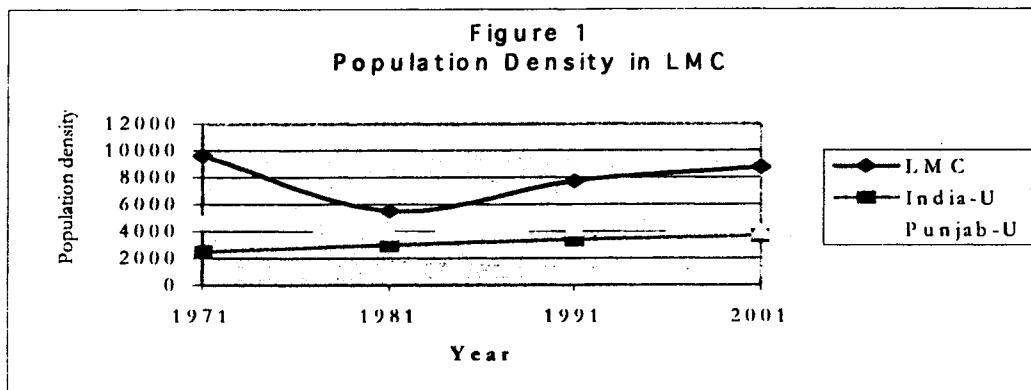
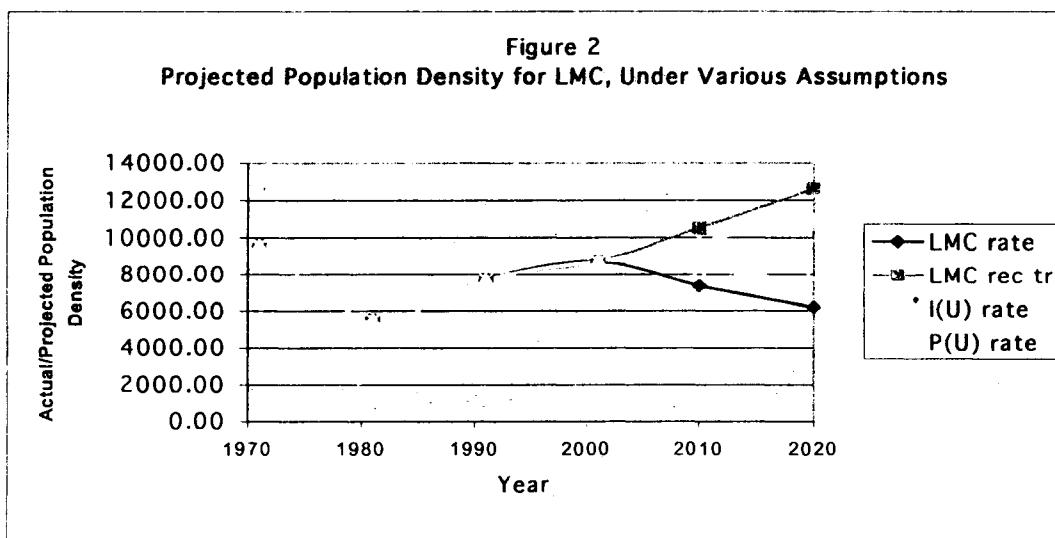


Figure 1 shows that the population density of LMC has been consistently higher than that for the state and national urban population and continually increasing in post-1981. This represents the need for above average service levels.

Further, consider the projections of population density we have made for LMC, assuming its own growth rate (historical growth rate and recent trends), state (urban) and national (urban) growth rates. Figure 2 shows this.



In Figure 2, the trend shown over 1970-2000 is actual LMC population density. The projections are for 2010 and 2020, making four different assumptions. In case LMC's future population density follows its own historical rate, or that of Punjab's urban growth rate of population density, there is no imminent threat regarding service levels. However, in case it follows its own recent trends (i.e., average growth of LMC's population density in the past two decades, 1981-2001), or the country's average growth rate for urban areas, there is an imminent need to increase service levels.

Traffic *vis-à-vis* road density

The physical expansion of the city and lack of channelised planning has led to complex problems for the proper development of the city. There are no official parking lots (underground/multistoried) allotted to commercial areas in the city resulting in traffic problems in the main markets. These traffic problems have caused loss of time, energy, environment, health and increased travel costs.

When juxtaposed with population density, the density of roads in the district is 1.08 per sq.km. in 1999-00, lower from 1.58 per sq.km during 1996-97, compared to 0.87 per sq.km for the state in 1999-00. While above the state average, the inadequate road network in relation to population density and unbalanced spatial distribution of urban activities in Ludhiana pose special problems of accessibility. The low percentage of land to roads indicates narrow right of ways resulting in low levels of service. Most of the "through" traffic passes through the city center due to the lack of peripheral and ring roads.

The public transport system is negligible, resulting in high patronage of intermediate public transport (IPT). This dependency on slow speed and low capacity modes has resulted in serious traffic problems including undue congestion and under-utilisation of transportation infrastructure.

There is no hierarchy of roads in the city. This means that individual roads do not continue the same alignment and frequently change their cross section elements. The road inventory reflects that road network has major deficiencies in design features. There are several traffic congestion nodes in the city.

The vehicle density is very high, being 162 per sq.km for 1999-00, compared with that for the state for the same year, only 54 per sq.km. Part of the reason for this is that Ludhiana (district) has the highest number of motor vehicles registered, 608,780 as of 1999-00, of all districts in the state. This indicates the inadequacy of the road infrastructure relative to vehicles in the district more generally.

Table 2 shows the number of different types of motor vehicles on the road in Ludhiana (district) during 1993-94. Based on this table, the total number of vehicles per capita for the district turns out to be 0.26, compared to 0.10 for the state of Punjab for 1991, again reinforcing the need for vehicle space.

Looking at the above problems, the city needs a comprehensive traffic and transportation plan.

Land use

Table 3 compares the disaggregated land use of Ludhiana for 2000 and 2003. A quick comparison shows that the area zoned for residential use, although declining, forms the bulk of land use in the city. Further, there is a perceptible increase in land devoted for traffic and transportation, reflecting the city's growth of traffic and congestion problems.

Table 2: Vehicles on Road in Ludhiana

Type of vehicle	Number on the road
Buses	537
Cars and station wagons	21102
Jeeps	1214
Taxis	851
Three-wheelers (passenger)	2494
Two-wheelers	240793
Four-wheelers, trucks and lorries	10090
Three-wheelers (goods)	2902
Tractors	30939
Others	12
Total	310934

Source: Statistical Abstract of Punjab

Table 3: Land Use Break Up of Ludhiana City, 2000 and 2003

Land use	2000		2003	
	Area (acres)	%	Area (acres)	%
Residential	14540	49.20	12570	42.3
Commercial	2086	7.06	1867	6.30
Industrial	5353	18.12	5560	18.73
Recreational	120	0.41	538	1.80
Traffic and transportation	4724	16.00	6046	20.35
Utilities	60	0.20	65	0.22
Government	610	2.06	650	2.20
Public and semi public	2055	6.95	2406	8.10
Total built-up area	29548	100	29702	100

Source: Draft Master Plan, Ludhiana 2000-2021

Service delivery

Water supply

The main source of water supply in the city of Ludhiana is underground water through shallow and deep tube wells. There is also a surface water source in the form of Sidhwan canal flowing on the southern side of the city which also has a sizable discharge of 1600 cusecs, which has not been tapped till date, as the total supply has been met with only the ground water.

The service level statistics for water are summarised in table 4. Hundred percent of the municipality areas have the capacity to provide water to the entire population, but, overall, only 80 percent population has piped water connection (Table 5). This implies that despite the fact that there is no supply constraint (infrastructure), the supply is intermittent. In the remaining areas, lack of affordability of the population has prevented them from having access to piped water connection.

None of the private houses have metered water connections, which has implications for water usage. As there is no volumetric consumptive tariff regime, the customers in these locales are generally not concerned about water loss.

When the access of households to water supply in urban Punjab and urban India is compared with that for Ludhiana, the city has above average (state as well as national) access, required for its higher population density. The data reported in table 5 is from the census, and is presented for purposes of comparing the data in table 4 with that for the country and the state. Note that the data presented for LMC in table 5 is from the census 2001, and must have been collected at least a couple of years earlier, so that is actual data from 1998 or 1999. Data from the PWSSB are local, and recent, being from 2003. So while census data show 69.5 percent tap water supply access in LMC, more recent data from PWSSB show 80 percent access of population to piped water supply in LMC. The actual access coverage is likely to be in the range of 70 percent-75 percent, based on informal discussions.

It is, however, a different question whether the level of services is adequate in LMC, although above average, when compared to the state and that for the country as a whole. Recall that its population density has also been above average so far. If we were to take into account the projections we have made for its population density, making various assumptions (Figure 2), there is no room for complacency.

Table 6 shows the compilation of facts. According to the PWSSB, actual average daily production of water is only 284 MLD, out of which only 140.5 MLD is consumed. This accounts for a mere consumption of 92.6 lpcd (litre per capita daily), which implies water supply of only about 8-10 hours (Table 5) a day, not 24 hours! There is not continuous supply since the ground water has to be pumped up through

tubewells and power is a constraint for this. Further, there could be seasonal variations in the supply, about which data are not available from the PWSSB.

Sewerage

A formal sewerage system exists in only half the city's area. Sewage treatment plant is non-existent in the city, with the collected sewage being discharged into Budha *nullah*. In the rest of the city, sewage is conveyed in rudimentary open shallow drains and ditches, which are close to the living quarters of the residents. It is discharged into the ground or the nearest watercourse. This leads to contamination of the water supply network and also pollutes the aquifer, which serves as a source of the city's water.

As a norm, 70 percent of water provided for domestic purposes finds its way into the environment as wastewater. In Ludhiana, this would mean that there is about 150 MLD of sewage discharged into the city's environment from domestic sources in addition to about 50 mld from industries and other sources. The discharge will increase as the water supply increases with the commissioning of the water supply augmentation project.

Table 4: Service Level Statistics for Water Supply, Ludhiana, 2003

Description of service	Number or percentage covered
Population as per 2001	1440000
Population at present (2003)	1517000
Total number of houses (present)	316042
Average number of people per household	4.8
Population having access to piped water supply	1213600
In percentage	80%
Population served by household connections	658000
Population served by Stand-posts	18000
Population served by independent institutional setup (Engineering colleges, universities, commercial and industrial establishments)	72000
Total population served	748000
Total number of private houses with metered connection	0
Total number of houses with unmetered connection	137071 (21% of population served by household connections, 658,000)

Description of service	Number or percentage covered
Total number of house connections	137071
Total number of commercial connections	25663
Number of stand posts	350
Number of tube-wells	347
Number of OHR and capacity in MLD	63 (38MLD)
Total length of distribution line(mains and sub-mains) in km.	1467

Source: Punjab Water Supply and Sewerage Board, 2003.

Table 5: Access of Households to Water Supply and Toilet Facilities In Punjab and India, 2001.

	Access to safe drinking water	Access to water within premises	Access to tap water supply	Access to tap water within premises	Access to toilet facility	Access to toilet within household
Ludhiana M.Corp	98.52	92.43	69.50	65.81	94.88	83.27
Punjab (Urban)	98.88	91.70	66.81	63.44	86.52	82.76
India (Urban)	90.01	60.84	68.66	49.68	73.72	57.38

Source: Census of India, 2001.

Table 6: Supply Statistics for Water Supply, Ludhiana, 2003.

Description of service	Data
Actual average daily production of water (mld)	284
Total average daily water discharge capacity (mld)	454
Daily water consumption through house connections (mld)	137
Daily water consumption through handposts (mld)	3.5
Total average daily water charged (mld)	140.5
% of water un-accounted for	50.5
Daily water supply duration (hrs.)	8-10

Source: Punjab Water Supply and Sewerage Board, 2003.

Table 7 summarises the level of service for sewerage. It may be noted that only 55 percent of the city's population have access to sewerage services, much less than the coverage for water supply. Given the amount of waste water that is discharged daily, the extent of sewerage access is highly inadequate.

At present only 10 percent of the city is covered by storm water drainage facilities, primarily because it is expensive. The total length of surface drains is 1145

km. Out of this, the length of type I drains is 1105 km. and length of type II drains is 40 km. There are 9 open *nullahs*, with total length of 10 km, which were initially constructed for storm water drainage and are presently being used to drain out normal surface wastewater from the city to the Buddha *nullah*.

Table 7: Service Level Statistics for Sewerage System, Ludhiana, 2003

Description of service	Proportion/Number covered
Population access to Sewerage in numbers	834350
In percentage	55%
Population served through sewer house connection in (numbers)	585928
Population served through soakage pits/ septic tanks (in numbers)	849072
Population served by independent institutional sewage (own systems in universities, colleges and so forth) (in numbers)	72000
Population served through conservancy system (in numbers)	10000
Actual number of sewer connections	121985
Number of institutions having independent sewerage system	22
Total average daily sewage flow in MLD	292
Length of outfall sewer (in km.)	8
Length of intercepting sewer (in km.)	96
Length of lateral/branch sewer (in km.)	964
Total length of sewer (in km.)	1098

Source: Punjab Water Supply and Sewerage Board, 2003.

Solid waste management

The total area of the LMC is 159.37 square km. Out of this, the older part of the city covering approximately 40 percent of the area and comprising of 50 percent of the population is being served by scavenging and sanitation facilities. Fifty percent of the population living in the outer areas is deprived of these facilities.

Ludhiana produces a very high volume of solid waste. In the year 2000-01 the generation of waste was 840 metric ton per day at about 420 gram per capita per day. About 70 percent of garbage and waste is collected and disposed off every day. Various committees have laid down the minimum physical standard of services to be 100 percent collection and disposal of solid wastes. Further, the solid waste efficiency in cities with million-plus population is 83 percent for class 1 cities. Given this, the question arises as to why the collection efficiency is only 70 percent in LMC. This shows the need for increasing the collection efficiency.

Finances

While the state of the various services emphasise the need for reform, we confirm this further based on our study of finances of the city.

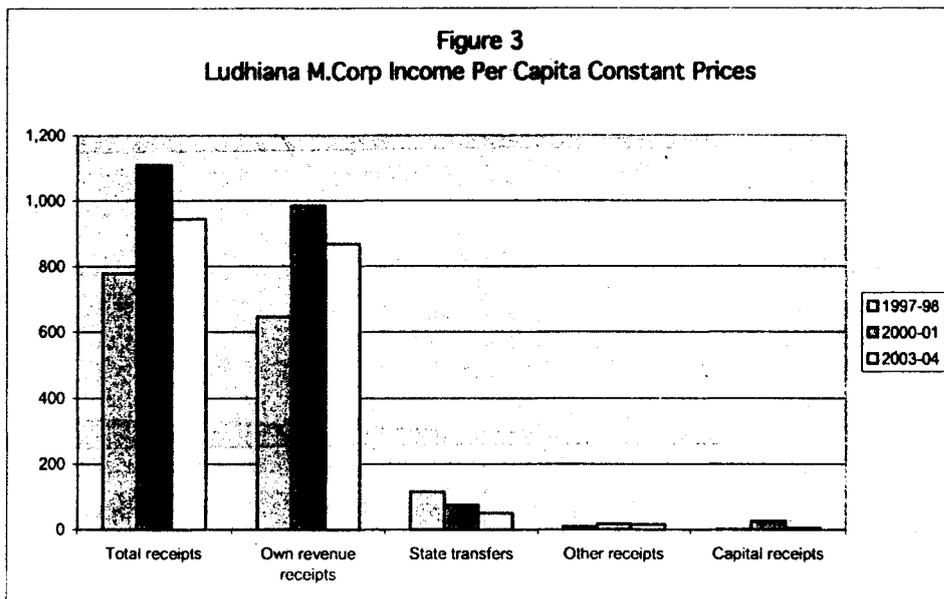
Figure 3 shows a comparison across time periods of LMC's income (in per capita constant 1997-98 prices). The figure demonstrates clearly that there is a decline in the total receipts of the LMC in 2003-04, when compared to 2000-01. This is true despite LMC's self-reliance that is so far, dependent heavily on octroi receipts. State transfers to LMC have continuously fallen since 1997-98. Other and capital receipts have been negligible.

The bulk of LMC's total expenditure (75% of it) on water supply and sewerage constitutes revenue expenditure. This refers to establishment (office furniture, administration, equipment and so forth) and O&M expenses that respectively constitute 27 and 47 percent of total expenditure in 2003-04. In revenue expenditure, O&M expenses have overtaken expenditure on salaries since 2001-02. So only a small part of the total expenditure on water and sewer (roughly 20 to 22%) is being spent on developmental works and investment in assets (e.g., installation of hand pump). The exceptions were 1999 and 2000 when 45 percent of total expenditure was on developmental works. Capital expenditure accounted for 26 percent of total expenditure in 1997-98 and increased to only 29 percent of total expenditure in 2003-04.

Figure 4 shows over time the expenditure on water and sewerage by category. The figure shows that although total expenditure shows a continual increase since 1997-98, capital expenditure has declined since 2000-01, whereas establishment and salary expenditures have continually decreased. O&M expenses have remained more or less constant. The only exception is expenditure on electricity for operating tube wells that has registered an increase since 2000-01. Debt repayments have increased since 2000-01, reflecting repayments towards the HUDCO loan (discussed in the debt section below).

Figure 5 shows a comparison of trends in the LMC's expenditure (in per capita constant prices) over time. This picture shows that total expenditure has fallen since 2000-01, consistent with its income trends. Further, expenditure on establishment and salaries, operation and maintenance works have remained the same over 2000-01 to 2003-04, whereas capital expenditure has declined significantly over the period. In general capital expenditure has not kept pace with population growth (Figure 1).

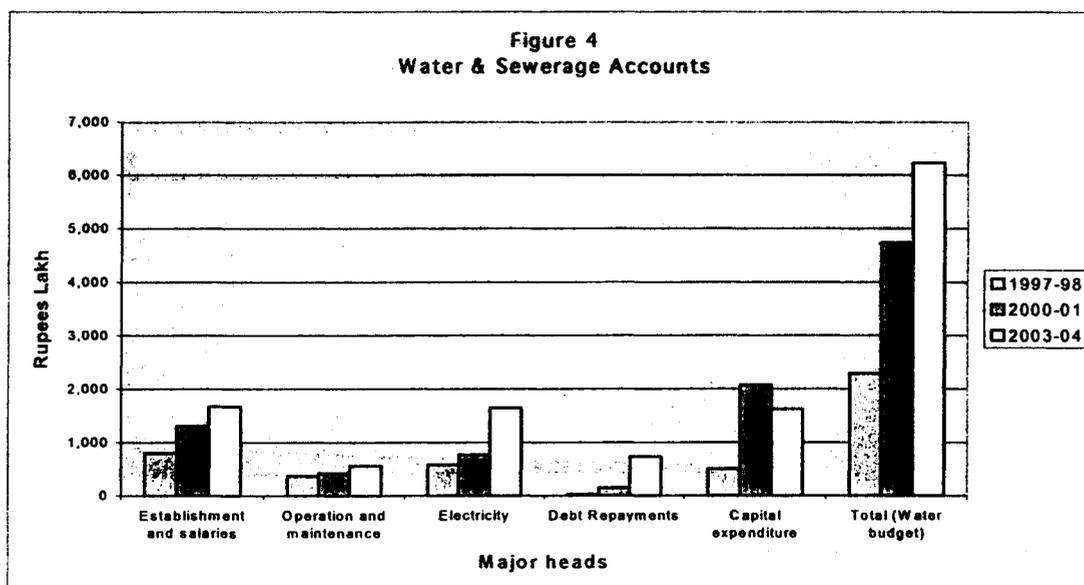
A similar trend holds good for general expenditure as well. A majority of the general budget of LMC (apart from water and sewer) has traditionally been spent on revenue items such as administration, salaries and O&M.



When we examine the total budget (general+water+sewer), we find that revenue expenditure is the primary component that drives total expenditure, the primary drivers being salaries followed by O&M. Wages and salaries have increased in absolute terms over this period because they are indexed to inflation. They have declined as proportion of total expenditure due to privatisation attempts made for the provision of various services during 1998-2001. As is well-known, government recruitment is costly, when compared to the market. Further, informal discussions indicate that LMC's employees are redundant labour force that do not work.

Figure 6 shows the general budget's expenditure on various services over time. It demonstrates a decline in expenditure on all important civic services – health including sanitation, roads, streets and drains, street lights, new developmental works, and O&M over the period 2000-01 to 2003-04. The only exceptions are electricity for street lighting that showed a continual increase in expenditure over the period 1997-98 to 2003-04, and establishment expenditure.

Overall, capital expenditure and expenditure on developmental works continue to constitute less than 30 percent of total expenditure, a case of capital expenditure not growing fast enough to keep pace with population growth.



What do these patterns of expenditure imply for whether these services are reaching the city's poor? Actually nothing! This is because of the following reasons (see framework from the *World Development Report 2004*).

