

Smart Cities: Skill Development Perspective**Dr. Ragini Johari, Associate Professor,****School of Management,****Ansal Institute of Technology & Management,****Sushant Golf City, Shaheed Path, Lucknow****Abstract**

Making smart cities perhaps seems synonym to growth for government now. In India, the concept of Smartness entails sustained economic development of city with development not only in infrastructure but also in amenities and increased employment opportunities. While planning for sustainable development of the cities, we should also take into account the factors of education and skill development. Thus emphasis is on skill development. Formal or organized sector needs only handholding in this but maximum skill challenges have been registered among the informal or unorganized sector. Though National Skill Development Mission launched in the Eleventh Plan has brought about a paradigm shift in handling skill development programmes; still it is not been able to penetrate deep down to grass roots. In order to transform our cities into smart cities and achieve vision of smart urbanization, educating and skilling the villagers is utmost required. Concurrently, vocational education and skill development efforts are needed to make our villages smart, so as to make our cities smarter.

Introduction

“India needs habitable cities before smart cities”. Taking cue from an article published in March 2015 issue of SME times by the same title; one is forced to think about the deliberations our present Prime Minister Narendra Modi is making about creation of smart cities in India. After an announcement made by our present Prime Minister Narendra Modi about his government's plans to create 100 smart cities, there is huge confusion everywhere. All chief ministers are contending to get the label.

The buzz word is loud and clear in every meeting and address of Sri Narendra Modi whether in discussions with world leaders like US President Barrack Obama or corporate giants like Infosys' chief Vishal Sikka. The three key ministries, viz., urban development, information technology and telecom are working head to toe in getting knowledge on best practices around the world especially on

infrastructure and technology issues. However more pertinent issues like pollution, clean drinking water, health & hygiene, sanitation and, above all, the safety of women still persist in the country but it seems, they have become secondary in the priority list of government. Making smart cities perhaps seems synonym to growth for government now.

What is a Smart city?

The question arises, how can a city be made smart? Before moving ahead let us try to understand what is a smart city? Deepak Mantri, senior manager, SPML Infra Ltd, in a conference on SMART URBANIZATION, organized by CII, described it as a place where 'sustainable economic development contributes to a high quality of life'. According to Trishul Palekar, senior transport planner-highways and transportation, Atkins India, 'sustainable' is more important than 'smart' when it comes to designing the cities of tomorrow. Architect Sonali Rastogi, co-founder of Morphogenesis Delhi observed. "Before smart comes sustainability." She emphasized, "A thousand years ago, people were smart. Smart' was there before technology. Smart buildings have been around for ages, and they're still around." Sustainability and tradition, she insisted, aren't mutually exclusive, and India has more answers to its urban challenges than many might be willing to admit.

According to Wikipedia, "a smart city uses digital technologies to enhance performance and wellbeing, to reduce costs and resource consumption, and to engage more effectively and actively with its citizens. Few important 'smart' sectors include *transport, energy, health care, water and waste*. A smart city should be able to respond faster to city and global challenges than one with a simple 'transactional' relationship with its citizens."

The term has also been synonymized with similar concepts like 'cyberville', 'digital city', 'electronic communities', 'flexicity', 'information city', 'intelligent city', 'knowledge-based city, hi-tech city, 'MESH city', 'telecity', 'teletopia', 'Ubiquitous city', 'wired city', etc.

There are no clear answers as to what a smart city is. Most definitions and, their scope, are western. IT firms like Microsoft or Siemens propound a tech-centric approach to smart cities; transport firms propose intense infrastructure-focus; utility management firms propose a citizen-centric plan and pollution control firms propose a sustainability-based approach. The perspectives are as varied as objectives of these firms. Smart city is in no way a concrete and technology jungle with no life into it.

Many Indian municipalities broadly describe smartness as 'e-governance' or anything little more than e-governance services.

Fortunately the view is changing. The present view for "smart city is a place which is integrated - consumer to government to business; where there is optimal employment and growth and where you get the right skill sets. The growth being beyond survival issues of *roti, kapada* and *makaan*," says Sh. Jalaj Shrivastava, Chairman, New Delhi Municipal Corporation.

Sustainable urban development as a key for making cities smarter

In India, the concept of Smartness entails sustained economic development of city with development not only in infrastructure but also in amenities and increased employment opportunities. On a similar note, N S N Murty, associate director and leader, smart cities, PricewaterhouseCoopers Pvt. Ltd views, "let's not focus just on the city, let's focus on urbanization everywhere." He emphasized upon 'livability' (infrastructure), 'livelihood' (employment), and 'life' (residential complexes) as an essence of urbanization. Speaking in the context of Gurgaon, he said, "The focus should be on making first the cities livable. Instead of simply making them a concrete jungle, the idea should be on developing the amenities, living conditions of people and their economic capabilities.

