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Community and Household Well-being in the Municipal Corporations of Maharashtra

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Abstract

Increasing urbanisation and rising economic inequality are concomitant in India. Though studies have examined the level, pattern and trend of urbanisation in Maharashtra, no attempt has been made to examine the level of well-being across local bodies in urban India. Using data from the Census of India 2011, this paper examines the variations in community and household well-being in the Municipal Corporations of Maharashtra. Two composite indices of well-being, namely, Community Well-being Index (CWI) and Household Well-being Index (HWI) are used to depict the state of well-being at the community and household levels respectively. Results suggest large variations in HWI and CWI

across the Municipal Corporations of Maharashtra. The correlation coefficient of HWI and CWI was 0.51. We observe varying patterns of CWI and HWI. Malegaon, Solapur, Nanded-Waghala, Akola Municipal Corporations are deprived at both CWI and HWI. Chandrapur and Parbhani Corporations, have higher HWI compare to CWI. The Kalyan-Dombivli Corporation ranked first while Parbhani Municipal Corporation ranked the least in CWI among all 27 Corporations in Maharashtra. Similarly, Panvel Corporation with a HWI value of 0.97 ranked first and Bhiwandi-Nizampur ranked least. Corporations that perform poorly in HWI and CWI should be accorded priority in the State's plan and policies.

Keywords: Urbanisation, Municipal Corporation, Maharashtra, Well-being, India

Introduction

Global Trends in Urbanisation

Increasing urbanisation is a global, national and local trend. Majority of the world's population are now living in urban areas. The level, growth and pattern of urbanisation are distinct in developed and developing countries. Of the 4.2 billion people living in urban areas in 2018, 76 per cent of the population lives in developing countries and 24 per cent lives in developed countries (United Nations, 2019). According to the United Nations Population Projection 2018, the urban population is expected to increase to 68 per cent worldwide by 2050. About 90 per cent of the projected population growth will be from the cities and towns of Asia and Africa (United Nations, 2018; Montgomery et al., 2005). The level of urbanisation is positively associated with industrialisation, employment opportunities, level of economic development, educational and health facilities and adversely associated with rising inequality, rampant growth of slums, rising pollutions levels and crowding of housing and infrastructure (Cohen, 2006; Sadashivam et al., 2016). Goal 11 of the Sustainable Development Goals (SDGs) aims to make cities and human settlements inclusive, safe, resilient and sustainable (UNDP, 2017).

Urbanisation - Issues and Challenges

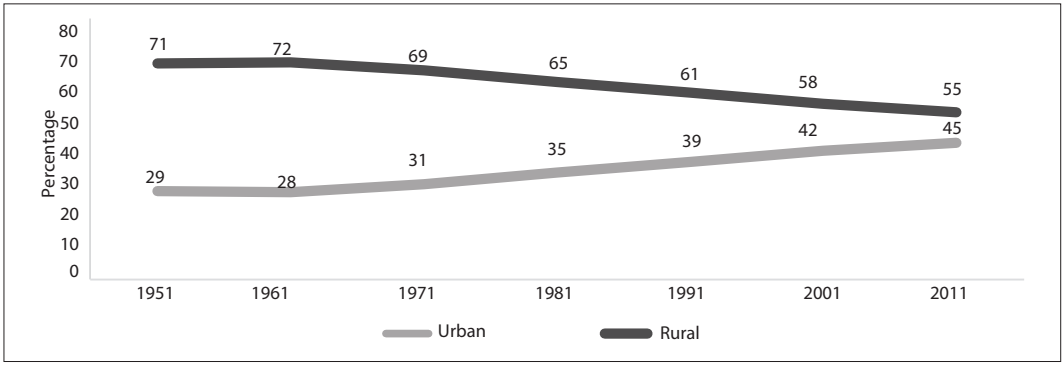
In many developing countries, the urban population is growing at least twice as fast as the rural population. Besides natural increase, rural-urban migration and reclassification of rural to urban areas are resulting in the growth of urban population. This demographic transformation towards urban areas is associated with the widening gap between demand for and supply of basic services such as water, sanitation and energy, affordable housing and health services, and is marked by rising income inequality and increasing level of pollution. Specifically, the pattern of urbanisation in developing countries leads to limited access to income and employment, growth of slums, poor infrastructure and services, environmental hazards and growing inequality (Cohen, 2006; Mahabir et al., 2016). Though unplanned urbanisation affects everybody, it affects the urban poor and vulnerable disproportionately. Provisioning of basic services to the urban poor and vulnerable is the priority agenda of a welfare government. Thus, the role of local, state and central governments is central to improving the lives of the urban poor.

Trends and Patterns of Urbanisation in Maharashtra

India's urban population has increased from 285 million in 2001 to 377 million in 2011 (Census of India, 2001 & 2011). By 2021, the urban population of India is projected at 432 million, which will be 32 per cent of the total population (Office of the Registrar General and Census Commissioner, 2006).

The national average in urbanisation conceals larger variations across the states and districts of India. Maharashtra is the third most urbanised state of India accounting for 13.5 per cent of India's urban population. The urban population of the state was 51 million in 2011 and projected to reach 81 million by 2026 (Census of India, 2011 & Office of the Registrar General and Census Commissioner, 2006). The level of urbanisation has increased from 29 per cent in 1951 to 39 per cent in 1991 and 45 per cent in 2011 (Figure 1). In absolute numbers, the urban population of Maharashtra has increased from 9 million in 1951 to 22 million in 1981 and 51 million in 2011 (Office of the Registrar General and Census Commissioner, 2006). The decadal growth rate of urban population during 2001-11 was 23.67 per cent compared to 10.36 per cent of rural population. Besides, the size of the decadal migrants was 20.4 million (16.6 within Maharashtra and 3.8 million from outside the state) during 2001-11 (Census of India, 2011). It is worthwhile to mention that Maharashtra has been an in-migrating state over the decades.

Figure 1: Trends in Share of Urban and Rural Population in Maharashtra, 1951-2011



Source: Census of India, various years

About half of the urban population growth in Maharashtra was contributed by natural increase (51%), followed by net migration to urban areas (31%) and reclassification of rural localities into urban areas (18%) (Bhagat, 2019). It is one of the progressive states of India and has recorded fast economic growth. In 2016-17, the State Domestic Product Per capita (SDPP) at current prices was estimated at ₹165491 and ranked 7th among all the states and union territories in India. The growth rate of SDPP was 12 per cent during 2015-16 and 2016-17, which was higher than that in many other states of India (RBI 2018). The life expectancy at birth was 72.2 in 2012-16, higher than the national average (Office of the Registrar General and Census Commissioner, 2018). In the composite index of human development, the state ranked 4th among 19 states of India (Suryanarayana et al., 2016). The state has also made significant improvement in Human Development Index and Gender Development Index values over time (Chatterjee et al., 2019). However, the level of poverty, inequality and regional disparities have remained large in the state. An estimated 11.8 million population lives in slums, accounting for 23.13 per cent of urban population of the state (Office of the Registrar General and Census Commissioner, 2013).

Role of Local Government

According to Article 243Q of the Indian Constitution, urban local bodies were classified into three types, namely, Nagar Panchayats (for the areas of rural to urban transition), Municipal Councils (for smaller urban areas) and Municipal Corporations (for larger urban areas). The 74th Amendment to the Constitution of India in 1992 was a watershed moment that has made a tremendous change in the governance structure of urban local bodies. The 74th amendment intended to improve the functioning and effectiveness of the local government in India. For the first time, municipalities in urban areas were given constitutional status. Accordingly, all municipalities are governed by a person chosen by direct election or representation of Chairpersons of Committees under Article 243S or by a person having special knowledge of Municipal Administration. The roles and responsibilities were decentralized to municipalities from the State Legislature with respect to preparation of plans for economic development and social justice and implementation of development schemes, so that they functioned as institutions of self-government. The amendment also made fiscal provisioning for municipalities in terms of taxation, sharing of taxes between state and municipalities and grants-in-aid to the municipalities from the state Governments.

