URBAN GOVERNANCE AND SATISFACTION OF CITIZENS OF THANE CITY

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ABSTRACT

In this paper, we have computed for the city of Thane in Maharashtra state, the Urban Governance Index developed by UN-HABITAT. Calculated UGI as 72 percent implies quite good governance. Our findings as regards citizens' satisfaction regarding the physical, social and environmental infrastructure provisions, their willingness to pay (WTP) for the enhancement of infrastructure by Thane Municipal Corporation (TMC) and cost benefit analysis of the performance of TMC do not indicate very good governance of the city.

We argue here that the UN-HABITAT methodology of computing UGI of a city (UNHME) is not giving a true picture of city's governance. Rather, it is giving an overstated value of UGI of the city which has the danger of the public body becoming complacent and negligent in its duties. UNHME has not taken account of the efficiency of delivery of key services by ULBs. In fact, good governance rests on efficacy of services delivery. Hence, UNHME needs to include variables which will reflect efficiency of service delivery and also adapt to conditions specific to the country in which the city is situated. Indian cities are plagued by inefficiency in delivery of public services.

1. INTRODUCTION

Bulk of the urban growth in India is concentrated in large cities. It is estimated that the present number of 53 metropolitan cities (plus one million population) will go up to 75 by 2021, including 6 as mega-cities with more than 10 million population. It is projected that India will have the greatest concentration of mega-cities in the Asia Region. This is happening largely as

the Indian cities act as engines of national growth, adding value to rural produce, serving regional markets and attracting international investments. The estimates indicate that cities in India account for 55 percent of national domestic product (NDP). The cities today have become the nodes of economic growth, mobilization and consumption.

The economic development of cities is neither automatic nor a natural corollary of growth in urban population. It is conditional upon the availability of urban infrastructure. Sustaining high growth will require substantial expenditure on physical and social infrastructure, and on urban amenities. Policy makers need to view efficient urban development and management as a critical pre-requisite to sustainable growth. The binding thread through this entire period was the lack of capacity and resources at the local level. Even after passing of 74th CAA in 1992, fiscal powers of ULBs are limited and there are large inefficiencies in tax collection, record maintenance, accounting and budgeting.

In order to enable the implementation of a new strategy, it would be necessary to restructure the local bodies and service departments. The challenge is to find ecologically sustainable, socially just, economically viable and culturally transferable technological and managerial innovations. The traditional role of ULBs from 'Provider' has to change to 'Facilitator'. The governance structure of the ULBs needs to be made more accountable and performance-oriented.

Below in section 2,we sketch a brief profile of Thane city, in section 3,we state the objectives of our paper, in 4, we describe the research methodology ,in 5 we describe UGI methodology developed by UN-HABITAT, in 6 we compute UGI of Thane city, in 7 we describe the distribution of citizens' sample based on satisfaction score ,in 8,we give the distribution of citizens' sample based on WTP, in 9 cost benefit analysis of TMC's projects is described, in 10 ,we compare UGI of Thane city with citizens' average satisfaction score and in 11,we conclude.

2. PROFILE OF THANE CITY

The city of Thane is one of Maharashtra's major industrial town and the district headquarters. The National Decennial Census 2011 pegged the population of the city at 18,18,872. Thane is included in the Mumbai Metropolitan Region and is one of the 18 Urban Centers therein. Being the first urban Center on the periphery of the Greater Mumbai, the city occupies a unique

position in the region. The geographical jurisdiction of the Thane city spreads over an area of 128.23 sq. km. with its boundaries contiguous with that of Greater Mumbai, Navi Mumbai, Mira Bhyander and Kalyan Municipal Corporation.

The city is slowly moving towards being a high end knowledge service provider with the multinational companies outsourcing their non-core processes to other experts.

The planning authority for the city of Thane is the Thane Municipal Corporation being established in 1982 by merging the then Municipal Council with adjoining 32 villages which were the part of Mumbai Metropolitan region. TMC is charged with planning, regulation, control and co-ordination of urban growth within territorial jurisdiction of the city. It also has responsibilities to provide basic civic amenities to the citizens along with the preparation and execution of infrastructural development projects. The territorial area has been divided into nine major areas viz. Kopari, Naupada, Uthalsar, Kalwa, Mumbra /Diva/ Shil, Vartaknagar, Owle /Manpada/ Kolshet, Wagle Estate, and Railadevi and accordingly the ward committees have been formed.

Thane Municipal Corporation has initiated reforms prior to JNNURM. The efforts of TMC have been recognised by Central and State governments as well as by various renowned agencies. The Corporation has been awarded for instituting numerous good governance initiatives, which are as given below-

- Clean city award from HUDCO 1999-2000
- Zonal award under Sant Gadgebaba Gram Swachta Abhiyan from State Government 2003-04
- First Municipal Corporation to implement Solar operated water heating system mandatory to all new buildings. Subsequently Government of India Ministry of non conventional energy has asked other Municipal Corporations to follow Thane model.
- Award for energy conservation from the Maharashtra energy development agency for two consecutive years 2003 and 2004
- Award for excellence in Municipal Initiatives from CRISIL for the year 2004-05
- Sector award at state level for Solid waste management

- National award for energy conservation ,pollution control laboratory has been recognised by government of India

- State sponsored Chhatrapati Shivaji Award for social afforestation for urban environment improvement by massive tree planting exercise during 2011. The TMC planted 25,000 saplings during 2011 besides drafting policies for green footpaths and up gradation of parks and recreational grounds. (Times of India, Thane, 1st October, 2013)

- 'HUDCO' Award to Thane Municipal Corporation for Various Environment Conservation Project in the Year 2012.

