e-Content for Geography M.A Semester IV

(URBAN GEOGRAPHY)

SMART CITY CONCEPT : ISSUES AND CHALLENGES

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Abstract

The present paper deals with the new concept of cities, called , 'Smart Cities'.The concept seems to have a post - modern overtone because it is a deviation from the modern concept of cities. Post-modern underpinning of cities in the form of Smart Cities necessarily give an expression towards digitilisation as means of unprecedented rate of fragmentation in the basic structure of digitised cities.It is in this context an attempt has been made to review the relevance of the concept of Smart Cities in rapidly moving urbanization. The paper also attempts to deal with basic issues and challenges of the concept,if it is executed in countries like India,the paper has been prepared with the help of published materials and and all such materials and texts have undergone content analysis for paper viewing of the digitized nature of the cities.

Keywords: Smart City, Innovation, e-participation, infrastructure.

Beginning of the Concept

Cities are large densely populated areas marked by heterogenous population . Ethnic and social diversity is very much evident. Cities are not found in isolation but are connected with each other in forming urban system. The 'Smart city' concept appeared in late 1980's as a means to visualize urban context and then evolved in different contexts. A city's attractiveness, growth opportunities depends on the basic services they offer to support growth opportunities.

Basic Fundamentals of the Smart City Concept

"Smart City" concept came into vogue to find better solutions for a better tomorrow by the present Modi government. The concept stands for cities that are modern in terms of facilities and opportunities. The Smart City Mission is to establish 100 smart cities by 2022. 20 cities were selected in the first list and 13 cities in the second list .In Bihar, 3 cities have been selected Biharsharif, Bhagalpur and Muzaffarpur. Biharsharif has got nomination but Patna could not make it. In the first go, 7 new cities are being developed along proposed Delhi-Mumbai industrial corridor**.**

People have tried to define 'Smart Cities' and thrown light on the new concept.

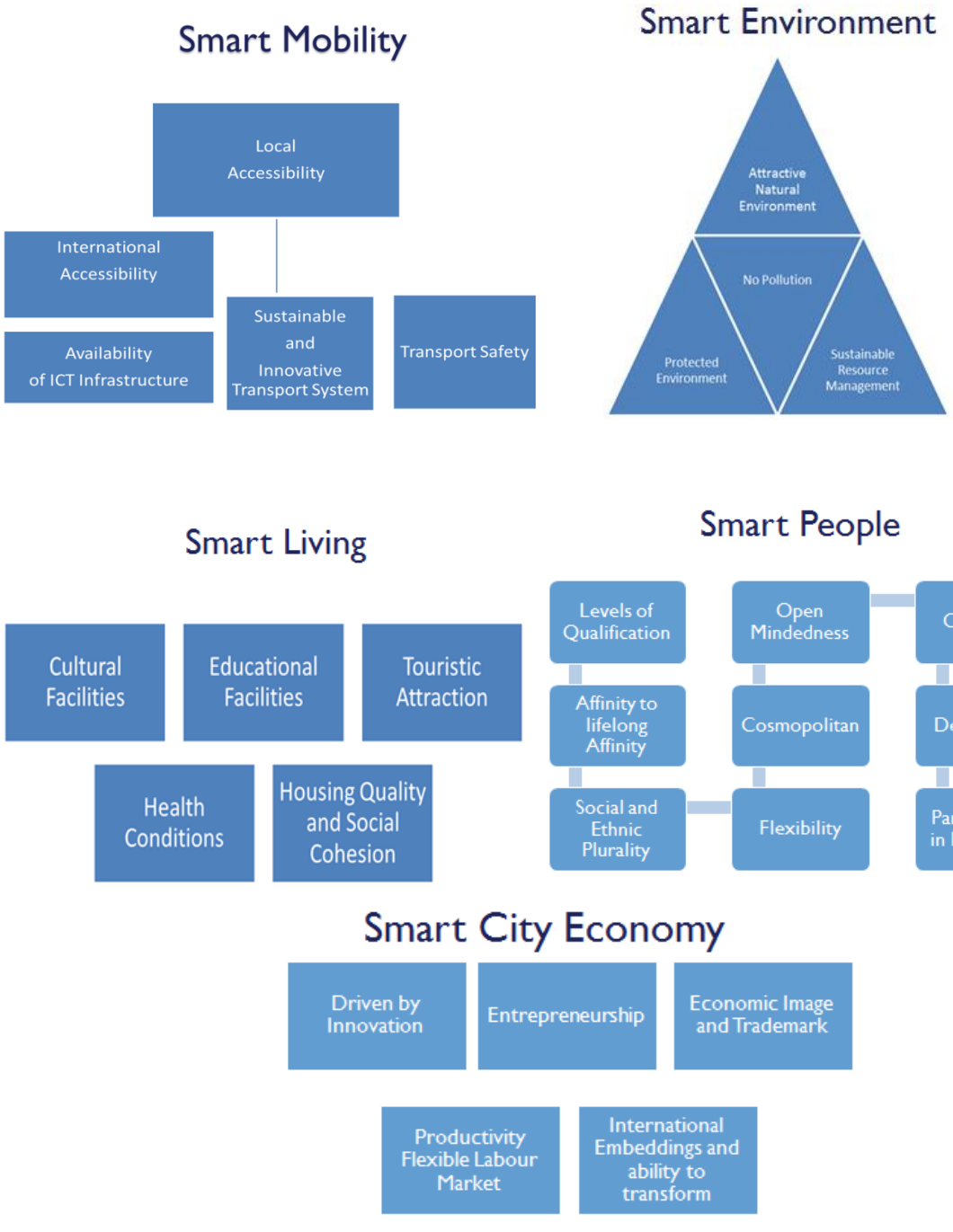
The new concept according to Anthoupoulos and Vakali (2012) believes that the paradigm of smart cities appeared in the late 1980's as a means to visualize urban context, and since then they evolved fast in different context) [(1)]