As of 2011, there were 23 Municipal Corporations in the state (27 by 2018). About three-fourths of the urban population in Maharashtra lives in these 27 Municipal Corporations. Each Corporation is governed by a separate elected representative. These corporations vary largely by population size and in level of socio-economic development. To date, no attempt has been made to understand the level of well-being and disparities in the Municipal Corporations in Maharashtra. In this paper, we present the state of community and household well-being in 27 Municipal Corporations of Maharashtra.

Objective

The objective of this study is to examine the state of community and household well-being in the Municipal Corporations of Maharashtra.

Data and Methods

Data from the Census of India, 2011 has been used in the analyses. The Census of India is the only data source that provides information on certain key indicators by type of urban locality such as wards, towns, councils and corporations. This information is provided for all the districts of India. A master data file has been prepared using variables from the Primary Census Abstract (PCA) and Household Amenities and Assets file. The PCA provides data on population size, population of 0-6 years, Scheduled Caste and Scheduled Tribe population, literacy and working population by sex. Similarly, the Household Amenities files provide data on percentage of households with no room, rented house, water by source, lighting by source, type of cooking fuel, type of toilet facility, open defecation, households having no drainage for waste water management. In addition to this information, the Census of India collected data on nine assets such as computer, computer with internet, car/jeep, bicycle, motor cycle, telephone, mobile, television, radio from each household. If a household does not have any of these assets, the household was classified as a household with no assets. The percentage of households without any of these assets is used as a variable in the computation of the Household Well-being Index. According to the Census of India, 2011 there were 23 Municipal Corporations and recently Chandrapur, Panvel, Parbhani and Latur have been reclassified as Municipal Corporations (from Municipal Council). This study used all the 27 Municipal Corporations for analyses.

Descriptive statistics, composite indices and scatter plots have been used in the analyses. Graphs have been prepared to present the well-being in each Municipal Corporation. Two composite indices, namely, the Household Well-Being Index (HWI) and Community Well-Being Index (CWI) have been computed.

Justification of Selecting Indicators for HWI and CWI

We used four indicators to compute the HWI, these are, female literacy, households with no room, households using unimproved cooking fuel (includes kerosene, charcoal, residuals, wood, dung and others) and households having none of the specified assets (computer or laptop, car/jeep, bicycle, motor cycle, telephone, mobile, television). Indicators are chosen based on their availability and importance to development. Duplication of indicators by choosing similar variables has been avoided. For instance, we have used households with none of the specified assets instead of specific assets such as television, computer, bicycle etc. or using both. Female literacy is one of the key indicators at household and aggregate level. It is positively associated with well-being of households. Female literacy, which has been widely used in literature, is chosen over male literacy as it is one of the key indicators associated with well-being. Similarly, households without any of the specified assets are more likely to be part of the economically vulnerable population. We have preferred this indicator as it reflects deprivation of households and a situation of possible abject poverty. Affordable housing is a major challenge in urban areas and hence households with no rooms have been considered an indicator of housing deprivation. Households living in urban areas without a single room are possibly living in most difficult situation. Usually, such proportion are higher in slums and poor inhabiting areas. Households using unimproved cooking fuel in urban areas are economically deprived and more likely to face health hazards. The use of unimproved cooking fuel has adverse health impact on women, children and even other household members.

Similarly, the four variables used to compute CWI are households with no drainage facility, households with unimproved source of light (includes kerosene, oil, other and no light), households using unimproved source of water (consists of tap untreated, covered well, uncovered well, hand pipe, tube well, tank, spring, river and others) and households practicing open defecation. Deprivations in these domains are considered community level indicators. Drainage facility is largely a community variable and provisioning of it is on local government. If the houses do not have drainage facility, in majority of cases the outlet is open and likely to affect the entire locality. Hence, this is one of the key variables of community well-being. The same logic also holds true for provisioning of drainage facility, water and electricity. In the absence of water supply by the local authority, households used bore water and other unimproved water sources. Hence, inclusion of this indicator would capture the community deprivation.

Household Well-being Index and Community Well-being Index

The variables used in computing both the indices were normalised using the observed lower and upper limits among 27 Corporations.

All variable used in computing composite indices are negatively associated with well-being and reflect deprivation at the household and community levels. The method used for computing the indices is given as

For all other variables, we have used the following formula

$$\frac{X_{max} - X_i}{X_{max} - X_{min}}$$

Household Well-being Index (HWI) = ¼ (Index of female illiteracy + Index of households with no room + Index of households with none of the specified assets + Index of households using unimproved cooking fuel)

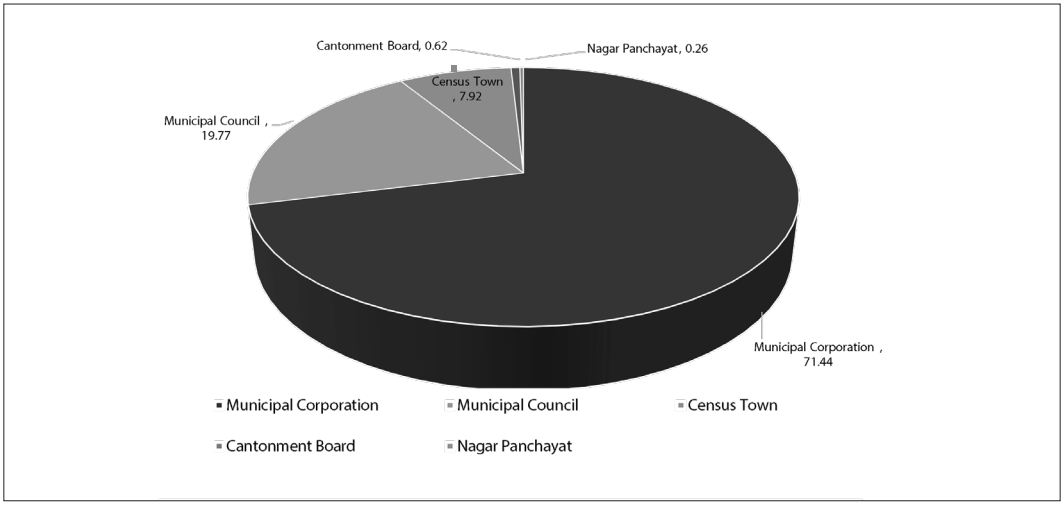
Community Well-being Index (CWI) = ¼ (Index of open defecation + Index of households having no drainage facility + Index of households having unimproved source of light +Index of households using unimproved source of water).

Both HWI and CWI vary in the range of 0 and 1. The closer the value to 1, the better is the level of well-being and vice versa. Table 1 presents the goal post along with mean and standard deviations of variables used in the computation of HWI and CWI.

Results

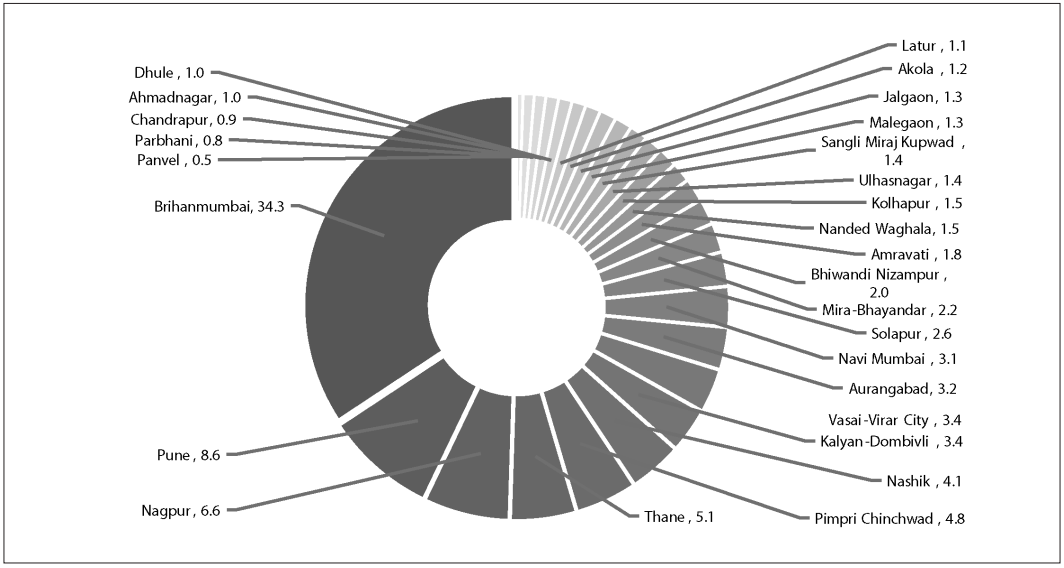
The spatial pattern of urbanisation in Maharashtra is largely uneven. Among 534 urban localities, there were 27 Municipal Corporations, 217 Municipal Councils, 278 Census Towns, 7 Cantonment Boards and 5 Nagar Panchayats. Municipal Corporations accounted for the highest share (71%) of urban population in the state, followed by Municipal Councils (20%) and Census Towns (8%) (Figure 2). Cantonment Boards and Nagar Panchayats had a share of less than one per cent of the total urban population in the state. Among all the Municipal Corporations, the Brihanmumbai Municipal Corporation (BMC) accounts for 34.3 per cent of the population followed by Pune (8.6%) and Nagpur (6.6%) (Figure 3). The BMC is spread over two districts namely, Mumbai District and Mumbai Suburban District. Similarly, among 35 districts of Maharashtra, two districts namely, Mumbai and Mumbai Suburban had 100 per cent urbanisation. Over half of the population in Thane, Nagpur and Pune districts lives in urban areas (Appendix A1).