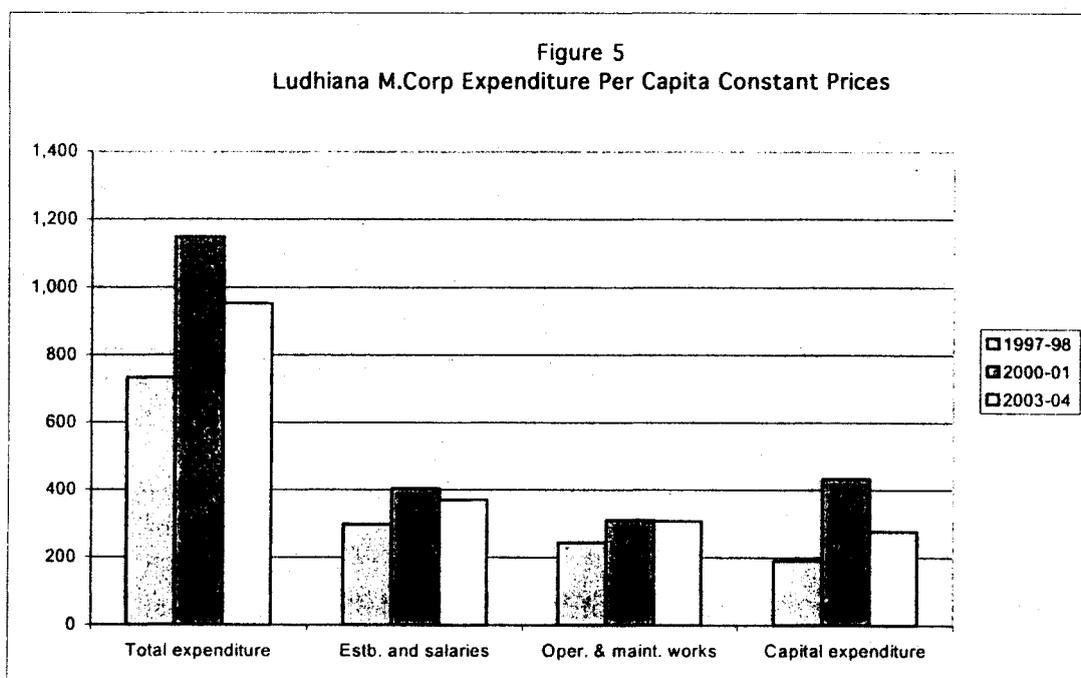
- There is no data regarding the distribution of city's income. The only observation we have made is that poorer households have settled around the Buddha *nullah* and the outskirts of the city.
- Second, even if expenditure is increased in these poorer neighborhoods, the question is whether that ensures better service. That is, if the poorer households are getting water, is that safe, potable water? This is a serious question as may have been clear from our discussions of pollutants discharged into the Buddha *nullah*.
- Many a time, poorer households cannot afford the resources it takes to gain access to these services. In the case of LMC, this lack of demand appears to be the reason why poorer households have been denied access to these service networks.

Debt

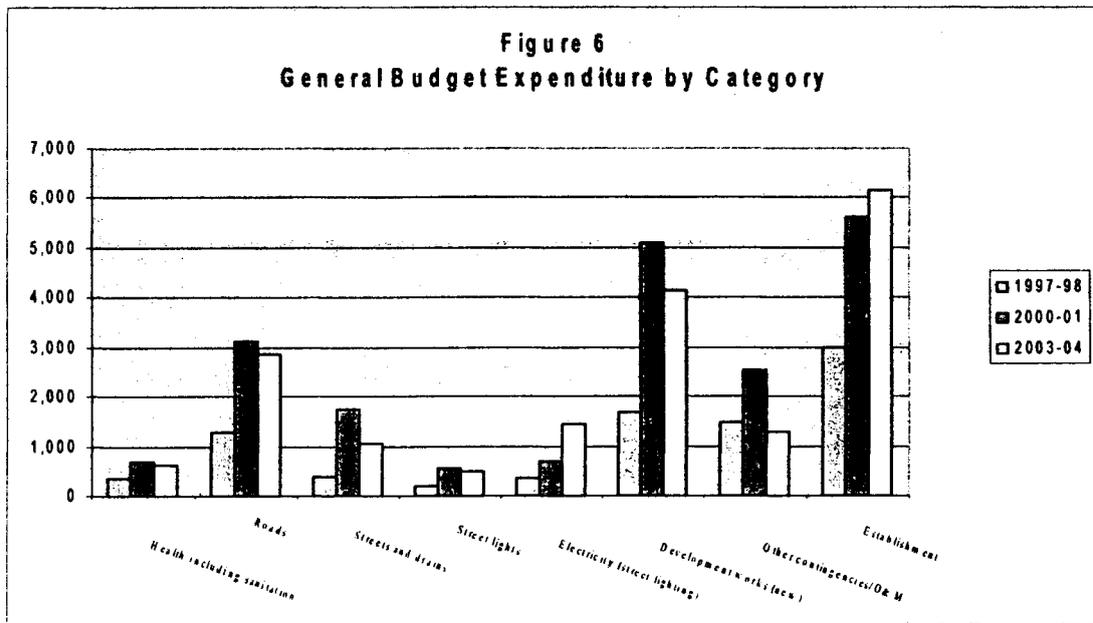
The LMC has issued a bond for Rs.17.80 crore in 1999-2000, of which Rs.985.12 lakh has been paid towards interest, and Rs.385 lakh is expected to be paid towards the principal as of Jan 2005. Apart from the bond issue, LMC has got a loan from HUDCO for Rs.19.46 crore in 2001-02. The LMC has been making some repayment of this loan as well towards interest and principal amounts. The data on repayment of loans in the water budget indicate that the repayment increased from

Rs.30 lakh in 1997-98 to Rs.189 lakh in 1999-2000, reflecting interest payments toward the bond issue. In 2003-04, the repayment amount jumped to Rs.730 lakh in 2003-04 reflecting payments towards HUDCO loan as well.

This brief review of the LMC's financial position indicates that there is no room for complacency. This indicates that the need for reform is financial as well, with the Government of Punjab about to issue ordinance to abolish octroi in the state. Further, the expenditure data do not indicate commensurate increase in capital expenditure or developmental works to increase the quantum or quality of public services. The LMC also has a huge burden of public debt with onus of repayment.



**Figure 6
General Budget Expenditure by Category**



3. Roadblocks and Bottlenecks to Reform

The question arises as to why the financial and service delivery performance has been less than satisfactory, and what are the bottlenecks to more effective service delivery and reform.

Institutional arrangements for water and sewerage services

There are 17 State Acts and 23 Central Acts that affect the functioning of municipal areas in Punjab. There is a statutory overlap of functions for planning, preparation and execution of water supply and sewerage schemes with the Punjab Water Supply and Sewerage Board (PWSSB Act, 1976) that also vests with the LMC (as per the Punjab Municipal Corporation Act, 1976). In reality, the broad demarcation is that while the PWSSB undertakes the planning, development and construction of major water and sewer networks, the operation and maintenance and the execution of minor developmental works is provided by the municipality (this distinction is not maintained in the statute). Table 8 summarises the provisions of various acts at the national, state and local level, their overlaps and implications.

The statutory overlap is a bottleneck as it creates unnecessary confusion regarding the roles of the two agencies in the execution of any given project. In reality, the classification of a project as 'major' or 'minor' tends to become arbitrary and the service takes a 'passing the buck' attitude.

Apart from the issue of statutory overlap, sometimes it is desirable to have local autonomy in certain functional areas. However, the LMC does not have the financial resources or the technical expertise to undertake water supply and sewerage projects independently. The technical expertise is lacking as the proportion of the city's area covered under regular employment is continually shrinking because the city itself is expanding and retirements do keep occurring.

Institutional arrangements for the city's land use

Recall the high population density in relation to state and national average (Figure 1), high traffic usage, and low land area in relation to vehicle usage. Institutional arrangements for land use are another example of service delivery failure. The Punjab Town Improvement Act of 1922 provides for the constitution of Improvement Trusts for improvement and expansion of the towns in the state. In Ludhiana, the Ludhiana Improvement Trust (LIT), is in principle, under the administrative control of the State's Department of Local Government. The LIT is entrusted with the task of proposing ways of improving the land use of the city, and developing new schemes for its development. However, the problem is that city

improvement is the LMC's discretionary not obligatory powers, under the *Punjab Municipal Corporation Act*.

The Punjab Regional and Town Planning and Development Act was enacted in 1995, requiring a planning agency for the preparation of Master Plans for cities, and their enforcement. In Ludhiana, the town and city planning department (TCP) prepares a plan in consultation with the Punjab Urban Development Authority (PUDA), that is approved by the State's Department of Local Government. The Punjab Urban Development Authority (PUDA), set up under the *Punjab Regional and Town Planning and Development Act*, is a state-wide authority. As may be clear, because of its centralised nature, it is not very effective in city planning.

Because of the existence of multiple agencies, it is not clear what the separate roles of the TCP and LIT are in city planning and improvement. This results in a situation of 'passing the buck' when it comes to removal of encroachments. The role of the private sector in land development is confined to the developers that buy plots from the LIT.

The Punjab Town Improvement Trust Act, 1922, Section 67, Chapter 7, provides that "...the Municipal Committee shall pay to the Trust....an amount per annum equal to two percent of the gross annual income of such Committee." According to this, the LMC owes the LIT 2 percent of its gross receipts every year, which the LMC stopped paying to the Trust in 1974, cumulatively adding up to Rs.46 crore as of the current financial year. The fact that the LMC has not paid the due 2 percent of its revenue to the LIT is due to the fact that there is no clear-cut agency that is responsible for making development schemes for the city.

In the case of the LIT, the lack of payment from the LMC of its due share has affected their task negatively. As evidence, the LIT had developed some good housing schemes that were handed over to the municipality in 1973 (see Table 9). However, subsequently, due to non-payment of dues to LIT by the LMC, the LIT has not been able to develop any new schemes, because of the lack of a resource base. LIT even had some cases pending in the court over the compensation to be paid for land acquired several years ago! LIT does make a small amount of money through sale of its schemes to developers. While residential plots are sold by lottery, commercial plots are sold by auction to the highest bidder. The LIT is currently working with four schemes (see Table 8) through these revenue sources and bank loans.

Leadership and its unwillingness to increase user charges for various services

The absence of appropriate user charges is an impediment to the effective delivery of various services. This is because a municipal corporation's finances are

closely related to the various user charges and service delivery. The Ministry of Urban Development and the CCF both have tried to support a commercial orientation as a financially sustainable approach to service delivery.

In LMC, for the financial year 2002-03, the total production cost of water (in rupees per kilolitre) excluding capital expenditure is Rs.2.06 (including distribution losses), with revenue income per kilolitre being only Rs.0.92. In the case of essential public services such as water, it is generally accepted that it is not fair to recover capital costs. Given this, as of 2002-03, revenue income covers roughly only 45 percent of total production cost of water (with or without distribution losses). Further, the LMC is known to provide amenities to unauthorised slums that are not payers of property taxes. There is a need for raising water charges, although in a phased manner, for both domestic and commercial users.

Quality of services

In the case of water, particularly the city is faced with the problem of its quality. Land use has important effects on the delivery of water/sanitation, given that the main source of water supply in the city is underground water. Heterogeneous land uses are spread through the city, and industry is spatially dispersed. If industrial use had been spatially concentrated, it would have been feasible for the city to set up a single sewage treatment plant for the effluents of all industrial units. However, given the spatial dispersion of industry, and the lack of sewage treatment plant, most of the small units discharge their waste water and sewage into the open drains that enter the Buddha *nullah*, whose contamination has affected the ground water quality. This is causing a serious environmental sanitation hazard and the stream has become a virtual drain.

For solving this problem, the Government of India (GoI) has taken up the Sutlej River conservation plan. This project, the Sutlej Action Plan (SAP) has been formulated to prevent pollution of the river and to improve its water quality as part of the National River Conservation Programme under Ministry of Environmental and Forests, Government of India. However, are the financial resources envisaged in the SAP is adequate to meet the needs, is an unanswered question. This needs to be examined.

Table 8. Statutory Overlaps in Ludhiana and their Implications

Tier	Act	Institution Formed/ Governed	Provisions	Overlap	Implications
National	73 rd Constitutional Amendment Act, 1992	All Urban Local Bodies (ULBs)	Definition of urban areas, municipal areas and municipal bodies, describing their composition and enlisting their powers and function	The panchayats and municipalities to prepare a development plan but no mention about the unavailability of technical expertise required to do so.	At first instance, the economic planning along with social sector development will take place followed with a infrastructure plan, but land use planning and development controls which are to be worked out later will take a back seat, the idea of integrated development will be lost.
			1. District planning committees (DPC) to consolidate the plans prepared by the panchayats and municipalities to prepare a draft development plan for the district		
			2. Urban planning including town planning, regulation of land use and planning for economic and social development	The service are included as the functions and responsibilities of the city corporation, but no light on the planning, implementing and execution side of the services	
			3. Services including water supply for domestic, industrial and commercial purposes, public health, sanitation and solid waste management		
			4. Public amenities i.e. Roads, Bridges street lighting, parking lots and public convenience	Terms like "development plan", "social justice" and "integrated development" require clarity which is absent	
			5. Slum improvement and upgradation and poverty alleviation		
6. Taxes, duties, tolls, fees and charges					
1. The constitution of the municipal corporation delineation of the powers, functions and appointment of the commissioner.	Functions for planning, preparation and execution of water supply and sewerage schemes also vests with the PWSSB, as specified by the PWSSB Act	Dichotomy in urban management where the municipal corporation and the specialised agency pass the blame for inefficient services.			
2. The construction and maintenance of works means for providing supply of water for public private purposes - Obligatory Function.			Dirtier cities with unhygienic living conditions and poor quality of life		
3. The construction, maintenance and cleaning of drains and drainage works and of public latrines, urinal and similar convenience - Obligatory Function		Detailed description of the type of services provided doesn't mention any time frame for the completion, which results in delays.			
4. The scavenging, removal and disposal of filth rubbish and other obnoxious or polluted matter - Obligatory Function			The improvement schemes take a backseat, as the LIC cannot implement any scheme without LMC's approval.		
5. The construction, maintenance, alteration improvements of public streets, bridges and - Obligatory Function					
6. The lighting, watering and cleansing of public streets and other public places- Obligatory Function					
7. The laying out or the maintenance of public parks, gardens or recreation grounds - Obligatory Function					
8. The improvement of the City in accordance with improvement schemes approved by the Corporation Discretionary Function					
Improvement schemes - conception and approval, are just a discretionary function, its not surprising that LMC doesn't pay heed to it and to the Ludhiana Improvement Trust					
State	Punjab Municipal Corporation Act. 1976, Amended 1994	Ludhiana Municipal Corporation (LMC)			

Table 8. Statutory Overlaps in Ludhiana and their Implications (contd.)

Tier	Act	Institution Formed/ Governed	Provisions	Overlap	Implications
State	Punjab Town Improvement Act, 1922	Ludhiana Improvement Trust (LIT)	1. All improvement trusts to be under the administrative control of department of local government.	"Improvement schemes" have not been explained in detail. Improvements just by beautification or improvement by better functioning? The meaning of the term will lead to altogether different schemes	Since the activities are under the control of a separate department, delays would be common, plus it doesn't make sense for another authority to approve it, who might not even be familiar with Ludhiana.
			2. Improvement and expansion of towns in the and for that purpose undertaking various types improvement and development schemes		
			3. The Municipal Corporation shall pay to the an amount per annum equal to two percent of gross annual income	if the clause was put, then suitably town improvement schemes should have been made the obligatory function of the LMC	
State	Punjab Water Supply and Sewerage Board Act, 1976	Punjab Water Supply and Sewerage Board (PWSSB)	1. Investigate and survey the requirements of water supply and sewerage, prioritising water supply and sewerage schemes with approval of the state government.	Functions for planning, preparation and execution of water supply and sewerage schemes that also vests with the LMC, as specified by the Punjab Municipal Corporation Act.	Dichotomy in urban management where the municipal corporation and the specialised agency pass the blame for inefficient services.
			2. Planning, preparing and executing schemes for the purpose of providing supply of drinking water and sewerage facilities in the areas of one or more local authorities.	Nothing specified in the act pertaining to the working of PWSSB as a contractor of LMC for water and sewerage works, which is the existing system.	
			3. Laying down the norms of staff to be employed by a local authority for maintenance of water supply and sewerage works.		
State	Punjab Regional and Town Planning and Development Act, 1995	Punjab Urban Planning and Development Authority (PUDA)	1. Establishment of PUDA, provisions for setting up special authorities for particular areas and setting up of the new Town Planning and Development	PUDA being a state wide authority is not very effective when it comes to city level plans, which the TCP prepares. The act's weakness is not setting up a separate development authority for Ludhiana, which would do all the planning work.	Organisational failure, landuse planning in complete disarray. Plans not even there on paper.
			2. Provides legal sanctity for town planning and development		
			3. The highest decision making body for regional and town planning is the Punjab Regional and Town Planning and Development Board, set up under the act.	Regional planning authority not provided any powers to rule over other authority	
			4. preparation of master plans and regional plans.		
			5. Development and regulation of land use as per the plan.	No stress on the implementation and executing side of the master plan. No clause stating the implmentating agencies and stressing on the legal penalties if the agencies do not implement plan.	
			6. preparation of town development schemes for upgradation of existing areas.		
			7. Provision of levy, assessment, and recovery development charges.		

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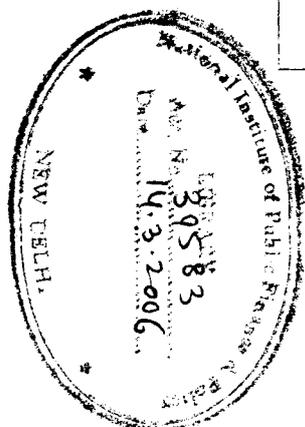


Table 9: Schemes, Ludhiana Improvement Trust

List of Schemes transferred to Municipal Corporation, Ludhiana u/s 55 of P.T.I Act 1922				
No	Name of Schemes	Area in Acres	Land Use	Date of Transfer to LMC
1	Tagore Nagar Part I	6.00	Residential	11-09-70
2	Tagore Nagar Extension Part I	2.00	Res.cum comm.	11-09-70
3	Shaheed Udham Singh Nagar	33.35	-do-	01-11-71
4	Moti Nagar	22.72	-do-	12-03-85
5	Islam Ganj including Kidwai Nagar	34.50	Housing cum comm.	24-04-73
6	Shaheed Kartar S. Sarbha Nagar	287.00	Res. cum comm.	01-07-73
7	Dr. Saifudin Kitchlu Nagar	100.00	-do-	12-03-85
8	24 Acre Division Scheme	24.00	Residential	12-03-86
9	Model Town Extension Part II	146.28	-do-	05-06-85
10	5.53 acre scheme on Sheep Shank Road	5.53	Housing	18-09-85
11	Bhadur House	3.50	Commercial	12-03-85
12	Lajpat Rai Market	0.44	-do-	--
13	Jawahar Nagar Market	0.50	-do-	--
14	Feroze Gandhi Market	13.00	-do-	12-03-85
15	Truck Stand	114.00	-do-	12-03-86
16	Grain Market	62.00	-do-	Handed over to Pb. Mandi Board
17	Dairy Scheme (Tajpur Road)	45.00	-do-	12-03-85
18	Cycle Market	2.62	-do-	--
19	Ind. Area Ext. a Scheme	64.24	Industrial	--
20	Bhai Randhir Singh Nagar	550.00	Residential	01-08-94
21	Model Town Extension	400.00	Residential	01-08-94
22	Gian Singh Rarawala Market	6.00	Res. cum comm.	01-08-94
23	Dashmesh Nagar	4.00	Housing	01-08-94
Current Schemes with the Trust				
1	Shaheed Bhagat Singh Nagar			
2	Maharshi Bahmik Nagar			
3	Rajguru Nagar			
4	Sant Ishel Singh Nagar			

4. Triggers for Reform

Crises do trigger reforms, as in the case of the country in 1991 that chose the path of reform in the aftermath of the balance of payments crisis. There are some triggers that could make the reform happen in LMC. These are:

Abolition of octroi and financial resources

The policy framework for the CCF states that most cities are unable to provide basic levels of urban services due to a combination of poor management practices, and inadequate financial resources. Pre-existing financial resources is a crucial factor that determines the internal readiness for 'reform' in most cities. A city with a large financial base can potentially turn down reform, as additional resources may not matter much to it.

Poor as the LMC's finances are, the state of Punjab will be issuing an ordinance soon to abolish octroi in the state. Given the fact that octroi accounts for more than 70 percent of LMC's own source receipts, surely the abolition will come as a trigger to persuade LMC to be financially more responsible. Some ways of making LMC more financially responsible would be to bring into the tax net those residential properties that have remained exempt.³ Further, informal discussions indicate that there are frequent under-assessments of taxed (commercial or business) property that range anywhere from 2-20 times.

