

Performance Evaluation of Urban Local Governments: A Case for Indian Cities

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Largest Urban Agglomerations : Across Time

- Falling number of cities from the developed world (blue)
- Out of five cities in all the time periods (shaded), 3 are from the developing world (black)
- Urbanisation: Post globalisation phenomenon in developing world

1975	Millions	2000	Millions	2025	Millions
1. Tokyo, Japan	26.6	1. Tokyo, Japan	34.5	1. Tokyo Japan	36.4
2. New York, USA	15.9	2. Mexico City, Mexico	18	2. Mumbai, India	26.4
3. Mexico City, Mexico	10.7	3. New York, USA	17.9	3. Delhi, India	22.5
4. Osaka-Kobe, Japan	9.8	4. São Paulo, Brazil	17.1	4. Dhaka, Bangladesh	22
5. São Paulo, Brazil	9.6	5. Mumbai, India	16.1	5. São Paulo, Brazil	21.4
6. Los Angeles, USA	8.9	6. Shanghai, China	13.2	6. Mexico City, Mexico	21
7. Buenos Aires, Argentina	8.8	7. Kolkata, India	13.1	7. New York, USA	20.6
8. Paris, France	8.6	8. Delhi, India	12.4	8. Kolkata, India	20.6
9. Kolkata, India	7.9	9. Buenos Aires, Argentina	11.9	9. Shanghai, China	19.4
10. Moscow, Russia	7.6	10. Los Angeles, USA	11.8	10. Karachi, Pakistan	19.1

Source: United Nations, World Urbanization Prospects, The 2007 Revision.

Metropolitan Areas : World and India

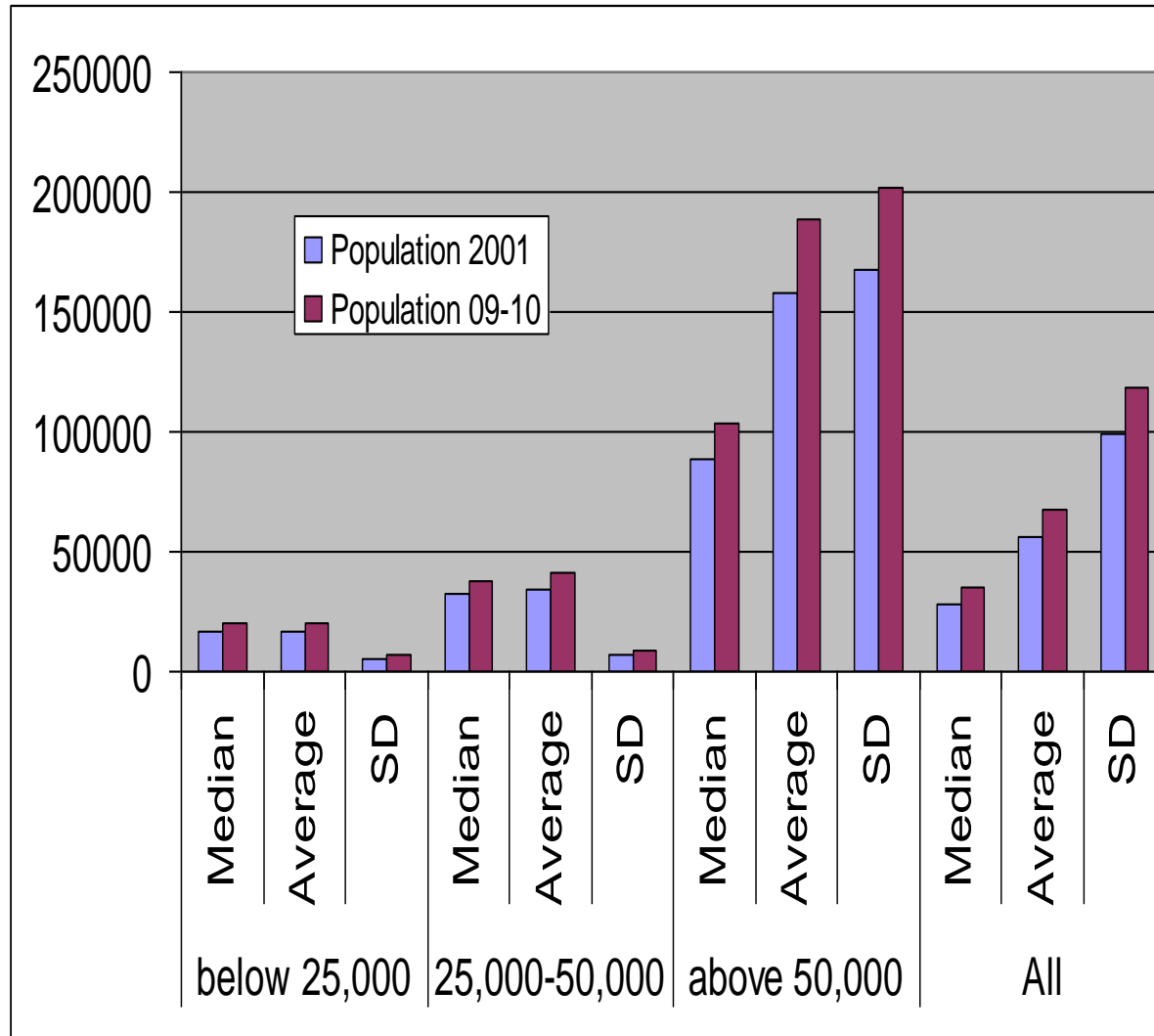
- Highest population: Tokyo (32.5 m)
- Highest area: New York (17,884 sq km)
- Highest Population density: Karachi (10,727 persons/sq km)
- Population : Mumbai, Delhi within top 10, Kolkata within top 15
- Population density: all 3 megacities in top 6 cities in the world
- Over 5,000 urban areas, different sizes
- 3 megacities: Delhi, Kolkata, Mumbai
- 53 million plus cities (census 2011)
- No other country in the world has three cities in the list of top 20 cities in the world
- 286,119,689 urban population (2011): 8 m annual addition