Figure 2: Percentage Share of Urban Population by Urban Locality, 2011



Source: Census of India, 2011

Figure 3: Percentage Distribution of Population in Municipal Corporations of Maharashtra, 2011



Source: Census of India, 2011

Household Well-being Index and Community Well-being Index in the Municipalities of Maharashtra

Table 1 presents the unweighted mean of variables used in computing HWI and CWI in the Municipal Corporations of Maharashtra. About 15.35 per cent female in the Municipal Corporations of Maharashtra are illiterate. About 6.5 per cent of the households did not have any of the specified assets. Similarly, 4.43 percent of the households had no room and 26.29 per cent of the households used unimproved cooking fuel. Among HWI indicators, households using unimproved cooking fuel had the highest standard deviation of 13.57. Similarly, in the case of CWI indicators, unweighted mean of households that practiced open defecation was 6.97 per cent, with a minimum of one per cent to a maximum of 24 per cent in the Municipal Corporations of Maharashtra. On an average, 9.31 per cent of the households had no drainage facility, 3.21 per cent of the households used unimproved source of light and 13.83 per cent of the households used unimproved source of water. Among CWI indicators, households using unimproved source of water had the highest standard deviation of 12.64.

Table 1: Goal Post in Computation of Household Well-being Index and Community Well-being Index in Urban Maharashtra, 2011

Variables used for Construction of Household Well-being Index	Maximum	Minimum	Mean	Standard Deviation
Percentage Female Illiteracy	24.29	8.29	15.35	4.15
Percentage Household with No Assets	18.00	2.00	6.50	4.11
Percentage Household with No Room	11.00	1.00	4.43	2.27
Percentage Unimproved Cooking Fuel	65.00	10.40	26.29	13.57
Variables used for Construction of Community Well-being Index				
Percentage Open Defecation	24.00	1.00	6.97	5.70
Percentage No Drainage Facility	26.50	1.70	9.31	7.43
Percentage Unimproved Source of Light	6.50	1.10	3.21	1.70
Percentage Unimproved Source of Water	51.60	2.50	13.83	12.64

Source: Census of India, 2011

Selected Socio-demographic Indicators in the Municipal Corporations of Maharashtra

Table 2 presents selected socio-demographic indicators in the Municipal Corporations of Maharashtra. Among the 27 Municipal Corporations, the percentage of slum population was maximum in Malegaon (55%) followed by Bhiwandi-Nizampur (48.7%) and Brihanmumbai (41.8%). The average household size varies from 4.04 in Pimpri Chinchwad to 5.98 in Malegaon. The sex ratio (number of females per 1000 male) varies from 709 in Bhiwandi Nizampur to 982 in Sangli Miraj Kupwad and the child sex ratio (number of female children per 1000 male child) varies from 812 in Jalgaon to 945 in Malegaon. The low child sex ratio in some of the corporations is possibly a reflection of the practice of sex selective abortion. The percentage of Scheduled Caste population was lowest in Bhiwandi-Nizampur (3.07%) and highest in Aurangabad (19.51%). Similarly, the percentage of Scheduled Tribe population varies from 0.54 in Kolhapur to 8.05 in Chandrapur. Among the Corporations, the literacy rate was highest in Panvel (93.89%) followed by Amravati (92.07%), Nagpur (91.92%), Akola (91.91%) and Kalyan-Dombivli (91.37%).

Table 2: Selected Socio-demographic Indicators in the Municipal Corporations of Maharashtra, 2011

Municipal Corporations	Total Population	Share of urban population (%)	Share of Slum Population (%)	Household size	Sex-Ratio	Child Sex Ratio (0-6 years)	Child Population (0-6 years in %)	Schedule Caste population (%)	Schedule Tribe population (%)	Literacy rate (%)
Ahmednagar	350859	0.69	10.62	4.62	961	887	10.96	13.08	1.16	89.79
Akola	425817	0.84	38.47	4.95	959	904	11.11	15.52	2.05	91.91
Amravati	647057	1.27	36.92	4.73	961	921	10.10	17.22	2.47	92.07
Aurangabad	1175116	2.31	18.81	4.97	929	871	13.51	19.51	1.30	87.49
Bhiwandi Nizampur	709665	1.40	48.67	5.07	709	944	12.94	3.07	1.15	79.48
Brihanmumbai	12442373	24.48	41.84	4.48	853	913	9.67	6.46	1.04	87.86
Chandrapur	320379	0.63	25.24	4.31	953	914	9.78	19.09	8.05	89.73
Dhule	375559	0.74	23.93	5.21	941	886	11.94	7.79	4.06	89.42
Jalgaon	460228	0.91	6.13	4.63	913	812	11.53	7.22	5.28	87.28
Kalyan-Dombivli	1247327	2.45	7.87	4.12	920	902	9.71	9.77	2.96	91.37
Kolhapur	549236	1.08	12.32	4.42	959	845	9.52	13.11	0.54	90.61
Latur	382940	0.75	22.49	5.14	937	873	12.49	17.62	1.45	84.22
Malegaon	481228	0.95	55.05	5.98	972	945	16.20	3.99	1.66	87.44
Mira-Bhayandar	809378	1.59	7.61	4.33	886	898	10.87	3.74	1.56	90.98
Nagpur	2405665	4.73	35.73	4.56	963	926	10.27	19.76	7.70	91.92
Nanded Waghala	550439	1.08	22.95	5.34	928	882	12.92	18.65	2.31	85.93
Nashik	1486053	2.92	12.77	4.42	899	865	11.74	14.44	7.23	89.85
Navi Mumbai	1120547	2.21	18.53	4.10	837	902	11.56	8.93	1.69	89.62
Panvel	180020	0.35	5.03	4.18	946	904	10.25	8.03	2.39	93.89