Another way to compensate for octroi abolition could be to increase water charges, by disseminating information regarding the user charge and quality relationship, especially because of the questionable water quality in LMC. Further, the LMC is known to provide amenities to unauthorised slums that are not payers of property taxes. Enforcement of service only upon payment is the sustainable option for better service delivery.

It is true that if octroi were to be abolished, the state government very likely comes up with a compensation package for the local government. While the financial analysis indicates that transfers have not been important in the LMC context, with octroi abolition, they could very well become very important in the transition period. In this instance, octroi abolition would be less of a trigger that it promises to be, in making LMC more financially accountable.

Other triggers in finances that could bring about reform would be if records were properly maintained by the city. In the past, lost records have meant litigation,

³ Movement towards taxation of residential property involve transaction costs such as the identification of properties, their valuation, setting tax rates, revenue collection, and other compliance costs, that are not the focus of this study.

court cases, and significant financial losses to the city. This could be attained with e-governance initiatives, in the steps of states like Karnataka and Andhra Pradesh that have successfully computerised all their land records, making them accessible, transparent and accountable.

Privatisation in service delivery

LMC is the lead service provider of public services in most instances. The LMC demonstrates a different variant of the client-policymaker-service provider relationship highlighted by WDR 2004 (Figure 4, p.6 of chapter on overview), since the policy maker is also the service provider in most instances, and is directly accountable to the clients. Service delivery to the poor then depends on the motivation of the public sector entity to serve them, implying not much discipline for public provision of the service.

It has been often said that privatisation is the panacea for a variety of problems in service delivery. However, the private sector or contractors cannot move into a vacuum created by a total collapse of the public sector. The experience with the private sector world-wide has shown that, wherever governance is weak, privatisation of the essential water and sanitation services results in serious problems including raising costs and reducing access and quality for the less well-off (see also *WDR 2004*). This suggests that strong governance that can *regulate* as well as enable *public participation in decision-making* and *project formulation*, can facilitate private sector participation, reduce cost of access and improve quality. So, public-private partnerships can work only if public sector governance is strong. Given strong public sector governance, privatisation stimulates efficiency because it ties performance to remuneration.

As is clear, it is quite feasible to privatise the running of tube-wells that is known to be a technically simple and not very time-consuming job. In many instances, as in the past, in the LMC, private tubewell operators may include individual shopkeepers, housewives, or senior citizens, in return for a small amount of income. This system, when compared to the relatively higher salaries to government employees as tubewell-operators in return for poor services, is certainly welcome and will act as a trigger of change and better service. In addition to the monetary benefits, privatisation can bring about the much needed diversity in skills for service delivery. In the past, traditionally the municipal corporation has been unable to attract the skills needed for doing various jobs. Even if available, they tend to be scarce because of various reasons: one is the monetary cost associated with their recruitment. A second reason is the constant spatial expansion of the LMC. Because of these reasons, privatisation can act as a trigger for financial as well institutional reform in LMC.

Privatisation has been introduced by the LMC in the running of tube wells, disposal works, and desilting of sewers. Currently, a large number of tube wells (240

out of 350) are entrusted by LMC to private operators for operation and maintenance. The work of desilting interceptor sewers was given on contract by LMC during 1996-97.

Public participation

Where accountability exists, there service delivery is likely to be successful. The question is: do mechanisms or fora for grievance redressal and information sharing exist in Ludhiana? There are no NGOs or consumer organisations that deal with public service delivery issues in Ludhiana. The privatisation of tubewell operation is an example of attempts to involve citizens in the delivery of public services. Although public services and their delivery/effectiveness are debated among the elitist groups of the city, there is no systematic discourse on the delivery of various services.

The media can do much to disseminate information and improve local government performance in public service delivery. Despite the city's above average literacy, total newspaper circulation and readership in Ludhiana is 65,700 (with Hindustan Times being the leader with circulation of 43,000, followed by the Tribune (circulation of 19,700), trailed by the Indian Express a distant third at a circulation of 3,000). This total circulation and readership covers only one-fourth of the city's households in 2001. So it is not clear what the incentives are for the policymaker cum service provider to be accountable to the clients.

Currently a major problem with the LMC functioning is the lack of public participation or discourse in budgeting. Ludhiana is conspicuous by its absence of NGOs doing any work in the public service areas. Certainly better information to the public and their participation in the provision of various services is likely to act as a rapid trigger for reform. Some initiatives here could be to enable web-presence of LMC budgets, its priorities and public discourse regarding the various problems associated with service delivery.

Master plan

Providing statutory status to the current Master Plan will provide signals regarding its mandatory nature and enforce it better. This is likely to act as a trigger for bringing about land use reform in the city. This would ensure balanced allocation of resources to land uses that need them the most and also plan for the city's future development in a systematic manner. Further, spatial concentration of industry would have advantages for efficient sewerage disposal. Finally, a comprehensive plan would enable the better estimation of demand for various services in different parts of the city, and the planning of infrastructure. Such enforcement would trigger a process that would narrow the demand-supply gap in the delivery of various services.

Local autonomy

Currently there are some institutional arrangements that impinge on the ability of the local government to influence policy pertaining to the development of water, sewerage, and land use. It may be recalled that the PWSSB and LMC are both actors in the water and sewerage arena currently. Whereas in the case of land use, city improvement is only a discretionary function of the city, which is the reason why LIT is not in a financially good position, having been denied its share from LMC revenues. Autonomy to these local government departments will trigger a process of institutional reform. This would mean that the PWSSB would not step in the development, planning of water supply and sewerage in the LMC, honoring the LMC's responsibility accorded by the *Punjab Municipal Corporation Act*, since local autonomy is desirable in projects of a local nature. Specific gaps such as lack of technical expertise at the LMC can be outsourced so that private services can be effectively utilised. Further, in the case of land use, the LIT has specific investment needs, which if given autonomy in city development, can act as the trigger for land use improvements in the city, much needed.

5. Reform Agenda

Undeniably a reform agenda for Ludhiana should include those items that are currently bottlenecks in the effective delivery of services. The first one is getting the institutional arrangements clear for the provision of water and sewerage services and land use. Here local autonomy is the desirable agenda, as highlighted above. For the provision of local autonomy to the LIT in city land use planning and improvement, at the minimum, the dues from LMC to LIT must be paid back. Cumulated, this is roughly Rs.467 million.

Service quality

Further, the sewerage treatment plant envisaged already under the SAP is well the first step towards ensuring water quality. More importantly, the cleaning of the Buddha *nullah* is imminently required. There are proposals to cover the *nullah* with concrete and turn it into a public recreation facility. For this, financial assistance is required. Finally, the water pipes and sewerage pipes in the old city are 70 years old and have outlived their capacity. Hence they need to be replaced. The city needs a better storm water drainage system. Currently only 10 percent of the city is covered. These are crucial for better quality of civic services.

Comprehensive plan and traffic management

As highlighted, comprehensive planning is required to better estimate the demand for and supply of various services. Until this is done, the service arrangements may not be foolproof. Further, the high vehicle density (higher than all other districts and the state average) calls for adequate traffic management. This requires spending on broadening of roads to include lanes, better O&M of existing roads, and better management of flyovers. According to estimates, these projects along with those required for replacement of water and sewer pipes, and cleaning of Buddha *nullah* need funding of roughly Rs.1000 crore.

Management of finances

As has been highlighted, a substantial part of LMC's reform rests on its ability to manage finances once octroi is abolished. This is a challenge because financial management requires many unpopular policies that bite the bullet. These include raising water charges, taxing currently exempt residential property, and better monitoring and compliance to ensure proper assessment of taxed property. Further, privatisation might be the next step to resolving many financial problems – reduction in recruitment of redundant public sector labour force, and ensuring payments for services delivered.

One important issue in financial reform is the propensity to raise user charges. For instance, is this a victim of political economy? We find that the LMC does need state approval for all tariff revisions. Sometimes it is the state of Punjab rather than the LMC that frequently revises various user charges.

Moreover, is water an issue for reform or for increasing the user charge? It may not be immediately clear what is the extent of users' willingness to pay for better quality of water. Now almost every household has some means of purifying their water (e.g., filter, aquaguard) so it is unclear whether they would pay higher user charges for better quality of water. Other options exist for households that can afford to buy bottled water. Studies develop empirical measures of willingness to pay by households for better water quality in Kolkata (*see Roy et. al., 2004*), taking into account expenses made by households on purification mechanisms. At the industry-level, discussions with industry representatives suggest that large units are willing to pay a higher charge for various services by the LMC, provided certain quality standards are maintained.

Note that transition from a high to a lower or no user charge regime is smoother than would be the case *vice-versa*. As the WDR 2004 points out, it might well be the case that charging for these services encourages consumer monitoring of service quality. Hence the potential for increasing user charges for appropriate sections of the users, should be tapped by the LMC. Further, a formal evaluation of the various services through a survey of users/clients is urgently needed in the LMC context, as with other municipalities, to ensure that client preferences are paid heed to. Until this is done, there is no guarantee that the present service arrangements are fool-proof.

Leadership is quite important for urban reform as it can thwart or motivate various reform initiatives – public or private participation in service delivery, greater transparency and accountability in procedures, and good governance. The LMC leadership, for instance, recognises that consumers are unwilling to pay increased user charges, for services that would not be very different (e.g., water which is purified by them anyway) after the increase. Again, something of interest to note is that according to the leadership, there is no innovation in raising user charges, and real reform lies in better administration and cutting down of costs. The LMC even seemed to be moving toward a single lump-sum tax (a sum-total of all taxes – octroi, property tax and other city-level taxes) per household.⁴ We find that the need for leadership is for someone that can rise above the short-run demands of populism and take urban reform further in the medium to longer-run.

⁴ Imagine the costs of administering such a tax. A household tax that needs to be revised has to take into account changes in the composition of every household in the city, almost on an annual basis!

Summary of investment options

Investment agenda	Funding required (Rs.)
LIT	467000000
Debt repayment	460764000
Traffic management	
Storm water system	1000000000
Lines for sewage in old city	
Replacement of old water pipes	
Cleaning of Budha <i>nullah</i>	
Total	10927764000

The investment options presented above for the MUD, Gol, are approximate, being based on discussions the NIPFP team has had with the LIT, LMC and analysis of the repayment of loans and existing payment plan for debt. They represent the minimum funding needs of the city.

Annexures

Annexure A

List of meetings in Ludhiana

1. Municipal Commissioner, Ludhiana Municipal Corporation.
2. A team of faculty from Punjab Agricultural University.
3. S.P. Karkara, former Commissioner, Ludhiana Municipal Corporation, and Member, Second State Finance Commission.
4. V.K. Goyal, CEO, Vardhman Mills.
5. Ashok Singh Garcha, Chairman, Ludhiana Improvement Trust.
6. Sandeep Kapur, Ludhiana Management Association.
7. Ludhiana Town and City Planning Department.
8. Punjab Water Supply and Sewerage Board, Ludhiana.
9. Punjab State Pollution Control Board.
10. Telephonic discussions with Ludhiana's former Commissioner, S.S. Sandhu.

List of meetings with resource persons in Delhi for Ludhiana and Rajkot

1. Representative, Financial Institutions Reform and Expansion Project
2. Representative, Cities Alliance

Annexure B

Databases

1. *Municipalities in India: The Devolution Paradox*, based on a study of the Implications of The Constitution (Seventy-fourth Amendment) Act, 1992, for Efficient Urban Management and Provision of Urban Environmental Infrastructure by Municipalities in India: Involving case studies in Tamil Nadu and Punjab. Sponsored by Regional Urban Development Office of the United States Agency for International Development, New Delhi, Volume 3 of 3. Published by the Times Research Foundation, November 1997.
2. *Status of Urban Water Supply Sewerage and Master Plan* for cent percent coverage with water supply, sewerage and roads of urban areas of Punjab, Punjab Local government Department and Punjab Water Supply and Sewerage Board.
3. *Comprehensive Traffic and Transportation Plan* for Ludhiana City.
4. Report regarding *improving the access of urban poor to basic services in Ludhiana* that was completed a year ago (in February 2003) completed by a consulting firm, IPE.
5. Newspaper clips regarding the report in (4).
6. Excerpts from a report that discusses the lessons learnt from a project pertaining to the support they provided to the MCL for *city-wide upgrading through improved access to basic services in Ludhiana* (March 2004).
7. *Presentation* prepared by the earlier commissioner of the city (Dr.Sandhu), which provides information regarding various municipal services.
8. Information pertaining to urban innovations in the city, of a draft proposal for *serving under-served settlements in Ludhiana* (June 2001).
9. Chapter on *Urban Scenario* in Ludhiana, prepared by ICRA, for its rating purposes.
10. Census of India 1991. Series 28 – Ludhiana (Part VA and VB-D Series) *Migration Tables*, Chandigarh, Punjab: Directorate of Census Operations.
11. Census of India 1991. Series 20 – Part IVA-C Series, *Socio-Cultural Tables*, Chandigarh, Punjab: Directorate of Census Operations.
12. Data from Ludhiana's District Industries Centre and District Statistics Handbook.
13. Statistical Abstract of Punjab.
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15. Bishnoi, S.R. 2002. "Spatial and depth-wise ground water quality variation in Punjab," *Proceedings of a Conference on the State of Ground Water in Punjab*, p.94-103, Department of Soils, Punjab Agricultural University, May.
16. Mani, Muthukumara, Sheoli Pargal and Mainul Huq. 1996. "Does environmental regulation matter?" The World Bank, November.
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18. Sridhar, Kala S. 2003. "Firm Location Decisions and Impact on Local Economies," *Economic and Political Weekly* 38 (39) September 27, 2003: 4121-30.
19. World Bank, 2002. *Improving the Investment Climate in India*. Washington, D.C.: The World Bank.
20. World Bank, 2004. *World Development Report 2004*. Washington, D.C.: The World Bank.

**Table A1: LMC General Budgets (General, Water, and Sewer Combined),
1997-98 to 2003-04**

Ludhiana M. Corporation	Income/Expenditure in Rupees Million						
	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04
Income							
(Gen.+Water+Sew.)							
Total receipts	992.17	1242.38	1884.52	1901.38	2030.90	2171.37	1996.57
Revenue receipts	988.85	1238.17	1680.88	1854.82	1892.80	2080.36	1983.10
Own revenue receipts	824.63	1061.37	1452.53	1687.33	1610.89	1695.08	1836.61
State transfers	147.02	155.02	209.30	129.61	246.64	361.95	106.84
Other receipts	13.20	18.67	18.50	33.61	30.12	19.91	35.87
Capital receipts	3.32	4.21	203.63	46.56	138.10	91.01	13.48
Expenditure							
(Gen.+Water+Sew.)							
Total expenditure	934.34	1191.76	1830.99	1966.56	1934.05	1907.04	2013.42
Revenue expenditure	690.78	851.98	1004.08	1224.25	1234.33	1271.17	1429.15
Establishment & salaries	379.39	590.82	595.23	692.63	726.14	722.23	779.97
Operation & maintenance	311.39	261.16	408.84	531.62	508.19	548.95	649.17
Capital expenditure	243.56	339.78	826.92	742.31	699.72	635.87	584.27
Development works	217.88	320.35	795.02	717.23	674.43	629.15	576.80
Others	25.68	19.43	31.89	25.08	25.29	6.72	7.47
Income-Expenditure	57.83	50.62	53.52	-65.18	96.86	264.33	-16.84

**Table A2: LMC General (General, Water, and Sewer Combined) Budgets: Nominal Per
Capita Income/Expenditure**

	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04
Income							
Total receipts	778.36	947.09	1395.97	1362.94	1414.61	1469.67	1313.14
Revenue receipts	775.76	943.88	1245.12	1329.57	1318.42	1408.07	1304.28
Own revenue receipts	646.93	809.10	1075.97	1209.51	1122.06	1147.30	1207.93
State transfers	115.34	118.17	155.04	92.91	171.79	244.98	70.27
Other receipts	10.35	14.23	13.70	24.09	20.98	13.48	23.59
Capital receipts	2.61	3.21	150.84	33.38	96.19	61.60	8.86
Expenditure							
Total expenditure	733.00	908.50	1356.32	1409.67	1347.15	1290.77	1324.22
Revenue expenditure	541.92	649.48	743.78	877.57	859.76	860.38	939.95
Establishment & salaries	297.63	450.39	440.92	496.49	505.79	488.83	512.99
Operation & maintenance	244.29	199.09	302.85	381.08	353.98	371.55	426.96
Capital expenditure	191.07	259.02	612.54	532.10	487.39	430.38	384.27
Development works	170.93	244.21	588.92	514.12	469.77	425.84	379.36
Others	20.15	14.81	23.62	17.98	17.61	4.55	4.91

Table A3: LMC General (General, Water, and Sewer Combined) Budgets: Percentage Composition of Revenue income/Expenditure

	1997- 98	1998- 99	1999- 2000	2000- 01	2001- 02	2002- 03	2003- 04
Income							
Total receipts							
Revenue receipts	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Own revenue receipts	83.39	85.72	86.41	90.97	85.11	81.48	92.61
State transfers	14.87	12.52	12.45	6.99	13.03	17.40	5.39
Other receipts	1.33	1.51	1.10	1.81	1.59	0.96	1.81
Capital receipts							
Expenditure							
Total expenditure	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Revenue expenditure	73.93	71.49	54.84	62.25	63.82	66.66	70.98
Establishment & salaries	40.60	49.58	32.51	35.22	37.54	37.87	38.74
Operation & maintenance	33.33	21.91	22.33	27.03	26.28	28.79	32.24
Capital expenditure	26.07	28.51	45.16	37.75	36.18	33.34	29.02
Development works	23.32	26.88	43.42	36.47	34.87	32.99	28.65
Others	2.75	1.63	1.74	1.28	1.31	0.35	0.37

Table A4: LMC General Budgets (General, Water, and Sewer Combined): Constant Per Capita Revenue and Expenditures

	1997- 98	1998- 99	1999- 2000	2000- 01	2001- 02	2002- 03	2003- 04
Income							
Total receipts	778.36	848.73	1197.68	1109.46	1095.42	1095.91	944.21
Revenue receipts	775.76	845.85	1068.26	1082.29	1020.93	1049.97	937.84
Own revenue receipts	646.93	725.07	923.14	984.56	868.88	855.52	868.56
State transfers	115.34	105.90	133.02	75.63	133.03	182.68	50.53
Other receipts	10.35	12.75	11.76	19.61	16.24	10.05	16.96
Capital receipts	2.61	2.88	129.41	27.17	74.49	45.93	6.37
Expenditure							
Total expenditure	733.00	814.14	1163.66	1147.49	1043.18	962.50	952.18
Revenue expenditure	541.92	582.03	638.13	714.35	665.76	641.57	675.87
Establishment & salaries	297.63	403.61	378.29	404.15	391.66	364.51	368.86
Operation & maintenance	244.29	178.41	259.83	310.20	274.10	277.06	307.00
Capital expenditure	191.07	232.12	525.53	433.14	377.41	320.93	276.31
Development works	170.93	218.84	505.26	418.50	363.77	317.54	272.78
Others	20.15	13.27	20.27	14.63	13.64	3.39	3.53

**Table A5: LMC General, Water, and Sewerage Budgets Disaggregated:
Income and Expenditure**

Income/Expenditure in rupees million

	1997- 98	1998- 99	1999- 2000	2000- 01	2001- 02	2002- 03	2003- 04
Income							
<i>General Budget</i>							
Total receipts	923.01	1151.36	1814.35	1727.40	1732.11	1916.52	1761.47
Revenue receipts	919.69	1147.15	1610.72	1680.84	1717.24	1896.95	1747.99
Own revenue receipts	759.47	973.46	1382.92	1517.62	1440.49	1515.08	1605.27
State transfers	147.02	155.02	209.30	129.61	246.64	361.95	106.84
Other receipts	13.20	18.67	18.50	33.61	30.12	19.91	35.87
Capital receipts	3.32	4.21	203.63	46.56	14.88	19.57	13.48
<i>Water and Sewerage Budget</i>							
Total receipts	69.16	91.02	70.17	173.98	298.79	254.85	235.11
Revenue receipts	69.16	91.02	70.17	173.98	175.57	183.41	235.11
Own revenue receipts	65.15	87.91	69.61	169.71	170.41	180.00	231.34
Capital receipts	0.00	0.00	0.00	0.00	123.23	71.44	0.00
Expenditure							
<i>General Budget</i>							
Total expenditure	705.32	904.10	1353.17	1492.97	1383.86	1404.17	1389.75
Revenue expenditure	512.00	624.20	741.40	958.45	890.84	900.22	967.98
Establishment and salaries	299.26	471.50	471.20	561.53	580.57	570.65	613.02
Operation and maintenance	212.74	152.71	270.20	396.91	310.28	329.57	354.96
Capital expenditure	193.32	279.89	611.76	534.53	493.02	503.95	421.77
Development works	167.63	260.47	579.87	509.45	467.73	497.24	414.30
Others	25.68	19.43	31.89	25.08	25.29	6.72	7.47
<i>Water and Sewerage Budget</i>							
Total expenditure	229.02	287.66	477.83	473.59	550.19	502.87	623.66
Revenue expenditure	178.78	227.78	262.68	265.80	343.48	370.96	461.16
Establishment and salaries	80.13	119.32	124.03	131.10	145.57	151.58	166.95
Operation and maintenance	98.65	108.46	138.65	134.71	197.91	219.38	294.21
Capital expenditure	50.24	59.88	215.15	207.78	206.70	131.91	162.50
Development works	50.24	59.88	215.15	207.78	206.70	131.91	162.50