3. RESEARCH OBJECTIVES

The objectives of our study can be stated as under:

i. To calculate Urban Governance Index (UGI) of the city and compare it with other cities of the world.

ii. To calculate satisfaction score of citizens and compare it with UGI of the city.

iii. To evaluate the willingness-to-pay (WTP) of the people for the infrastructure goods and services provided to them by TMC.

iv. To calculate cost and benefits of TMC projects

4. RESEARCH METHODOLOGY

4.1   The Hypotheses

The hypotheses, which were tested, are:

i. The Average satisfaction score of citizens is high.

ii. The average willingness-to-pay (WTP) of the people for the infrastructure goods and services provided to them by TMC is high.

iii. The cost of the infrastructure measures and projects are less than the benefits that accrue from them.

iv. Average satisfaction score of citizens and UGI are similar.

4.2 Scope of the Study and Data Collection

Primary as well as secondary data sources were used by us for the study. A structured questionnaire and direct survey method was used to collect responses of stakeholders that included 705 residents. Resident respondents from all nine wards of the city namely, Uthalsar ,Naupada ,Kopari ,Kalwa ,Mumbra/ Diva/Shil, Wagle Estate ,Railadevi, Vartak nagar, Owle/Manpada/Kolshet were covered.

Double dichotomous questionnaire was used to collect data from a stratified random sample of residents in each of the city's nodes. WTP of the residents was found out. Data on their level of satisfaction with TMC activities was ascertained. While ascertaining the response on WTP, residents were briefed about the work of TMC in the major areas of infrastructure provision and management. The payment vehicle suggested to them was the monthly contribution to a fund for extending TMC's physical, social and environmental infrastructure.

Secondary data sources like TMC budget, city development plan, newspaper reports, environmental status reports and UN-HABITAT reports were also referred. Information was also obtained from various websites like that of the Thane Municipal Corporation (TMC) and Jawaharlal Nehru National Urban Renewal Mission (JNNURM).

4.3   Data Analysis

The statistical techniques used to test the hypotheses are as follows:

i.   To analyze resident responses and to test hypotheses bivariate frequency tables were obtained using SPSS for the level of WTP with level of satisfaction with TMC.

ii. The CVM was used as a basis for cost-benefit analysis.

iii. UN-HABITAT framework was applied to calculate Urban Governance Index (UGI) score for Thane city. This score was also compared with other cities of the world.

iv. To examine whether good governance score has translated into satisfied residents, Satisfaction score based on 5 point scale such as excellent, very good, good, average and poor, for physical, social and environmental infrastructure was calculated for stakeholders. Comparison of UGI score of Thane with satisfaction score of residents was carried out to evaluate the performance of TMC at grass root level.

5. URBAN GOVERNANCE INDEX (UGI) DEVELOPED BY UN-HABITAT

UN-HABITAT launched the Global Campaign on Urban Governance in 1999 to support the implementation of the Habitat Agenda goal of "sustainable human settlements development in an urbanizing world." The Campaign's goal is to contribute to the eradication of poverty through improved urban governance. It aims to increase the capacity of local governments and other stakeholders to practice good urban governance and to raise awareness for good urban governance around the world. The campaign is implemented through four principal strategies: **normative debate, advocacy, capacity building and knowledge management**.   The development of the index supports the Campaign's advocacy and capacity-building strategies.

The above noted survey by UN HABITAT on governance concluded:

"The result of good governance is development that 'gives priority to poor, advances the cause of women, sustains the environment, and creates needed opportunities for employment and other livelihood".

The urban governance index expects to demonstrate that good urban governance is vital to improving the quality of life in cities.

The urban governance index is being developed with a two-fold purpose. At the *global level*, the index will be used to demonstrate the importance of good urban governance in achieving broad development objectives, such as the Millennium Development Goals and those in the Habitat Agenda.   Organizations such as UN-HABITAT, UNDP and the World Bank have long advocated for increased investments in urban development based on a common argument: the world is increasingly urbanizing, and cities, through their concentrations of population and

resources, represent the best entry point for the efficient and effective use of scarce development resources.

At the *local level*, the index is expected to catalyze local action to improve the quality of urban governance.

The Urban Governance Index has been developed jointly by the Global Urban Observatory and the Global Campaign on Urban Governance, supported by selected cities as well as key members of the Campaign's Global Steering Group. An internal UN-HABITAT Flex-Team was established to prepare initial framework and indicators in 2002. Initial indicators were developed based on Urban Indicators Programme and in-house research. An Expert Group Meeting made recommendations regarding the structure and content of the index in November 2002. Field-testing was carried out in two stages with a group comprising first 12 and later 24 large and medium-size cities from different regions. It is intended to expand this to a larger group based on the Global Urban Observatory's monitoring programme and through the ongoing city-based work of UN-HABITAT programmes. A long-list of indicators was selected for the initial field test with partners. Based on the results, indicators that demonstrated the strongest correlation to the quality of governance have been selected for inclusion in the Index. Opportunities for national adaptation of the Index are being actively pursued, including in Indonesia, Somalia and Sri Lanka. National (multi-city) application is already underway in Zimbabwe and Mongolia. Discussions are ongoing with local authorities' associations to develop a Good Governance Hallmark or Award system for cities based on the Index results.

Thus, the Urban Governance Index developed by UN-HABITAT is composed of four sub-indices, namely: Effectiveness sub-index; Equity sub-index; Participation sub-index; and Accountability Sub-Index. These are given below in Box 1:

BOX 1

SUB-INDICES OF UGI

"Effectiveness of governance measures the existing mechanisms and the socio-political environment for institutional efficiency in financial management and planning, delivery of services and response to civil society concerns".

"**Equity** implies inclusiveness with unbiased access to basic necessities of urban life, with institutional priorities focusing on pro-poor policies."

"**Participation** in governance implies mechanisms that promote strong local representative democracies through inclusive, free and fair municipal elections. It also includes participatory decision-making processes, where the civic capital, especially of the poor is recognized and there exists consensus orientation and citizenship".

"**Accountability** implies that mechanisms are present and effective for transparency in the operational functions of the local government; responsiveness towards the higher level of the local government; local population and civic grievances; standards for professional and personal integrity and rule of law and public policies are applied in transparent and predictable manner".