According to Townsend (2014) "Smart cities are places where information technology is welded to address problems old and new. The old city of concrete, glass and steel now conceals a vast underworld of computer and software's. The new city, on the other hand, is a digital upgrade to our built legacy giving rise to a new wind of city-we may call it a smart city."[(2)]

Albino(2015) "The Smart city is not an isolated enclave or gated city but a city that connects with its people and transforms their life, thus, it would be pertinent to mention that while cities transform people,people make cities. We need to be clear about now we use the technology to shape our cities and its consequences for the poor and the people at the margins" [(3)].

Smart City concept came into vogue to find better solutions. In 2005, JNNURM (Jawaharlal Nehru Urban Renewal Mission) was started which was redesigned as SMART CITY and AMRUT (Atal Mission for Rejuvenation and Urban Transformation) a decade later in 2015.[(4)] The JNNURM was significantly different from earlier urban policies as it recognized the importance of urban areas in economic growth, Smart cities are development strategies of urban area. The older city was of concrete glass and steel but the new city on the other hand is a digital upgradation of our built up city which holds vast potential of computers and softwares. The concept stands for cities that are modern in terms of facilities.

The smart city envisages to make use of information technology for (i) Physical infrastructure i.e. roads, built environment etc. (ii) Engage local people and local governments by use of open innovation and e-participation (iii) To learn, adapt and innovate by responding effectively. Smart solutions to city challenges have to be given. A smart city uses digital technologies or information and communication technologies (ICT) to enhance quality and performance of urban services, to reduce cost and resource consumption and to engage more effectively and actively with its citizens. Sectors that have been developing under the smart city include government services, transport and traffic management, energy, healthcare, water and waste. A smart city envisages for smart mobility, smart environment, smart living, smart people, and smart city economy. This can be well exemplified by the given model.



Research Questions

The paper concerns itself with the following research propositions/ questions.

1) What comprises Smart Cities ?
2) What is the relevance of converting older cities to Smart Cities?

3) To what extent does the concept of Smart Cities initiate a movement in Indian urban phenomenon.
4) Is the concept of Smart City suitable under under Indian conditions pertaining to the major metropolitan cities.

Objective

The paper has been written with the objectives:-

(1) To outline the issues and challenges Govt. will have to face in and developing Smart Cities in India.
(2) What can be done for meeting the challenges for developing these as Future Cities.

Methodology

The work is based on secondary data as it is a new concept and the smart city project has recently come into existence. The paper has been prepared with the help of published materials and texts , internet sources and have undergone content analysis.

