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Idea Behind Smart City: A Step towards Urban Upliftment

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Abstract

As India's population continues to grow, more citizens will move to cities. Experts predict that about 25-30 people will migrate every minute to major Indian cities from rural areas in search of better livelihood and better lifestyles .It is estimated that by the year 2050, the number of people living in Indian cities will touch 843 million. To accommodate this massive urbanization, India needs to find smarter ways to manage complexities, reduce expenses, increase efficiency and improve the quality of life.

Currently while 30% of the Indian population resides in urban centers, these centers contribute around 65% to the national GDP. It is projected that urban India will contribute about 75% of national GDP in the next 15 to 20 years.

With half the world's population living in cities, increasing the strain on energy, transportation, water, building and public spaces, there is an increasing need for "smart" city solutions which are both efficient and sustainable on one hand and can generate economic prosperity and social wellbeing on the other.

The Smart City is a process, or series of steps, by which cities become more "livable" and resilient and, hence, is able to respond quicker to new challenges. This paper basically focus towards the new concept of smart city ,key areas of development which are required to make city more smarter, and are we ready for this new emerging challenge.

Keywords: GDP, Development, Smart-City, Prosperity.

Introduction

It is common knowledge that people tend to live and work in an urban setting because the available opportunities help them progress in their lives. Cities of developing countries such as India prominently display these trends. At the same time however, urban conditions in India are exceptionally different and complex. For example India's urban population proportions are comparatively less than the global average (31.15 per cent as per the 2011 Census of India), the size of the population is huge (377.11 million) and is growing by the day.

Besides demographic patterns, the social and economic characteristics of the urban population also help to understand the notion of Indian cities. An insignificant proportion of India's urban population is extremely wealthy and displays very high consumption levels. At the other extreme are a large number of deprived people who struggle daily to make a living. Avenues of organized employment are inadequate and thus many job aspirants explore livelihood opportunities in the informal sector where workers rights and safety are major concerns. Moreover, the urban society is represented by an interesting mix of religious and caste groups that pursue a variety of social and cultural practices, as well as festivities. Religious ceremonies along river courses passing through cities and on public roads are a common sight. In many ways, the conditions witnessed in Indian cities may look similar to those in many parts of the world. The concern, however, is with regard to the methods followed in managing the urban dynamics. While the governments of some developing countries such as Chile, Mexico, Colombia, Argentina, Brazil and China to name a few, have responded professionally and responsibly to the challenges posed by urbanization, India struggles to address the issue. The citizens' quality of life index is one method, which can help in understanding and attending to the problem areas. The index is computed on the basis of data and public-opinion polls on different parameters of well-being, including income and wealth, jobs and earnings, work-life balance, housing, environmental quality, health status, education and skills, social connections, civic engagement and personal security . Country-level

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comparisons show Denmark, Switzerland, Australia, New Zealand and Germany doing well on these indicators, whereas many South and Southeast Asian countries including India are at the other end of the index Attempts have also been made to assess the quality of life in 440 cities of the world based on similar parameters. The rankings by Mercer, a global human resources consulting firm, show Vienna and Zurich earning the top spots among European cities, with Singapore doing well in Asia. However, as far as India is concerned, the cities of Hyderabad (Andhra Pradesh/ Telangana), Pune (Maharashtra) and Bangalore (Karnataka) rank139th, 144th and 145th respectively (The Indian Express, 2016)

Concerns of Urbanisation in India- Preview

A visit to any Indian city reveals the general state of affairs. The entire urban landscape looks rather like an unplanned sprawl with built up residential and commercial structures mushrooming haphazardly. Maintenance and upkeep of public places is generally lacking. A closer assessment shows noticeable imbalances in physical development and in the level of basic infrastructure and services within and between cities. While the rich live in planned and well-serviced gated complexes, households belonging to the low income group reside in informal settlements and slums with insufficient or no access to civic services. Mobility is severely impaired due to insufficient public facilities, and irregularities in traffic management often result in road accidents. When it rains, water logging happens at many places, which further restricts mobility. As urbanization has brought together people from diverse social, cultural, economic and religious backgrounds, the problem of stress, violence and crime is rising. This current state of affairs can be attributed to the fact that many parts of the urban setting remain completely ungoverned and unregulated, and thus a large number of citizens/informal sector workers/commercial establishments utilize public spaces and drive their motor vehicles in a disorganized manner.