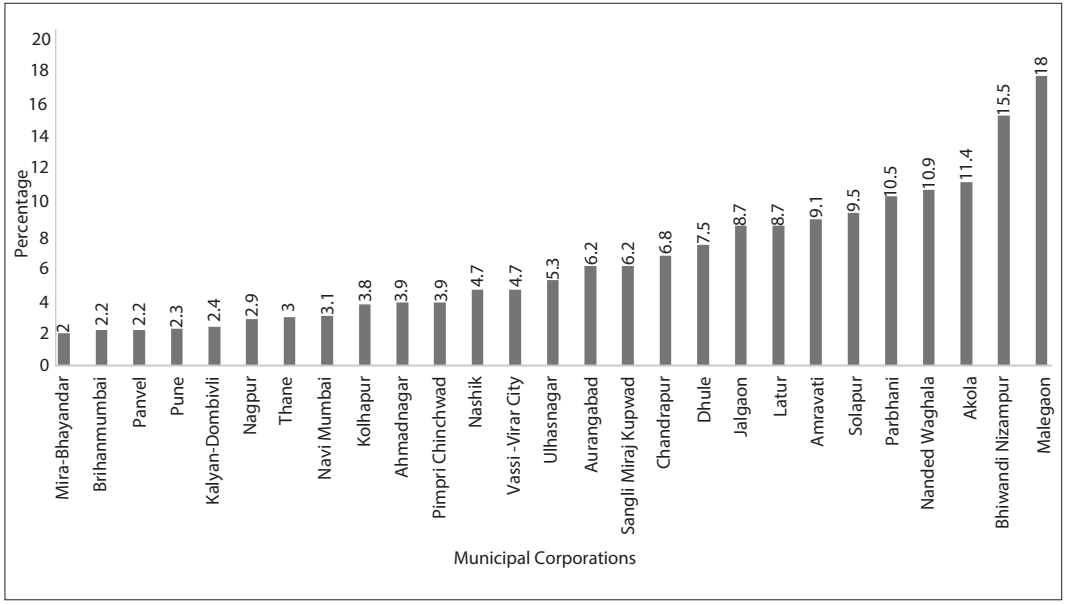
Municipal Corporations	Total Population	Share of urban population (%)	Share of Slum Population (%)	Household size	Sex-Ratio	Child Sex Ratio (0-6 years)	Child Population (0-6 years in %)	Schedule Caste population (%)	Schedule Tribe population (%)	Literacy rate (%)
Parbhani	307170	0.60	24.59	5.43	962	913	13.37	12.26	1.18	81.62
Pimpri Chinchwad	1727692	3.40	7.47	4.04	833	875	12.83	15.85	2.11	89.22
Pune	3124458	6.15	22.10	4.21	948	908	10.79	13.42	1.09	89.56
Sangli Miraj Kupwad	502793	0.99	5.39	4.57	982	901	10.70	14.53	0.70	85.91
Solapur	951558	1.87	18.43	5.05	978	919	11.49	14.51	1.89	82.80
Thane	1841488	3.62	17.75	4.23	888	908	11.40	6.84	2.32	89.41
Ulhasnagar	506098	1.00	16.73	4.53	881	906	10.13	17.13	1.30	87.49
Vasai-Virar City	1222390	2.41	2.92	4.20	886	911	12.03	4.17	4.70	88.57
Population Weighted Mean	NA	NA	NA	4.50	893	904	11.58	12.21	2.64	88.14

Source: Census of India, 2011

Household Deprivations in Assets in the Municipal Corporations

Figure 4 represents the percentage of households having none of the specified assets in the Municipal Corporations of Maharashtra. Among the 27 Municipal Corporations, the percentage of households having none of the specified assets was maximum in Malegaon (18%) followed by Bhiwandi-Nizampur (15.5%), Akola (11.4%), Nanded Waghala (10.9%), Parbhani (10.5%). Mira-Bhayandar Corporation had the lowest percentage of households with none of the specified assets (2%) followed by Brihanmumbai and Panvel (2.2%), Pune (2.3%), Kalyan-Dombivli (2.4%), Nagpur (2.9%).

Figure 4: Percentage of Households having none of the Specified Assets in the Municipal Corporations of Maharashtra, 2011

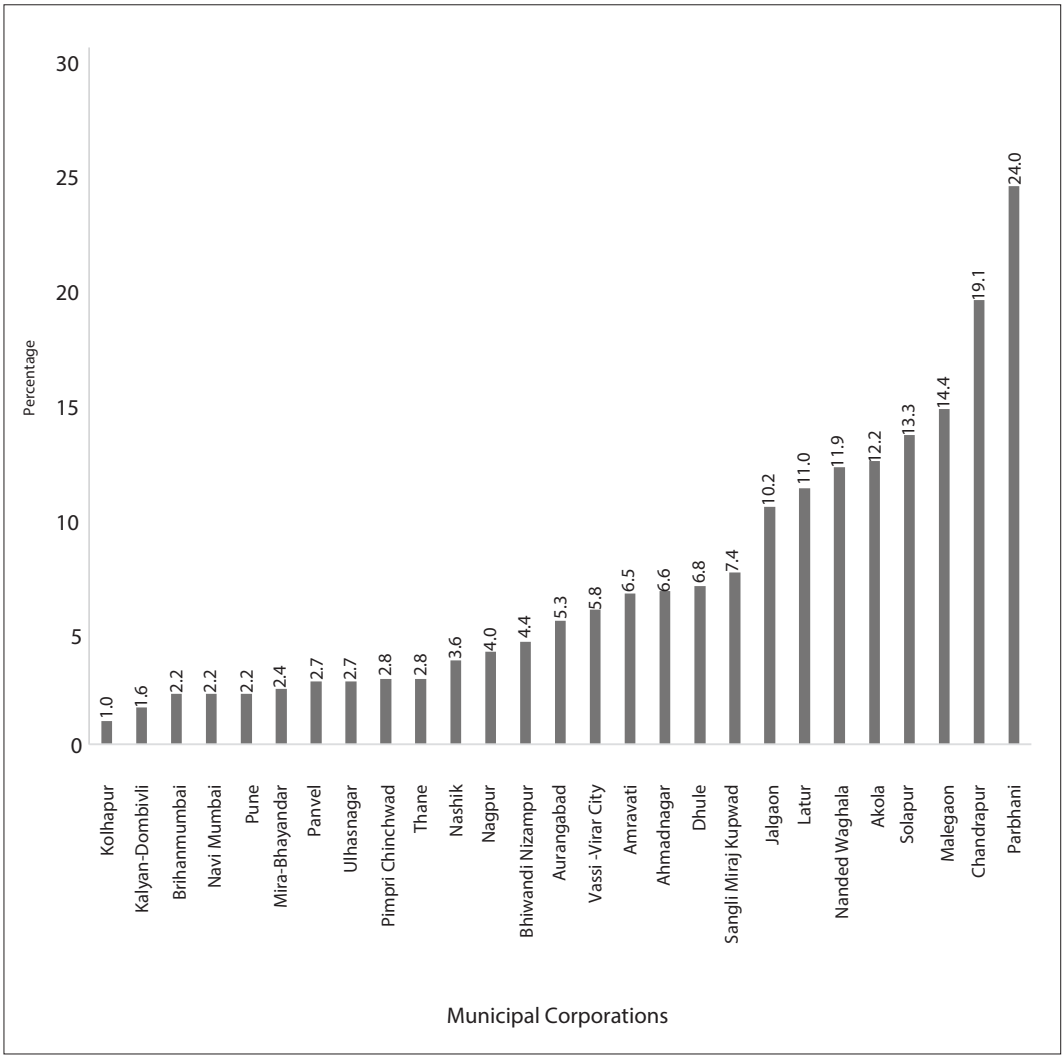


Source: Census of India, 2011

Inter-corporation Variations in the Practice of Open Defecation in Maharashtra

Figure 5 presents the percentage of households practicing open defecation in the Municipal Corporations of urban Maharashtra. The Swachh Bharat Abhiyan, the sanitation programme of the Government of India, laid emphasis to provide improved sanitation to the population. Among the 27 Municipal Corporations, Parbhani Municipal Corporation had the highest percentage (24%) of households using open defecation, followed by Chandrapur (19.1%), Malegaon (14.4%), Solapur (13.3%), Akola (12.2%). It was lowest in Kolhapur Corporation (1%) followed by Kalyan-Dombivli (1.6%), Brihanmumbai and Navi Mumbai (2.2% each).