Infrastructure and Service Delivery

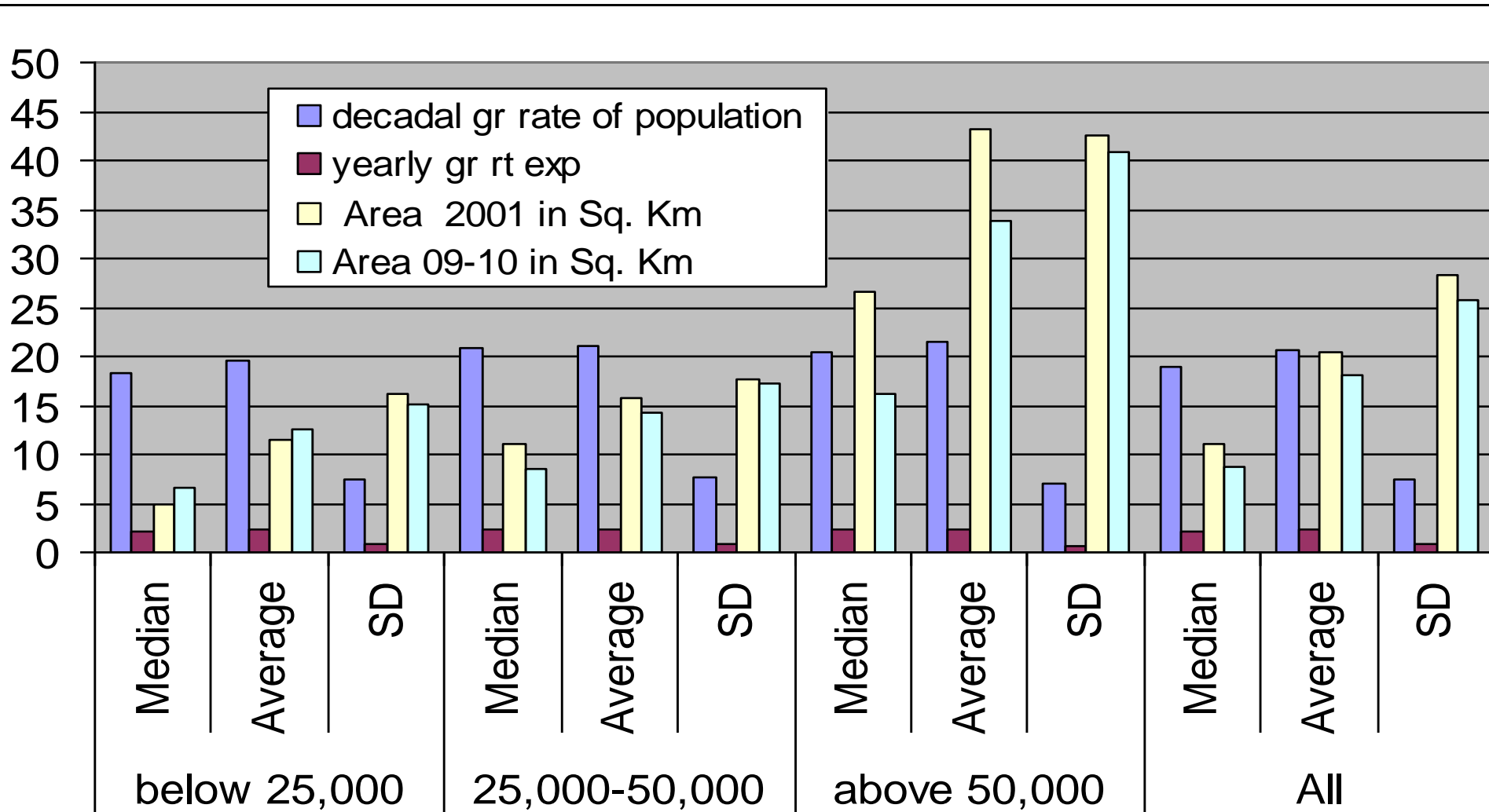
- Main Constraint: Infrastructure and Service Delivery
- Resource constraint
- Detailed review of service delivery scenario in the cities of Karnataka
- Estimate the shortfall in physical levels of services and their operations and maintenance (ONM) expenditures from the physical and financial norms respectively which are prescribed for Indian cities.
 - Some estimations of ONM expenditure requirements
- Revenue Side: the sources of own revenues and the revenue expenditures in the cities
- the shortfall of resources to assess the extent of self reliance in the cities. Some estimations of own revenue capacities are also attempted.
- Performance evaluation of the cities taking the service provisions as the outcomes with the resources used by them in an integrated framework and pinpoint some possible sources of mis-utilisation of resources.