Chart 1 explain sub-indices of UGI

CHART 1

SUB-INDICES OF UGI
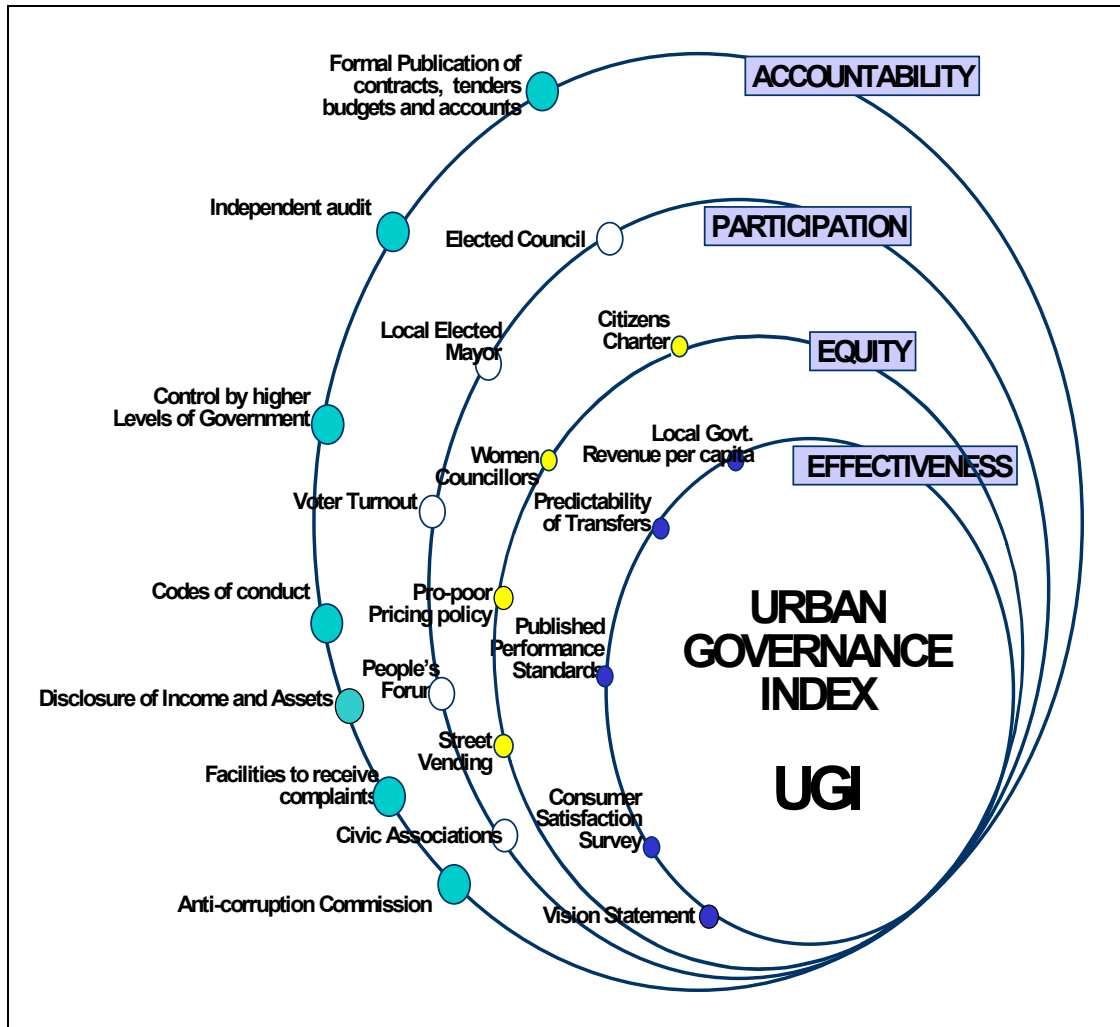
6. CONSTRUCTION OF URBAN GOVERNANCE INDEX FOR THANE CITY IN MAHARASHTRA STATE

6.1 Computation of UGI for Thane City

Below we have attempted to compute the four sub-indices of UGI for Thane city. We have allotted scores to 25 data variables contained in four sub-indices as per UN-HABITAT methodology.

We have computed UGI for Thane city using formulae and the weights as per UN-HABITAT methodology. In every sub-index, the total of weights given to data variables is

one.This total weight is distributed over the data variables depending on the importance of the variable from point of view of urban governance. For illustration, in Effectiveness index, the variable 'local government revenue per capita' is given the weight of 0.25, while 'Ratio of recurrent and capital budget' is allotted the weight 0.10. Thus the value of UGI depends on values of data variables, weights attached to data variables and also the availability of data on variables**.**

The detailed computation of UGI is shown below:

Effectiveness sub-index of UGI is calculated in Table 1 as below

TABLE 1

EFFECTIVENESS SUB-INDEX (Data Variables 1-8)

No	Data Variable	Data (X)	Formula	Result	Weight	Total
1	Local Government revenue per capita (LGR)	Rs 5050.8 (its log= 3.7033601718)	LGR= (log X- log min)/ (log max- log min) min=105.8 (its log= 2.0244856677) max=	1.6788745 / 2.7637696 = 0.6074582	0.25	0.15186455