Table A6: LMC General, Water, and Sewerage Budgets Disaggregated: Per Capita Income and Expenditure

Per capita at nominal prices in rupees							
	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04
Income							
<i>General Budget</i>							
Total receipts	724.11	877.70	1343.99	1238.23	1206.49	1297.18	1158.51
Revenue receipts	721.50	874.49	1193.15	1204.86	1196.13	1283.93	1149.65
Own revenue receipts	595.81	742.09	1024.41	1087.86	1003.36	1025.47	1055.79
State transfers	115.34	118.17	155.04	92.91	171.79	244.98	70.27
Other receipts	10.35	14.23	13.70	24.09	20.98	13.48	23.59
Capital receipts	2.61	3.21	150.84	33.38	10.36	13.25	8.86
<i>Water and Sewerage Budget</i>							
Total receipts	54.25	69.39	51.98	124.71	208.12	172.50	154.63
Revenue receipts	54.25	69.39	51.98	124.71	122.29	124.14	154.63
Own revenue receipts	51.11	67.01	51.56	121.65	118.70	121.83	152.15
Capital receipts	0.00	0.00	0.00	0.00	85.83	48.35	0.00
Expenditure							
<i>General Budget</i>							
Total expenditure	553.33	689.21	1002.37	1070.19	963.92	950.40	914.04
Revenue expenditure	401.67	475.84	549.20	687.03	620.51	609.30	636.64
Establishment and salaries	234.77	359.43	349.05	402.52	404.39	386.24	403.18
Operation and maintenance	166.89	116.41	200.15	284.51	216.12	223.06	233.46
Capital expenditure	151.66	213.37	453.17	383.16	343.41	341.10	277.40
Development works	131.51	198.56	429.54	365.18	325.80	336.55	272.48
Others	20.15	14.81	23.62	17.98	17.61	4.55	4.91
<i>Water and Sewerage Budget</i>							
Total expenditure	179.67	219.29	353.95	339.47	383.23	340.37	410.18
Revenue expenditure	140.25	173.64	194.58	190.53	239.25	251.08	303.31
Establishment and salaries	62.86	90.96	91.88	93.97	101.40	102.59	109.80
Operation and maintenance	77.39	82.68	102.70	96.56	137.86	148.49	193.50
Capital expenditure	39.42	45.65	159.38	148.94	143.98	89.28	106.88
Development works	39.42	45.65	159.38	148.94	143.98	89.28	106.88

Table A7: LMC General, Water, and Sewerage Budgets Disaggregated: Constant Per Capita Income and Expenditures

Per capita at constant prices (1997-98) in rupees							
	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04
Income							
<i>General Budget</i>							
Total receipts	724.11	786.55	1153.08	1007.94	934.26	967.28	833.02
Revenue receipts	721.50	783.67	1023.67	980.77	926.23	957.40	826.65
Own revenue receipts	595.81	665.02	878.90	885.53	776.96	764.67	759.16
State transfers	115.34	105.90	133.02	75.63	133.03	182.68	50.53
Other receipts	10.35	12.75	11.76	19.61	16.24	10.05	16.96
Capital receipts	2.61	2.88	129.41	27.17	8.02	9.88	6.37
<i>Water and Sewerage Budget</i>							
Total receipts	54.25	62.18	44.59	101.51	161.16	128.63	111.19
Revenue receipts	54.25	62.18	44.59	101.51	94.70	92.57	111.19
Own revenue receipts	51.11	60.05	44.24	99.03	91.91	90.85	109.40
Capital receipts	0.00	0.00	0.00	0.00	66.46	36.06	0.00
Expenditure							
<i>General Budget</i>							
Total expenditure	553.33	617.63	859.98	871.15	746.42	708.69	657.24
Revenue expenditure	401.67	426.42	471.19	559.26	480.50	454.34	457.77
Establishment and salaries	234.77	322.10	299.47	327.66	313.14	288.01	289.91
Operation and maintenance	166.89	104.32	171.72	231.60	167.35	166.33	167.87
Capital expenditure	151.66	191.21	388.80	311.90	265.92	254.35	199.46
Development works	131.51	177.94	368.53	297.26	252.28	250.96	195.93
Others	20.15	13.27	20.27	14.63	13.64	3.39	3.53
<i>Water and Sewerage Budget</i>							
Total expenditure	179.67	196.51	303.68	276.34	296.76	253.80	294.94
Revenue expenditure	140.25	155.61	166.94	155.10	185.27	187.23	218.09
Establishment and salaries	62.86	81.51	78.82	76.49	78.52	76.50	78.95
Operation and maintenance	77.39	74.09	88.11	78.60	106.75	110.72	139.14
Capital expenditure	39.42	40.91	136.74	121.24	111.49	66.58	76.85
Development works	39.42	40.91	136.74	121.24	111.49	66.58	76.85

Table A8: LMC General, Water, and Sewerage Budgets Disaggregated: Percentage Composition of Revenue Income and Expenditure

	1997- 98	1998- 99	1999- 2000	2000- 01	2001- 02	2002- 03	2003- 04
Income							
<i>General Budget</i>							
Revenue receipts	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Own revenue receipts	82.58	84.86	85.86	90.29	83.88	79.87	91.84
State transfers	15.99	13.51	12.99	7.71	14.36	19.08	6.11
Other receipts	1.43	1.63	1.15	2.00	1.75	1.05	2.05
<i>Water and Sewerage Budget</i>							
Revenue receipts	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Own revenue receipts	94.21	96.58	99.21	97.55	97.06	98.14	98.40
Expenditure							
<i>General Budget</i>							
Revenue expenditure	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Establishment and salaries	58.45	75.54	63.56	58.59	65.17	63.39	63.33
Operation and maintenance	41.55	24.46	36.44	41.41	34.83	36.61	36.67
<i>Water and Sewerage Budget</i>							
Revenue expenditure	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Establishment and salaries	44.82	52.39	47.22	49.32	42.38	40.86	36.20
Operation and maintenance	55.18	47.61	52.78	50.68	57.62	59.14	63.80

**AN ASSESSMENT OF REFORM POTENTIAL IN
RAJKOT**

Introduction

There is widespread concern that cities in India are severely stressed on account of inadequate and poor quality infrastructure and services, and that they are unable to productively absorb new activities and population. This concern is supported by the fact that aggregate investments in urban infrastructure, i.e., water and wastewater disposal services, solid waste collection and management, citywide roads, and street lighting, has been stagnating at about 2.5-2.75 percent of the total developmental expenditure, which is far below the level that is needed to wipe out the infrastructure deficit and to simultaneously provide for the requirements of fast growing urban populations. Several studies and government documents, notably the India Infrastructure Report 1996 (now needing revision) and the Ninth and Tenth Five Year Plans have referred to the problems arising out of inadequate urban infrastructure and services, and underlined the need to accelerate investment in them. These have also referred to gross inefficiencies in service delivery and management, and called for a closer examination and review of the existing systems and procedures that are constraining efficient delivery of urban services.

Seized of these problems, the Government of India has, in recent years, taken important initiatives to explore the use of incentives for the state and city governments to undertake long-standing reforms that impinge on infrastructure and service delivery and management, including geographical and functional fragmentation in city management, weak fiscal base and rating, and inefficient service delivery systems. These initiatives which have been brought forward in the form of Urban Reform Incentive Fund (URIF), the proposed City Challenge Fund (CCF) or its variant, and pool financing are designed to provide incentives in the form of grants to enable states and cities identify a reform agenda for improving the management of cities and city's infrastructure. Prepared in this context, this study on Rajkot looks at the city and city's infrastructure, its current level of adequacy and maintenance, and the nature of pressures that city's infrastructure is confronted with. The study attempts to assess the role of Rajkot Municipal Corporation (RMC) in service provisioning, financing and management together with that of other public institutions concerned with services like water and waste water and developed land, and of the private sector and the conditions under which it has been brought in. Pursuant to the terms of reference, the study report provides a sense of what might be areas of interventions to put Rajkot city on a fast track, orderly growth route.

The report uses a somewhat simple framework of analysis: why supply mechanisms do not respond to the growing demand for infrastructure and services or the lags in infrastructure and services caused by persisting population growth and other factors bearing on infrastructure demand. The framework recognises that supply responses are a function of complex factors that extend beyond the

institutional and financial arrangements, but being a rapid assessment, this study limits itself to looking at the institutional and financial factors.

In accordance with the design, the report is based on an examination of budgets provided by the Rajkot Municipal Corporation (RMC), materials made available by the Rajkot Urban Development Authority (RUDA), and other reports and studies prepared by institutions such as the CEPT, academic dissertations on Rajkot, and interviews with the Rajkot Chamber of Commerce and other stakeholders.

The report is in three parts: section 2 provides an overview of the city's profile, comprising the demographic, economic, and infrastructural attributes. Section 3 discusses the respective roles of institutions and organisations that are responsible for the growth and development of Rajkot city and city's infrastructure, and as well as their roles in financing and managing infrastructures. The developmental challenges and options are discussed in section 4 of the report.

2. The City of Rajkot Demographic, Economic, and Infrastructure Attributes

The City

Founded in 1608 as a fortified city on the banks of river Aji, Rajkot over the history has served many needs and situations – as a princely state in the early years of the 19th century, as a city developed by the British during 1820-1870, as the capital of the former Saurashtra state, and now as a centre of considerable importance in the state of Gujarat, with extensive interests in trade, industry, education, entertainment and communications. It has countrywide rail and road linkages.

Demography

Rajkot has, over the decades, grown at impressive rates, enabling it to rise from a small town of 36,151 persons in 1901 to an urban agglomeration of over one million persons in 2001 (10,02,160 according to the 2001 census). It now forms a part of the club of 35 one-million population cities in India. The population growth of Rajkot has, however, been uneven; during 1941-51, it registered an extraordinarily high rate consisting essentially of refugee migrants from Pakistan. A second period of high growth during 1991-2001, was driven principally by the incorporation of new settlements into the Rajkot municipal jurisdiction. Incorporation or merger* of such settlements — the census calls them outgrowths — represent a phenomenon that now characterises several of India's metropolises and large cities, and present a challenge of how best to organise and manage services in the merged areas. In Rajkot, as this chapter explains in some detail, this process of urban consolidation is behind many of the most significant urban development challenges the city faces today.

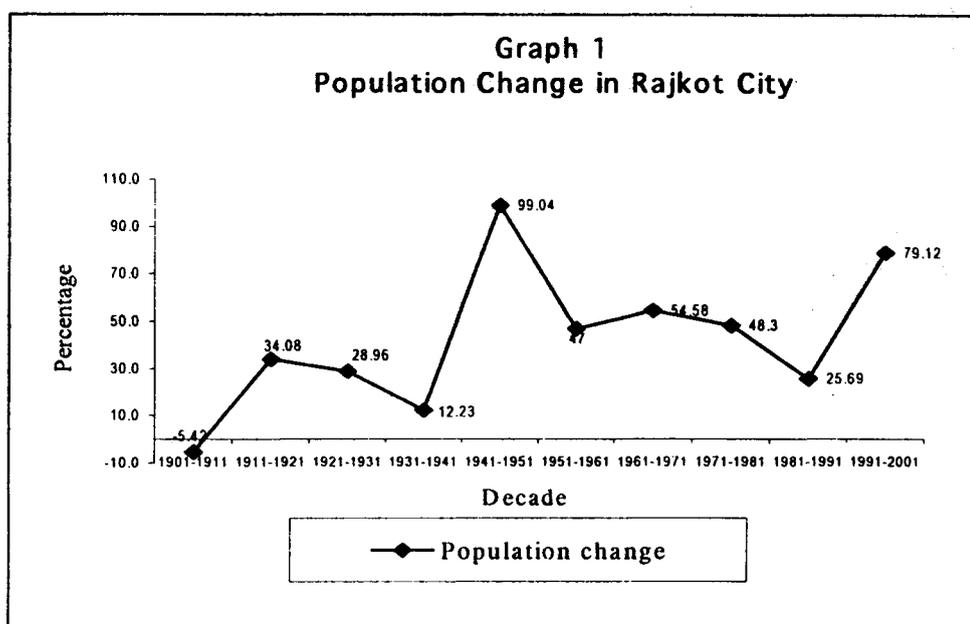
* An urban agglomeration is a typical Indian concept, similar to what other countries would call, a metropolis. An urban agglomeration in India would comprise at least one central city—normally with a population in excess of 100,000, and several smaller cities and villages.

* City-county merger or consolidation is a major issue in many developed and developing countries, and is linked with questions of scale, efficiency, and management. It is not a routine business of expanding or changing boundaries.

Table 1: Population Change in Rajkot

Constituents of Rajkot Urban Agglomeration (UA)	Population		% growth 1991-2001
	1991	2001	
Rajkot UA	651007	1002160	53.1
Rajkot MC	556137	966642	72.8
Kotharia OG	-	11016	-
Anandput OG	4923	7272	47.7
Madhapur OG	3134	3744	19.5
Bedi OG	-	3312	-
Mota Mava OG	1953	3046	55.9
Manharpur OG	1136	2793	145.9
Munjka OG	1498	2192	46.3
Vavdi OG	1382	2143	55.1
Mavdi OG*	22243	-	-
Nana Mava OG*	16610	-	-
Raiya VP*	41991	-	-

Note: * Merged with the Rajkot Municipal Corporation (RMC).
 UA: Urban Agglomeration MC: Municipal Corporation
 OG: Outgrowth VP: Village Panchayat



Rajkot's demographic growth is accompanied by a phenomenal growth in slum population and illegal and unauthorised settlements. Nearly 20 percent of city's population is estimated to be living in slums, which, like in other cities, are devoid of basic services and infrastructure such as water, wastewater disposal facilities, and road networks. Incorporation of new settlements into the municipal limits in 1999 has

affected the social composition of Rajkot city; the percentage of those who live in slum and unauthorised settlements has risen from 20 percent in the pre-1999 period to about 30 percent now, suggesting insufficient control over lands therein by the Rajkot Urban Development Authority (RUDA).

Economic base

Rajkot has a strong manufacturing economic base, with a market that extends not only beyond the state of Gujarat, but even the national boundaries. In its early history, Rajkot was organised around the establishment of cloth mills. More recently, the emphasis has shifted to small and medium industries, dominated by foundries, oil engine manufacture, machine tools, engineering and automobile works, castor oil processing, gold and silver jewellery, handicrafts, readymade ladies garments, spices, medicines, and wall clocks. Manufacturing activities are concentrated in two main industrial estates namely, Aji industrial estate and Bhaktinagar industrial estate; in addition, many small units are scattered through the city.

For its centralised location, Rajkot has a history of being a vibrant trading centre for the Saurashtra region. It boasts of a stock exchange, which is linked with the exchanges in Mumbai, Kolkata, and New Delhi. Rajkot also serves as a market town for agricultural produce from the surrounding areas. Although Saurashtra region is a water scarce region, groundnut, bajra, cotton as well as vegetables are grown by tapping the limited groundwater available. Groundnut and oil seeds are major crops sold and processed in Rajkot. There are currently five large edible oil mills and more than 25 small mills in the city.

Table 2: Activity Distribution in Rajkot

Activity	% of workers
Agricultural and allied activities	3.8
House hold industries	3.0
Manufacturing (other than HH)	28.2
Construction	5.5
Trade and commerce	21
Transport	10.2
Services	28.4
Total	100.0

Source: RMC, 2001.

Infrastructure

Water supply

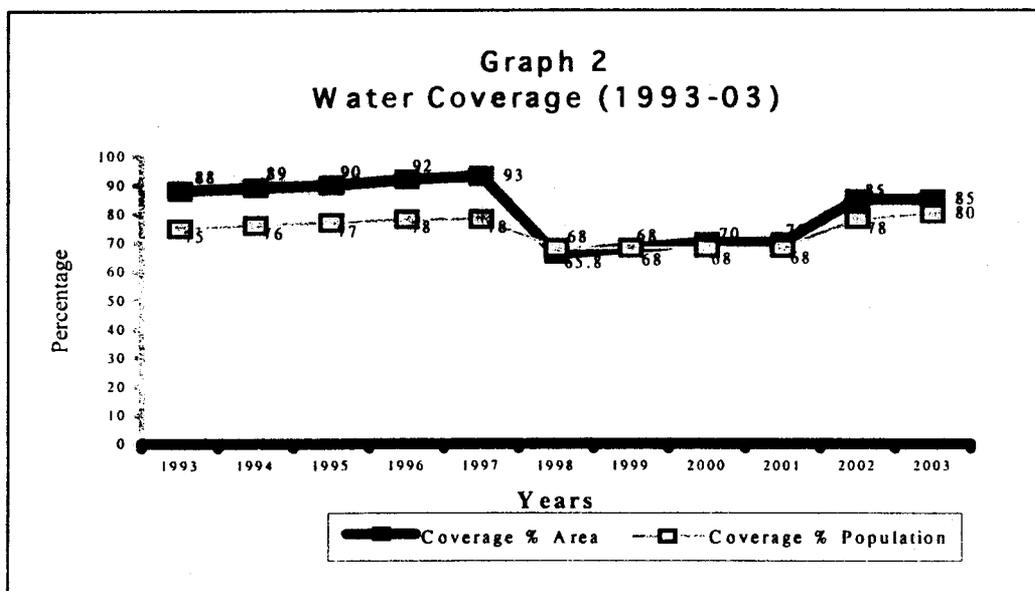
The availability of water is arguably the greatest long-term problem facing Rajkot. The city lies in a water deficit region; rains are irregular and there is no perennial source of water. Since the city lies in a hardrock area, the availability of groundwater is limited. Because of this, there is considerable variation in the per capita water availability even though municipal water networks are claimed to reach 80 percent Rajkot's population – 90 percent in the old city area and 70 percent in the newly-merged areas. Water is released for 20 minutes a day which, the RMC contends, delivers 79.4 litre per capita per day (lpcd). According to the Chamber of Commerce, the municipal network supplies are generally supplemented by water tankers and deep tube-wells. During summer months, even slum dwellers are reported to buy water from the private sources.

The city has an overall water shortage of about 56 million litre per day (mld), when leakages that are of the order of 27 percent and a national standard of 135 lpcd are factored in. The Rajkot Municipal Corporation (RMC) plans to draw 160 mld from the Narmada river at a price of about Rs.6/kl (excluding any capital expenditure) and Rs.9 if capital expenditure is included. The stability of this source of water is linked with the state-level political compulsions that are beyond the control of RMC. Also, if the source is to be sustained, water pricing will be a major issue.

Table 3: State of the Infrastructure: Water Supply

Attribute	Component	Indicator
Service delivery	Water demand	135.2 mld @ 135lpcd
	Water produced	108.8 mld
	Water supply claimed by RMC	112.22 mld @ 112 lpcd
	Water wasted due to leakages	29.4 mld
	Water discharged to the people	79.4 mld
	Water supply per capita per day	79.24 lpcd
	Coverage	Total number of house connections
Total number of stand posts		2100
Total number of hand pumps by RMC		1700
Number of tankers (10000 ltrs)		250
Percentage population having tap-based water		72%
Percentage of slum population served		91%
Percentage area covered		73%
Treatment	Percentage water being treated	78%
Storage Capacity	Percentage of water that can be stored	54%

Source: RMC and City Corporate Plan for Rajkot City, 2003 and Water Demand calculated.



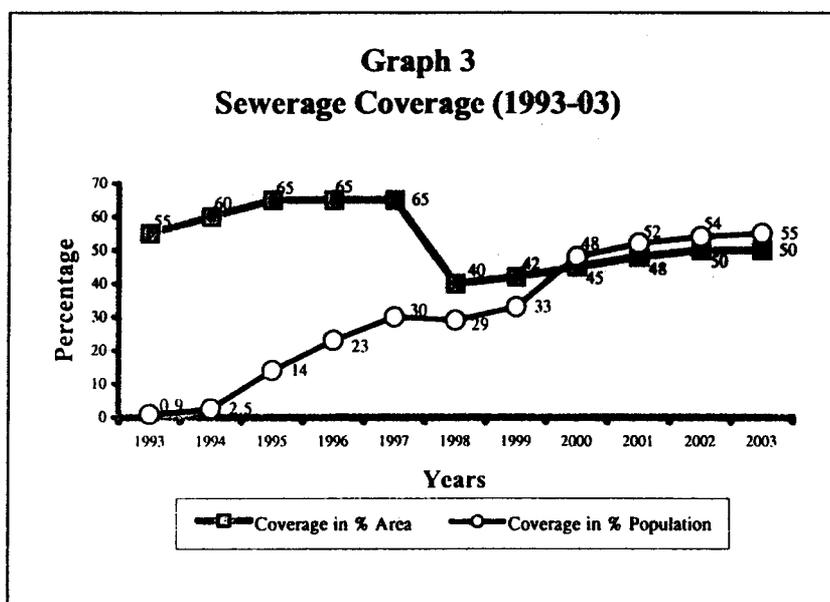
Sewerage and drainage

The sewerage network in Rajkot consisting of a 460 km. long collection system, currently serves 55 percent of city's population, although in terms of area, it remains at the same level as in 1993. Also, the sewage treatment plant has a capacity to treat only about 55 percent of the sewage that is generated in the city. The plant has, however, been non-functional for technical problems and financial constraints. A substantial portion of the sewage—approximately 35-40 mld, is discharged into open drains, *nullahs*, septic tank and soakpits, and is a major source of insanitation in the city.