Population Statistics in Different Size Classes of Karnataka ULBs

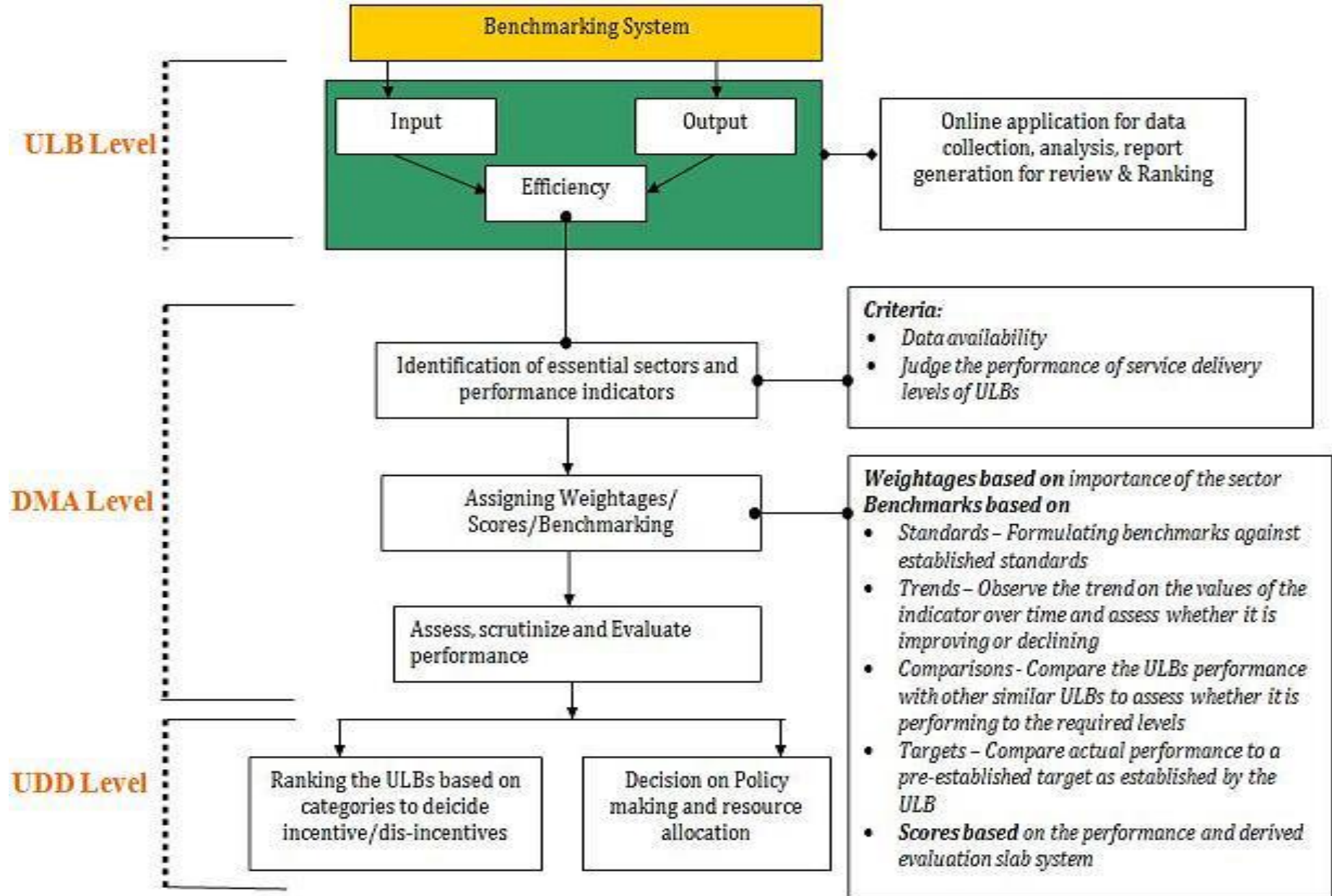
- 213 ULBs
- 88 n the smallest size class
- 75-medium
- 50-Large



Growth Rates of Population and Area in Different Size classes of Karnataka ULBs



SLB Framework



Size class: Norms

Classes	Population
IA	>5 Million
IB	1-5 Million
IC	100,000-1 Million
II	50,000-100,000
III	20,000-50,000
IV+	<20,000

Physical Norms

Service	Physical Norms	
Water Supply	<p>100 per cent individual piped water supply for all households including informal settlements for all cities</p> <ul style="list-style-type: none"> • Continuity of supply: 24x7 water supply for all cities • Per capita consumption norm: 135 litres per capita per day for all cities 	
Sewerage	Underground sewerage system for all cities and 100 per cent collection and treatment of waste water	
Solid Waste	100 per cent of solid waste collected, transported, and treated for all cities as per Municipal Solid Waste 2000 Rules	
Storm Water Drains	Drain network covering 100 per cent road length on both sides of the road for all cities	
Street Lighting	<p>Illuminance: 35 Lux (35 lumens per sq. km) for all road categories in all cities</p> <ul style="list-style-type: none"> • Spacing between street lights: 40 m for major roads, 45 m for collector roads, and 50 m for access road spaces 	
Urban Roads	Size class	Road Density (km per sq km)
	IA	12.25
	IB	12.25
	IC	12.25
	II-IV+	7

Financial Norms (INR per capita)

