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Multi-dimensional Prosperity Index

A review of the levels of prosperity and its key determinants in the first 20 smart cities of India

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Urban Transformation

Cities are complex webs of information, relationships and real time spatial exchanges. In the age of urban diplomacy, cities around the world are constantly striving to attract global capital by enhancing their competitiveness. There are several ideas and pathways attempted by various levels of governments to increase prosperity and attract new opportunities. The recent shift in the social processes and discourses enabled by the penetration of digital technologies has created a set of new opportunities to address the urban complexities. In 2014, the Government of India announced its intention to develop 100 cities as Smart cities. In the first instance, 20 cities were selected.

Multi-dimensional Prosperity Index

It is a tool to measure the overall progress of a city based on the quality of infrastructure, socio-cultural opportunities and resources available for collective well-being. MPI has four sub indices such as physical and financial infrastructure, health and educational infrastructure, community assets and household amenities.

Policy Messages

- Smart cities can become models of planned prosperity provided priority investments are made in building the social and human capital.

- The first 20 cities exhibit a good mix of opportunities and challenges which offer insights for determining future policy interventions.

- Monitoring the impact of policies and measuring the change in these urban spaces will require standardised spatial data at micro level.

The Leghatum Institute (2014) defines prosperity as "a condition of physical and material security combined with personal and social well-being". Smart cities use technologies to address complex realities to create effective interfaces between authorities and citizens eventually leading towards prosperity.

Smart Cities and Prosperity

In recent years, urban development has assumed centrality in the politico-economic processes of India. With 31.16 per cent urban population (Census 2011), India is well poised to transform into an urban society. The recent trends of urban growth at sub national level offer evidences of more rapid growth. States such as Goa, Mizoram, Tamil Nadu, Kerala and Maharashtra have more than 45 per cent urban population. There are 81 districts in India, which have more than 50 per cent urban population.

According to the Ministry of Urban Development, Government of India (2015), the "smart cities mission aims to provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of 'smart' solutions in cities". The selected cities have embarked upon a mission to enhance their institutional and societal capabilities to become smart cities in the next three years.

Locations of First Phase Smart Cities

India
First Twenty Smart Cities

Source: Author

Type of First Phase Smart Cities

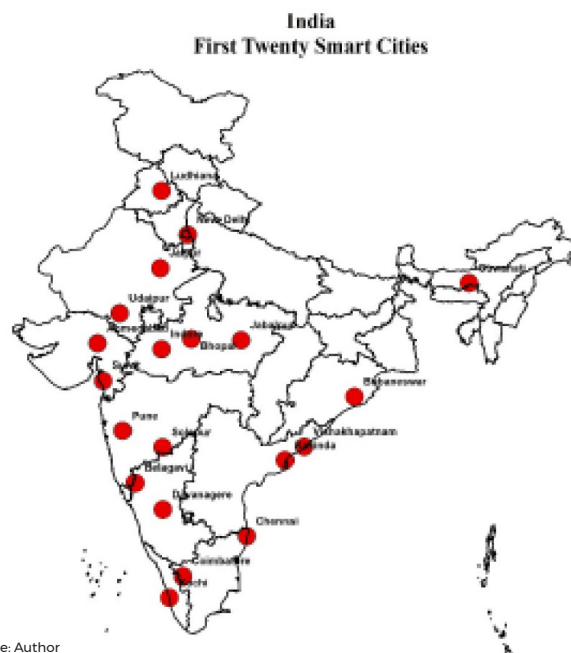| City Type	Tier			
	I	II	III	Total
Business and Industrial Centre		Ludhiana, Coimbatore, Ahmedabad, Pune, Surat, Indore, Belgaum, Guwahati, Solapur, Jabalpur	Davanagere	11
Capital	New Delhi Chennai	Jaipur, Bhopal Bhubaneswar		5
Cultural & Tourism			Udaipur	1
Port		Kochi Vishakhapatnam	Kakinada	3
Total	**2**	**15**	**3**	**20**