Table 4: State of the Infrastructure: Sewerage

Attributes	Component	Indicator
Treatment	% of wastewater treated	55%
Service Coverage -	% of population coverage	55%
-	% of household coverage	44.43%

Source: Study estimates based on formulae suggested by CMAG Urban Indicator Programme for Rajkot.



Rajkot city relies on a natural drainage system for storm water disposal. Rajkot Municipal Corporation (RMC) considers the option of having an underground drainage system as too expensive in relation to its potential use. It justifies its choice not to invest in underground drainage for reasons that Rajkot is a low rainfall area and that it has a natural drainage system; however, it has under consideration a study to assess the costs and benefits of such a system.

Solid waste

Rajkot city generates about 470 metric tonne of solid waste/day of which the RMC and its extended arms are able to collect about 350 metric tonne. The extended arm of RMC includes the private contractors and community based organisations. Primary collection of waste is done by about 3000 *safai karamcharis* of the corporation, and by private sweepers who operate in the three wards of the newly merged area. The RMC has outsourced transportation of the waste to disposal sites to private contractors in 13 out of 23 wards; municipal employees continue to be responsible for the remaining areas.

The performance of outsourcing arrangements is, however, hard to establish. One measure of effectiveness is the promptness of waste collection and transport for final disposal. Of a total of 75 percent of waste collected, only 20 percent is collected on day one, 30 percent on day two and the remaining 50 percent on days three and four, which suggests low level of performance. The Chamber of Commerce has expressed dissatisfaction with solid waste services, and observed that private contractors in the newly merged areas do no better than the municipal employees in the old city.

Table 5: State of the Infrastructure: Solid Waste Management

Attributes	Component	Indicator
Service level & coverage	% of waste collection	80%
	% of vehicle capacity to waste generated	45%
	Average spacing of waste collection bins	3.38 km./bin
Sustainability	% of capacity of waste collection bins	194
Service cost & efficiency	Average road length covered per sweeper	1100 mt.
	Manpower per tonne	0.11

Source: Study estimates based on formulae by CMAG Urban Indicator Programme for Gujarat.

Road system

With a road length of 2250 km., half of which being non-bituminous, Rajkot's road network is both inadequate and of poor quality. The traffic is multi-modal, and with no separate traffic grids, the city remains congested with the associated high costs. Two wheeler traffic and auto rickshaws dominate the traffic mix, accounting for about 65 percent of all traffic. Cars constitute only 1.5-3 percent of the total traffic. When combined with non-motorised traffic, the result is multiple forms of transportation sharing the limited roadways, with resultant loss of speed. The problem is compounded by the prevalence of uncontrolled or manually managed intersections. Rajkot has no public transport system; however, a vibrant privately operated transport network fills in to meet the mobility requirements of the city.

Table 6: State of the Urban Infrastructure: Road

Attributes	Component	Indicator
Surfaced roads	% of roads surfaced	64%
Physical coverage	Road density	20 km/sq km
	Cost per km of road length	Rs.20800/km

Source : Study estimates based on formulae suggested by CMAG Urban Indicator Programme for Gujarat.

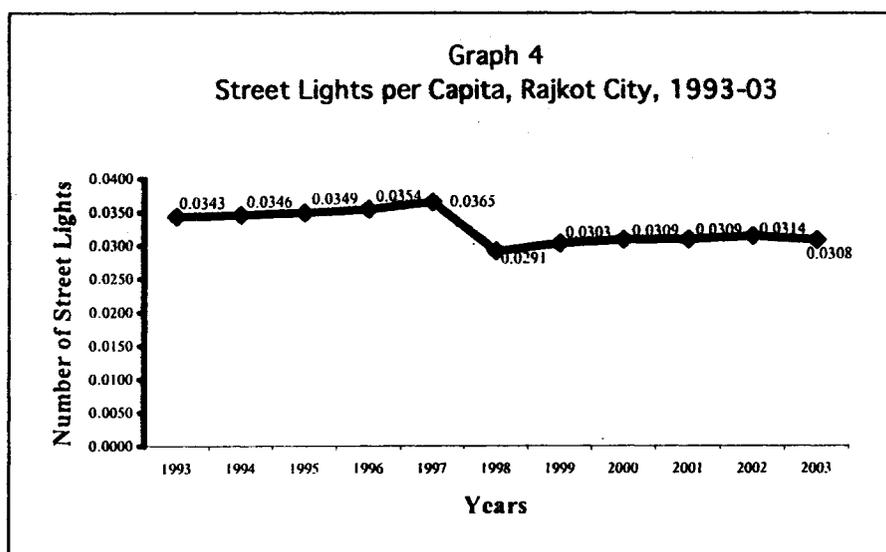
Street lighting

Street lighting is managed by the Rajkot Municipal Corporation (RMC) in conjunction with the Gujarat Electricity Board (GEB) and private contractors. The poles are owned by the GEB, while the distribution network is provided and managed by the RMC. The RMC, in turn, contracts out maintenance of street lighting to private contractors for 16 out of 23 wards. As with other services, the newly merged areas present to the RMC a formidable task in respect of street light provisioning.

Table 7: State of the Infrastructure: Street Lighting

Attributes	Component	Indicator
Street light coverage	Number of street lights per km. of road length	25
Cost	Cost per street light	Rs.1350

Source: Study estimates based on formulae suggested by CMAG Urban Indicator Programme for Gujarat.



Physical attributes and land use

Rajkot city is characterised by a pattern of multiple land uses. The total area developed for urban activities constitute 77 percent of the Rajkot Municipal Area. Residential use occupies about half of this area, while industries occupy a fifth and commercial zones occupy less than 2 percent. Although a development plan has been prepared, poor implementation and enforcement result in quite different ground realities. Rajkot is plagued by problems of informal sector including slum development,

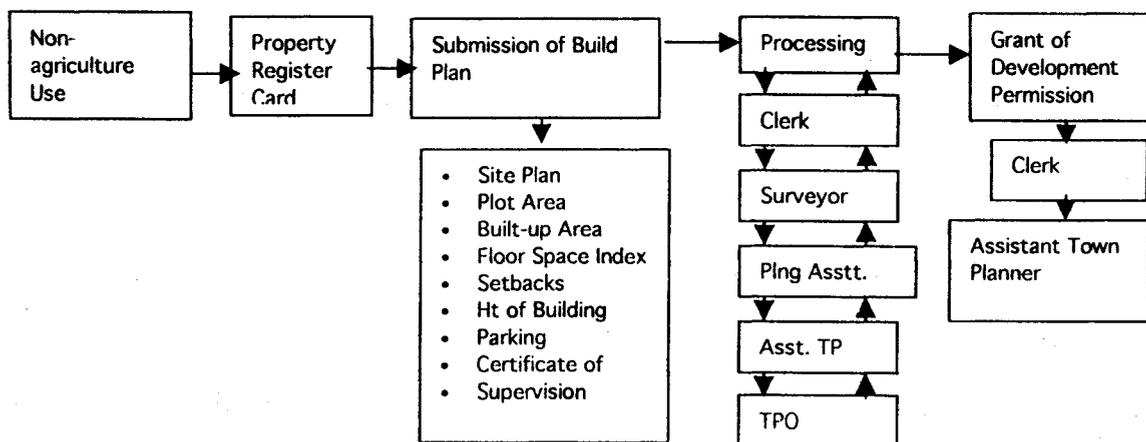
illegal colonies and commercial encroachments and a lack of industrial zoning and unplanned mixed land use.

Informal residential use

Residential use occupies almost 50 percent of the total land area, and is split into both high-density development, mostly in the older areas, and low-density development, in the newly incorporated areas. Formal residential development has been slow to develop, and now seriously lags behind the overall population growth. Informal settlements in the form of illegal and unauthorised construction have filled in the gap, and now occupy an alarmingly high 60 percent of the total residential area. Out of this, the *jhuggi-jhopri* clusters occupy 20 percent, and the rest consists of unauthorised colonies, which do not comply with the General Development Control Regulations (GDCR). According to the RMC, 75 percent of dwelling units for low-income groups, 55 percent for middle-income groups and 25 percent of high-income group housing are constructed without permission. The problem is, if anything, growing. On an average, around 6000 dwelling units are added annually to the housing stock as against 1600 applications that are received by RMC for formal approval.

A substantial portion of unauthorised construction is accounted for by what are known as “*suchit* societies”, which are planned illegal colonies constructed by converting agricultural lands to non-agricultural uses. Development of these colonies is explained by two factors: first, development permission and building applications procedures are extremely lengthy, leading households to bypass the procedures and build illegally. Second, conversion of agricultural into non-agricultural lands is a relatively simple process, and is often used for conversion into farmhouses. The RMC has no role in this process, even when it has to ultimately assume responsibility for extending services to such areas.

Figure 1: Path of Approval of Building Plan



Informal commercial use

Commercial use accounts for 1.7 percent of the total area, or 2.1 percent of the developed area. There are two wholesale markets in the city, which are supplemented by a large and vibrant informal trading sector. The informal sector predominantly large encroachments, is spread out over the entire city, with no effective regulation either by the RMC or RUDA. Importantly, there has not been any systematic discussion on understanding either the role of this sector or the alternative ways in which it can be integrated into the economy of the city.

Industrial use – the lack of zoning and conformity

There are two industrial estates developed by the Gujarat Industrial Development Corporation (GIDC): Bhaktinagar Industrial Estate and Aji Industrial Estate. In addition, Sorathiwadi had been developed by private developers. The National Textile Mill, which is non-operational, occupies a large chunk of prime land in the centre of the city.

For its historical industrial roots, industries and residences of industrial employees have grown in proximity to each other, showing itself in a mixed land use pattern. Most industrial units do not provide housing to its workers, who then resort to living in slum unauthorised settlements in a mixed land use pattern. Aji's riverbed is completely covered with slums, a typical by-product of the absence of housing for the industrial workers, which further aggravates the problem of informal housing.

In addition, the historical pattern of development has inhibited efforts at zoning. Since most of Rajkot's units are small-scale industries with smaller space, labour, and investment requirements, they have sprung up interspersed with the residential areas. This has been further propelled by rapid urbanisation, industrialisation and absence of enforcement and zoning regulations for industries. The scattered location of small-scale textile and screen-printing industries (approximately, 400), which use a variety of dyes and chemicals, reduces the possibility of setting up of common effluent treatment plants. These chemicals pollute the underground water as well as the Aji river which is a major source of water for the city. Finally, these small-scale industries within the residential areas are creating undue pressure on the already stressed infrastructure of water, sanitation and solid waste management, as well as affecting the residential character of such areas.

Public and semi-public use

Public purpose spaces include open space, parks and playgrounds, recreational spaces, education and health facilities, government offices and other institutions. The major recreational facility is the race course complex, which houses an international

cricket stadium, indoor stadium, hockey ground, football ground, a garden, and an open ground. Other recreational spaces are Shastri Maidan, Zilla Garden, Jubilee Garden and Aji dam. The percentages of public purpose space to total area and developed area are 9 percent and 11 percent respectively. Public purpose spaces are in deficit in the old city area.

What then is the city?

In sum, Rajkot city is a growing city with a strong manufacturing and trading base. The city's infrastructural services are not only inadequate but as the graphs show, their level when measured in relation to either area or population has not improved over the years. Quite the contrary; all services show a discontinuity corresponding to the additional demands of the merger in the late 1990s. The city has barely managed to hold on, in a wider sense, to the 1993 level of infrastructural services. Spatially, infrastructure pressures have risen in the older areas, and the newer areas remain grossly underserved. A significant portion of the city has grown outside of the building controls and is indicative of either the arduous procedures which households, business and industry find costly to follow, or inadequate coordination between different institutions that hold responsibilities for the growth and development of the city. The city continues to be at high risk on account of its dependence on rainwater; any reduction in such risks is dependent on the new water links and how these are fostered outside the political arena.*

* This is a typical *de soto* syndrome: doing anything legally is more cost.

3. Institutional and Financial Frameworks

Statutory and institutional framework

Land, infrastructure, and services provide the foundation for the development of a city. Their efficient and equitable provisioning is central to economic growth and poverty reduction. Within the general pattern observed over much of the country, the development and provision of land, infrastructure, and services in Rajkot is regulated by a string of laws, procedures, and government orders, whose administration and enforcement rest with the state government, city government, and specific-purpose authorities. These laws together with the *Constitution (seventy-fourth) Amendment Act, 1992* provide a framework for service provision and management in terms of the powers that the different levels of government and authorities can exercise, their territorial and functional domain, and the channels of communications between them.

Chart 1: Statutory and Institutional Framework for Land, Infrastructure, and Services

Statute	Institutional set-up
<i>The Bombay Provincial Municipal Corporation Act, 1949</i> ,* as amended for Gujarat, 1989	Rajkot Municipal Corporation (RMC)
<i>The Gujarat Town Planning and Urban Development Act, 1976</i>	Rajkot Urban Development Authority (RUDA)
<i>Gujarat Infrastructure Development Act, 1999</i>	Gujarat Infrastructure Development Board (GIDB)
<i>The Gujarat Industrial Development Corporation Act, 1962</i>	The Gujarat Industrial Development Corporation (GIDC)
<i>Gujarat Water Supply and Sewerage Board Act</i>	Gujarat Water Supply and Sewerage Board

Rajkot Municipal Corporation (RMC)

The RMC is the key institution for the provision and management of basic urban infrastructure such as water and wastewater disposal services, garbage disposal, citywide roads, and street lighting. Following the incorporation of the *Constitution (seventy-fourth) Amendment Act, 1992*, the RMC is also entrusted with two additional functions, namely, (i) planning for economic and social development, and (ii) urban

* Except in case of primary education, most of the provisions in the *Bombay Provincial Municipal Corporations Act, 1949* are based on the city of *Bombay Municipal Act, 1888*, with most lawmakers claiming that this Act has stood the test of time.

forestry, protection of the environment, and promotion of ecological aspects.* Drawing its power and authority from the *Bombay Provincial Municipal Corporation Act, 1949* as applicable to the state of Gujarat, the RMC is also responsible for a host of regulatory functions which give them enough power to regulate any activity, e.g., building permits, vending licenses, and industrial permits; however, these powers are subordinate to the provisions in some of state-level laws. Not all the functions listed in the Act are performed by the RMC.

Chart 2

Act/Authority	Functions as envisaged for the authority
<i>Bombay Provincial Municipal Corporation Act, 1949, amended for Gujarat 1989</i>	<ul style="list-style-type: none"> ▪ Managing municipal property and liabilities. ▪ Formation of public and private streets, building regulations and improvement schemes.
<p>Authority Rajkot Municipal Council (RMC)</p>	<ul style="list-style-type: none"> ▪ Watering, scavenging and cleansing of all public streets and places in the city and removal of all sweepings there from. ▪ Water works management comprising construction, management and maintenance of municipal water works and construction of new works necessary for a sufficient supply of water for public and private purposes. ▪ Collection, removal and treatment of sewage, offensive matter and rubbish. ▪ Lighting of public streets, municipal markets and public buildings vested in the Corporation. ▪ Construction and maintenance of public markets. ▪ Entertainment of a fire brigade. ▪ Construction and maintenance of public hospitals.

The corporation consists of a council of 69 members from 23 wards with a mayor as its head. Committees at the ward level are absent. Functionally the RMC is organised around a powerful standing committee with power to sanction contracts, and a number of other sectoral committees (*see* Annex 2). There is a parallel administrative structure organised around 25 sectoral departments led by a commission in whom all executive powers of the corporation vest. The capacity of this executive arm is extremely low. Of the 5000 employees, 3000 are unskilled *safai karamcharis* or cleaners. With regard to professional qualifications, the RMC includes

* The *Bombay Provincial Municipal Corporation Act, 1949* also provides for four other functions of Schedule 12 but in the category of discretionary functions.

only one chartered accountant, four MBAs, and two environmental engineers in its ranks. In addition, while it is an extremely difficult claim to substantiate, there are also indications that political connections and party political play a role in RMC staffing and promotion decisions, which undercut scope for development of a merit-based internal structure.

While difficult to ascertain in a rapid study, the political and executive wings of the RMC do not operate in concert at the level of broad direction and strategic vision. Instead the executive views the mayor and corporation members as an obstacle to its functioning which have to be side-stepped wherever possible. For their part, the elected members are adamant that there are certain political realities — such as the difficulty of full cost pricing of water services — which it is their role to transmit to the executive. More generally, the current lack of, and the difficulty of forging, a shared transformative agenda across the political and executive arms of the RMC is likely to be a substantial obstacle to development and implementation of a reform agenda.

Gujarat town planning and urban development

The *Gujarat Town Planning and Urban Development Act, 1976*, applicable to the entire state, regulates the future development of land, infrastructure and services in cities and towns; the Rajkot Urban Development Authority (RUDA) set up under the provisions of this Act, is responsible for an orderly development of Rajkot city and its environs, formulation of a master plan/perspective plan, and development of new areas with proper infrastructure and services. It formulated in 1999 a development plan for Rajkot: 2011 A.D., which is under consideration of the state government.

Chart 3

Act/Authority	Functions as envisaged for the authority
<i>Gujarat Town Planning and Urban Development Act, 1976</i>	<ul style="list-style-type: none"> ▪ Undertake the preparation of a development plan for the urban development area.
<p><i>Authority</i> Rajkot Urban Development Authority (RUDA)</p>	<ul style="list-style-type: none"> ▪ Undertake the preparation of town planning schemes in urban development areas for matters pertaining to planning, development, and use of urban land. ▪ Control the development activities in accordance with the development plan in the urban development area. ▪ Execute works in connection with water supply, disposal of sewage and provision of other services and amenities. ▪ Acquire, hold, manage and dispose the movable or immovable property as necessary. ▪ Carry out the development work in urban development areas as assigned to it by the state government. ▪ Enter into contract or arrangement with any local authority/person or organisation for development purposes.

Gujarat Infrastructure Development Board

The Gujarat Infrastructure Development Board (GIDB) set up under the *Gujarat Infrastructure Development Act, 1999* is meant to promote public-private partnership in infrastructure development. (see Annex 11) The Act provides “a framework for participation by persons other than the state government and government agencies in financing, construction and operation of infrastructure projects”.

Chart 4

Act/Authority	Functions as envisaged by the authority
<i>Gujarat Infrastructure Development Act, 1999</i>	<ul style="list-style-type: none"> ▪ Promote private sector participation in financing, construction, maintenance and operation of infrastructural facilities.
Gujarat Infrastructure Development Board (GIDB)	<ul style="list-style-type: none"> ▪ Advise the state government on matters of policies related to private-public participation. ▪ Coordinate and monitor projects.

Gujarat Industrial Development Corporation

The Gujarat Industrial Development Corporation (GIDC), set up under the *GIDC Act 1962* has a vital stake in the economic development of the state, including cities and towns, such as, Rajkot. The corporation establishes and manages industrial estates at places selected by the state government, and provides loans for the establishment of factories in such estates. The corporation enjoys power under the Act to provide amenities and common facilities in the estates and is responsible for their maintenance. The corporation has developed the two industrial areas in Rajkot, and as per the statutory provisions, is responsible for its operation and maintenance. Then there is the Gujarat Water Supply and Sewerage Board (GWSSB), which provides water to the rural areas and undertakes augmentation of water supply in selected urban areas of the state.

How does the institutional framework work in practice?

To what extent has this institutional structure helped to build, augment, and maintain the services in Rajkot? To what extent has it constrained efficient and equitable service delivery? The proliferation of Acts and corresponding issues can, and does lead to implementation problems. The existing institutional structure rests on two premises, both of which contribute to sub-optimal outcomes: (i) local governments and their interests and priorities are subordinate to larger, state-level priorities, and (ii) spatial and functional domains of the different institutions are distinct.

First, local and municipal mandates are often subordinated to state-level priorities. For example, under the *Gujarat Industrial Development Act, 1962*, the GIDC is empowered to “establish and manage industrial estates at places selected by the state government”, without requiring it to consult with the RMC, presumably on the ground that economic and industrial development is outside the purview of the municipal government. In other words, the GIDC is not accountable to local constituents. Industrial estates in Rajkot are a case in point. The industrial estates were established by the GIDC in accordance with norms that are not in conformity with those of the RMC. The RMC demands that the estates be handed over to them and that the pipes be changed before they will provide water. GIDC insists that they do not have the necessary funds to change pipes and that RMC should nonetheless provide water. As a result, the industrial estates in Rajkot are today faced with problems of water and infrastructure management within the estate areas. Such provisions in the *Gujarat Industrial Development Act* fail to recognise the role of RMC in planning for economic and social development.