			61640 (its log= 4.78986263 005)			
2	Ratio of recurrent and capital budget (RRC)	5.021 (its log= 0.70079022 137)	RRC= (log X-log min)/ log max-log min) min= 0.09 (its log= -1.04575749 056) max= 8.37 (its log= 0.92272545 799)	1.74654771 / 1.96848295 = 0.8872557	0.10	0.08872 557
3	Ratio of mandated to actual tax collected (TC)		TC=96.23	0.9623	0.10	0.09623
4	Local	16.61	LGT =1	1.00	0.10	0.10

	government revenue transfer (LGT)		(0-25%=1, 25-50%=0.75, 50-75%=0.50, 75-100%=0.25)			
5	Predictability of transfers in local government budget (PoT)	Yes=1	PoT=X	1.00	0.10	0.10
6	Published performance delivery standards (PPDS)	Yes=1	PPDS=PPS x S/T, 1 x 5/5	1.00	0.15	0.15
	b. No. of key services for which the PPDS is present (S); c. Total no. of key services	NA	S=5 T=5			

	for which PPDS should be present (T)[1]					
7	Consumer satisfaction survey (CSS)	Yes=1	CSS=X	1.00	0.10	0.10
8	Vision statement effective (VSE)		VSE= 0.5 x VS+ 0.5 x PP	1.00	0.10	0.10
	a. Vision statement (VS) [2]	Yes=1	VS=X	1.00		
	b. Vision statement drafted through a participatory process (PP)	Yes=1	PP=X	1.00		
					Effectiveness sub-index	**0.8867**

[1]Water, electricity, sanitation, health and education should be considered as key services for which the performance delivery standards should be present.

[2] Being an indicator of effectiveness, the indicator has been disaggregated into the presence of vision statement and process of drafting the vision statement.

As per Table 1 **Effectiveness sub-index is 0.8867**

Equity sub-index of UGI is calculated in Table 2 as below

TABLE 2

EQUITY SUB-INDEX (Data Variables 9-13)

No.	Data Variable	Data (X)	Formula	Result	Weight	Total
9	Citizens charter for basic services (CCS)		CCS=CC x S/T (CCS=1x5/5)	1.00	0.20	0.20
	a. Citizens' charter (CC)	Yes=1	CC=1			
	b. No. of key services for which the CC is present (S) c. Total no. of key services for which CC should be present (T)	S=5 T=5				

10	Percentage of women councillors (WC)	50%	WC=X x 2/100 (WC=50 x 2/100)	1.00	0.20	0.20
11	Percentage of women in key positions (WK)	No=0	WK= X x 2/100	0.00	0.10	0.00
12	Percentage households with water connection (HH wat.)	82.88%	HH wat. =82.88/100	0.8288	0.15	0.12432
	Existence of pro-poor policy (PPC)	Yes=1	PPC=X	1.00	0.10	0.10
	Is water price cheaper for poor settlements? (WP)	Yes=1	WP=X	1.00	0.10	0.10
13	Incentives for informal market (IM)		IM=1 (any one of a, b or c)	1.00	0.15	0.15
	a. Street vending not allowed	No=0				
	b. Street vending with restrictions	Yes=1				
	c. Public fairs, municipal	No=0				

	market					
					Equity sub-index	**0.87432**

As per Table 2 **Equity sub-index of UGI is 0.87432**

Participation sub-index of UGI is calculated in Table 3 as below

TABLE 3

PARTICIPATION SUB-INDEX (Data Variables 14-18)

No.	Data Variable	Data (X)	Formula	Result	Weight	Total
14	Elected council (EC)	Yes=1	EC=X	1.00	0.15	0.15
15	Locally elected mayor (LEM)	0.75	LEM= 0.75	0.75	0.15	0.1125
16	Voter turnout (VT)	52%	VT= X/100	0.52	0.30	0.156
17	Peoples' forum (PC)	Yes=1	PF=X	1.00	0.15	0.15
18	Civic	No=0	CA= (Log X-	0.00	0.25	0.00

associations per 10,000 population (CA)		Log min)/ (Log max- Log min) min=0.49; max =72.79 (Field test 2003)			
				Participation sub-index	**0.5685**

As per Table 3 **Participation sub-index of UGI is 0.5685**

Accountability sub-index of UGI is calculated in Table 4 as below

TABLE 4

ACCOUNTABILITY SUB-INDEX (Data Variables 19-25)

No.	Data Variable	Data (X)	Formula	Result	Weight	Total
19	Formal publication (FP)		CTBA= Average (CT+BA)	1.00	0.20	0.20
	a. Formal publication: contracts and tenders	Yes=1	CT=X	1.00	NA	

	(CT)					
	b. Formal publication: budget and accounts (BA)	Yes=1	BA=X	1.00	NA	
20	Control by higher government (CG)		CG = Average (CLG+RC)	1.00	0.07	0.07
	a. Control by higher government : close local government (CLG)	Yes=1	CLG =X	1.00		
	b. Control by higher government : removal of councillors (RC)	Yes=1	RC=X	1.00		
	Local government authorities (LGA)		LGA =Average (SLT+SYC+BF+CP)	1.00	0.08	0.08

	c. Local government : set local tax levels (SLT)	Yes=1	SLT =X	1.00		
	d. Local government : set user charges for services (SUC)	Yes=1	SUC=X	1.00		
	e. Local government : borrow funds (BF)	Yes=1	BF=X	1.00		
	f. Local government : choose contractors for projects (CP)	Yes=1	CP=X	1.00		
21	Codes of conduct (CoC)	No=0	CoC=X	0.00	0.10	0.00
22	Facilities to receive complaints (FRC)		FRC= Average (OA+ EF)	1.00	0.10	0.10

	b. Official appointed to receive complaints on public authorities (OA)	Yes=1				
	c. Exclusive facility to receive complaints on corruption (EF)	Yes=1				
23	Anti-corruption commission (ACC)	No=0	ACC=X	0.00	0.15	0.00
24	Personal income and assets (PIA)	NA	PIA =(0.75* average PIA+FIA +0.25* IAM)	0.75	0.15	0.1125
	a. Disclosure of personal income and assets (PIA)	Yes=1	PIA=X	1.00		
	b. Disclosure of family's income and	Yes=1	FIA=X	1.00		

	assets (FIA)					
	c. Income and assets regularly monitored (IAM)	No=0	IAM=X	0.00		
25	Regular independent audit (RIA)	No=0	RIA=X	0.00	0.15	0.00
					Account-ability sub-index	**0.5625**

As per Table 4 **Accountability sub-index of UGI is 0.5625**

Urban Governance Index = Average of (Effectiveness sub-index + Equity sub-index + Participation sub-index + Accountability sub-index)

UGI= (0.886725+0.87432+0.5685+0.5625=2.892145) ÷ 4= 0.72303625

TMC did better in effectiveness & equity sub-index, but not in participation and accountability sub-index.