Size Class	Water Supply	Sewerage	Solid Waste Management	Urban Roads	Strom Water Drains	Street Lighting
1A	797	414	269	421	62	90
1B	613	373	189	421	62	55
1C	491	290	135	527	78	54
II	491	290	113	276	32	4
III	368	207	113	368	42	3
IV+	245	145	113	368	42	3

Summary: Physical Levels of Services

Size Class		Below 25000		25000 to 50000		Above 50000		All	
		Median	CV	Median	CV	Median	CV	Median	CV
Water Supply	per capita supply (LPCD)	102	1.3	74.6	0.7	96	0.6	90	1.1
	Norms Coverage (%)	76	1.2	56	0.6	72	0.6	69	1.1
	Days of Supply in a Week	3	0.5	3	0.5	3	0.5	3	0.5
	Hours of Supply in a Day	1	0.8	1	1.2	1	1.4	1	1.1
Solid Waste Management	Collection efficiency	75	0.2	88	0.04	100	0.1	85	0.2
	Transportation Efficiency	71.4	0.2	88	0.06	100	0.8	83	0.5
Urban Roads	Road Density (KM per Sq KM Area)	5	1.13	6.3	1.1	9	2.2	6	2.5
	Norms Coverage (%)	71.6	1.1	90	1.1	84	2.6	82	2.6

Summary: Expenditures on Services

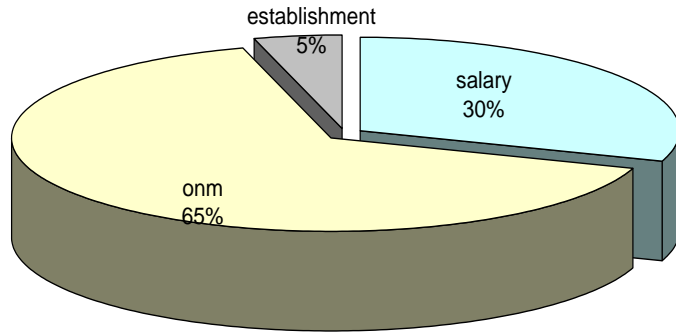
Services	Indicators	Below 25,000		25,000 to 50,000		Above 50,000		All	
		Median	CV	Median	CV	Median	CV	Median	CV
Water Supply	ONM cost per Capita (INR)	168	1.3	213	0.6	228	2	203	1.5
	Coverage of Norms (%)	55	1.2	58	0.6	46	2	53	1.3
Solid Waste Management	ONM cost per Capita(INR)	8.50	2.7	14.20	1.5	14.50	1.5	11	3.5
	Coverage of Norms(%)	7.5	2.7	13	1.5	12	1.4	9.3	3.2
Urban Roads	ONM cost per Capita(INR)	35.60	1.7	36.10	1.6	20	1.5	33	1.7
	Coverage of Norms(%)	71.6	1.1	90	1.1	84	2.6	82	2.6
Street Lighting	ONM cost per Capita(INR)	43.4	1	37	1.5	39	0.8	42	1.2
	Coverage of Norms(%)	1447	1	1238	1.5	211	1.5	1151	1.4
All Services	ONM cost per Capita(INR)	364	1	390	1	352	1.4	372	1
	Coverage of Norms (%)	45	1	46	1	36	1.2	43	1

Some Financial Performance Indicators

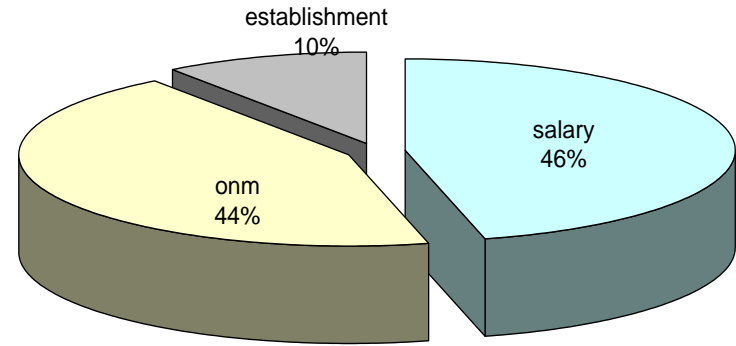
Indicators	Below 25000		25000 to 50000		Above 50000		All	
	Median	CV	Median	CV	Median	CV	Median	CV
Own Revenue to Revenue Expenditure Ratio (%)	13	0.5	31	0.21	112	3	27	5.3
Own Revenue to ONM Expenditure ratio (%)	24	1.4	52	0.65	200	2.5	50	4.4
Water Charges to ONM Expenditure on Water (%)	15	0.8	11	0.7	12	0.9	13	0.8
Collection Efficiency of Property Taxes (%)	53	0.6	65	0.4	58	0.6	62	0.5
Own Revenue Capacity to Actual Own Revenue (Index)	116	2.6	116	0.2	141	2.6	116	3
Own Revenue Capacity to ONM Requirements	23.5	2	27.5	2	27.5	2.2	27	2.2