Second, jurisdictional overlaps across institutions leave scope for shedding of responsibility. Both the BPMC and the GTPUDA include provisions governing water supply and sanitation, thereby conferring responsibility on both RMC and RUDA for these services. Since the GTPUDA does not specify a time frame or provide sufficient

guidance on requirements for completion of water and sanitation services, these responsibilities tend to be underplayed by RUDA. For example, as discussed further below, RUDA failed to provide these services to the “new areas” that were merged with the RMC area in 1998, leading to continued contentions by the two authorities that the failure to provide timely water and sanitation rests with the other. Since each institution is constituted under separate acts through separate processes, there has been little effort at rectifying this institutional overlap.

In addition, complex procedures require co-ordination across multiple institutions. For example, approval for town planning schemes involves the RMC, RUDA and is sent to the Gujarat State Town Planner for modification and approval as necessary. It is likely that this process is overly elaborate. Moreover, the co-ordination problem can be exacerbated by the state town planner’s lack of familiarity with the local context, which could introduce locally inappropriate decisions. Finally, the lengthy approval procedures have the perverse effect of encouraging unauthorised colonies, as the costs of formal approval are too high.

The institutional context for Rajkot’s urban development is further illuminated by a focus on two additional themes: the merger of RUDA areas into RMC, and the emergent use of public private partnerships.

The merger of RUDA areas into RMC: A major institutional challenge

In June 1998, three village areas with a population of more than 2 lakh were merged with Rajkot city, which then had a population of approximately 6.6 lakh, representing a 37 percent increase in population. This merger also increased the city’s area by 33.6 percent (see Map 1 for a visual representation of these changed boundaries). Graphs 2-4 in chapter 2 tell a story of a steep drop in levels of service provision in 1997, as the newly merged areas with highly inadequate levels of service provision were added to Rajkot. Behind this merger lies a story of institutional dissonance.

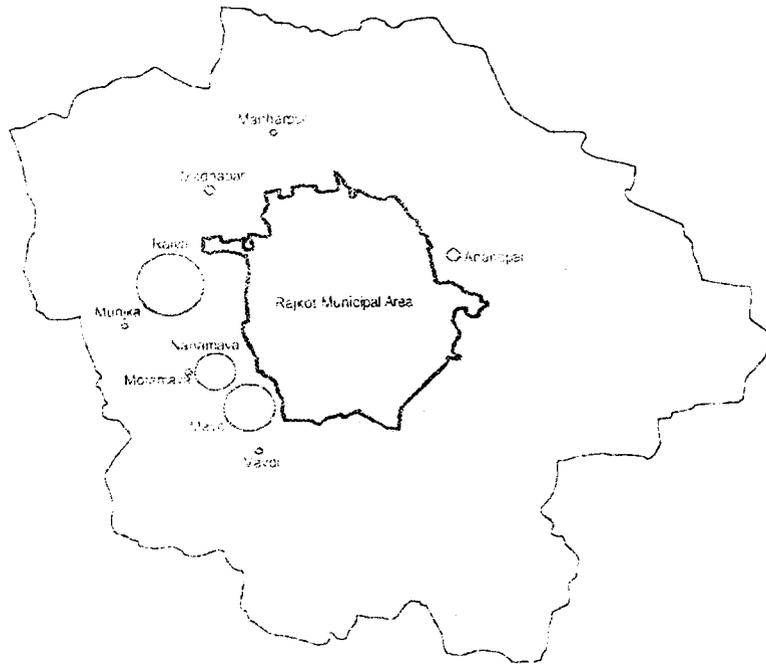
As per the *Gujarat Town Planning and Urban Development Act, 1976*, the newly merged areas were declared urban development areas and brought under the control of RUDA, prior to their eventual merger into the RMC. During the period of RUDA control, while population grew and economic activity flourished in anticipation of the merger, the development of the area in terms of service delivery failed to keep pace. As a result, the RMC is now faced with digesting an enormous area and population. The merger poses the largest set of urban development challenges Rajkot faces in the coming years, particularly in the areas of land use, water, and sewerage.

RUDA insists that their responsibilities are, in order of priority, preparation and periodic revision of a development plan, preparation of Town Planning schemes, and, finally, infrastructure development. Thus, plans are regularly prepared on paper; RUDA

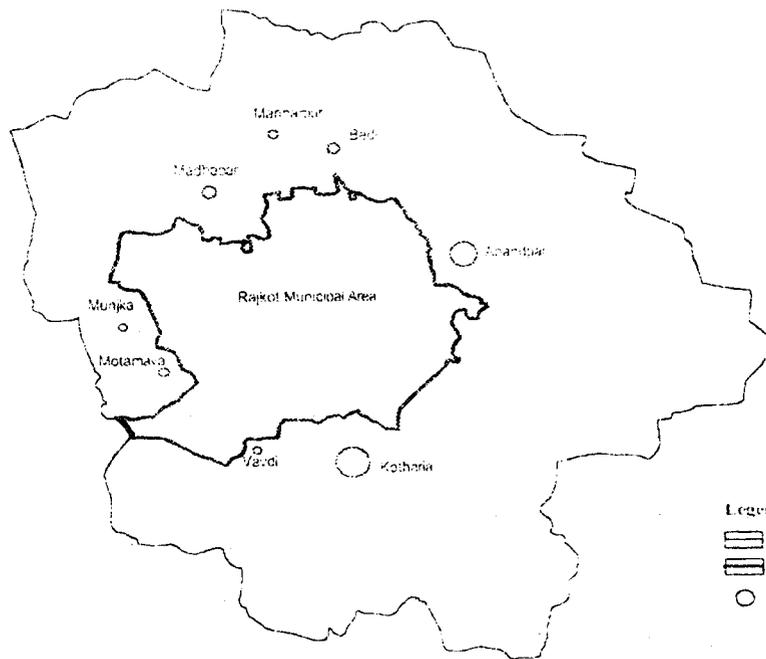
fulfils its obligation to revise development plans every decade. RUDA officials argue that since infrastructure is their last priority, provision of infrastructure to the new areas should not be seen as their responsibility. However, the *Gujarat Town Planning and Urban Development Act* does not provide any support to this contention. The matter is further confused, because the Gujarat Water Supply and Sewerage Board (GWSSB) is responsible for rural parts of the state, including rural parts of RUDA areas.

Map 1 Change in Area and Population of Rajkot and its Outgrowths: 1991-2001

Rajkot and its Outgrowths - 1991



Rajkot and its Outgrowths - 2001



Legend
 [Double line symbol] RUDA Boundary
 [Single line symbol] RMC Boundary
 [Circle symbol] Approximate Population Size

Note: Map not to Scale

As a result of this mis-matched perception, the newly merged areas were transferred to RMC with highly inadequate infrastructure. RUDA provided only a basic street network, leaving provision of other services to RMC. For example, RUDA had provided only 500 stand posts for water supply for a population of about 100,000. Despite this lack of basic facilities, at the time of the merger, high rise buildings and other signs of advanced development already dotted the new areas, relying on water tankers and soak pits.

As a consequence of institutional overlaps, and lack of clarity, the RMC now faces a steep task ahead. It has had to invest a substantial portion of its capital budget for upgrading facilities in the newly merged areas, a pattern that is likely to continue in the future. For example, scheme expenditures increased between 1998/99 and 1999/2000 from 21 crore to 52 crore, largely accounted for by massive increases in water supply, new area development and town planning (see Annex 3). In undertaking this task, the RMC will have to back-fill provision of services in an area that is already substantially developed, a far more challenging and expensive task than laying infrastructure early in the development cycle.

Emergent public-private partnerships

The RMC's emphasis on private sector involvement is an important emergent institutional trend in the city's management. Specifically, using provisions of the *Gujarat Infrastructure Development Act, 1999* as also of the *Bombay Provincial Municipal Corporations Act* (as applied to Gujarat), the RMC has an aggressive attitude to promote outsourcing of municipal services where possible. To date, they have established a "zonal contract system" for laying water pipelines, operation and maintenance of sewerage and drainage, solid waste management and transport of solid waste to dump sites, and maintenance of street lights. Moreover, they use what they describe as BOT contracts (described further below) for construction of public facilities such as fire stations and community centres.

The pursuit of greater economic efficiency is the major reason given by the RMC for the emphasis on outsourcing. For example, the RMC finds that private contractors used for transporting solid waste deploy capital-intensive trucks more efficiently than they were used under municipal control. Privately employed drivers work longer hours, getting better use out of the trucks. Contracts are written based on number of trips with a designated load. The performance of these outsourced arrangements is hard to establish. While RMC officials express satisfaction with the outsourcing arrangement, Chamber of Commerce members dispute this assertion, suggesting that private contractors who manage sweeping in the new areas do no better than the municipal employees in the old city. Moreover, as stated earlier, about half the waste remains uncollected after two days.

Outsourcing is also used as a way of side-stepping politically volatile labour management issues. About half the RMC's staff (3000 workers) consists of *safai karamcharis* or sweepers and cleaners responsible for collection and consolidation of solid waste. These cleaners are organised into several strong unions, which, according to RMC officials, place obstacles in the way of more effective functioning and certainly oppose any lay-offs. The issue is further compounded by the fact that most of the *safai karamcharis* belong to the same caste, which is protected as a "scheduled caste" under the Atrocities Act. RMC officials claim that the employees misuse the protections under this Act in the course of labour negotiations.

Taking advantage of the lack of existing municipal workers, the new areas are entirely serviced by outsourced solid waste contracts. The RMC aims to expand upon this base until 50 percent of the service is provided through outsourcing. The benefits of outsourcing, from an RMC perspective, are that private contractors are better able to exact labour discipline from workers, since they are "headstrong" people. In order to obtain results, the RMC must "turn a blind eye" to the methods of the contractors. There may indeed be legitimate concerns about inefficiencies derived from politically organised municipal workers. However, use of outsourcing as a political instrument also risks undercutting the original purpose of labour protections and protections for scheduled castes. In the absence of a broader set of robust social protections and credible enforcement, outsourcing may have perverse results.

The RMC has also made liberal use of so-called *build-operate-transfer* (BOT) projects as a partnership vehicle with the private sector. In essence these are contracts to private developers for construction of a specific facility – fire station, community centre etc. – as specified in the Rajkot Development Plan. In exchange for construction of the facility, the private contractor receives rights to develop a portion of the land for commercial use or sale. For example, the RMC has contracted with a developer to build a fire station and housing for firemen, at zero cost, on a plot of land specified for the purpose in the Rajkot Development Plan. Based on a plan drawn up and approved by the RMC, the fire station and housing was constructed on about 40 percent of the plot area, leaving the remaining 60 percent or so at the disposal of the contractor to be developed as a multi-storey shopping complex and community hall. The contractor rents the community hall for functions, and has leased the shops, both at market rates.

Since the land, once zoned for a public purpose, cannot legally be sold or used for any purpose other than a fire station, this arrangement appears to benefit both sides. The contractor benefits from access to land in a prime commercial area. Moreover, since the contractor normally will collect rental or sale income in "black" (or unaccounted for) money as well as "white" money, they realise the true economic value of the property. RMC officials also candidly admit that the contractor, by taking payment in black (or unaccounted) money, can come close to realising the market value of the land.

Such arrangements raise a basic question. Does the provision of a public facility at no cost – such as a fire station – represent fair compensation to the RMC in exchange for prime commercial land? The answer rests in part on the details of the contracting and bidding process, which would determine whether the RMC extracted the true value of the property. These empirical questions were beyond the scope of this study, but are certainly necessary to explore before this sort of arrangement is widely adopted.

More fundamentally, the RMC's BOT arrangement represents an attempt to side-step the rigidities of the zoning arrangements. In essence, it allows commercial use of a substantial portion of land allotted for public use. The RMC would likely be better served by an arrangement that allowed it to sell off a portion of the land explicitly for commercial use, reap the full market value, and use the proceeds to build a public facility on the remaining land. Doing so would, however, require a change in the zoning rules.

The finances of the Rajkot Municipal Corporation (RMC)

The Rajkot Municipal Corporation (RMC) maintains a single entry/cash-based accounting system; consequently, the receivables and payables do not form a part of its financial accounts. Nor are its liabilities adequately accounted for. The RMC classifies all receipts into four categories, *viz.*, revenue receipts, capital receipts, scheme receipts, and other (miscellaneous) receipts. Revenue receipts are further divided into two main heads, (i) own revenue receipts and (ii) state transfers. Own revenue receipts consist of taxes, user charges and other fees and fines that are levied and collected by RMC. Own resource receipts, *i.e.*, the fiscal base of RMC consists of octroi, consolidated property tax, theatre tax, vehicle tax, and non-tax receipts, mainly from sale of water. Receipts under state transfers consist of education cess, which is returned to the corporation either in full or part, and grants-in-aid under general purpose and specific purpose categories. Capital receipts represent loans contracted for various projects and from sale of assets. Scheme receipts are amounts that the RMC receives for various project specific schemes and works. Other receipts consist of deposits, advances and the like.

Expenditure heads are also divided by the RMC into four categories, namely revenue expenditure, capital expenditure, scheme expenditure and other expenditure (miscellaneous). Revenue expenditure has three categories: (i) expenditure on establishment, wages, and salaries; (ii) expenditure on operation and maintenance; and (iii) debt servicing. Expenditure is classified for each department such as general administration, fire, lighting, public health, water supply, medical care, pre-primary education, primary education, higher secondary education, technical education, public buildings and on commercial activities. Expenditure on developmental works is shown

as capital expenditure, whereas expenditure on various project specific schemes is shown under schemes.*

In 2002-03, the RMC spent Rs.1265 per capita (*see Annexes 3-5 for detailed data on expenditure*). Annual revenue expenditure, i.e., expenditure on the operation and maintenance of services and regulation of activities accounts for 59 percent of the total expenditure or Rs.742 per capita annually. Of this, Rs.398 was spent on establishment, wages and salaries, an amount equal to 54 percent of the revenue head or 31 percent of total expenditure. Expenditure on pensions and other retirement benefits forms 7.4 percent of the total expenditure. Next in importance to revenue expenditure is expenditure on schemes; in 2002/03, expenditure on schemes constituted 28.9 percent, and the balance of 5.1 percent was incurred on creation of new assets.

Table 8: Composition of RMC's Expenditure, 2002/03

Nature of expenditure	Per capita (Rs.)		% of total expenditure
	Current	1997/98 prices	
Revenue	742.14	553.40	58.67
Establishment and salaries *	397.98	296.77	31.46
O & M and others *	344.16	256.63	27.21
Capital	64.13	47.82	5.07
Schemes	365.20	272.32	28.87
Pensions and other deposits	93.49	69.72	7.39
Total	1264.96	943.26	100.00

Note: * Included in own revenue expenditure.

How is this spending level financed? The RMC raises with the revenue-raising powers that it has access to, Rs.1160.61 per capita which finances 91.7 percent of the total expenditure (*see Annexes 6-8 for detailed data on revenue*). Over 57 percent of RMC's own income is derived from octroi, an indirect tax perceived generally as producing distortions but a preferred option with most municipalities. Notwithstanding the proposition that municipal governments should make better use of charges and direct taxation (property) to finance services, there is resistance to do so as discussed further below.

Earnings from property taxes which uses an ARV base are 24.5 percent of revenues of the RMC. The general property tax rate rises with the ARV, with the highest slab of > Rs.10,000 attracting a tax rate of 30 percent to which are added a conservancy tax of 4 percent on domestic properties; non-domestic properties are

* The RMC undertakes and implements schemes in the sphere of water supply, drainage, town planning, Aji industrial settlement yojna, slum development scheme and the like

taxes at higher rates for conservancy and are required to additionally pay a fire tax. By most reckoning, it is a high tax regime, and has persisted on account of the inability of RMC to periodically revise the ARVs or improve collection.

State transfers to supplement the financial resources of RMC are, in relative terms of lesser significance, accounting for about 9.8 percent of the total revenue receipts. A greater part of the transfers accrue to RMC in the form of education cess grant.

Table 9: Structure of RMC's Revenues, 2002/03

Revenue identity	Per capita (Rs.)		% of total revenue receipts
	Current	1997/98 prices	
Own revenues receipts	968.68	722.33	68.00
Tax receipts*	909.96	678.54	63.88
Non-tax receipts*	58.73	43.79	4.12
State transfers	113.66	84.75	7.97
Other miscellaneous	78.27	58.36	5.49
Capital receipts	48.34	36.04	3.39
Scheme income	103.96	77.52	7.29
Pension and other deposits	111.53	83.17	7.82
Total receipts	1424.44	1062.18	100.00

Note: * Included in own revenue receipts.

At the first stage of analysis, the finances of the Rajkot Corporation (RMC) portray a positive profile in that—

- the corporation has a revenue account surplus; in 2002/03, the revenue account surplus formed 36 percent of the total revenue receipts. Few municipalities in India are able to claim such surpluses;
- it is not a revenue-dependent corporation, and its dependency ratio on state resources is extremely low, consisting primarily of education cess grant; and
- it is able to apply its surpluses for capital improvement works, a distinction that is achieved by, at best, a few municipal corporations in India.

A closer examination of RMCs finances, however, shows several disturbing features. For instance—

- maintaining a revenue account surplus is of little consequence when there are serious service shortages and deprivations, e.g., a 79 lpcd water supply with a coverage that has rarely exceeded 80 percent of population, 53 percent of households which remain unconnected to sewerage system, and the inability of RMC to be able to exercise enough control and regulation on land use etc. In per

capita terms, the RMC spends Rs.2.03 per day on running the city's services which, by any reckoning, is insufficient for purposes of growth, equity, or quality of life; aggregate per capita expenditure levels have risen marginally over the past five years and have in fact, registered a decline at 1997/98 prices at a rate of 4 percent per annum. Combined with the fact that expenditure levels are low and the RMC is unable to hold on even these levels would tend to suggest a deterioration in the levels of infrastructure services in the city of Rajkot;

octroi is yet another issue over which the finances of RMC are vulnerable. The state government of Gujarat has abolished octroi in all municipalities, but has so far retained it in municipal corporations. Given the nation-wide trends where octroi stands abolished in all states excepting Punjab and municipal corporations of Gujarat and Maharashtra, its abolition in these places would seem likely. There appears to be no preparedness on the part of RMC to operate its activities in a revenue-regime without octroi levies, a revenue source that currently accounts of 57 percent of revenues;

property tax is the most likely alternative for municipal corporations to at least partially offset octroi levies. However, the RMC does not show evidence of thinking ahead to build up the property tax regime and its efficiency ahead of abolition of octroi. There are several possible areas for proactive steps. First, the RMC could consider shifting from the ARV method of assessment to a more manageable and transparent unit area based system. Second, despite provision in the BPMC Act (1949) for revisions in ARV every four years, the RMC has allowed the values to remain unchanged for over a decade, since 1992. Third, and arguably the most significant, collection efficiency is poor and needs to be improved. In 2001-02, for example, the property tax bill was Rs. 21 crore, arrears were 140 crore, and collections were a mere 16 crore, not even sufficient to cover current charges, let alone arrears. Indeed, a number of lawsuits are pending on property tax issues. In an attempt to deal with this problem, the RMC waived arrears up to Rs. 15,000 per property, which seems to have subsequently had some impact on collection efficiency - collection in 2002-03 went up to Rs. 25.5 crore - but at the cost of a one time financial adjustment; and

the water account is another disconcerting feature of the finances of RMC. Water provisioning is perhaps the most important function of RMC, more so as Rajkot is located in a water-scarce region. The RMC spends approximately 18 percent of its total budget on water, inclusive of expenditure on establishment, operation and maintenance including electricity charges and augmentation of water supplies. While there is no consistency in the pattern of expenditure, expenditure on electricity appears to be on the rise. It is one component, which is exogenous to the RMC's operations.

Table 10: Water Accounts of RMC (Rs. lakh)

Year	Total expenditure	Revenue expenditure	Receipts	Receipts as a % of	
				Revenue expenditure	Total expenditure
1998/99	1628.66	1422.86	245.36	17.24	15.07
1999/00	3642.34	1467.42	265.27	18.08	10.03
2000/01	3863.55	1102.38	288.14	26.14	7.46
2001/02	2458.30	1343.11	244.52	18.20	9.95
2002/03	2404.51	1392.39	531.20	38.15	22.09

The RMC, however, recovers only a fraction of the total expenditure on water. Of the total expenditure on water, the RMC recovered 22 percent in 2002/03 – an improvement over the previous years on account of an increase in the flat rate that it charges per household, but significantly below what would appear necessary for making water provision a sustainable proposition. Even on the assumption that capital and schematic investments are payable over a longer duration with zero burden on the existing population, recoveries from water are significantly low. As stated earlier, the RMC supplies water for 20 minutes a day and water connections in Rajkot are unmetered, with few exceptions such as the high-rise apartment and industry and business. As Rajkot begins to increasingly rely on Narmada river water which is expected to cost Rs. 6/kl (excluding capital cost), supplying water at current rates would seriously affect water supply, and consequently its other activities.