Effectiveness sub-index of TMC is 0.886725, which is higher as TMC's revenue per capita is satisfactory and it also has higher weightage as 0.25 , TMC raises a major part of its budgetary requirements (more than 75 %) on its own and thus its dependence on higher levels of governments is less, there is very less gap (3.77 %) in mandated to actual revenue collected, which implies that TMC has tapped its potential to raise revenue to a large extent, There is fair

degree of regularity of transfers from higher levels of government in TMC budget, all these variables have total weightage 0.30 , there is currently a formal publication of performance standards for key services delivered by TMC having weightage 0.25, Surveys are conducted by TMC while preparing plans for the city , stakeholders' are consulted at each stage of the plan, weightage 0.10, TMC takes guidance from its vision statement in chalking out and implementing the various programmes, weightage 0.10.

Equity sub-index is 0.87432, which is higher because TMC has Citizen's Charter for number of desirable key services, and has higher weightage 0.20, better representation of women in total councilors weightage 0.20, higher percentage of households with water connections, weightage 0.15, existence of pro poor price policy and weightage 0.10. However, Women councilors are not holding key positions such as 'Mayor, Deputy Mayor', and TMC fairs poorly in terms of incentives for growth of informal business as its role is more restrictive than supportive.

Participation index is 0.5685, which is lower mainly because of unavailability of data on civic associations per 10,000 population and which has higher weightage of 0 .25, comparatively lower voter turnout**,** which also has higher weightage of 0.30. However, for some data variables TMC's performance is good like, election of local governing council and Mayor which is through democratic process, and there is existence of Citizen's Forum, which discusses problems and action plan regarding urban governance, environmental and civic issues. But, these variables have relatively lower weights as 0.15 and 0.15 respectively.

Accountability index is lower i.e. 0.5625 , because of absence of anti-corruption corruption Commission, specified code of conduct for TMC authorities and regular independent audit having total weightage of 0.40. However, there are some data variables where TMC's performance is good such as the higher levels of government exercise less control on TMC regarding economic issues but carrying less weightage 0.07.

6.2   Comparison of UGI score of Thane City with other cities of the world

UN-HABITAT center has computed a UGI index for cities of African, Arab states, Asia and Pacific, Europe, North America and Caribbean states which are shown in Chart 2 as follows:

CHART 2

UGI CALCULATED BY UN-HABITAT FOR OTHER CITIES IN THE WORLD
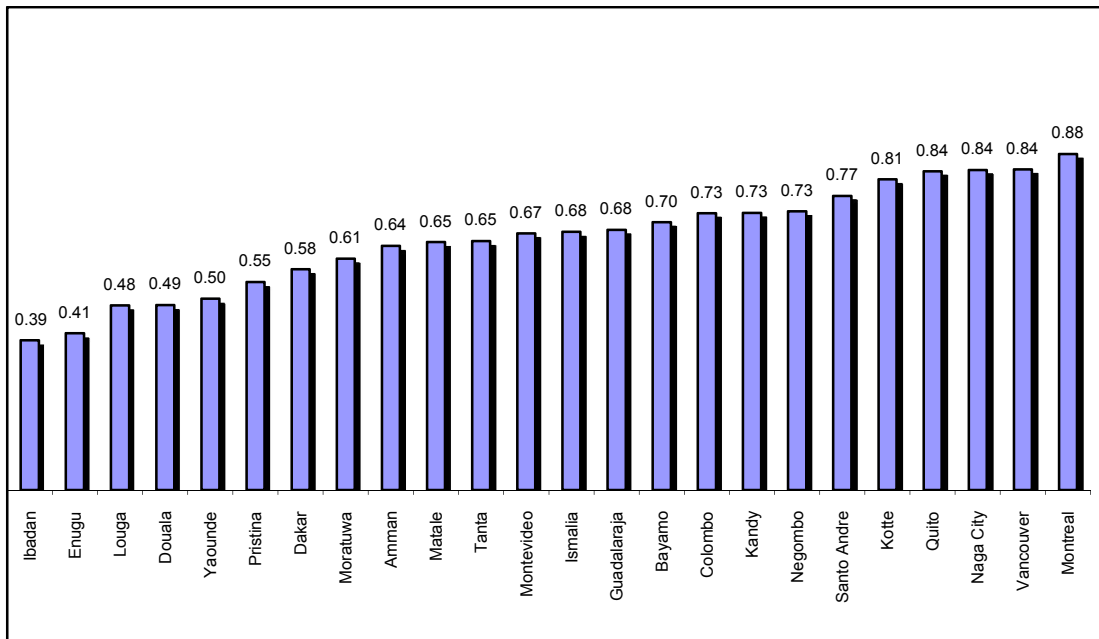
The UGI of city of Thane is quite satisfactory i.e above 70 percent. The analysis of this high level of UGI points out that governance of TMC is effective and equalizing to large extent, but needs be more participatory and accountable to the people. The UGI is calculated on the basis of secondary data.

The UGI calculated for Thane city is **0.72303625** which lies in between of UGI scores of Bayamo **(0.70)** from Latin America & Caribbean and of three cities, Colombo, Kandy and Negombo **(0.73)** of Asia and Pacific. The maximum score is of Montreal from Canada, North America, which is **0.88.**

Next, we found the satisfaction scores of residents based on survey we conducted using structured interviews of residents and we have compared UGI with the satisfaction score of residents.