Source: India Smart City Profile, MoUD, 2017

Multi-dimensional Prosperity Index

The need to monitor growth had led to preparation of various Indices. Asian Development bank (ADB, 2001) published the 'Urban Indicators for Managing Cities'. In 2012, the UN-HABITAT brought out City Prosperity Index. Multi-dimensional Prosperity Index (MPI) has been developed in an effort to address the need for monitoring the Indian smart cities. The other indices being based on the global data could not be directly applied to the Indian context. The detailed data required for computing a City Prosperity Index is not available for the smart cities. Hence a new Index which can capture the real dynamics of smart cities was constructed.

The available sources of data from central government and municipal level were reviewed. These include Government of India sources such as Census of India, unit level data of National Sample Survey Organisation (NSSO), reports on socio-economic indicators of recent rounds from National Sample Survey Office and data from various Ministries especially Ministry of Urban Development. Multi-

Demographic Profile

City	Population (In Millions)	Sex Ratio	Literacy Rate
Bhubaneswar	0.84	892	91.7
Pune	3.12	948	89.6
Jaipur	3.04	904	83.3
Surat	4.46	756	83.8
Kochi	0.60	1039	97.8
Ahmedabad	5.57	898	88.3
Jabalpur	1.05	935	87.4
Visakhapatnam	1.70	983	83.3
Solapur	0.90	978	82.8
Davanagere	0.43	979	84.9
Indore	1.96	925	85.6
New Delhi	0.25	838	89.8
Coimbatore	1.60	997	91.3
Kakinada	0.32	1048	80.6
Belagavi	0.48	988	89.8
Udaipur	0.47	928	89.7
Guwahati	0.95	929	91.8
Chennai	4.60	989	90.2
Ludhiana	1.60	850	85.8
Bhopal	1.79	921	83.5

Source: Calculated from Census of India, 2011

dimensional Prosperity Index (MPI) was computed from 28 parameters clubbed into four groups such as physical and financial infrastructure, health and educational infrastructure, community assets and household amenities.

In physical and financial infrastructure Kochi, Delhi and Ludhiana secured top positions. In health and educational index, Guwahati, Ahmedabad and Udaipur got highest ranking. Community Assets were found higher in Kochi, New Delhi and Solapur. Household amenities Were found higher in New Delhi, Pune and Chennai.
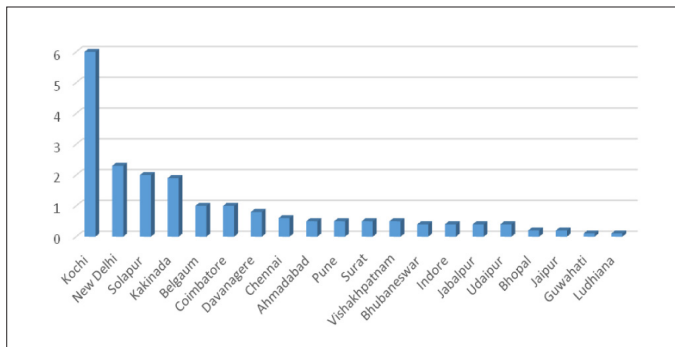
Physical and Financial Infrastructure Index
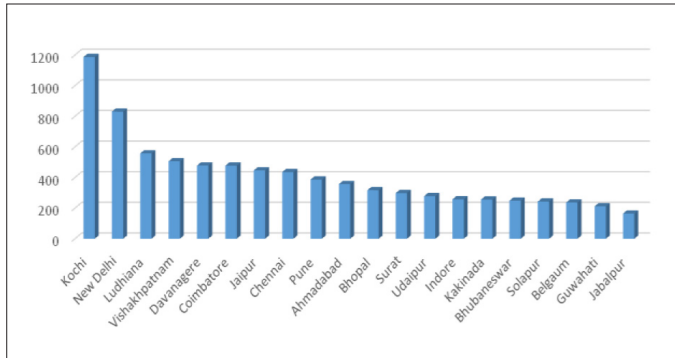
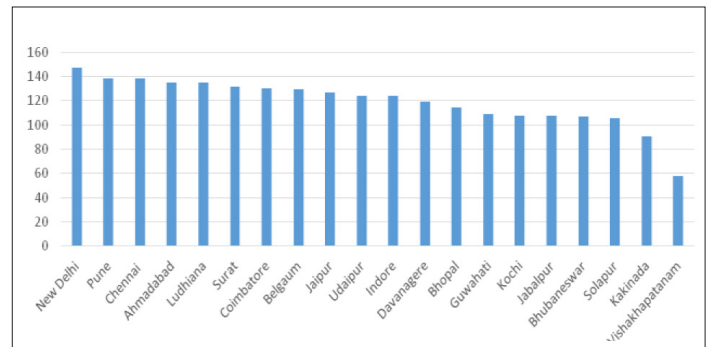Source: Author

