CHAPTER I: INTRODUCTION

1.0. Overview of the Chapter

This chapter discusses an introduction to the research, urbanization trends in Global and India context, growth of metropolitan and mega cities, urbanization in Karnataka, absence of metropolitan governance, issues and problem statements, significance of the study, general framework of the study area, research hypothesis, approaches and questions, aims & objectives, methodology, data analysis, scope & limitations and followed by plan of work.

1.1. Urbanization – a Global Phenomenon

Urbanization is a major change taking place globally. According to United Nation report\(^1\) in 1950, 30\% of the world’s population lived in cities. In 2000 it was 47\%. The urban global tipping point was reached in 2007 when for the first time in history over half of the world’s population 3.3 billion people were living in urban areas. It is estimated that a further 500 million people will be urbanized in the next five years and projections shows that 60\% of the world’s population will be urbanized by 2030 (Appendix II - 2.1). Such rapidly increasing urbanization, particularly in developing countries, creates many opportunities and challenges. Due to urbanization, the associated problems are infrastructure deficit, housing shortage, poor sanitation, inadequate health; urban slums, poverty & unemployment and environmental degradation pose a formidable challenge in many developing countries. The available statistics shows that, urbanization is also contributing significantly to climate change. The 20 largest cities consume 80\% of the world’s energy and urban areas generate 80\% of greenhouse gas emissions worldwide\(^2\).

Although urban areas will encompass an increasing share of the world population, the proportion of people living in very large urban agglomerations or mega-cities is still small. In 2000, 3.7 per cent of the world population resided in cities of ten million inhabitants or more and by 2015 that proportion is expected to rise to 4.7 per cent. In addition, 2.8 per cent of the world population in the year 2000 lived in cities with populations ranging from five million to ten million inhabitants, and the projected figure for 2015 is 3.7 per cent. Overall, by 2015, merely 8.4 per cent of the world population is expected to reside in large urban agglomerations of five million
inhabitants or more. An interesting feature of World urbanization is the growth of large cities. In 1950 World had only two mega cities i.e., the population of ten million or more. In 2000 the number had increased to 16. According to projections made by the UN reports, by 2030 there will be 27 mega cities. Out of which 18 mega cities will be in Asian countries. The population in large urban agglomerations will rise not only as a result of population growth in today’s populous cities but also because the numbers of such cities are expected to keep on rising.

**Box 1: Unbalanced Growth but Inclusive Urban Development**

The World Bank has published the ‘World Development Report (WDR) 2009’ with theme on, "Reshaping Economic Geography". The report’s main message is that economic growth will be unbalanced but development can still be inclusive. The chapter on urbanization suggests a policy framework to help nations benefit from urbanization. It outlines that ranking and sequencing of policies can help governments ease inclusive development. For areas of incipient urbanization, the policy priorities would be provision of basic urban services and improvement of land markets. For areas with intermediate urbanization, the priorities include providing basic services, improvement in land markets and investing in infrastructure in around the growing cities. Advanced urbanized areas should focus on well-functioning land markets, representative management, state-of-the-art transport infrastructure, and social policies to integrate low-income residents. The report provides important inputs for understanding and developing India’s urban development strategy.

**Source:** World Bank 2009.

The first World Conference on Human Settlement (Habitat I) was held in Vancouver, Canada in 1976. Habitat –II was held in Istanbul, Turkey in 1996. The World Summit on Sustainable Development held in Johannesburg in 2002 reaffirmed its commitment to the full implementation of agenda 21 and strengthening the concept of sustainable development. In these twenty years, the problems urban India faced have become highly complex. Some new problems also came to the forefront at times overshadowing the old ones. Apart from the above, some of the sector programs have been initiated which are as follows:

- **The Local Agenda 21 programme:** This emerged from the 1992 Earth Summit. It offers a multi-year support for secondary cities, as the means to introduce or strengthen environmental concerns in their plans.
• *The Sustainable Cities Programme*: A joint initiative by UN-Habitat and UNEP, it was designed to build capacities in environmental planning and management through urban local authorities.

• *The Safer Cities Programme*: This was initiated by UN-Habitat to tackle the problem of urban crime and violence by developing the crime prevention capacities of local authorities.

• *The Disaster Management Programme*: This was established by UN-Habitat to support countries recovering from natural disasters or wars.