7.   DISTRIBUTION OF THANE CITIZENS' SAMPLE BY LEVEL OF SATISFACTION

A proportionate stratified random sampling method was used in selecting 705 resident respondents from each of the nine wards of Thane city.705 randomly selected citizens of Thane were asked to give scores to the physical, social and environmental infrastructure provision measures of TMC, on a five point scale, namely, "excellent", "very good", "good", "average", and "poor", and their level of satisfaction for physical, social and environmental infrastructure provision measures of Thane Municipal Corporation was calculated as seen from Table 5.

TABLE 5
SATISFACTION SCORE

Response	Excellent	Very good	Good	Average	Poor	No response
Satisfaction Score	5	4	3	2	1	0

To consider satisfaction score for physical infrastructure, scores given for roads, flyovers, bridges availability, condition of roads, and availability of parking space, water, electricity supply and services of TMT buses were considered. In category of social infrastructure, scores given to quality of education in municipal schools, availability of super specialty services in municipal hospitals, progress of slum redevelopment and improvement programme were considered. Whereas for environmental infrastructure, scores given to availability and maintenance of green spaces, maintenance of lakes, public toilets, availability of garbage bins, and effectiveness of ghantagadis was considered. After assigning scores, total was calculated.

In order to ascertain TMC's overall performance in terms of categories of physical, social and environmental infrastructure provision measures, satisfaction score for all three categories were taken together for Thane city as seen from Table 6.

TABLE 6

SATISFACTION SCORE OF RESIDENTS FOR ALL THREE CATEGORIES OF INFRASTRUCTURE

Percentage to Total

Satisfaction Score → Category of Infrastructure ↓	Excellent	Very good	Good	Average	Poor	Total Respondent residents
Physical	5.77	13.54	29.53	27.07	24.09	100
Social	3.12	9.74	25.01	33.67	28.46	100
Environmental	2.33	11.40	22.41	29.99	33.87	100

Table 6 indicates that only 19.31 percent of resident respondents of thane city have rated physical infrastructure together as "very good" and "excellent". Maximum of them have rated it as "good" (29.53 percent), followed by "average" (27.07 percent), and "poor" (24.09 percent).

Only 12.86 percent of resident respondents have rated TMC's social infrastructure provision measures together as "excellent" and "very good". Maximum respondents (33.67 percent) have rated it as "average", followed by 28.46 percent as "poor", and only 25.01 percent as "good".

For environmental infrastructure provision measures TMC is rated as "poor" by maximum number of respondents in Thane city (33.87 percent), followed by 29.99 percent rating it as "average", and 22.41 percent as "good". Only 13.73 percent of the respondents have rated TMC's measures together as "excellent" and "very good".

With regard to physical infrastructure resident respondents are more satisfied with 5.77 percent rating it as "excellent", followed by social (3.12 percent) infrastructure. Most of them are not

satisfied with environmental infrastructure as 33.87 percent have rated TMC's measures as "poor", followed by social infrastructure (28.46 percent). This clearly points at giving more emphasis on development and maintenance of environmental and social infrastructure in city by TMC.

We asked 14 questions pertaining to all three types of Infrastructure, hence, if there is response for all questions , minimum score will be 14 and maximum score will be 70. This score was converted into percentages. Satisfaction score in percentage is classified into three groups, for which Arithmetic mean (46.65) and S.D. (13.54) were found. On the basis of satisfaction score residents are classified into three groups, defining 33.11 as lower and 60.19 as upper limit.

- Residents whose satisfaction score is below 33.11 is classified as first group called 'low' satisfaction group (Arithmetic mean – S.D.)

- Residents whose score is 33.11 and above but below 60.19 are classified into second group, called 'Medium' satisfaction group

- Resident respondents whose satisfaction score is 60.19 and above were considered in third group called as 'high' satisfaction group. (Arithmetic mean + S.D.)

Classification of respondents according to their satisfaction score is presented below in Table 7.

TABLE 7

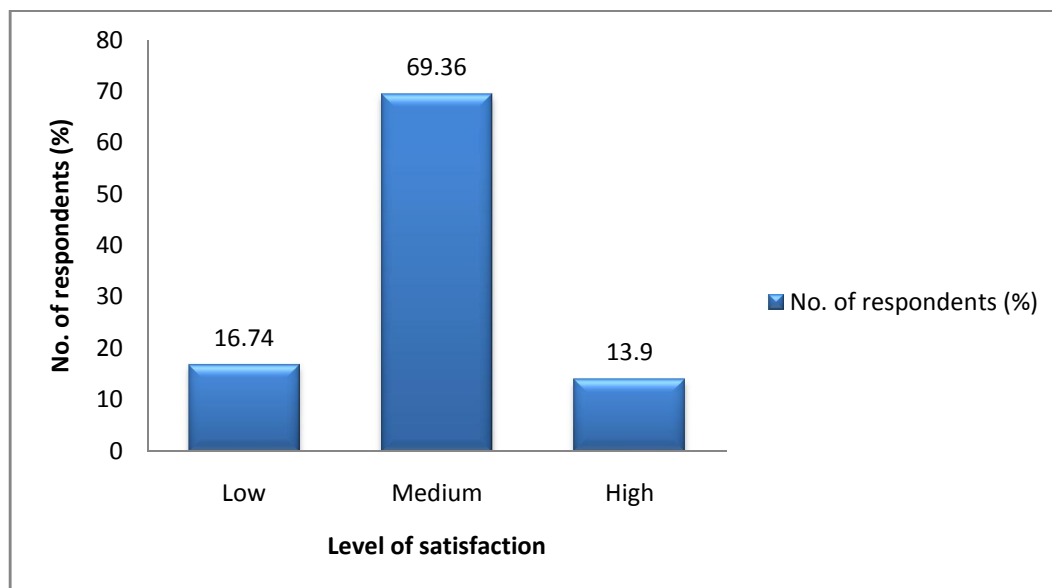**DISTRIBUTION OF RESIDENT SAMPLE BY LEVEL OF SATISFACTION**

Level of satisfaction	Number of Respondents	Percent
Low	118	16.74
Medium	489	69.36

High	98	13.90
Total	705	100.0

Maximum respondents i.e. 86.1 percent have reported low or medium level of satisfaction. This invalidates our hypothesis (i) that average satisfaction score of citizens is high.