What do we conclude?

The statutory and institutional structures were created on the principle of separate, distinct functional and spatial jurisdictions, with little recognition that there are important interdependencies, both functional and spatial. Actions taken by RUDA have direct implications for RMC. There is evidently a need to revisit the statutory provisions. The finances of RMC are in an unsatisfactory state, despite a surplus on revenue account and its ability to finance a part of capital expenditure out of its own resources. There is little long term thinking about the significant prospect of octroi abolition, and the related problem of ineffective property tax collection. Water accounts are most vulnerable and water pricing do not reflect the scarcity value of water, i.e., the economic cost.

4. Areas of Intervention

Rajkot's profile is typical of most Indian cities that, on the one hand, are growing and economically viable, and, on the other hand, continue to face increasing stress on infrastructure and services, confront institutional rigidities and grapple with a stagnant fiscal base. In this generalised framework, cities move on at a pace that permits them to absorb the incremental population and activities, albeit in informal ways, often with services that are supplied by the private sector. Rajkot appears to be in this mould; growing and continuing to acquire economic diversification, without any significant augmentation of its infrastructural base or fiscal rejuvenation, the Constitution (seventy-fourth) Amendment notwithstanding. Rajkot has barely managed to hold on to service levels of a decade ago.

The question is: Can Rajkot break out from this routine growth curve? Where is it possible to intervene? This rapid assessment first explores the larger context for urban reform in Rajkot, and then examines in greater detail a few areas, which seem to hold the key to Rajkot's role in Gujarat's economy.

Based on this rapid assessment, there are several obstacles to the emergence of a strategic reform programme in Rajkot.

First, there is no obvious locus of dynamism and change in Rajkot today. The city appears to be run from year to year, without any larger plan, and with little ability to anticipate future situations and develop a strategic vision. Instead existing institutions operate within the narrow confines of their statutory and legal framework – such as RUDA grinding through its decadal plan revisions with little regard to final outcome. The institutional dissonance discussed in this study — such as between RMC and RUDA — also contributes to the strategic vacuum. The net result is a complete lack of incentives for broader strategic visioning and planning. Indeed, interviews with officials and citizens suggest a low level equilibrium of low expectations and low quality service delivery; poor urban functioning has become an accepted way of life.

Second, there is extremely limited capacity within the body that will likely have to play a leadership role in crafting a reform agenda — the RMC. Few of the staff have professional qualifications, and are exposed to the ideas that would allow them to see beyond the confines established by current institutional limits and conventional practice. Limited capacity beyond the very top layer also suggests that implementation of a reform vision will also be a significant challenge. The combination of limited capacity and cross-institutional conflict is particularly problematic.

Third, the urban political economy in Rajkot does not suggest any ready actors to stimulate change. The disconnect between the executive and the political arms of the RMC suggest an oppositional relationship rather than a collaborative one. While

elected councillors do indeed play their role by representing the popular public sentiment on issues such as user charges for water and property tax reform, this representation shows little signs of growing into an enlightened leadership. To do so would require the political leadership to spell out the contours of a reform programme that credibly promises better service delivery in the medium term in exchange for short-term public concessions. Such a political bargain would form the basis for a partnership between political and executive wings.

External actors, such as the Chamber of Commerce, do not appear to be moving toward a productive catalytic role either. The Chamber is heavily critical of the RMC and its limited ability to provide services effectively. However, as is common with higher income groups in urban India, they see little incentive to promote change because they are able to meet their private needs through private provision — water tankers instead of piped water. From this privileged perspective, the costs and risks associated with engaging public organisations to change the public infrastructure are far higher than the likely benefits. The merger of the new areas is a further obstacle to unified urban action. The new areas are likely to demand a disproportionate share of financial and managerial resources, which will leave older parts of the city disinclined to pay additional taxes or user charges.

Fourth, in the absence of a larger strategic framework and adequate accountability mechanisms, efforts at greater private sector involvement risk being sucked into patronage politics and shaped by political rather than economic context. In this rapid assessment, the available evidence on the economic gains from either outsourcing or BOT contracts was inconclusive. A more in depth study of contractual terms, obligations, bidding processes, and eventual outcomes is needed. However, that BOT arrangements were used as a way around a restrictive planning framework (in the case of a fire station) and outsourcing street cleaning was seen primarily as a way of side-stepping fraught labour relations suggests the primacy of politics in public private partnership.

Mitigating this bleak picture are a few potential triggers for reform:

First, that Rajkot does not suffer from the parlous state of municipal finances that many other Indian cities grapple with provides some room for experimentation.

Second, and related, the merger of new areas provides a relatively blank canvas for experimentation; a problem could be turned into an opportunity. The current experiments – such as private sweepers – are limited and undertaken with narrow aims, in this case undercutting the sweepers union. By being more bold and creative and, most important, focusing on delivery of improved final outcomes, the RMC may be able to use the new areas as the vanguard of a larger project of urban renewal. To do so would require a strategic vision focused on these areas, combined with an intensive communication campaign to the public.

Third, the anticipated shift away from octroi and toward other forms of municipal financing may have at least two positive long-term effects. First, it could force the RMC to grapple with the question of user charges and property tax reform to ensure a viable base. Second, making greater financial demands on citizens would necessarily stimulate a broader public debate about service delivery and lead to scrutiny and demands for accountability. In particular, the peculiar situation of deeply flawed service delivery — such as 20 minutes of water a day — despite a substantial revenue account surplus and scope for financing capital expenditures out of the city's income would come into focus. While painful and politically charged, such public ferment and debate is necessary to create demand for a strategic vision and, equally important, public ownership of and commitment to a reform agenda.

Moving from broad forces and patterns to specific first steps, a few areas are key to Rajkot's future:

- (i) *Greater autonomy and authority to Rajkot Municipal Corporation (RMC) consistent with the parameters of the Constitution (seventy-fourth) Amendment Act, 1992.* From all the secondary evidence analysed in connection with the preparation of this study report, there is little indication or suggestion that the 1992 amendment has made any impact on the functioning or the finances of the RMC. The RMC continues to be negatively impacted by the intersecting web of laws and their attendant institutions. The relationship of RMC with either the GIDC whose mandate is to spur industrial growth in the state, or even the RUDA which is responsible for projecting and planning Rajkot's hinterland, has not undergone any change, as a result of the 1992 Amendment. Thus, the GIDC continues to develop industrial estates and industrial areas in areas that it considers appropriate from the standpoint of the state and RUDA, in accordance with its mandate, formulates a development plan for Rajkot and its environs to the year 2011 A.D.

There will, of course, continue to be significant roles for institutions other than RMC. However, to complement local autonomy there need to be clear demarcations between institutions and formal mechanisms for the RMC to participate in the process of decision-making on issues such as where to locate estates or what areas should accommodate the new growth. The absence of such mechanisms has affected service provisioning in Rajkot and its environs. Even on a broader scale where Rajkot's development is to be coordinated with that of other towns and villages, i.e., by the District Planning Committee (DPC), progress has been tardy, if not insignificant. For example, the office of the district is concerned with conversion of rural lands into urban or quasi-urban use, but not with the integration of such lands into the overall physical and infrastructure development.

The key to the problems of fragmentation and coordination lie in revisiting the statutory frameworks in the context of the *Constitutional (seventy-fourth) Amendment Act, 1992*, and simultaneously the institutional structures that are created under those frameworks. This is a substantial problem, and has to be undertaken at the state level.

- (ii) *Positioning of the informal sector in Rajkot's economy.* At 60 percent of the total residential area and accounting for substantial proportions of commercial activity, the informal sector of Rajkot cannot be ignored. It contributes significantly to the city's economy and invariably places considerable demands on services. Over the years, there has been an extraordinarily growth in informal housing, mostly in the form of unauthorised colonies which do not conform to any developmental regulations, and informal businesses that are scattered over the city. This pattern of growth is explained in terms of tardy growth of formal housing, inadequate supply of developed lands, lengthy and arduous procedures for building permits, and inability of the RMC and RUDA to control unauthorised construction (or is it rent seeking)? While it is not possible to quantitatively estimate the benefits that might be derived by regulating the sector and providing it a legitimate place, it is evident that it is inescapable. Moreover, if a strategic reform vision is to address the issues of user charges, property tax and the like, doing so without factoring in the informal sector is to define away a substantial proportion of the problem. A necessary first step is simply to obtain better information on the dimensions of the problem, and categorise the drivers of the informal sector – regulatory, financial, governance, or a combination of these. This understanding will then have to inform any strategic vision, and in particular each sectoral component of a reform agenda, whether in terms of water, solid waste, or roads.
- (iii) *Raising the financial profile of the Rajkot Municipal Corporation (RMC).* Even with a surplus on revenue account, the finances of the RMC are in an unsatisfactory state. It is surprising, as this Corporation has not seized the vast opportunities available to it, in three spheres (i) property reform of taxation; (ii) water price reform; and (iii) using debt market for strengthening municipal infrastructure.

Property tax reform is long overdue in Rajkot. As stated earlier, the total revenues from property taxation which in Rajkot is a composite tax comprising a tax on property, a conservancy and a fire tax, are a meager Rs. 25.52 crore from about 200,000 assesses. There are five slabs of ARVs, with each slab carrying a different tax rate that rises to 30 percent for properties that have an ARV of Rs.10,000; such high rates have evidently not been revenue – friendly, evidence of which is in large arrears. The state of Gujarat has moved towards a major reform of property tax system, which however, has been slow to be incorporated by the RMC. Property taxation is the most legitimate local tax and needs to be effectively used.

Water pricing is an important sphere for consideration of reform, particularly since water scarcity is likely to be a fact of life for Rajkot well into the future. The currently extremely high levels of subsidy are unsustainable, especially in the face of dependence on future high cost supply from the Narmada. The city is faced with a stark choice, of either biting the political bullet and raising user fees, or strengthening the long term state of public finances in order to provide a transparent and sustainable subsidy for water consumption. In this context, attention to more efficiency of water use, on the supply and demand sides, would appear to be a no-lose strategy in Rajkot's water scarce environment.

Debt financing of urban infrastructure is an accepted strategy in many parts of the developing world, including India, and particularly Gujarat. The example of Ahmedabad seeking capital market funds for financing infrastructure is still fresh to induce other municipal corporations to instil fiscal discipline and use it for augmenting service levels. In Rajkot, debt servicing (loans from the state government) is relatively insignificant, and the RMC perceives it to be a positive feature of its finances. It has made use of its surpluses for capital improvements and schemes, without using the market funds. This is one area where fiscal rating may be a possible route for improving own finances and financing city's infrastructure.

The state government has a vital stake in city's growth and development. Apart from reconciling the statutory provisions under different Acts with the aim of giving primacy to RMC, there are two other spheres where state government interventions are necessary. These are: (i) accounting systems which is the case of Rajkot are single entry/cash based and which do not permit a realistic appraisal of its finances; and (ii) implementing the recommendations of the state finance commission.

In conclusion, Rajkot faces many problems typical of urban India – a fractured institutional structure, low capacity, chronically poor service delivery, and a sense of apathy and resignation to crumbling urban spaces. At the same time, it has a reasonably healthy financial base, albeit one that is threatened and inadequately used. To envision a serious reform of Rajkot, three factors appear to be paramount. First, much will hinge on the future of octroi in Gujarat. If octroi is to be abolished, the state must allow cities time to plan, and Rajkot and other cities will have to rise to the challenge. Second, many hurdles to Rajkot's reform lie outside its control, at the level of state institutions and frameworks. Any urban reform effort will have to be undertaken in concert with a larger state-level effort. Third, the current political disconnect between citizen and elected official, and elected official and administrative bureaucracy bode ill for the full life cycle of reform — from conceptualisation through design and implementation. To be credible and politically sustainable, urban reforms in Rajkot, as elsewhere, will need the support and understanding of the citizenry. Forging the local political conditions means for public debate, and effective governance mechanisms to sustain reform are a pre-condition to urban renewal in Rajkot.

Can Rajkot break out of the routine growth mode?

For Rajkot to develop and implement a strategic vision requires interventions at several fronts and levels – giving a proper role to the Rajkot Municipal Corporation (RMC) vis-a-vis other institutions, providing space and recognition to the under-provided informal sector, and strengthening the fiscal base of RMC which is vastly vulnerable, notwithstanding the revenue account surpluses that it is able to post. Even these surpluses may be illusory if the receivables and payables are accounted for. The Rajkot Municipal Corporation (RMC) needs to prepare itself for a revenue regime, which may have to devise a strategy for better application and use of direct taxation and direct charging for services that it offers.

Annex 1
Timeline for Rajkot City

	1950s	1960s	1970's	1980s	1990s	2000s
Origin and Governance	1. The state of Saurashtra came into existence in 1948 and Rajkot was made the capital.	1. In 1960, due to the formation of Gujarat state Rajkot city's political importance declined, but the economy and city development was not much affected.	1. Rajkot municipality was converted into municipal corporation from 19.11.1973 and the city administration was placed under the new <i>Bombay Provincial Municipal Corporation (BPMC) Act 1949.</i>	1. City was divided into 18 wards.	1. Expansion of municipal limit from 69 sq. km. to 104.86 sq.km (1998) by merging the surrounding municipal areas that is Mavdi, Nanamava, and Raiya.	
	2. Due to the capital status, a number of government and semi government offices were set up during the decade, 1950-60.	2. Municipal services were run by Rajkot municipal borough, which was later converted into Rajkot municipality, under the <i>Gujarat Municipal Act, 1963.</i>	2. Slum improvement introduced by city government.		2. City wards increased from 18 wards to 23 wards.	
	3. Based on the population, the city was divided into 10 wards.					
Master Plan		1. The first master plan for the city was prepared during 1966.	1. The first master plan of the city was sanctioned in 1971 by the Government of Gujarat.	1. First town planning scheme was prepared during 1975, which was sanctioned in 1984.	1. Development plan for Rajkot 2011 sent to Government of Gujarat for final approval.	

Annex 1

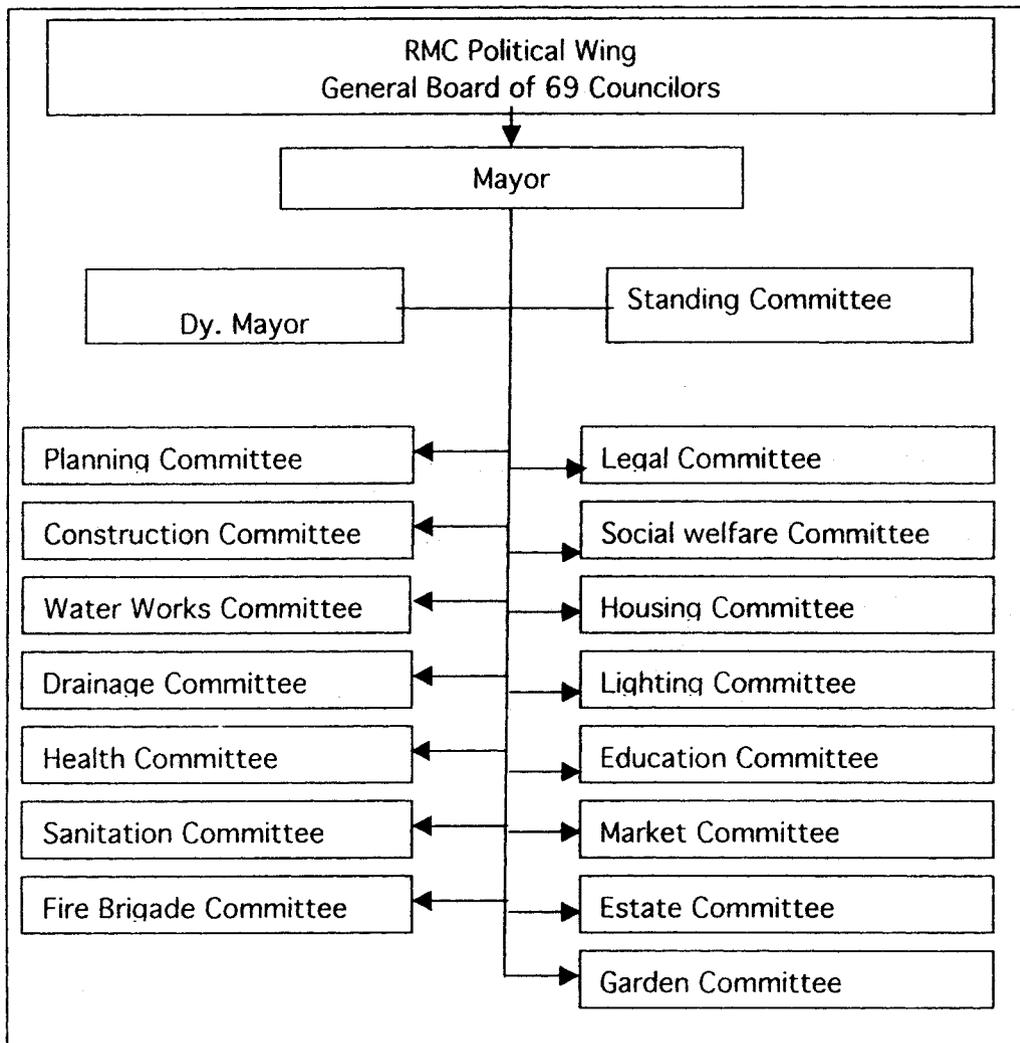
Timeline for Rajkot City (contd.....)

	1950s	1960s	1970's	1980s	1990s	2000s
			2. To keep pace with the rapid upsurge of industrial and trade activities comprising of textile, gold smith, foundry, metal, machine tools, domestic appliances, agriculture and food products, two industrial estates that is Bhaktinagar Industrial Estate and Aji Industrial Estate emerged.			
Water Supply		1. Aji water supply scheme was started.	1. Nyari water supply dam and scheme commissioned. It was unique as no other Municipal Corporation had ownership of a dam for water supply, generally ownership belongs to the State Government.		1. Due to acute water shortage RMC with the help of GWSSB drilled 120 bores in wankaner area to get about 40 mld water. This scheme was commissioned during 2000.	1. Water supply scheme based on Mahi-Narmada pipeline commissioned.
Underground Sewerage			1. Underground sewerage scheme was planned during 1972, which was again modified during 1979 and accordingly execution work started.		1. Sewerage treatment plant of 44.5 mld capacity constructed.	