• *The Healthy Cities Programme*: Initiated by the World Health Organization, this programme aims to improve, promote and maintain conducive urban environmental health conditions.

• *The Global Campaign on Urban Governance*: This was launched by UN-Habitat in 1999 to encourage urban planning to be pro-poor and inclusive. Its vision was to realize the inclusive city.

• *The Global Campaign for Secure Tenure*: This was launched by UN-Habitat in 2002 to improve shelter for the urban poor by promoting security of tenure in informal settlements.

• *City Development Strategy*: Promoted by the Cities Alliance, City Development Strategies encourage local governments to produce inter-sectoral and long range visions and plans for cities.

• *Gender responsiveness*: This has included promotion of gender mainstreaming issues in local government and planning. Examples include Gender Budgeting and Women's Safety Audits.

The problems of cities we notice and experience today is the product of the mismanagement of the spatial economy of the country on the one hand and that of individual cities, towns and villages on the other. Since the management of the city systems is not geared to efficient production maintaining social equity in terms of decision making and access to resources and civic services and enhancing environmental quality, the dream of a sustainable city can never be realized.
1.2. Urbanisation in India – Trends and Issues

India is one of the major emerging economies in the world with about 60% of GDP generated in urban areas. Urbanization is a global process. The world is in the midst of a massive urban transition unlike that of any other time in history. Kingsley Davis has explained urbanization as process (Davis, 1962) of switch from spread out pattern of human settlements to one of concentration in urban centers. India no longer lives in villages. In absolute terms India’s urban population is second largest in the world after China. The urban population of India has increased ten-fold during the last century, from 25.86 million in 1901 to 286.25 million in 2001. Between 1961 and 1991 while the total population increased nearly two times, the urban population went up nearly three times. The decadal growth rate in urban areas during 1991-2001 was 31.55 per cent compared to 18.11 per cent in rural areas. Although, the proportion of the urban population to the total population of the country is just about 28 per cent and it is noteworthy that the urban population has been growing faster than the rural population. The recent data by the provisional Census of India 2011 reveals that, the decadal growth rate of urban areas has slightly increased to 31.80 per cent, whereas in the rural areas has decreased to 12.20 percent. The proportion of urban to the total population has been increased to 31.16 percent (Appendix I-1.1 & Appendix II-2.3).

The urban growth rate in India has been relatively low compared to many developing countries. The decadal growth rate of urban population in India increased at a fast pace from 1921-1931 until 1951. Subsequently it registered a sharp decline during 1951-1961. This drop was largely due to declassification of a very large number of towns during 1951-1961. The decades 1961-1971 and 1971-1981 witnessed significant improvements in urban growth rate which thereafter steadily dropped to the present level.

The annual exponential growth rate of urban population during 1951 was 3.47 per cent. This was the highest, the country had seen until that time and led to the emergence of theories of ‘over urbanization’ (Kundu). Subsequently, this high growth rate has been attributed to independence and partition of the country as also non-rigorous identification of towns and cities in the 1951 Census. Formalization of the criteria for identifying urban centers in the 1961 Census resulted in a dramatic decline in urban growth figures in the following decade. The 1971-81, however,
following the same methodology of urban population enumeration, saw a very high urban growth of 3.79 per cent, fuelling speculation that India was on the verge of an urban explosion. Speculations notwithstanding, the growth rate came down to 3.11 per cent in the 1991. It has gone down further to 2.74 per cent in the 1991-2001 and recent provisional Census of India, 2011 data reveals that slightly increased to 2.76 (Appendix I-1.1. & Appendix II- 2.2).

According to the projections made, India’s urban population will reach a staggering 657.06 million by 2031, more than half of the present total population of 1210.19 million (Provisional Census of India 2011).

1.2.1. Urbanization pattern

The pattern of urbanization in India is characterized by continual concentration of population and activities in large cities (Kundu, 1983). This is manifested in a high percentage of urban population being concentrated in class I towns and its population has systematically gone up over the decades in the last century. It clearly shows that population centered in class I towns. According to 1991 census, about two third (65.20%) of the countries urban population lived in Class -I towns with a population of more than 100, 000. Whereas in 2001, it has increased to 68.67 percent and the provisional Census of India 2011, data reveals that, it has increased to 70 percent (264.90 million), over the years there has been continual concentration of population in class I towns, and rests of other class towns were constantly decreasing (Appendix I-1.3 & Appendix II -2.4).