Figure 5: Percentage of Households Practicing Open Defecation in the Municipal Corporations of Maharashtra, 2011

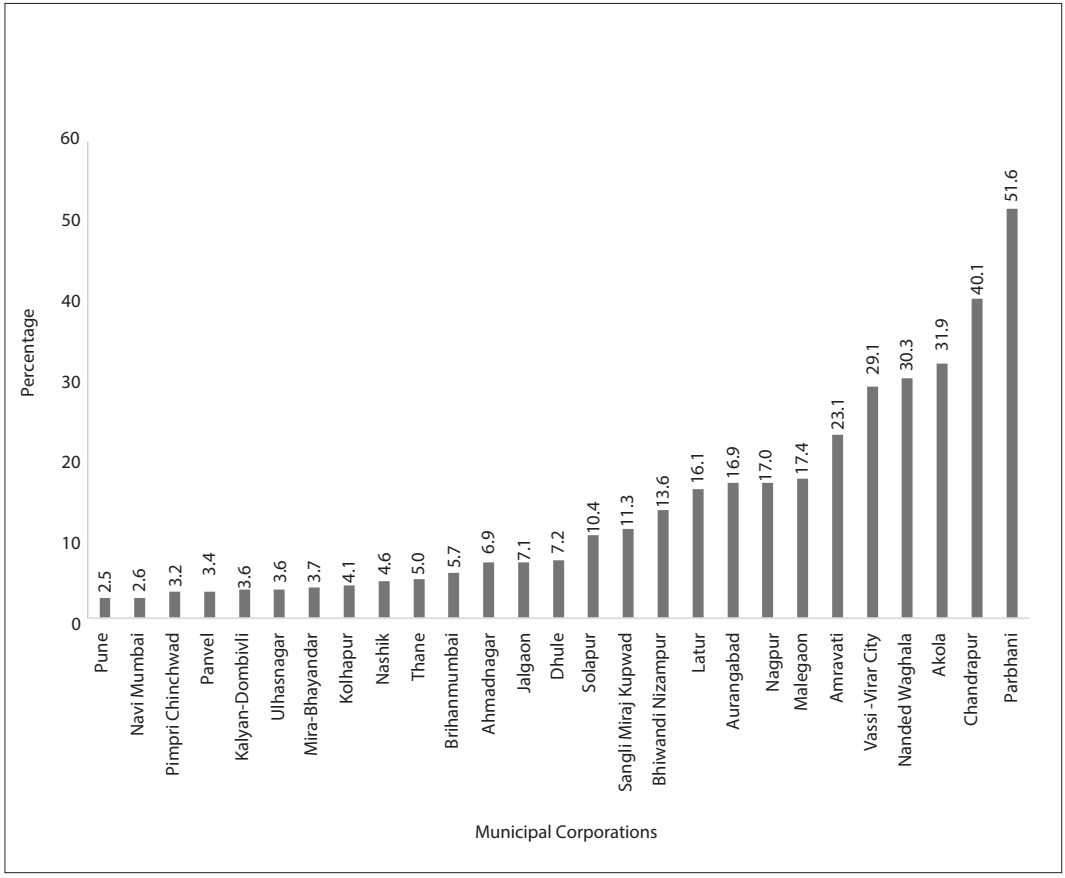


Source: Census of India, 2011

Unimproved Sources of Water in Municipal Corporations

Figure 6 represents the percentage of households using unimproved sources of water in the Municipal Corporations of Maharashtra. It varies from a minimum of 2.5 per cent in Pune Corporation to a maximum of 51.6 per cent in Parbhani Corporation. The number of households using unimproved sources of water was high in the Corporations of Chandrapur (40.1%), Akola (31.9%), and Nanded-Waghala (30.3%).

Figure 6: Percentage of Households using Unimproved Sources of Water in the Municipal Corporations of Maharashtra, 2011



Source: Census of India, 2011

Table 3 presents selected indicators, HWI and CWI of the Municipal Corporations of Maharashtra. Among the 27 Corporations, female literacy varies from 75.71 per cent in Bhiwandi-Nizampur Corporation to 91.71 per cent in Panvel Corporation and the weighted mean for female literacy is 84.58 per cent. Percentage of households with no room varies from a minimum of one per cent in Parbhani to a maximum of 11 per cent in Bhiwandi-Nizampur Corporation. The percentage of households using unimproved cooking fuel was highest in Malegaon (66%) followed by Bhiwandi-Nizampur (65%) and Parbhani (49%) Corporation. Among the Municipal Corporations, Sangli Miraj Kupwad Corporation had the highest percentage (26.5%) of households without drainage facility, followed by Dhule (26%), Ahmadnagar (21.6%) and Malegaon (19.7%). Similarly, the percentage of households using unimproved source of light was highest in Parbhani (6.5%). Besides, this Corporation had the highest percentage of users of unimproved water sources (51.6%) at the household level. The percentage of households using unimproved water sources was also high in Chandrapur Corporation (40.1%), followed by Akola (31.9%), Nanded Waghala (30.3%), Vasai-Virar city (29.1%).

Table 3: Selected Indicators, HWI and CWI in the Municipal Corporations of Maharashtra, 2011

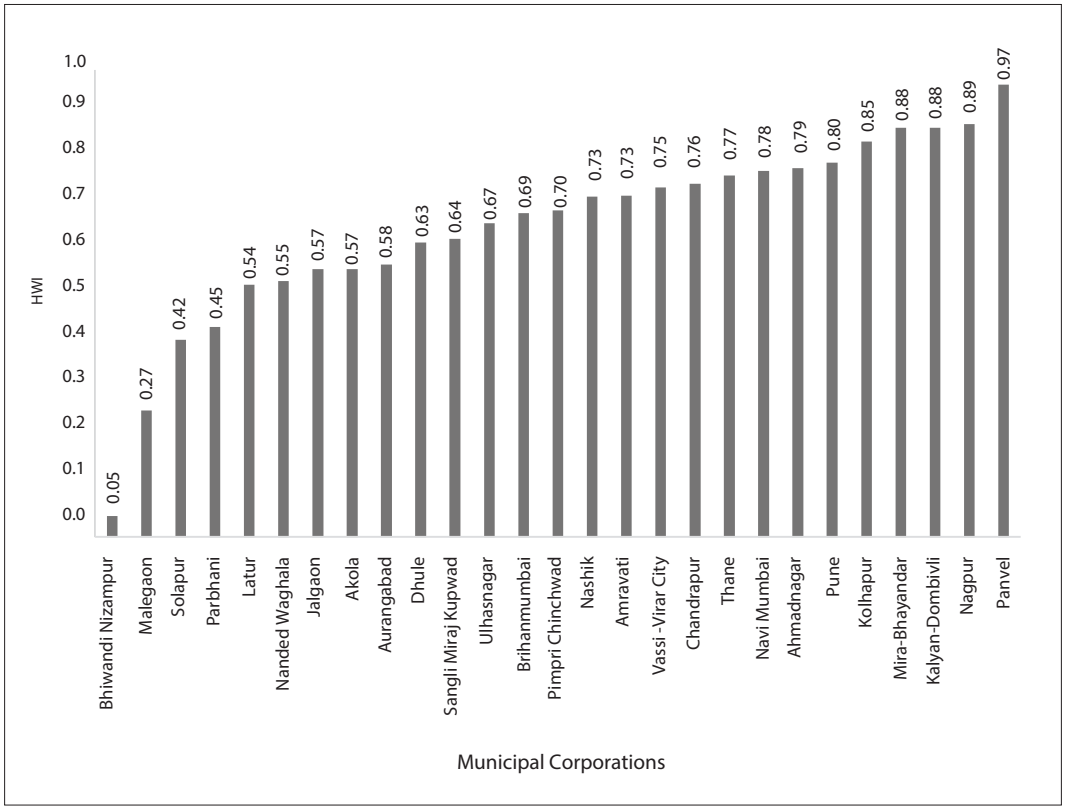
Municipal Corporations	Female Illiteracy (%)	Households with no specified assets (%)	Households with no room (%)	Households using unimproved cooking fuel (%)	Household Well-being Index	Households practicing open defecation (%)	Households with no drainage facility (%)	Households using unimproved source of light (%)	Households using unimproved source of water (%)	Community Well-being Index
Ahmednagar	13.68	3.90	3.20	19.40	0.79	6.60	21.60	2.00	6.90	0.68
Akola	10.97	11.40	6.10	34.50	0.57	12.20	6.40	6.00	31.90	0.46
Amravati	10.16	9.10	2.80	28.70	0.73	6.50	8.30	4.70	23.10	0.60
Aurangabad	17.50	6.20	5.30	32.10	0.58	5.30	7.10	2.00	16.90	0.79
Bhiwandi Nizampur	24.29	15.50	11.0	64.70	0.05	4.40	4.90	3.40	13.60	0.77
Brihanmumbai	13.61	2.20	7.72	21.50	0.69	19.10	15.30	5.40	40.10	0.28
Chandrapur	14.79	6.80	1.30	23.40	0.76	6.80	26.00	4.60	7.20	0.51
Dhule	15.70	7.50	3.60	32.80	0.63	2.18	2.38	2.73	5.73	0.89
Jalgaon	16.63	8.70	7.20	18.10	0.57	10.20	9.10	3.20	7.10	0.71
Kalyan-Dombivli	11.19	2.40	2.90	15.30	0.88	1.60	2.40	1.10	3.60	0.98
Kolhapur	12.82	3.80	2.70	12.40	0.85	1.00	5.90	1.90	4.10	0.92
Latur	20.80	8.70	3.10	33.90	0.54	11.00	10.90	3.20	16.10	0.63
Malegaon	15.43	18.00	5.70	66.10	0.27	14.40	19.70	6.30	17.40	0.36
Mira-Bhayandar	11.41	2.00	3.80	11.20	0.88	2.40	2.90	1.20	3.70	0.96
Nagpur	10.69	2.90	2.00	18.60	0.89	4.00	7.40	2.20	17.00	0.79
Nanded Waghala	19.05	10.90	1.80	38.10	0.55	11.90	19.50	4.40	30.30	0.41
Nashik	14.08	4.70	5.00	18.60	0.73	3.60	4.80	3.20	4.60	0.84