Unregulated growth in semi-urban areas

One of the ill effects of urbanization is uncontrolled population and physical growth in semi-urban areas. Those people who are unable to live in prime areas of a city due to the affordability factor find semi-urban areas as ideal places to reside and operate from. Haphazard growth occurs because semi-urban areas are weakly governed. Two factors are responsible for this problem.

First, there is lack of clarity among the government agencies on the physical boundaries of the semi-urban areas. Neglect in monitoring physical development in such areas over a period of time allows migrant settlers to carry out contiguous physical changes.

Secondly, rural–urban jurisdiction ambiguity also prevents the agencies from formulating and applying appropriate land and building regulations. The pressure created by urbanization has thus a severe impact on the semi-urban areas, which suffer from a host of social, economic, development and environment problems.

Socially Bycott

The Indian government has a clear legislation and policy for protecting the rights and welfare of poor communities living in cities. For this purpose, awide range of pro-poor schemes have been implemented from time to time. Empirical studies, however, reveal that the benefits of various development schemes are partly reaching the intended beneficiaries.

Increasing Mushrooms of Slums

In India, urbanization has led to the formation of slums. These are areas where the poorest of the poor live. Their houses are worn down, basic civic amenities are usually not available and the environmental conditions in the area are unfit for human habitation. Slums have come up because of migration and the city governments' inability to create an affordable housing stock for the poor migrant population. Due to negligence in monitoring vacant lands, poor migrants build temporary structures for living. Even when legal provisions are introduced for reserving houses for the poor in the housing stock created by the private builders, these are not adhered to. Adults and children who live in slums are engaged in a variety of activities. Many work as labourers in the construction industry.. Examples of services offered are sale of flowers and earthen pots, fruits and vegetables, laundry and ironing, distribution of newspapers, sale of cooked food near office and commercial areas. Thus, in many ways, slum dwellers are playing an important role in building and running cities. In terms of numbers, about 5 per cent of India's total population and17 per cent of its total urban populations lives in slums. Between 2001and 2011, the slum population of India grew by 25 per cent (Census of India, 2011b). A worrying trend is the emergence of slums in some Northern and Northeastern States, which previously did not report their existence. Five cities - namely Vijayawada and Greater Visakhapatnam(Andhra Pradesh), Jabalpur (Madhya Pradesh), Greater Mumbai (Maharashtra), and Meerut (Uttar Pradesh) - have recorded over 40 percent slum households. The all-India data show that many slum households do not have drinking water source (43 per cent) and toilets (34 per cent) with in their premises.

Management and Governance Constraints Affecting India's Urban Sector

Efforts to improve the deteriorating conditions caused by urbanization in Indian cities have been made from time to time. These include a variety of measures such as the introduction of urban development programmes, the strengthening of State and local level institutions, and the adoption of innovative urban governance practices, including institutional partnerships with non-State actors. Reference may be made here to two significant urban reform measures. The first pertains to the empowerment of urban local governments (or municipalities) in all the States of India. The second is the Jawaharlal Nehru National Urban Renewal Mission (JNNURM).

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A Chain of reforms in Urban sector in India

Municipal institutions have been in existence in the country since 1882, however, these remained entirely under the control of the State legislatures for a very long time. It was gradually realized that people's expectations can be met in a much better way by strengthening local government institutions. Accordingly in 1992, the Constitution (Seventy-fourth Amendment) Act was passed. As per the Act, exclusive provisions for the empowerment of municipalities were inserted for the first time in the Indian Constitution. This legislative intervention paved the way for the constitution of a uniform typology of municipalities across the country as well as the reservation of seats in municipalities for women, scheduled castes, scheduled tribes and backward class of citizens. The Act also provided for the devolution of powers, functions and responsibilities to municipalities; the timely conduct of municipal elections; as well as the constitution of wards committees, state finance commissions, committees for district and metropolitan planning (Constitutional Provisions, 1999).With the implementation of the Act, notable change in urban governance was observed, however, efforts to decentralize administration at the level of the ward and to devolve powers, functions and responsibilities from the State to local governments met with little success mainly due to reluctance by State functionaries. The Jawaharlal Nehru National Urban Renewal Mission (JNNURM) was launched in 2005 by the Congress-led government of Prime Minister Manmohan Singh. It