A city, by nature, is a manufacture, an almost entirely artificial object, constructed for historical goals of socialization, synergy, increase of knowledge and social wellbeing.

Theoretically speaking, sustainable urban development is a process of synergetic integration and co-evolution among the great subsystems making up a city (economic, social, physical and environmental), which guarantees the local population an ever enhancing level of wellbeing in the long term, without compromising the possibilities of development of surrounding areas and contributing by this towards reducing the harmful effects of development on the biosphere.

According to researches conducted by multiple agencies including CII, there is a sharp transition towards urbanization projected to the tune of 600 million people by 2031. This would not simply be a demographic shift as it would place cities and towns at the center of India's development trajectory. Currently, only 30% of Indian population lives in urban areas which is much lower than other major developing countries like China, Brazil, Indonesia, Mexico etc and the figure will certainly increase in

coming years. It is expected that urban sector contribution to the nation's economy would amount to around 70% of the GDP, 85% of the total tax revenue and 70% of all new jobs created. Taking Deepak's words, in order to make smart cities, its sustainable development is obligatory. The concept of sustainable development is slowly but steadily approaching recognition.

Sustainable urban development particularly means balancing the development of the urban areas while protecting the environment with an equal stress on employment, shelter, basic services, social infrastructure and transportation. As of late urban areas have gotten to be places of urban natural debasement and inefficient utilization of assets, which would turn out to be expensive to our future generations. While planning for sustainable development of the cities, we should also take into account the factor of education and skill development. Education is the single most important instrument for social and economic transformation. This being one of the important agenda of 12th Five Year Plan as well, an intensive effort is needed to strengthen the system at all levels: elementary, secondary, higher secondary and higher education. Concurrently, vocational education and skill development efforts need to be strengthened.

Emphasis on Skill Development

Improved training and skill development is critical for providing decent employment opportunities to the growing youth population and necessary to sustain the high growth momentum. National Skill Development Mission launched in the Eleventh Plan has brought about a paradigm shift in handling skill development programmes. Although it has clearly defined core principles and put in place a Coordinated Action Plan for Skill Development, still a lot is left unattended.

During the Twelfth Plan, gaps in skill ecosystem are being identified and addressed on the foundation laid in eleventh plan period. NSDC, a vital element of Governments' Coordinated Action Plan in skill development has already made significant progress in attending to skill development issues particularly for the large unorganized sector, yet a lot more has to come. The 12th Five Year Plan (FYP) has highlighted skill-building as an imperative need to reap India's so-called demographic dividend. Skill formation can be made part of formal education framework right from class ten onwards. However skill creation apart from formal training has to be more synergized with creative methodology.

Though India has younger workforce than China and all OECD countries, yet the drive to further augment their capacities is missing. In years to come the world will see unprecedented shortage of skilled workforce creating immense opportunities for Indian youths, but it's unlikely that with the existing policy framework on skill development, India will be able to grab this chance.

The 11th Five Year Plan's recommendations on the matter led to a three-tier structure: the PM's National Council, National Skill Development Coordination Board (NSDCB) and the National Skill Development Corporation (NSDC). All these bodies are more involved into policy making at different levels, thus affecting the real task of implementation. Though the state governments are at liberty to channelize the skill development initiatives and enjoy its benefits as well. But the challenges on this in the 12th Five Year Plan are numerous and are blocking the developmental spirit. Government alone is unable to create such facilities conducive for guaranteed skill development. Thus PPP model is need of the hour. In given condition, it is imperative that a balance between labour and capital intensive sectors could be created. Sectors like agriculture, tourism or SMEs, if promoted well can fetch better results.

Role of National Skill Development Policy

As per 2011 policy framework, around 95 per cent of the nation's workforce hails from unorganized sector including both rural and urban areas. It contributes to about 60 per cent of the nation's GDP fortifying the expertise base of the unorganized sector subsequently enhancing efficiency, working conditions, labour rights, social security and living standards.

This majorly includes workers and apprentices in micro enterprises, unpaid family workers, casual workers, migrant labourers, out of school youths, adults willing to be skilled, farmers and artisans from rural areas to be precise.

National Skill Development Policy enables all individuals through enhanced aptitudes, capabilities accepted nationally and internationally to obtain a respectable livelihood for themselves and guarantee India's competitiveness in the global market.

This points towards accomplishing speedier development through upgrading people's employability and capacity to adjust to changing innovations and business sector demands, enhancing efficiency and lifestyles of the individuals, reinforcing intensity of the nation and pulling in interest in aptitude improvement.

National Skill Development Policy opens doors for all to acquire aptitudes and develop themselves all through life, and particularly for youth, women and distraught set alongwith ensuring commitment by all partners to provide unconditional support. It facilitates building up a great talented workforce or entrepreneurs suiting to present and future employment needs of market. Through this strategy the government empowers the foundation of adaptable delivery systems that react to the qualities of an extensive variety of necessities of partners through viable coordination between ministry, the Center, States and public and private suppliers.