Parameters for Selection of Smart Cities

Under Smart City Mission, cities have been chosen through two stage competition: Congested old cities have been advisable. Cities which have potential for future growth. Some cities as Biharsharif in Bihar has been selected by winning city challenge competition. This is in two stages: Criteria for Stage I involves Point System - Existing Service Level 25 points, Institutional System and Capacities 15 points, Self Financing 30 points and Past Records 30 points. Stage II – City Level Evaluation 30 points and includes credibility of implementation.

City Vision and Strategy – degree of co-relation with needs and aspiration of residence, use of ICT to improve Public Service Delivery, impact on core economic activity. Proposal level evaluation (70 points)- cost effectiveness of smart city plans, innovation and scalability, extent of citizen consultation for vulnerable section. Table No. 1 gives the list of Smart Cities in India.

Table No 1

List of Selected Smart Cities in India.

SL. No.	State/UT	No. of cities	SL. No.	State/UT	No. of cities
1	Andaman & Nicobar Islands	1	20	Madhya Pradesh	7
2	Andhra Pradesh	3	21	Maharashtra	10
3	Arunachal Pradesh	1	22	Manipur	1

4	Assam	1	23	Meghalaya	1
5	Bihar	3	24	Mizoram	1
6	Chandigarh	1	25	Nagaland	1
7	Chhattisgarh	2	26	Odisha	2
8	Daman & Diu	1	27	Puducherry	1
9	Dadra & Nagar Haveli	1	28	Punjab	3
10	Delhi	1	29	Rajasthan	4
11	Goa	1	30	Sikkim	1
12	Gujarat	6	31	Tamil Nadu	12
13	Haryana	2	32	Telangana	2
14	Himachal Pradesh	1	33	Tripura	1
15	Jammu & Kashmir	1	34	Uttar Pradesh	13
16	Jharkhand	1	35	Uttarakhand	1
17	Karnataka	6	36	West Bengal	4
18	Kerala	1	**Grand Total**		**100**
19	Lakshadweep	1			

Source :- Times of India(TOI), August 27, 2015

Discussion and Explanation

Basically most of the cities selected old small towns and big cities . These are cities offer housing facilities to population in large numbers. tourism and educational facilities. Developing these places as a Smart City is a challenging task which will take many years as the public services, building technologies bridging the gap between government and society has to be looked after. It requires smart buildings, energy, mobility, infrastructure, technology, healthcare and smart citizens which is an uphill task. Some cities are old cities which needs redevelopment.

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India's Urban Rejuvenation Mission launched on June 25, 2015 was to assist State Governments to create 100 Smart cities was something new and an expression of aspiration of the country to leapfrog its problem by using modern technology. The key task of a smart city is to foster rural urban economic linkages in general and ensure basic amneties. The new city will offer decent living options,including sanitation and solid waste management of high quality .Segregation of waste, transportation treatment and disposal systems needs to be looked after. Technical expertise and appropriate institutional arrangements are also needed. How best information and communication technologies (ICT) can be used in getting feedback and solution to the problems. In essence, it is a digital upgradation of old city and smart solutions of existing problems. Smart solutions include e-governance and electronic service delivery, video crime monitoring, smart monitors for water supply management smart parking and intelligent management of traffic.

The cities hold many prospects which are as follows :-

- Use of technology will shape the city through infrastructural development. It will bear consequential impact on the poor and people at the city margins.
- Smart city will offer sustainability of economic activities to its people.
- These cities will transform people and offer employment opportunities, education, skills and income level.
- Digital upgradation to our built legacy will give rise to new wind of 'city'.
- Smart Mobility of people – National and International will be possible.
- The mission envisages to provide Smart Environment for the city.
- Proper sanitation and sewerage facility will be taken care.
- Proper landuse management will bring a sea of change.
- Proper e-trade facility, e-commerce and e-banking will be brought about.
- Proper e-governance will be provided to people.

Challenges in the development of Smart City

Inclusive growth has been a challenge for any urban development programmes along with growth and sustainability. JNNURM has been criticized for exclusionary form and huge socio-economic inequality between the cities as well as between regions. Smart city is different and recognizes the urban policies and programmes and recognizes the importance of cities in India's economic growth as two- thirds of GDP is accrued from urban areas. The states that measures up to the guidelines and nominate cities could get funding of Rs. 100 crore per year per city for the next five years. It's a smart move to rejuvenate the urban areas. But Smart City Mission has to face many challenges. They are as follows:-

(1) Rapid growth of population due to backwardness in the surrounding area is so high that workable population has a strong tendency to shift to urban centres. So, the first challenge is to meet incoming of population and to meet the employability balance.