In the context of demographic dominance of urban scene by class I cities, it is important to note that there were only 24 class I cities in 1901 that have gone up to 393 in 2001 and provisional Census of India, 2011 data reveals that, further increased to 468. While a number of lower order towns have graduated to class I category, the process of rural settlements acquiring urban characteristics has been weak. The pattern of growth has remained similar over time although there is a general deceleration in urban growth in all size categories in the past two decades. Class I cities have maintained an edge over class II, III, IV and class V towns in terms of the growth rate (of common towns). The gap, however, seems to have widened during 1991–01 (Appendix I-1.3 & Appendix II-1.4). Class I cities in the country experiencing higher population growth is due to both aerial expansion as well as in-
migration. A large number of satellite towns have emerged in the vicinity of these cities.

1.2.2. Growth of Metropolitan cities

Metropolitan cities in India are considered as vital economic, cultural and political nerve centers. Further, the metropolitan cities in India are also regarded as a crucial hub for regional or international associations and communications. The growth of metropolitan or million-plus cities is another interesting phenomenon. In 1901, India had only one metropolis, viz, Calcutta. In 1951, there were five such cities but by 1981, the number had increased to 12 and the Census of India 2001 registered as many as 35 million-plus cities and the provisional Census of India, 2011 data reveals that has increased to 53 (Appendix II- 2.5). The population of these metros adding up to about 160.50 million accounts for nearly 13.26 per cent of the country’s total population and 42.56 percent of the total urban population according to 2011 provisional census.

The decadal growth rate of metropolitan cities in India increased at a fast pace in 1951. This is due to the marked concentration of economic activities, attracting more people from the country-side as well as from smaller urban centers. Subsequently it registered a sharp decline up to 1971-1981. This drop was largely due to declassification of a very large number of towns during 1951-1961. At present, the decadal growth rate of metropolitan cities is marginal decreasing whereas the decadal growth rate of urban population increasing (Appendix I-1.4 & Appendix II -2.6).

1.2.3. Indian Mega cities

There are Three Mega cities (Urban areas with 10 million or more people) in India: Mumbai, Delhi and Kolkata. The highest annual exponential growth rate of urban population of five metropolitan cities in India during 1991-2001 is Delhi (4.23%) followed by Bangalore (2.78%), Mumbai (2.64%), Kolkata (1.92%) and Chennai (1.80%) respectively. Delhi is the World’s fastest-growing megacity, adding nearly one-half million people per year. Although the city has long since expanded beyond the original inhabited area, it still has room to grow both within its borders and in adjacent suburbs. The recent data released by the provisional Census of 2011, the decennial growth rate of Bangalore is highest (49.65%), followed by Chennai
(35.51%), Delhi (26.69%), Mumbai (12.05%) and Kolkata (6.87%) respectively. Now Bangalore becomes the World’s fastest growing metropolitan city. The researcher has projected, by the year 2031; Bangalore will overtake Kolkata and Chennai and became a third most populous city in the Country (Appendix I-1.5 & Appendix II - 2.7).

A recent report by McKinsey Global Institute says that India will have 68 cities by 2030 with a population of over 1 million, 13 cities with more than 4 million people, and 6 megacities with populations of 10 million or more. As many as 590 million people will be living in cities in India, and Mumbai and New Delhi will be among the five largest cities in the World.

The spatial growth differentials of Mega cities in India substantiate that, in case of Bangalore - growing core and declining periphery whereas in Delhi - declining core; growing periphery and rest of the four cities such as Greater Mumbai, Kolkata, Chennai and Hyderabad shows that declining core and declining periphery.