National Policy on Skill Development covers institution-based skill development including ITIs/ITCs/vocational schools/technical schools/ polytechnics/ professional colleges, etc. The accentuation is laid upon sectoral skill improvement, formal and casual apprenticeships and different sorts of trainings with training for self-employment highlighted most, entrepreneurial advancement, retraining of superannuated employees and life-long learning and non-formal training including E-learning, vocational learning and distance learning.

Skill challenges of unorganized sector

A welcoming fact about today's India is that it's more than 50 per cent of the population is young and working which can make India the skill capital of the world. The question is what constitutes informal or unorganized sector and how to define it (it is to be noted here that the terms "unorganized" and "informal" sectors are often used interchangeably).

The ILO's resolution on statistics of employment in the informal sector as adopted in fifteenth international conference of labour statisticians (ICLS) held in 1993 and again in 2003 defined *Informal Sector as consisting of units engaged in the production of goods and services with the primary objective of generating employment and income to individuals*. According to ILO, these units operate at small scale with no division between labour and capital as factors of production. These organizations lack professionalism with more stress on casual employments. The employer-employee relationships are more personal and informal with greater emphasis on social relationships than professional ones.

According to National Commission for Enterprises in unorganized sector, *"unorganized workers are those working in unorganized or household sector excluding regular workers with social security benefits*

and the workers in the formal sector without any employment/ social security benefits provided by the employers.”

In order to better understand the likely consequence for skill improvement in the sector, it is important to ponder on the sectoral composition of workers of unorganized sector and within this formal and informal sector.

The informal sector in India consists of employees in micro enterprises, unpaid family members, casual workers, home based workers, migrant labourers, out of school youth, domestic workers, street vendors etc. As per the National Sample survey conducted by Ministry of Statistics and Programme Implementation in 2009-10, approximately 92.8 per cent of the total work force constituted of informal workers. Its an assorted sector comprising of both the rural and urban areas. This can be well understood by a table below giving a comparative account of employment share in organized and unorganized sector. As indicated by the survey, the share of organized sector employment between 1999-2000 and 2009-10 ranged between 13.6 per cent and 15.8 per cent, while the share of employment in unorganized sector between 84.1 percent and 86.3 percent.

Table 1: Formal and Informal Employment in Organized and Unorganized Sectors (in millions)

	Formal	Informal	Total
2009-10			
Unorganized	2.3	385.1	387.3
Organized	30.7	42.1	72.9
Total	33	427.2	460.2
2004-05			
Unorganized	1.4	393.5	394.9
Organized	33.4	29.1	62.6
Total	34.8	422.6	457.5
1999-2000			
Unorganized	1.4	341.3	342.6
Organized	33.7	20.5	54.1
Total	35.1	361.7	396.8

Source: 12th Plan Document Volume III, Planning Commission (Table 22.5)

This indicates continuously increasing unorganized work force both in rural as well as in urban areas. The boost in casual employment is an outcome of workers not having an assured job security, social protection which their counterparts in formal organizations are getting. Hence, mainstreaming the unorganized sector workers is a major challenge in the Indian context.

Causes of informalization of sector

The factors affecting the process of informalization can be classified as

- (i) labour and
- (ii) non-labour factors.

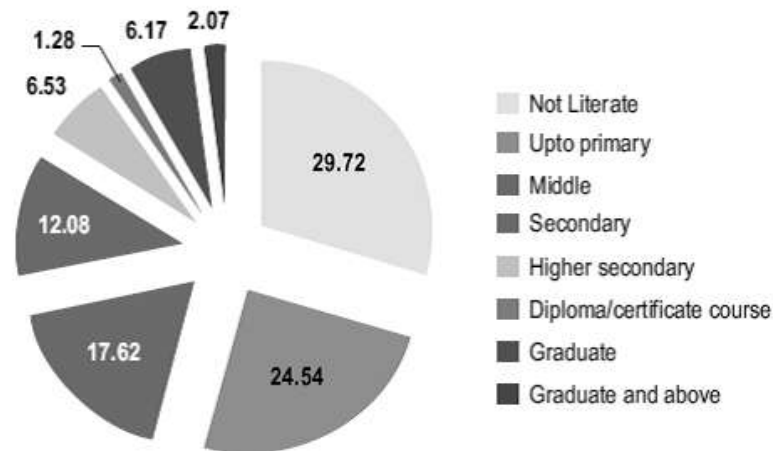
The labour factors include-

(i) Quality of labour in terms of education and training

In India, the level of education is quite low and there is also lack of vocational training among the workers entering labour force. The study conducted by planning commission on this depict that more than 50 per cent of those entering the labour force are having upto primary level of education.