CHART 3

DISTRIBUTION OF RESIDENT SAMPLE BY LEVEL OF SATISFACTION

8.   DISTRIBUTION OF RESIDENT SAMPLE BY LEVEL OF WTP

Another response elicited from the residents was the monthly contribution they would be willing to pay (WTP) to set up a fund for extending TMC's physical, social and environmental infrastructure to further the measures for sustainable development taken by TMC. The responses ranged between zero to RS. 1000. Ward-wise differences in WTP were also observed.

In order to classify respondents by their level of WTP, arithmetic mean (64.47) and standard deviation (97.80) were found, but since S.D. is more than Arithmetic mean, different pattern was followed for classification.

Residents are classified into four groups according to their WTP as follows.

- First group classified as 'No WTP' group, is consisting of those residents who have reported zero WTP

- Second group classified as 'Low WTP' group, is consisting of respondents having positive WTP but it is less than Rs 100

- Third group classified as 'Moderate WTP' group, is consisting of respondents having WTP between Rs 100 and Rs 250

  Fourth group classified as 'High WTP' group, is consisting of respondents whose WTP is above Rs 250

Classification of residents according to their level of WTP is presented below in Table 8 and Chart 4

TABLE 8
**DISTRIBUTION OF RESIDENT SAMPLE BY LEVEL OF WTP**

Level of WTP	Number of respondents	Percent
Nil WTP	240	34.04
Low WTP	260	36.88
Moderate WTP	179	25.39
High WTP	26	3.69

Total	705	100.0

Table 8 suggests that stakeholders are open to the idea of sustainable development but are not willing to pay much for the same. 65.96 percent of the resident respondents have quoted moderate or low WTP. 34.04 percent of citizens have reported nil WTP. **This invalidates our hypothesis number (ii) that** the average willingness-to-pay (WTP) of the people for the infrastructure goods and services provided to them by TMC is high.

CHART 4

DISTRIBUTION OF RESIDENT SAMPLE BY LEVEL OF WTP
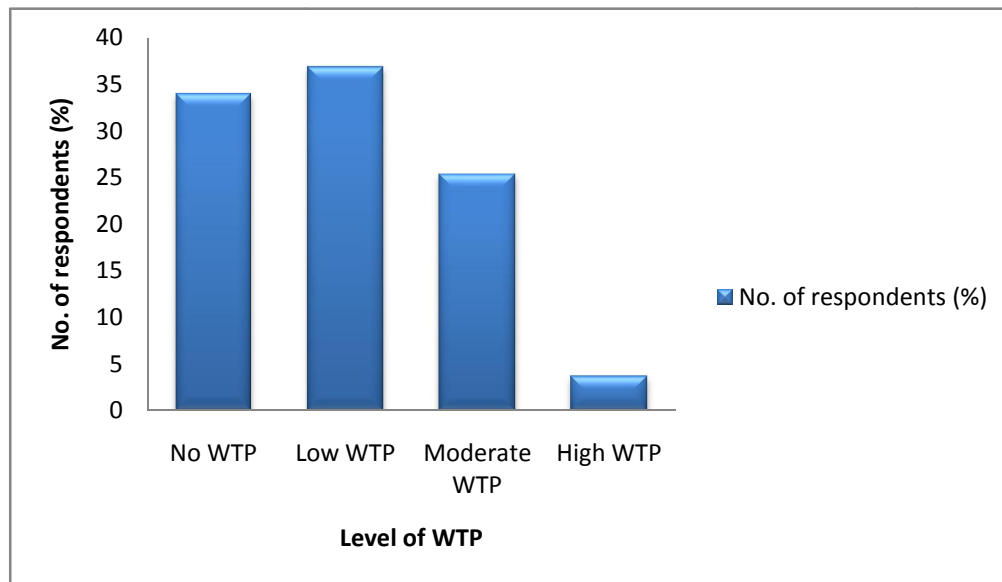
9. **COST- BENEFIT ANALYSIS (CBA)**

We test here our hypothesis (iii) that the cost of the local measures and projects are less than the benefits that accrue from them.

Cost–benefit analysis is an analysis of the cost effectiveness of different projects in order to see whether the benefits outweigh the costs.

CBA in the present study is done on the basis of the responses given by the citizens in terms of WTP. The total benefit is arrived at by considering the total population of thane for 2011 i.e. 18,18,872 and it s divided by average family size in thane as mentioned in Thane City Sanitation Plan (page 19) which is 4.45 , thus total number of households worked out for 2011 are 4,08,735.281.

The total benefit is then arrived at by multiplying the mean WTP per month per family (Rs. 64.47) by the number of households. The monthly willingness to pay by all households , that is, total benefit is thus Rs   26351163.6

The cost is represented as the cost on health, education, water provision, and sewage treatment and various services provided by TMC for the year 2010-11*(Source: TMC budget statement (actual) for 2010-11 from website of TMC)*.

The total cost is Rs.(in lakhs) 38,683.27 and dividing this amount by 12, we got the monthly expenses as Rs 32,23,60,583.

Now BENEFITS-COST = Rs.2,63,51,163.6 - Rs.32,23,60,583 = -Rs. 29,60,09,419. Thus, cost is exceeding benefits per month.

This rejects our hypothesis (iii) that the cost of the local measures and projects are less than the benefits that accrue from them.

This implies that TMC has to take efforts to enhance the returns from its expenditure by spending money productively. This is also consistent with residents' satisfaction score, (section 6 where Arithmetic mean of satisfaction score is 46.65) which shows that people are not much satisfied with TMC and so benefits perceived by them and their willingness to pay are also low.