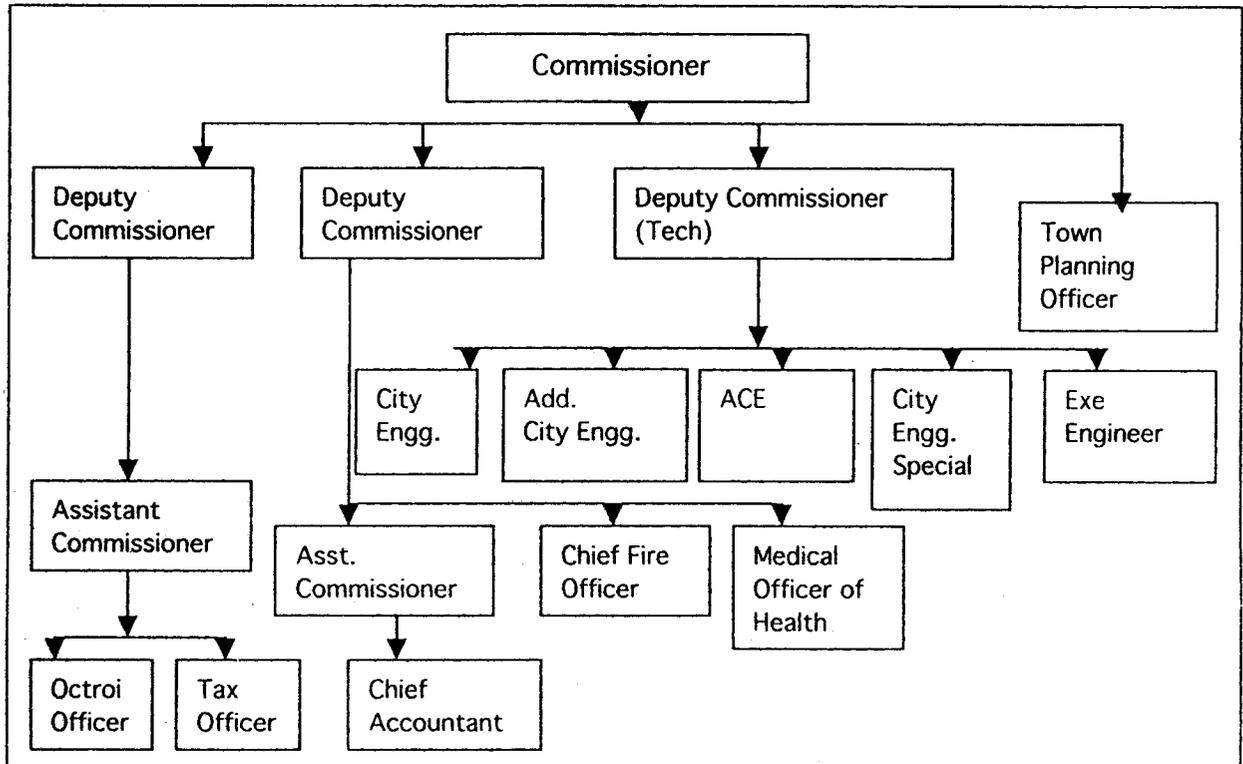
Annex 2

Rajkot Municipal Corporation Organisation Structure

a) RMC Political Organisation & Hierarchy



b) RMC Administrative Hierarchy



Annex 3
The Finances of Rajkot Municipal Corporation (RMC)
a. Profile of Expenditure

Profile	Expenditure (Rs.lakh)						AAGR (%)
	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	
Total expenditure	9261.27	11300.41	14450.96	13426.12	11634.68	13601.82	7.69
☐ Revenue expenditure	5550.07	6985.02	7215.56	6338.98	6909.48	7980.06	7.26
• Establishment & salaries	2688.83	3612.68	3898.18	4024.80	4038.75	4279.38	9.29
▪ Public health & welfare	211.76	290.97	336.95	351.38	355.65	412.25	13.32
▪ Conservancy	813.76	1009.17	1201.95	1199.65	1273.09	1409.34	10.98
▪ Water works	195.37	254.21	290.03	315.10	309.54	327.01	10.30
▪ Roads (PWDI)	86.25	106.10	145.08	151.04	163.58	174.66	14.11
▪ Street lighting	54.99	73.09	80.29	80.55	79.87	81.09	7.77
▪ Fire brigade	58.18	73.92	90.24	94.24	95.03	110.82	12.89
▪ Tax collection	419.77	522.72	575.25	540.17	602.72	582.01	6.54
▪ General administration	707.13	1096.72	964.11	1071.77	941.56	948.58	5.87
▪ Other administration	141.62	185.78	214.28	220.91	217.70	233.63	10.01
• Operation & maintenance works	2513.67	2911.50	2688.87	1851.51	2292.08	2909.06	2.92
▪ Public health & welfare	101.79	109.32	98.02	99.08	94.31	105.35	0.69
▪ Conservancy	92.02	129.70	155.96	140.84	142.87	169.03	12.16
▪ Water works	764.81	902.36	813.60	371.06	259.70	293.11	-19.18
▪ Water works (electricity)	183.62	266.29	363.79	416.22	778.87	772.27	28.73
▪ Roads (PWD)	649.49	801.41	554.69	266.74	289.99	842.25	5.20
▪ Street lights	43.68	32.96	43.27	41.49	81.78	76.31	11.16
▪ Fire brigade	11.55	17.11	15.55	11.28	14.01	19.42	10.39
▪ Electricity (street lighting)	217.63	233.89	272.52	301.99	356.51	330.79	8.37
▪ Other contingencies/O&M	61.69	62.57	63.42	51.70	64.15	88.10	7.13
▪ Repayment of loans	387.39	355.89	308.05	151.11	209.88	212.45	-12.01
• Education	246.63	352.45	396.24	342.84	363.21	398.48	9.60
• Others	100.94	108.39	232.27	119.83	215.44	393.14	27.19
☐ Capital expenditure	1175.31	1109.45	1093.62	603.15	498.06	689.56	-10.66
☐ Scheme expenditure	1968.60	2106.08	5210.90	5200.90	3252.97	3926.87	13.81
• Scheme development	1741.68	1785.52	4887.62	4570.93	2537.92	2666.54	8.52
▪ Drainage	380.91	397.24	724.15	501.44	312.93	427.86	2.32
▪ Water supply scheme	69.12	205.80	1851.64	2705.30	1056.35	960.30	52.63
▪ Solid waste management	213.15	41.39	41.14	44.41	213.23	152.98	-6.63
▪ Housing scheme	949.09	420.77	345.18	278.28	99.87	162.75	-35.27
▪ Town planning	143.72	113.65	417.81	465.24	323.65	53.73	-19.68
▪ New area development etc.	-14.31	606.67	1507.70	576.25	531.88	908.92	-
• Scheme repayments of loans	226.92	320.56	323.28	629.97	715.06	1260.33	34.29
▪ Drainage	168.85	165.74	150.25	137.23	127.61	109.46	-8.67
▪ Water supply scheme	0.00	0.00	0.00	55.87	53.84	51.82	-
▪ Solid waste management	17.72	34.08	37.92	34.95	31.90	31.50	11.51
▪ Housing scheme	9.03	89.51	103.99	118.50	155.04	147.56	55.87
▪ New area development etc.	31.32	31.23	31.12	283.42	346.67	920.00	67.60
☐ Pension and other deposits etc.	567.29	1099.86	930.88	1283.09	974.17	1005.33	11.44

Annex 4

The Finances of Rajkot Municipal Corporation (RMC) (contd...)

a. Profile of Expenditure (per capita)

Profile	Per capita expenditure (Rs.)						AAGR (%)
	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	
Total expenditure	1140.39	1319.32	1599.66	1388.94	1141.20	1264.96	2.07
□ Revenue expenditure	683.41	815.50	798.73	655.77	677.72	742.14	1.65
• Establishment & salaries	331.09	421.78	431.51	416.37	396.15	397.98	3.68
▪ Public health & welfare	26.08	33.97	37.30	36.35	34.88	38.34	7.71
▪ Conservancy	100.20	117.82	133.05	124.10	124.87	131.07	5.37
▪ Water works	24.06	29.68	32.11	32.60	30.36	30.41	4.69
▪ Roads (PWDI)	10.62	12.39	16.06	15.63	16.04	16.24	8.50
▪ Street lighting	6.77	8.53	8.89	8.33	7.83	7.54	2.15
▪ Fire brigade	7.16	8.63	9.99	9.75	9.32	10.31	7.27
▪ Tax collection	51.69	61.03	63.68	55.88	59.12	54.13	0.92
▪ General administration	87.07	128.04	106.72	110.88	92.35	88.22	0.26
▪ Other administration	17.44	21.69	23.72	22.85	21.35	21.73	4.40
• Operation & maintenance works	309.52	339.92	297.65	191.54	224.82	270.54	-2.69
▪ Public health & welfare	12.53	12.76	10.85	10.25	9.25	9.80	-4.93
▪ Conservancy	11.33	15.14	17.26	14.57	14.01	15.72	6.55
▪ Water works	94.18	105.35	90.06	38.39	25.47	27.26	-24.80
▪ Water works (electricity)	22.61	31.09	40.27	43.06	76.40	71.82	23.12
▪ Roads (PWD)	79.98	93.56	61.40	27.59	28.44	78.33	-0.42
▪ Street lights	5.38	3.85	4.79	4.29	8.02	7.10	5.54
▪ Fire brigade	1.42	2.00	1.72	1.17	1.37	1.81	4.78
▪ Electricity (street lighting)	26.80	27.31	30.17	31.24	34.97	30.76	2.76
▪ Other contingencies/O&M	7.60	7.31	7.02	5.35	6.29	8.19	1.51
▪ Repayment of loans	47.70	41.55	34.10	15.63	20.59	19.76	-17.63
• Education	30.37	41.15	43.86	35.47	35.63	37.06	3.98
• Others	12.43	12.65	25.71	12.40	21.13	36.56	21.58
□ Capital expenditure	144.72	129.53	121.06	62.40	48.85	64.13	-16.28
□ Scheme expenditure	242.40	245.88	576.82	538.04	319.07	365.20	8.20
• Scheme development	214.46	208.46	541.04	472.87	248.93	247.99	2.90
▪ Drainage	46.90	46.38	80.16	51.87	30.69	39.79	-3.29
▪ Water supply scheme	8.51	24.03	204.97	279.87	103.61	89.31	47.01
▪ Solid waste management	26.25	4.83	4.55	4.59	20.92	14.23	-12.25
▪ Housing scheme	116.87	49.12	38.21	28.79	9.80	15.14	-40.88
▪ Town planning	17.70	13.27	46.25	48.13	31.75	5.00	-25.29
▪ New area development etc.	-1.76	70.83	166.90	59.61	52.17	84.53	-
• Scheme repayments of loans	27.94	37.43	35.79	65.17	70.14	117.21	28.68
▪ Drainage	20.79	19.35	16.63	14.20	12.52	10.18	-14.28
▪ Water supply scheme	0.00	0.00	0.00	5.78	5.28	4.82	-
▪ Solid waste management	2.18	3.98	4.20	3.62	3.13	2.93	5.89
▪ Housing scheme	1.11	10.45	11.51	12.26	15.21	13.72	50.26
▪ New area development etc.	3.86	3.65	3.44	29.32	34.00	85.56	61.99
□ Pension and other deposits etc.	69.85	128.41	103.04	132.74	95.55	93.49	5.83

Annex 5

The Finances of Rajkot Municipal Corporation (RMC) (contd...)
a. Profile of Expenditure (per capita at 1997/98 prices)

Profile	Per capita expenditure (1997/98 prices, Rs.)						AAGR (%)
	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	
Total expenditure	1140.39	1182.30	1372.43	1130.62	883.70	943.26	-3.80
□ Revenue expenditure	683.41	730.80	685.27	533.81	524.80	553.40	-4.22
• Establishment & salaries	331.09	377.98	370.22	338.93	306.76	296.77	-2.19
▪ Public health & welfare	26.08	30.44	32.00	29.59	27.01	28.59	1.84
▪ Conservancy	100.20	105.58	114.15	101.02	96.70	97.73	-0.50
▪ Water works	24.06	26.60	27.54	26.53	23.51	22.68	-1.18
▪ Roads (PWDI)	10.62	11.10	13.78	12.72	12.42	12.11	2.63
▪ Street lighting	6.77	7.65	7.63	6.78	6.07	5.62	-3.71
▪ Fire brigade	7.16	7.73	8.57	7.94	7.22	7.69	1.40
▪ Tax collection	51.69	54.69	54.63	45.49	45.78	40.36	-4.95
▪ General administration	87.07	114.74	91.56	90.25	71.52	65.78	-5.61
▪ Other administration	17.44	19.44	20.35	18.60	16.54	16.20	-1.47
• Operation & maintenance works	309.52	304.61	255.37	155.92	174.09	201.74	-8.56
▪ Public health and welfare	12.53	11.44	9.31	8.34	7.16	7.31	-10.80
▪ Conservancy	11.33	13.57	14.81	11.86	10.85	11.72	0.68
▪ Water works	94.18	94.41	77.27	31.25	19.73	20.33	-30.66
▪ Water works (electricity)	22.61	27.86	34.55	35.05	59.16	53.55	17.25
▪ Roads (PWD)	79.98	83.85	52.68	22.46	22.03	58.41	-6.29
▪ Street lights	5.38	3.45	4.11	3.49	6.21	5.29	-0.33
▪ Fire brigade	1.42	1.79	1.48	0.95	1.06	1.35	-1.09
▪ Electricity (street lighting)	26.80	24.47	25.88	25.43	27.08	22.94	-3.11
▪ Other contingencies/O&M	7.60	6.55	6.02	4.35	4.87	6.11	-4.36
▪ Repayment of loans	47.70	37.23	29.26	12.72	15.94	14.73	-23.50
• Education	30.37	36.87	37.63	28.87	27.59	27.63	-1.89
• Others	12.43	11.34	22.06	10.09	16.36	27.26	15.71
□ Capital expenditure	144.72	116.08	103.86	50.79	37.83	47.82	-22.15
□ Scheme expenditure	242.40	220.35	494.89	437.97	247.08	272.32	2.33
• Scheme development	214.46	186.81	464.19	384.92	192.76	184.92	-2.96
▪ Drainage	46.90	41.56	68.77	42.23	23.77	29.67	-9.16
▪ Water supply scheme	8.51	21.53	175.85	227.82	80.23	66.59	41.14
▪ Solid waste management	26.25	4.33	3.91	3.74	16.20	10.61	-18.12
▪ Housing scheme	116.87	44.02	32.78	23.43	7.59	11.29	-46.75
▪ Town planning	17.70	11.89	39.68	39.18	24.58	3.73	-31.16
▪ New area development etc.	-1.76	63.47	143.19	48.53	40.40	63.03	-
• Scheme repayments of loans	27.94	33.54	30.70	53.05	54.31	87.40	22.81
▪ Drainage	20.79	17.34	14.27	11.56	9.69	7.59	-20.15
▪ Water supply scheme	0.00	0.00	0.00	4.70	4.09	3.59	-
▪ Solid waste management	2.18	3.57	3.60	2.94	2.42	2.18	0.02
▪ Housing scheme	1.11	9.36	9.88	9.98	11.78	10.23	44.39
▪ New area development etc.	3.86	3.27	2.96	23.87	26.33	63.80	56.12
□ Pension and other deposits etc.	69.85	115.07	88.41	108.05	73.99	69.72	-0.04

Annex 6

The Finances of Rajkot Municipal Corporation (RMC)

b. Structure of Revenue

Structure	Revenue receipt (Rs.lakh)						AAGR (%)
	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	
Total receipts	9756.16	10640.29	13440.19	13404.51	11479.14	15316.67	9.02
□ Revenue receipts	7373.94	8246.81	8808.98	9623.38	9445.25	12479.76	10.52
• Own revenue receipts	6143.24	6913.60	7523.22	7746.12	8208.78	10416.01	10.56
▪ Tax receipts	6016.17	6638.61	7238.78	7412.25	7892.71	9784.55	9.73
Octroi	4226.28	4930.50	5203.30	5141.75	5412.69	5987.68	6.97
Property tax	1069.72	1020.91	1258.66	1436.74	1633.30	2552.27	17.39
Conservancy tax	264.51	267.78	320.27	358.03	401.79	635.93	17.54
Toll tax	153.92	142.09	147.35	144.50	144.50	8.65	-57.57
Water charges	263.32	245.36	265.27	288.14	244.52	531.20	14.04
Other tax	38.42	31.97	43.93	43.09	55.90	68.80	11.65
▪ Non-tax receipts	127.07	274.99	284.44	333.88	316.07	631.46	32.07
• State transfers	563.34	649.96	527.65	1069.94	483.25	1222.14	15.49
▪ Shared revenue receipts	0.00	0.00	0.00	0.00	0.00	0.00	-
▪ State grants	563.34	649.96	527.65	1069.94	483.25	1222.14	15.49
Education cess grant	423.61	515.16	388.46	596.30	408.93	1082.26	18.76
Water crisis grant	0.00	0.00	0.00	300.00	0.00	0.00	-
Other grants	139.73	134.80	139.19	173.64	74.32	139.87	0.02
• Other revenue receipts	667.36	683.25	758.11	807.31	753.22	841.62	4.64
□ Capital receipts	309.76	470.72	606.98	583.98	267.46	519.75	10.35
• Sale of land/shopping centre	203.82	314.32	407.42	87.19	75.16	56.18	-25.77
• Grants	79.28	102.20	123.01	357.67	154.67	213.38	19.80
• Loans/bonds income	0.00	12.88	0.00	71.57	0.00	204.00	-
• Others	26.66	41.32	76.55	67.55	37.63	46.20	10.99
□ Scheme income	1256.61	972.66	2887.84	1755.26	558.67	1117.90	-2.34
• Sale of land etc.	253.69	180.22	407.06	350.70	275.39	952.91	26.47
• Loans	530.04	89.52	1763.79	854.47	0.00	0.00	-
• Others	472.88	702.92	716.99	550.08	283.27	164.99	-21.06
□ Pensions and other deposits	815.85	950.10	1136.39	1441.89	1207.77	1199.25	7.70

Annex 7

The Finances of Rajkot Municipal Corporation (RMC) (contd...)

b. Structure of Revenue (per capita)

Structure	Per capita revenue receipt (Rs.)						AAGR (%)
	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	
Total receipts	1201.33	1242.25	1487.77	1386.71	1125.94	1424.44	3.41
□ Revenue receipts	907.99	962.81	975.11	995.55	926.45	1160.61	4.91
• Own revenue receipts	756.45	807.16	832.79	801.34	805.17	968.68	4.95
• Tax receipts	740.80	775.06	801.30	766.80	774.16	909.96	4.11
• Octroi	520.41	575.64	575.98	531.92	530.91	556.85	1.35
• Property tax	131.72	119.19	139.33	148.63	160.20	237.36	11.78
• Conservancy tax	32.57	31.26	35.45	37.04	39.41	59.14	11.93
• Toll tax	18.95	16.59	16.31	14.95	14.17	0.80	-63.18
• Water charges	32.42	28.65	29.36	29.81	23.98	49.40	8.42
• Other tax	4.73	3.73	4.86	4.46	5.48	6.40	6.04
• Non-tax receipts	15.65	32.11	31.49	34.54	31.00	58.73	26.45
• State transfers	69.37	75.88	58.41	110.69	47.40	113.66	9.88
• Shared revenue receipts	0.00	0.00	0.00	0.00	0.00	0.00	-
• State grants	69.37	75.88	58.41	110.69	47.40	113.66	9.88
• Education cess grant	52.16	60.14	43.00	61.69	40.11	100.65	13.15
• Water crisis grant	0.00	0.00	0.00	31.04	0.00	0.00	-
• Other grants	17.21	15.74	15.41	17.96	7.29	13.01	-5.59
• Other revenue receipts	82.18	79.77	83.92	83.52	73.88	78.27	-0.97
□ Capital receipts	38.14	54.96	67.19	60.41	26.23	48.34	4.74
• Sale of land/shopping centre	25.10	36.70	45.10	9.02	7.37	5.22	-31.39
• Grants	9.76	11.93	13.62	37.00	15.17	19.84	14.19
• Loans/bonds income	0.00	1.50	0.00	7.40	0.00	18.97	-
• Others	3.28	4.82	8.47	6.99	3.69	4.30	5.38
□ Scheme income	154.73	113.56	319.67	181.58	54.80	103.96	-7.95
• Sale of land etc.	31.24	21.04	45.06	36.28	27.01	88.62	20.85
• Loans	65.27	10.45	195.24	88.40	0.00	0.00	-
• Others	58.23	82.07	79.37	56.91	27.78	15.34	-26.67
□ Pensions and other deposits	100.46	110.92	125.79	149.16	118.47	111.53	2.09

Annex 8



The Finances of Rajkot Municipal Corporation (RMC) (contd...)
b. Structure of Revenue (per capita at 1997/98 prices)

Structure	Per capita revenue receipt (1997/98 prices, Rs.)						AAGR (%)
	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	
Total receipts	1201.33	1113.24	1276.44	1128.80	871.89	1062.18	-2.46
□ Revenue receipts	907.99	862.82	836.60	810.39	717.40	865.44	-0.96
• Own revenue receipts	756.45	723.33	714.49	652.31	623.49	722.33	-0.92
▪ Tax receipts	740.80	694.56	687.48	624.19	599.48	678.54	-1.76
Octroi	520.41	515.85	494.17	432.99	411.11	415.23	-4.52
Property tax	131.72	106.81	119.54	120.99	124.06	176.99	5.91
Conservancy tax	32.57	28.02	30.42	30.15	30.52	44.10	6.06
Toll tax	18.95	14.87	13.99	12.17	10.97	0.60	-69.05
Water charges	32.42	25.67	25.19	24.26	18.57	36.84	2.55
Other tax	4.73	3.34	4.17	3.63	4.25	4.77	0.17
▪ Non-tax receipts	15.65	28.77	27.01	28.12	24.01	43.79	20.58
• State transfers	69.37	68.00	50.11	90.10	36.70	84.75	4.01
▪ Shared revenue receipts	0.00	0.00	0.00	0.00	0.00	0.00	-
▪ State grants	69.37	68.00	50.11	90.10	36.70	84.75	4.01
Education cess grant	52.16	53.90	36.89	50.21	31.06	75.05	7.28
Water crisis grant	0.00	0.00	0.00	25.26	0.00	0.00	-
Other grants	17.21	14.10	13.22	14.62	5.64	9.70	-11.46
• Other revenue receipts	82.18	71.48	72.00	67.98	57.21	58.36	-6.84
□ Capital receipts	38.14	49.25	57.65	49.18	20.31	36.04	-1.13
• Sale of land/shopping centre	25.10	32.89	38.69	7.34	5.71	3.90	-37.26
• Grants	9.76	10.69	11.68	30.12	11.75	14.80	8.32
• Loans/bonds income	0.00	1.35	0.00	6.03	0.00	14.15	-
• Others	3.28	4.32	7.27	5.69	2.86	3.20	-0.49
□ Scheme income	154.73	101.76	274.26	147.81	42.43	77.52	-13.82
• Sale of land etc.	31.24	18.86	38.66	29.53	20.92	66.08	14.98
• Loans	65.27	9.37	167.51	71.96	0.00	0.00	-
• Others	58.23	73.54	68.09	46.32	21.52	11.44	-32.54
□ Pensions and other deposits	100.46	99.40	107.92	121.42	91.74	83.17	-3.78