Municipal Corporations	Female Illiteracy (%)	Households with no specified assets (%)	Households with no room (%)	Households using unimproved cooking fuel (%)	Household Well-being Index	Households practicing open defecation (%)	Households with no drainage facility (%)	Households using unimproved source of light (%)	Households using unimproved source of water (%)	Community Well-being Index
Navi Mumbai	13.97	3.10	3.40	21.30	0.78	2.20	2.20	1.70	2.60	0.96
Panvel	8.29	2.20	2.10	10.10	0.97	2.70	2.40	1.90	3.40	0.94
Parbhani	24.00	10.50	1.00	48.60	0.45	24.00	16.00	6.50	51.60	0.11
Pimpri Chinchwad	14.63	3.90	5.70	22.40	0.70	2.80	5.20	1.90	3.20	0.91
Pune	13.33	2.30	5.00	13.30	0.80	2.20	2.00	1.60	2.50	0.96
Sangli Miraj Kupwad	18.23	6.20	3.30	28.40	0.64	7.40	26.50	3.80	11.30	0.51
Solapur	24.12	9.50	5.00	35.50	0.42	13.30	8.50	6.30	10.40	0.52
Thane	13.67	3.00	4.20	20.50	0.77	2.80	2.70	1.70	5.00	0.93
Ulhasnagar	16.60	5.30	3.90	26.60	0.67	2.70	2.60	1.40	3.60	0.96
Vasai-Virar City	14.78	4.70	4.20	16.40	0.75	5.80	9.20	2.40	29.10	0.68
Population Weighted Mean	15.35	6.14	4.16	26.67	0.70	6.30	10.86	3.81	22.25	0.82

Source: Author's calculation based on Census of India, 2011

Figure 7 presents the HWI value of all the Municipal Corporations of Maharashtra. The HWI varies from a minimum of 0.05 in Bhiwandi-Nizampur Corporation to a maximum of 0.97 in Panvel Corporation. Corporations with the lowest HWI score reflect the least well-being. Some of the least developed Corporations are Malegaon (0.27), Solapur (0.42), Parbhani (0.45). The most developed Corporation in terms of HWI is Panvel (0.97) followed by Nagpur (0.89) Kalyan Dombivali and Mira-Bhayandar (each 0.88), Kolhapur (0.85).

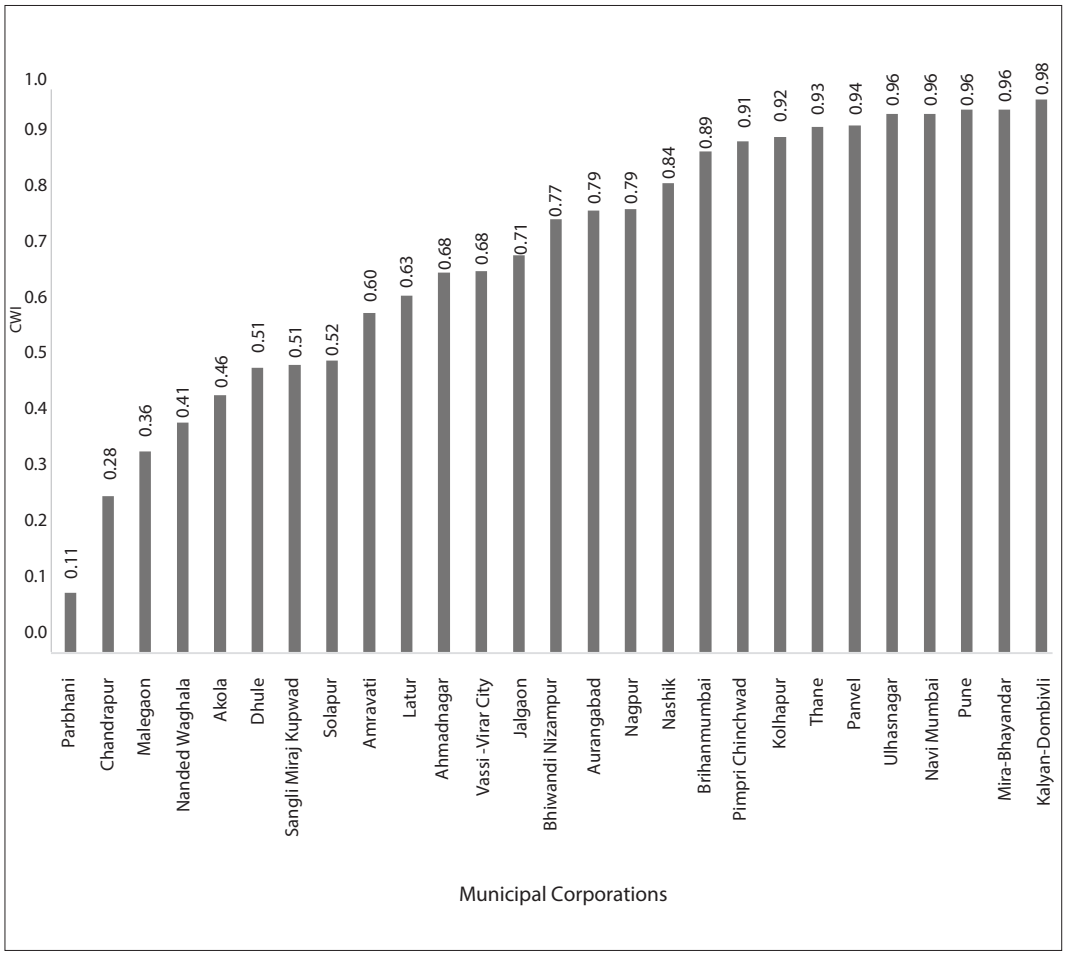
Figure 7: Household Well-being Index by Municipal Corporations of Maharashtra, 2011



Source: Author's calculation based on Census of India, 2011

Figure 8 represents the CWI value of all the Municipal Corporations of Maharashtra. Parbhani Corporation scored the lowest (0.11) in CWI among all the Corporations, which indicates the highest level of deprivation among community indicators. Corporations having less twhan 0.5 index value in CWI were Chandrapur (0.28), Malegaon (0.36), Nanded-Waghala (0.41) and Akola (0.45) (Figure 6). The CWI value is the highest in Kalyan Dombivli (0.98) among all the Corporations.