10.   COMPARISON OF UGI AND SATISFACTION SCORE OF RESIDENTS

At this stage, it is important to see whether there is any correlation between UGI score calculated earlier for Thane city based on secondary data , with the satisfaction score of residents of Thane city based on primary data. This will verify our hypothesis (iv) that, Average satisfaction score of citizens and UGI are similar. High UGI score means better governance, and also it will correlate with high satisfaction score of residents.

As noted earlier , UGI of Thane city is computed using UN-HABITAT methodology. And calculated UGI of Thane city is 0.72 i.e.72 percent, implying that the extent of deficiency in governance of the city is only 28 percent. Also city can compare itself with Montreal city in Canada, a developed country, whose UGI is 88 percent which is not very high as compared to UGI of Thane city.

Let us now look at satisfaction score of respondent residents. Earlier in this paper, we found that Arithmetic mean of satisfaction score of our   sample is 46.65 in percentage terms, standard deviation is 13.54   and the coefficient of variation (cv) is 29.03 .The cv of 29 percent indicates that majority of satisfaction scores are close to the average satisfaction score. This clearly indicates that respondents on the whole are only moderately satisfied with Thane Municipal Corporation's functioning. This finding is further strengthened when we see in section 4 in Table no. 7 in which residents' sample is distributed as per level of satisfaction and it is found that 69.4 percent of resident respondents have medium satisfaction level, followed by 16.7 percent having low satisfaction level and only 13.9 percent have reported having high satisfaction level.

When we juxtapose UGI of Thane city and Mean satisfaction score of city' residents, we clearly see a wide gap between the two.UGI based on secondary data sources mainly made available on TMC's website is quite high (72 %) as compared to the average satisfaction score (46.65%) based on a representative sample of citizens' responses collected through administering a structured interview. Our two findings, in earlier section 8, and in section 9 namely, a) citizens' lower average willingness to pay for an infrastructure conservation and promotion fund to be set

up by TMC and b) costs incurred on sustainable development measures by TMC exceed the benefits received by citizens are consistent with modest average satisfaction score (46.65 %) and not with high UGI (72%). Our own observations of city's governance go along with average satisfaction score of residents.

We argue here that the   UN-HABITAT methodology of computing UGI of a city (UNHME) is not giving a true picture of city's governance. Rather, it is   giving an overstated value of UGI of the city. This is because UNHME is not paying much attention to efficiency of delivery of key services by ULBs. In fact, good governance rests on efficacy of services delivery . Further, an overstated UGI will make Indian ULB complacent and will not provide appropriate guidance to ULB in its plans and their execution. Hence, UNHME needs to include variables which will reflect efficiency of service delivery and also adapt to conditions specific to the country in which the city is situated. Indian cities are plagued by inefficiency in delivery of public services.

We suggest below the modifications in UGI and its adaptation to Indian realities:

i.   The UNHME includes a data variable such as per capita revenue received by the ULB (data variable 1). It is not sufficient for good governance. What is more important is to include outcomes of budget. In other words, maximizing expenditure efficiency and also minimizing per capita cost of collecting the revenue will result in more and better outcomes and will improve governance.

ii.   The UNHME includes a data variable such as a formal publication by the local government of performance standards for key services delivered (data variable 6). But mere publication of performance standards cannot be sufficient to ensure whether these are abided by in reality. Hence a variable reflecting actual performance standards measured in terms of speed and coverage of delivery of key services will be a pointer to level of   governance.

iii.   The UNHME includes data variable such as Consumer satisfaction Survey (data variable 7). However, mere conduct of survey of satisfaction of consumers is not adequate for good governance. Cognizance needs to be taken of findings of the surveys and

utilization of these findings in future planning for the city and its execution. Hence, inserting a data variable capturing the findings of consumer satisfaction survey will truly give good guidance for governance.

iv.   UNHME includes a data variable as existence of vision statement of ULB (data variable 8). But it is important to take account of plan targets set in light of the vision statement and the consequent action to attain the set targets. Hence, a data variable, actions taken by ULB for attainment of vision of the city over a specified period in the past (3 or 5 years) in terms of the comparison of planned targets and the extent of their achievement by the ULB is needed.

v.   Further, UNHME includes a data variable as Citizen's Charter: right of access to basic services (data variable 9).However, it is very essential to know how far citizens' charter is followed by ULB and has covered all citizens and citizens are satisfied with basic services. This is especially important for the metropolitan cities in India which are over urbanized and have to serve huge populations.

vi.   Also, what is important is how far the public goods and services provided by the civic body have reached the people or they are aware of their existence. Hence a variable capturing the average level of awareness of the citizens regarding the presence or absence of public goods or services needs to be included.

vii.   What is peculiar for cities in India are serious institutional weaknesses. Inclusion of a data variable capturing these weaknesses in UMHME will truly reflect the level of urban governance.

We state that UGI of Thane city is overstated and needs modifications as noted above. UGI is very much higher than average satisfaction score of residents thus invalidating our hypothesis no. (iv).

11. CONCLUSION

We have computed for the city of Thane in Maharashtra state, the Urban Governance Index developed by UN-HABITAT. Calculated UGI as 72 percent implies quite good governance. Our findings as regards citizens' satisfaction regarding the physical, social and environmental infrastructure provisions, their willingness to pay (WTP) for the enhancement of infrastructure by Thane Municipal Corporation (TMC) and cost benefit analysis of the performance of TMC do not indicate very good governance of the city.

The UN-HABITAT methodology of computing UGI of a city (UNHME) is not giving a true picture of city's governance. Rather, it is giving an overstated value of UGI of the city which has the danger of public body becoming complacent and negligent in its duties. UNHME has not taken account of the efficiency of delivery of key services by ULBs. In fact, good governance rests on efficacy of services delivery. Hence, UNHME needs to include variables which will reflect efficiency of service delivery and also adapt to conditions specific to the country in which the city is situated. Indian cities are plagued by inefficiency in delivery of public services.

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