Composition of Revenue Expenditures

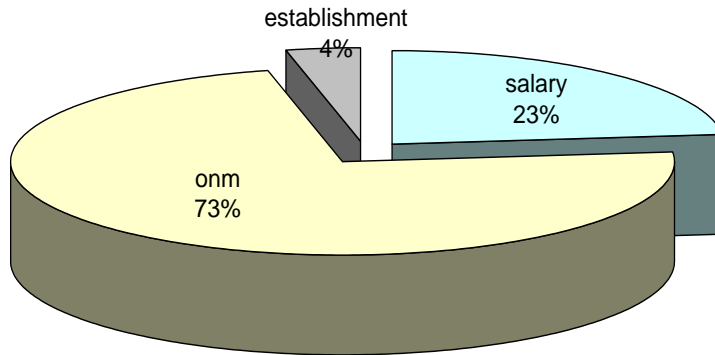
Composition of Revenue Expenditures (25,000 to 50,000 Size Class)



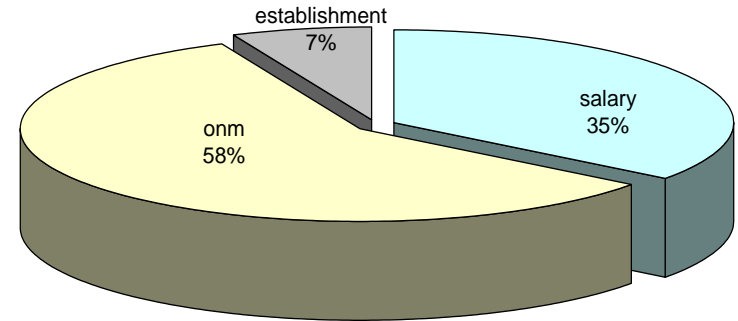
Composition of Revenue Expenditures (Below 25,000 Size Class)



Composition of Revenue Expenditures (Above 50,000 Size Class)