Figure 8: Community Well-being Index in the Municipal Corporations of Maharashtra, 2011



Source: Author's calculation based on Census of India, 2011

Ranking of Municipal Corporations by CWI and HWI

Table 4 shows the ranking of Municipal Corporation of Maharashtra by CWI and HWI. Kalyan-Dombivli ranks first in CWI, indicating the most developed Corporation in Maharashtra, followed by Mira-Bhayandar, Pune, Navi Mumbai. Parbhani Corporation ranks last in CWI followed by Chandrapur, Malegaon, Nanded-Waghala. On the other hand, in HWI ranking Panvel comes first, followed by Nagpur, Kalyan-Dombivli, Mira-Bhayandar whereas, Bhiwandi Nizampur Corporation ranks last in HWI, showing highest deprivation at the household level, followed by Malegaon, Solapur, Parbhani. Chandrapur Corporation ranks 26th in CWI but 10th in HWI showing the highest absolute difference (16) in rank, followed by Bhiwandi-Nizampur (13), Ulhasnagar and Nagpur (11). Higher difference in absolute ranking implies the extremity between two indices - that particular Corporation is better in one index but worse in the other.

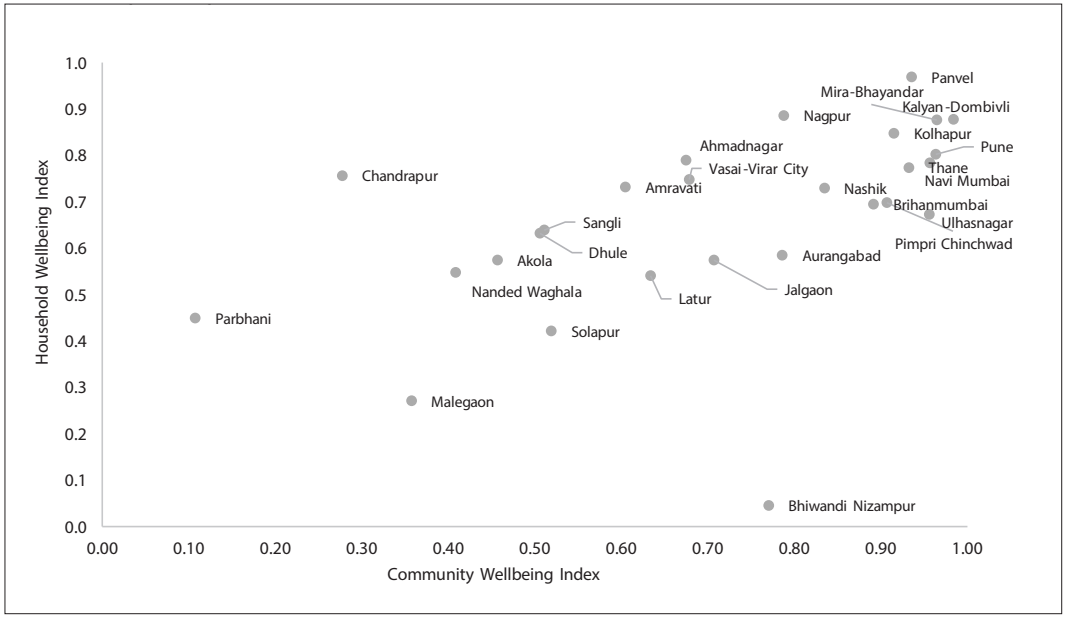
Table 4: Ranking of Municipal Corporations by Community Well-being and Household Well-being Index, 2011

Municipal Corporations	CWI	Rank in CWI	HWI	Rank in HWI	Absolute Difference in rank of HWI and CWI
Kalyan-Dombivli	0.98	1	0.88	3	2
Mira-Bhayandar	0.96	2	0.88	4	2
Pune	0.96	3	0.80	6	3
Navi Mumbai	0.96	4	0.78	8	4
Ulhasnagar	0.96	5	0.67	16	11
Panvel	0.94	6	0.97	1	5
Thane	0.93	7	0.77	9	2
Kolhapur	0.92	8	0.85	5	3
Pimpri Chinchwad	0.91	9	0.70	14	5
Brihanmumbai	0.89	10	0.69	15	5
Nashik	0.84	11	0.73	12	1
Aurangabad	0.79	12	0.58	19	7
Nagpur	0.79	13	0.89	2	11
Bhiwandi Nizampur	0.77	14	0.05	27	13
Jalgaon	0.71	15	0.57	20	5
Ahmadnagar	0.68	16	0.79	7	9
Vasai-Virar City	0.68	17	0.75	11	6
Latur	0.63	18	0.54	23	5
Amravati	0.60	19	0.73	13	6
Solapur	0.52	20	0.42	25	5
Dhule	0.51	21	0.63	18	3
Sangli Miraj Kupwad	0.51	22	0.64	17	5
Akola	0.46	23	0.57	21	2
Nanded Waghala	0.41	24	0.55	22	2
Malegaon	0.36	25	0.27	26	1
Chandrapur	0.28	26	0.76	10	16
Parbhani	0.11	27	0.45	24	3

Source: Author's calculation based on Census of India, 2011

Figure 9 presents the scatter plot of CWI and HWI for all Corporations of Maharashtra. Indices are categorized into three groups, namely, low, medium and high well-being. In the case of CWI, all the Corporations with CWI values 0 to 0.45 are classified as those with low well-being; those with values from 0.46 to 0.95 are classified as medium, and those with values above 0.95 are classified as high. Similarly, in the case of HWI, Corporations with HWI values 0 to 0.45 are classified as low; from 0.46 to 0.86 are classified as medium, and above 0.86 are classified as high. We observe four patterns of well-being based on the scatter plot; these are Corporations developed at both levels, developed at the community level but not at the household level, developed at the household level but not at the community level and low well-being at both levels. Malegaon, Solapur, Nanded-Waghala, Akola Corporations are deprived at both community as well as household levels. Bhiwandi-Nizampur Corporation was more developed at the community rather than at the household level. But in the case of Chandrapur, Parbhani Corporations, the nature of well-being was just the opposite, showing more well-being at the household level than at the community level. There are some Corporations where both CWI and HWI were high, such as in Panvel, Kalyan-Dombivli, Mira-Bhayandar, Kolhapur, Navi Mumbai, Thane.

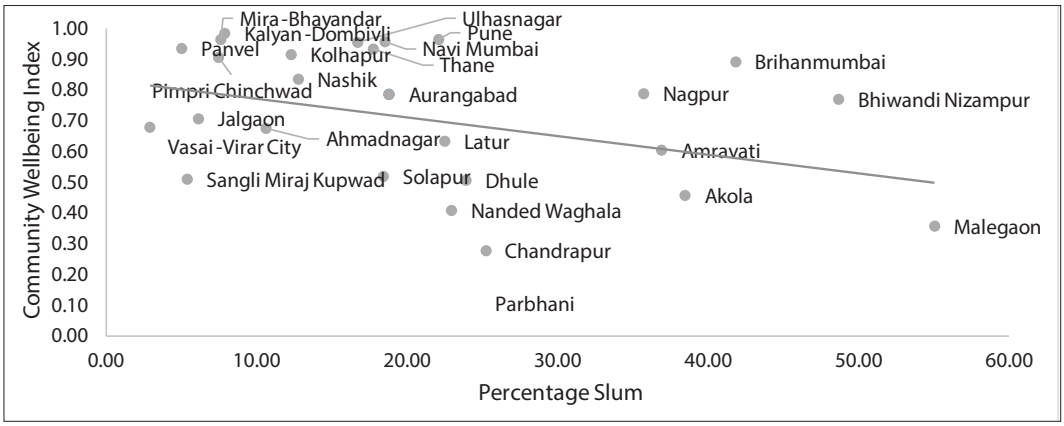
Figure 9: Scatter Plot of Community Well-being Index and Household Well-being Index in the Municipal Corporations of Maharashtra



Source: Author's calculation based on Census of India, 2011

Figure 10 presents the scatter plot and associated trend line between CWI and the share of slum population in the Municipal Corporations. The declining trend line reflects the negative association between CWI and the share of slum population, that is, Corporations with a higher slum population such as Malegaon, Akola, Chandrapur and Parbhani are associated with a lower CWI value.