Health and Social Infrastructure Index
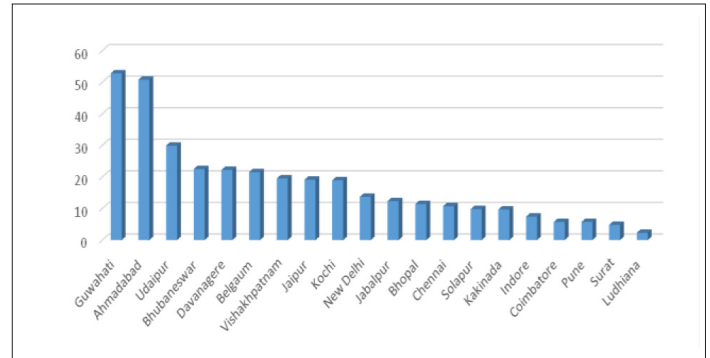
Source: Author

Community Assets Index

Source: Author

Household Amenities Index

Source: Author

Multi-dimensional Prosperity Index

MPI Rank	City	Household Amenity Index	Physical/ Finance Infrastructure Index	Social/ Health Index	Community Asset Index	MPI
1.	Kochi	107.8	1186.7	18.9	6.0	329.8
2.	New Delhi	147.3	829.9	13.7	2.3	248.3
3.	Ludhiana	134.8	557.4	2.3	0.1	173.7
4.	Davanagere	119.4	477.9	22.2	0.8	155.1
5.	Coimbatore	130.2	477.4	5.7	1.0	153.6
6.	Jaipur	126.8	446.3	19.1	0.2	148.1
7.	Chennai	138.3	435.3	10.7	0.6	146.2
8.	Vishakhapatnam	58.0	506.0	19.5	0.5	146.0
9.	Ahmedabad	135.2	357.0	50.8	0.5	135.9
10.	Pune	138.4	386.4	5.7	0.5	132.7
11.	Bhopal	114.8	316.9	11.4	0.2	110.8
12.	Surat	131.7	298.3	4.8	0.5	108.8
13.	Udaipur	124.3	278.3	29.9	0.4	108.2
14.	Indore	124.0	257.3	7.4	0.4	97.3
15.	Belgaum	129.2	236.5	21.5	1.0	97.0
16.	Bhubaneswar	106.8	248.6	22.5	0.4	94.6
17.	Guwahati	109.2	211.7	52.8	0.1	93.5
18.	Solapur	105.8	243.0	9.8	2.0	90.2
19.	Kakinada	90.7	256.1	9.7	1.9	89.6
20.	Jabalpur	107.4	164.2	12.3	0.4	71.0

Source: Author

Next Steps

- Prepare MPI for the remaining 40 smart cities.

- Review the impact of Area Based and Pan City projects in the smart cities using MPI.

- Use MPI as the tool in the Urban Observatories

Further Reading

RTPI (2017),"The Digital Economy and Town Planning", London.

Feldman, M.P. (2014). "The character of innovative places: entrepreneurial strategy, economic development, and prosperity", Small Business Economics, Vol. 43 (1), 9–20.

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