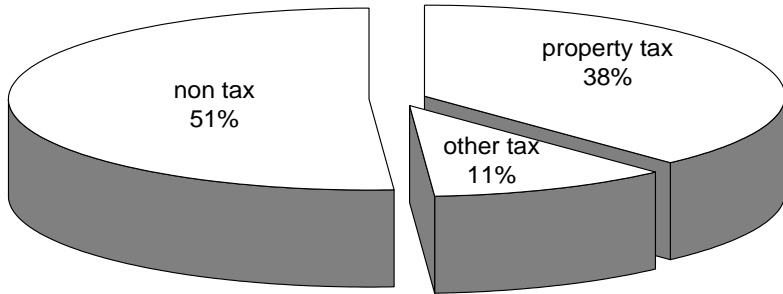


Composition of Revenue Expenditures

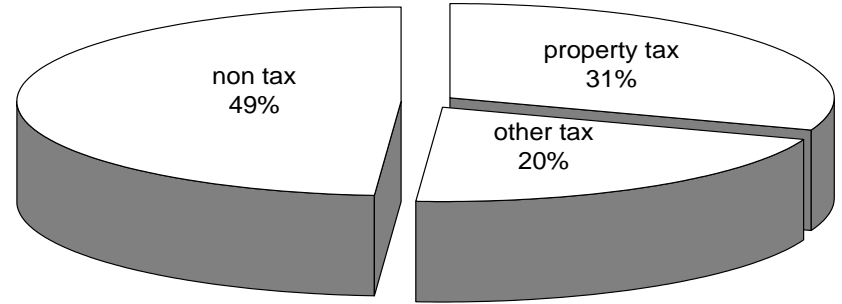


Composition of Own Revenues

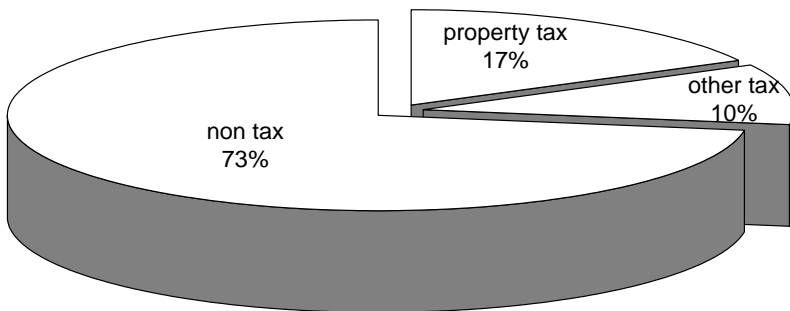
Composition of Own Revenues (Below 25,000 Size Class)



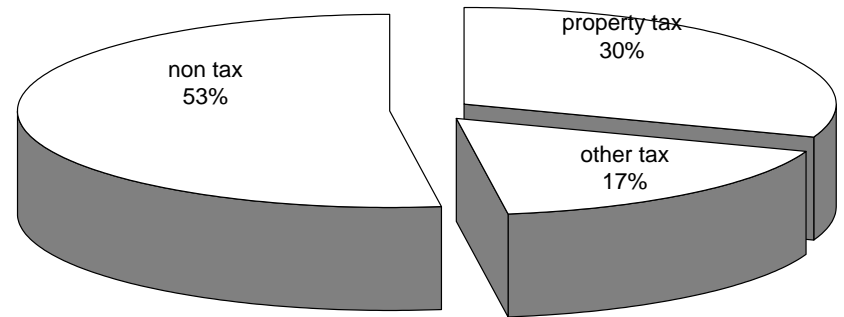
Composition of Own Revenues (25,000 to 50,000 Size Class)



Composition of Own Revenues (Above 50,000 Size Class)



Composition of Own Revenues



Efficiency Scores

	Below 25,000	25,000 to 50,000	Above 50,000	All
No. Of ULBs	88	75	50	213
Inefficient ULBs (Nos)	64	58	31	153
Inefficient ULBs (%)	72.7	77.3	62	71.8
Median	0.76	0.67	0.77	0.73
Average	0.76	0.69	0.77	0.74
SD	0.2	0.24	0.22	0.22
Max	1	1	1	1
Min	0.3	0.27	0.34	0.27
CV	0.27	0.35	0.28	0.3

Sources of Additional Cost Savings

- We also attempt an analysis of additional cost saving through slacks in inputs.
- These slacks locate the sources and quantum of input savings additional to what has been recorded in the radial efficiency scores.
- We find that among the input variables the highest proportion of ULBs can save on establishment expenditure and the lowest proportion of ULBs on ONM expenditure. This is true for all the size classes of cities.
- In most of the resources , the quantum of additional savings is higher in smaller cities indicating to the fact that mis-utilisation of resources and under-provision of services are more pronounced in the smaller cities.

Summary Results

- Efficiency scores for each size class grouped to generate these statistics from the optimization model results which is applied to all the cities together.
- We find that there is not much difference in the average and the median and the variation across cities and within a city size class is also minimal.
- On an average the ULBs in Karnataka can save upto 27 per cent of the inputs to achieve the maximum efficiency in the prescribed model.
- That is to say the cities can provide the same levels of services by utilizing resources lesser by 27 per cent of what they currently use.
- The highest efficiency score is recorded for the biggest size class of cities and the lowest score in the medium size class. The medium size class also records the highest percentage of inefficient ULBs in the group.