was felt that instead of having a large number of separate programmes for the development of various urban sectors, there should be a comprehensive and integrated urban development programme (MoUD, 2005). During the ten-year duration of JNNURM from 2005 to 2015, financial assistance was provided to State and local governments for development of infrastructure facilities. More importantly, a series of mandatory and optional reforms1 were implemented to strengthen work practices in municipalities, para-statal agencies and State governments. Due to these efforts, many positive developments have occurred, the benefits of which have reached the citizens. For example, with the creation of municipal websites, a large number of residents can easily fulfill numerous requirements such as online payment of taxes, obtaining birth and death certificates and trade licenses, submission of tenders by contractors, etc.

In the past two years, the BJP-led government has launched several new programmes to improve the condition of urban areas in the country. The impact of some programmes is now being seen . For instance, to attend to the problem of open defecation, 1.5 million individual household toilets and 76,000 community and public toilets have reportedly been constructed. Efforts are also being made to improve door-to-door collection of solid waste and data in this respect show that 34,590 wards across the country are now covered by this service. Furthermore, for the protection of heritage, plans have been prepared for 12 identified cities.

Figure 1: Potential Cities to be considered under India's Smart Cities Mission
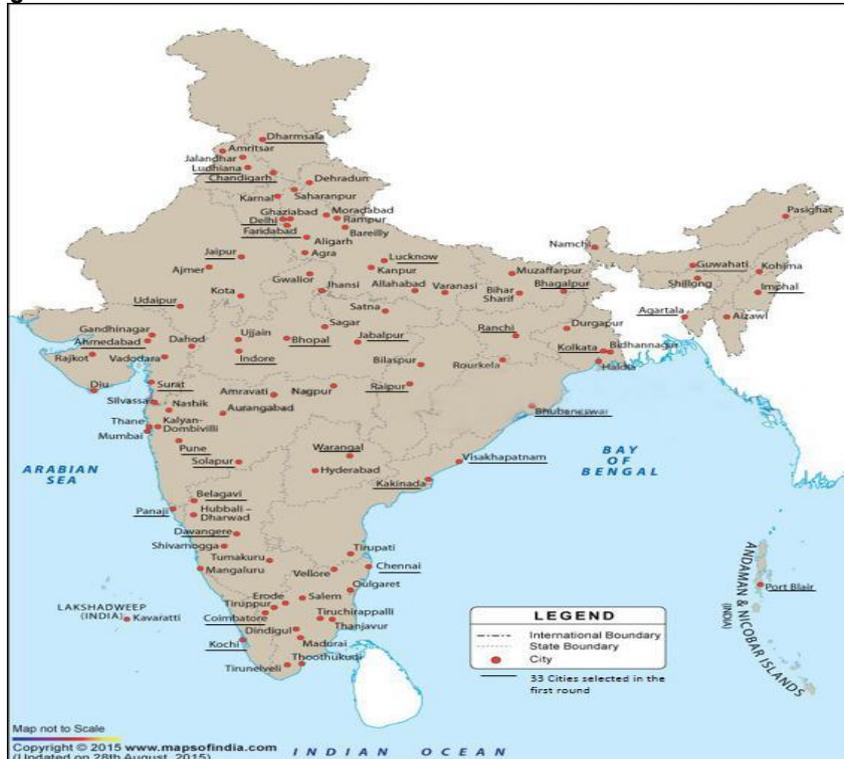
Notes: (i) Map shows location of 98 cities. Names of one city each in the States of Jammu and Kashmir and Uttar Pradesh are yet to be announced; Underlined cities in the figure have been selected for transformation in the first round/phase

A two-stage competition between potential cities within the State/Union Territory has been organized (Figure 1). In the first stage, each city within a State/UT has competed against each other for being Considered for financing under phase one of the Smart Cities Mission. For this purpose, the governments of all the Indian States/UTs were asked to score all the cities lying in their jurisdiction on the basis of a city government's performance, which include criteria such as the existing service levels, institutional systems/capacities, financial strength, and implementation of previous reform measures.