As per 209-10 survey, only 6.7 per cent persons in the age group 15-59 years fall in this category with the proportion of women being further low at 4.1 per cent. The percentage share of people having received or undergoing formal vocational training is even lower at 1.6 per cent and 0.6 per cent respectively with about 92.6 per cent of the persons in this age group not having received any form of skill training.

Figure 1.1: Education profile of Labour Force in India in 15-59 years age group (in per cent)



Source: Based on (Table 22.19) of 12th Plan Document Volume III, Planning Commission

(ii) Plethora of labour legislations in India

The excess of labour laws at times also act as barriers to growth of private entrepreneurship and industry reliance on capital and resorting to use of contractual labour.

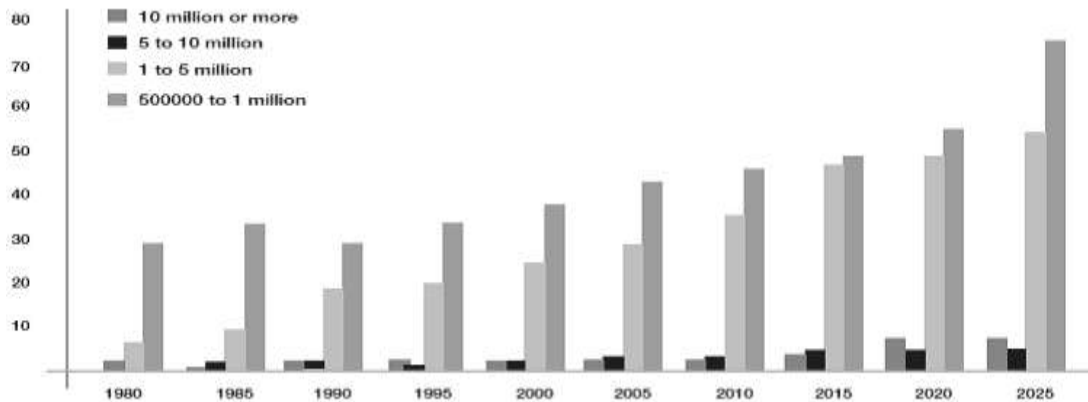
Besides these, there are some **non-labour factors** also, which are discussed below-

- (i) Regulatory procedures such as initial routine requirements to attain a number of clearances when applying for building permits. Most of the time, MSMEs are unwilling to expand in size to avoid further regulations and taxes.
- (ii) Utility connections like electricity, water, telephone etc.
- (iii) Absence of quality infrastructure including roads, transport, uninterrupted power supply, etc.
- (iv) Last but not the least, land acquisition being a major constraint in setting up industry.
- (v) Currently there is no mechanism to validate and estimate the training needs of different units in the unorganized sector. The workers are either not aware or deliberately avoid training for loss of income.

Development of industries at village and town level to make cities smarter

As per an analysis done by Price Waterhouse Cooper (PWC), India will have six megacities lodging a populace of 10 million or more, by 2025. As per the estimates, there will be more than 60 cities with a population of 1 million or more, as against 43 such cities in 2011.

Figure 1.2: Urban agglomerations in India between 1980 & 2025



Source: World Urbanization Prospects: The 2011 Revision; PwC analysis

Urbanization is imperative for a country's monetary progression. It carries with it better prospects for monetary development and fetches prospects for enterprise development and in addition occupation to the population. This facilitates development of more and more people; thus making it more comprehensive.

However it has some inbuilt challenges too. The continuous overflow of village population in cities has unfavorably influenced infrastructure development evident in terms of acute power cuts, water shortages and excessive rise in traffic, making cost of living almost unaffordable.

India since 1947 has witnessed many milestones of development, with its villages turning into towns, and towns transforming into cities. Now, the time has arrived for the country to transform its cities into smart cities and achieve vision of smart urbanization. Is it possible to achieve this vision only with the help of few construction giants like DLFS or ANSALS or by the help of companies like Microsoft or Siemens creating a mesh of their lifeless projects? Government's PPP model look upon them to provide an unending support in writing a new raga of growth along with it in the form of inclusive and sustained

development marked as SMART CITIES. The endeavors ought to begin from our grass root level. This may begin with building micro to small units at village level keeping in mind the end goal is to make them self supported. Development accomplished by this rural community will be unequivocally connected to their capacity to address urbanization and related social, environmental and financial issues in an all encompassing way, while capitalizing on future opportunities. In the meantime, this will likewise address the issues of resource crunch in urban communities.

Prime Minister Modi's planning to have 100 smart cities in the beginning is a brilliant initiative, but mere developing already developed cities will not fetch the objective. India has many hundreds of villages and government through industry giants should work towards industrialization of these areas and create more and more employment opportunities. Then probably NSDC's efforts can also payback and a balanced development of country can be made possible.

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