Figure 10: Scatter Plot of Community Well-being Index and Percentage Share of Slum Population in the Municipal Corporations of Maharashtra, 2011



Source: Author's calculation based on Census of India, 2011

Discussion and Conclusion

The demographic shift to the urban locality in Maharashtra poses several challenges to planners, policy makers, the state government and the urban local bodies. Provisioning the basic services to the urban poor and vulnerable should be the priority agenda of a welfare government. Thus, the role of local, state and central governments is central to improving the lives of the urban poor. Municipal Corporations account for almost three-fourths of the total urban population in Maharashtra. The level of household and community well-being varies enormously across the Corporations. On the Community Well-being Index, Parbhani ranks the least followed by Chandrapur, Malegaon and Nanded-Waghala. Corporations with a higher Community Well-being Index are Kalyan-Dombivli, Mira-Bhayandar, Pune and Navi Mumbai. Brihanmumbai accounts for about one-third of the total Corporation population of Maharashtra, ranks 10th out of 27 Municipal Corporations with a Community Well-being Index value of 0.89. With respect to the Household Well-being Index, it has been observed that Bhiwandi-Nizampur scores the lowest value of 0.05, followed by Malegaon, Solapur and Parbhani. This suggests that the concentration of poorer households is higher in these Corporations. We also found varying patterns of Household and Community Well-being Indices in the Municipal Corporations. Some Corporations have a higher Community Well-being Index as well as a higher Household Well-being Index; some have a lower Community Well-being Index but a higher Household Well-being Index; some Corporations have a higher Community Well-being Index than a Household Well-being Index. Provisioning of services varies to a large extent in the Corporations. We suggest that community services be improved in those Corporations with a lower Community Well-being Index.

Some of the possible explanation for variation in HWI and CWI are as follows. Both HWI and CWI are relative performance of Municipal Corporation based on four indicators only. The variations in CWI may be due to availability of financial resources, water resources and administrative efficiency. For the well-functioning of a Municipal Corporation, revenue plays a critical role in the over all development of its people. Of the 27 Municipal Corporation in the State, majority of them i.e 17 are categorised as D class. Although, the classification of these corporations is based on population, the

financial condition of the corporation has major role in the overall well-being of its population. These corporations face major budget challenges. With the cancellation of the Octroi tax, these corporations solely rely on property tax, which is not sufficient for development activities. On the other hand, the MCGM is one of the richest municipality in the state. Similarly, Corporations spend 63 per cent of their budget in meeting only the administrative costs leaving minimum funds for subsidiary policies[1]. Due to insufficient funding softer sectors such as Health, Education, welfare suffers. For instance, if playgrounds are made available then there is unavailability of funds for maintenance. If efficient teachers are recruited, there is lack of teaching programs for them. The weaker Municipal Corporations are not able to sustain themselves and as a result the overall development and well-being of the population suffers. The rainfall and water availability varies largely across regions of the state. While Konkan region receives sufficient rainfall, Vidarbha region receives low rainfall and faces acute water shortage. Besides, the administrative efficiency varies across municipal corporations. On the other hand, the HWI is associated with per capita income, educational attainment and overall well-being of the households. Our finding of Bhiwandi-Nizampur score least in the HWI is corroborated with low income level, high population growth, densely inhabited area and concentration of large migrants. It is one of the largest textile hub in the country. Parbhani Municipal Corporation is also one of the poorer municipal corporation in Maharashtra. Besides, administrative efficiency and political commitment also has a role in performance of the corporations. Ensuring the security and sustainability of the financial status of weaker corporation should be of priority for the government.

Limitations of the Study

This is the first attempt that provides a picture of well-being at both the community and household levels of all the 27 Municipal Corporations of Maharashtra. However, we acknowledge the following limitations. First, due to data constraints, the analysis was limited only to eight variables. Information about many important variables was not available and hence could not be included in computing the indices. The poverty effect on each of the domain due to COVID-19 is many fold and could not be assessed. Second, we also acknowledge that there is no thick line to segregate the community and household level variables distinctly. For instance, sanitation facility can be treated both as a community and a household level variable. Poorer households cannot afford improved sanitation facility. On the other hand, providing sanitation facilities for the community is largely the concern of the local government.

Way Forward

We recommend that secondary analyses be carried out using available datasets such as, National Family Health Survey-4, National Sample Survey etc. A primary study is recommended to examine the various dimensions of well-being, and provide estimates of multiple deprivations in the Municipal Corporations of India in the context of recent COVID-19 outbreak.

Acknowledgement

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[1]UNICEF Mumbai urban consultation Report 18th Dec 2017

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Appendix:

A1: Percentage Share of Selected Indicators in the Slums of the Municipal Corporations of Maharashtra, 2011

Municipal Corporations	Percentage Slum	Sex Ratio	Child Population (0-6 years) (in %)	Child Sex Ratio (0-6 years)	Schedule Caste Population (in %)	Schedule Tribe Population (in %)	Literate Population (in %)	Female Literacy rate (in %)	Male Literacy rate (in %)
Ahmednagar	10.62	980	12.13	952	37.11	1.00	86.78	74.56	86.78
Akola	38.47	965	12.66	941	22.84	2.00	91.97	83.99	91.97
Amravati	36.92	965	11.76	947	26.46	2.28	90.96	84.68	90.96
Aurangabad	18.81	945	15.30	891	29.90	1.21	88.24	73.91	88.24
Bhiwandi Nizampur	48.67	705	13.79	953	3.66	1.12	78.95	70.97	78.95
Brihanmumbai	41.84	810	10.87	912	7.88	1.27	91.58	82.32	90.71
Chandrapur	25.24	958	10.67	959	20.66	8.77	90.71	79.97	86.42
Dhule	23.93	967	13.32	910	14.02	7.12	86.42	75.64	91.58
Jalgaon	6.13	925	14.69	871	10.70	7.52	81.75	68.84	81.75
Kalyan-Dombivli	7.87	872	12.68	952	29.02	1.99	83.59	69.50	83.59
Kolhapur	12.32	1022	11.78	936	34.52	0.33	85.84	70.04	85.84
Latur	22.49	946	12.72	902	17.13	1.45	88.35	78.07	88.35
Malegaon	55.05	964	17.61	962	3.24	1.03	88.02	81.64	88.02
Mira-Bhayandar	7.61	650	13.65	916	9.55	3.52	84.17	68.31	84.17
Nagpur	35.73	970	11.01	942	24.34	11.59	92.26	85.12	92.26
Nanded Waghala	22.95	941	15.00	925	20.18	1.42	87.07	76.51	87.07
Nashik	12.77	930	13.78	939	32.50	13.09	84.33	69.30	84.33
Navi Mumbai	18.53	776	14.22	919	17.91	2.20	85.45	70.75	85.45
Panvel	5.03	950	13.50	912	18.51	2.25	75.70	69.82	81.32
Parbhani	24.59	988	14.39	937	16.26	0.95	82.29	68.95	82.29
Pimpri Chinchwad	7.47	919	14.48	921	51.08	1.77	80.67	64.31	80.67
Pune	22.10	955	12.15	927	27.87	1.34	87.28	75.94	87.28
Sangli Miraj Kupwad	5.39	1034	12.85	914	50.79	0.45	79.20	62.71	79.20
Solapur	18.43	997	12.20	940	30.12	1.54	86.41	68.56	86.41
Thane	17.75	833	12.56	902	11.01	4.03	88.79	78.53	88.79
Ulhasnagar	16.73	814	11.84	942	28.50	1.55	86.49	72.66	86.49
Vasai-Virar City	2.92	804	16.01	902	5.29	5.34	85.35	72.09	85.35

Source: Census of India, 2011

A2: Correlation Matrix of selected Socio-demographic and Household Well-being and Community Well-being Indices.

Characteristics	Sex Ratio	Child Sex ratio	Schedule Caste	Schedule Tribe	HWI	CWI
Sex Ratio	1.00	-0.11	0.43	0.15	0.29	-0.43
Child Sex ratio	-0.11	1.00	-0.18	-0.09	-0.26	-0.20
Schedule Caste	0.43	-0.18	1.00	0.20	0.16	-0.20
Schedule Tribe	0.15	-0.09	0.20	1.00	0.25	-0.17
HWI	0.29	-0.26	0.16	0.25	1.00	0.51
CWI	-0.43	-0.20	-0.20	-0.17	0.51	1.00

Source: Census of India, 2011

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