(2) Retrofitting and land management is a big challenge in urban area. Retrofitting involves the transformation of an existing built- up area into smart more efficient and livable city. The vision of Smart City is to identify nearly 500 acres of land in consultation with citizens.[4] Everywhere there is a tendency to have residential complex. This poses a hurdle in the development of smart city complex. While reviewing the smart city strategy the most important to identify the areas of weaknesses., e.g. 100 percent distribution of water supply and sanitation. Achieving citywide efficiencies can be a significant challenge.

(3) Redevelopment involves the replacement of dilapilated built-up environment and creation of a new layout with enhanced infrastructure needs vast open areas more than 50 acres which is a problem.

(4) Pan-city envisages application of smart solutions to the existing infrastructure, by the use of technology, information and data to make infrastructure development is the need but infrastructural chaos and inadequacy – electricity, water supply and sanitation are the main parameters and there is no possibility of improvement**.** Electricity or power supply is a major problem. The cities receive power from commercial power production and thermal power. The supply in most of the selected cities is meager and it cannot support the power demand of Smart City. Smart cities should have accessibility to electricity 24x7; this is not possible with the existing supply and distribution city. Shift to renewable sources and focus is needed on green buildings and green transport to reduce dependence on electricity.

(5) Financing smart cities is a big challenge .The High Power Expert Committee (HPEC) has assessed a per capita investment of Rs. 43,386 for 20 year period . From 2009 -20 an annual requirement of Rs. 35,000 crore is envisaged. It needs to see how these projects will be financed.

(6) Lack of master plan or city development plan- The key to smart planning is a proper master plan which needs to be implemented and which encompasses the needs of the city so as to improve and provide better opportunities to the citizens.70-80 percent of the cities do not have such plans.

(7) Essential utility services are unreliable. Water, transport and broadband facilities are ineffective .There is absence of e-commerce, e-governance and e-trade.

(8) Lack of quality manpower- Building capacities for 100 smart cities is not an easy task as most ambitious projects are delayed owing to quality manpower, both at centre or state levels. Funds are needed for focus on training, research knowledge exchange and creation

of database designing of tool kits and decision support system. Capacity building is needed at the initial stage which owing to absence of quality manpower is lacking.

(8) Absence of other means of livelihood- Agriculture is the main source of livelihood. In the fringe areas apart from agriculture land for farming there is no other source of livelihood. The people are also not mentally prepared to part with their land for smart city development and not ready to adopt the urban standard. People's response need temperamental changes, acquaintance to computer internet which is missing. NGO's support is needed

(9) Challenges of e-governance which cities will face is related to water supply and sanitation, energy, urban transport and traffic management, pollution control and environmental sustainability, regulation of land use, management/decongestion of development within crowded zones, maintenance of civic infrastructure, policing, disaster management and urban poverty.

(10) Constraints of Urban Local Bodies- The ULB's are have limited technical capacities to ensure timely and cost effective implementations , operations and maintenance. The ULB's are unable to attract the best talent.

(11) Ensuring Three -tier governance - There is a need to ensure co-ordination between central, state and local governments agencies related to financing and sharing of best practices and service delivery processes.

Suggestions

Implementation of Smart City Mission In Biharsharif is an uphill task. Poor Indian cities are engines of productivity and wealth. The wealth can be created only by urbanization and innovations in housing, services, utilities and technology will lead to improvements in people's life. It requires careful planning. It is a new concept and no work howsoever has been initiated.

- There is a need to invest in research and development in creating an appropriate e-governance solutions.
- Govt. support of capital investment.
- NGO's support is needed.
- Corporate sector has to play an important role.
- Urban bye-laws have to be followed.
- Need of proper planning of roads, number of vehicles, better housing and improved sanitation and medical care.
- Change in people's temperament.

However, it may be concluded that enhanced digital infrastructure comprising wireless systems, data system and maintenance of low carbon footprints as envisaged to be brought about by creation of Smart Cites may create a conducive environment for citizens to enjoy improved quality of life and living conditions in urban areas.

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