Strength of the Concept of Smart City

The smart cities proposal floated by the Urban Development Ministry is sound in many ways:
At least one city from every Indian State and UT has been selected under the Mission, and an objective and transparent process has been followed in the selection of cities. Apart from some pointers by the Union Ministry on the basic features that smart cities should have (such as mixed land use, housing for all, pedestrian areas, open spaces, transport options, citizen-friendly and cost effective governance, creating city identity), it has been left to the State/UT/local agencies and the citizens to evolve their own understanding about how they want their cities to function smartly. Consulting firms, foreign governments, bilateral and multilateral institutions, and domestic organisations having experience in smart city development can be involved by the States/UTs in the preparation of smart city plans.

While one portion of the city maybe improved (i.e., area-based development), there is also scope for applying smart solutions to existing city-wide infrastructure. A special purpose vehicle (SPV) will be constituted in each city for implementing smart projects under the Mission, as against the traditional parastatal/municipality-led model of urban development. The national government will offer one-half of the financial support (US$ 7.5 billion) to State/UT/local governments for meeting the project cost. The Mission will converge with other urban development schemes of the Modi government, such as the Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Clean India Mission, Housing for All, National Heritage City Development and Augmentation Plan, Digital India, Skill Development, Financial Inclusion.

Areas of Concerns for Urban Upliftment

It is, however, doubtful whether the Mission will achieve its goal of making smart cities. Some areas of concern may be described here instead of the entire city, one part will be selected for carrying out the improvement work. Accordingly, during the five year duration of the Mission, only one part of the city will undergo a transformation, whereas during the same time period, the remaining parts of the city will be developed and governed in the usual manner, which is currently marked by numerous inefficiencies.

This approach could thus widen development inequalities further.Improvement of one part of the city will have to be done wisely. For example, in an effort to provide 24 X 7 drinking water supply or electricity, the services of other parts of the city should not be affected.

The rapid informal growth in peri-urban areas is a negative consequence of urbanization. As described in an earlier section of the paper, peri-urban areas suffer from numerous social, economic, development and environment problems. While these problems should have been dealt with, the Mission only provides for green field (new) development on vacant land around cities in order to cater to the requirements of the expanding urban population. With passing time, conditions in semi-urban areas will further deteriorate, making it increasingly difficult to address this issue.

Traditional development and governance mechanisms have been bypassed, and the entire work of urban transformation under the Mission will be handled by the proposed city-level special purpose vehicle (SPV). Though the SPV will be represented by State and non-State actors, it will have to demonstrate improved levels of efficiency in raising project funds, and in project implementation and rules' enforcement. These matters have seriously hindered the progress of urban development in the past.

Furthermore, efforts to strengthen the functioning of traditional institutions must continue, because on the one hand, the SPVs will be dependent on these for meeting their resource needs, and on the other, parts of the city not covered under the Mission will need to be efficiently looked after by traditional institutions.

Conclusion

The present leadership of India has launched the Smart Cities Mission in June 2015 with the aim of giving a better quality of life to the citizens in 100 existing cities covering all States and Union Territories in the country. A five-year timeline has been kept for completing the development projects proposed for each city. During the past few year, preparatory work has been done at the national, state and local level to take the Mission agenda forward. As per the current status of the Mission, some cities have prepared their smart city plans and constituted Special Purpose Vehicles for implementing the projects. The Union Urban Ministry is urging governments at the State/UT/local level to take pro-active steps in mobilising matching amount of funds, as well as in preparing and implementing the projects on time, so that the completion deadlines are met. The ADB and World Bank have also agreed to extend a loan for the implementation of bankable projects.

For this the following Recommendations can be given:
1. Centre, State and local leadership must work together
2. Government & Indian residents will have to respond in organised manner.
3. Continuous exchange of ideas ,experiences, and the knowledge thus generated should be utilised in redefining the smart city .
4. Wider plans should be built up on managing neglected problems, such as public safety and security; living and livelihood of poor and vulnerable persons, and migrants;

unemployment; water, drainage and sanitation deficiencies; traffic congestion and vehicular emissions; environmental degradation;

5. Manpower, financial and technical capabilities of traditional urban local institutions should be strengthened by organising useful training programmes,

6. Civic agencies should be adequately empowered for project implementation and enforcement of laws.

7. Efficiently managed services (both online and offline) should be made available to citizens for reporting complaints, such as water logging, broken road, power failure, etc, and such problems should be resolvedin a time-bound manner by the concerned agencies.

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