1.3. Urbanization in Karnataka

The Karnataka State had a population of 61.13 million (Provisional Census of India, 2011), ranks by ninth position for total population of India. Karnataka is one of the fastest growing and urbanizing states of the country, with more than 1/3rd of its inhabitants or 33.98 per cent of its population residing in urban areas, well above the National average. The provisional Census of India 2011, data reveals that the population residing in the urban areas has increased to 38.57 percent; it is well above the National average. Karnataka's decennial growth rate of urban population has been consistently progressive with gradual increase in the share of urban population, from -4.64 percent in 1911 to 31.27 percent in 2011 (Provisional Census of India, 2011). During 1951, the decennial growth rate of urban population has rapidly increased to 61.75 percent; the main reason for such high urban population growth peak during 1951-61 in Karnataka was the state's initiatives for industrialization. This was the period when India as a whole and Karnataka encouraged massive industrial development by establishing several large- and medium-scale public sector industries, like Hindustan Machine Tools (HMT), Indian Telephone Industry (ITI), Bharath Electronics Ltd (BEL), Hindustan Aeronautics Ltd (HAL), Government Electric
The second boom in the urban population growth during 1971-81 was also attributed to industrialization and commercialization, but with more stress on development of the Information Technology (IT) sector in its formative stage. A similar spurt in the growth of population and manufacturing workers during 1941-51 and 1971-81 was also evident in Bangalore city, the capital of Karnataka (Rao and Tewari 1979)\(^{10}\). It is projected that by 2021 & 2031, the urban population will go up to 31.13 & 41.09 million respectively. The share of urban population will go up to 49.95% in 2031 for an average annual exponential growth rate of 2.75 % (Appendix I-1.6 & Appendix II-2.8).

It is a leading state in the field of industry, in particular with regard to the production of computer software. Karnataka has emerged as a key state with knowledge-based industry such as IT, biotechnology and engineering. The state also leads in electronics, computer software and biotechnology exports, with US$ 19.13 billion for 2009-10. It is the science capital of India with more than 100 Research and Development (R&D) centres, and a preferred destination for multinational corporations with more than 650 such companies. The state is well connected to its five neighbouring states and other parts of India via 15 National Highways\(^{11}\) that run through the state. The state has a rail network of 3,244 km, which includes broad gauge and meter gauge (Economic survey of Karnataka, 2010-11). Five important airports of the state are located in Bangalore, Belgaum, Mangalore and Hubli and newly added of Mysore Airport. The state has an all-weather seaport at Mangalore, which mainly handles cargo vessels. One of Asia’s biggest naval bases (INS Kadamba) is situated at Karwar in Uttar Kannada district (GoKa, 2005).

Appendix I- 1.7 shows the changes in sectoral contributions to Karnataka’s economy. Over the years, Karnataka has witnessed high growth with the economy of the state, which was predominantly agrarian, shifting significantly towards an industrial and service-based economy. In 2009-10, the tertiary sector contributed 54.1 percent to the state’s GSDP at current prices, followed by secondary sector (28.1 percent) and tertiary sector (17.8 percent). The tertiary sector has been the fastest growing among the three sectors from 2004-05 to 2009-10. The growth has been driven by trade, hotels, real estate, finance, insurance, transport, communications and other services.
The secondary sector decline 29.0 to 28.1 percent between 2004-05 and 2009-10 and the primary sector decline to 19.80 to 17.80 percent between 2004-05 and 2009-10.

1.4. Absence of Metropolitan Governance

The growth of urban population has created serious challenges and imposing greater demands for municipal governments in India. The urban centers contribute to the national economies in far greater proportion to their population share, and are the engines of enterprise, innovation and culture. One of the interesting phenomenon is continual increase of metropolitan cities and their population and these Metros adding up to about 160.50 million, accounting for 42.56 percent of the total urban population (Provisional Census of India 2011).

The Metropolitan cities are characterized by multiple municipalities each delivering services within their own jurisdiction. The majority of urban services (transportation, water supply, solid waste management, and housing, for example) spill over municipal boundaries. As the physical expansion of large cities extends into the rural hinterland and crosses into other political jurisdictions, there is an increasing need to coordinate service delivery. The popular perception is that urban areas are better served with regard to water supply, sanitation and other amenities. But the perception of well serviced cities hides the harsh reality of gross inequalities. According to a 2002 NSS report on ‘Housing Conditions in India’, 22 cities with more than a million people, had slum population ranging from 10 to 54% of their total population.

There are large gaps among demand & supply of urban services such as water, sanitation, solid waste management, public transport etc. The enormous disparity in quantity of water supplied in Class I cities. Out of 393 cities, around 77 cities have cent percent water supply coverage. In case of sewerage only around 70 cities have partial sewerage treatment facilities. About 62 percent of the urban population had access to toilets, either connected to sewers or septic tanks or to pit latrines and serviced latrines and the solid waste generated in Indian Cities varies from 0.20 to 0.60 kg per capita per day\textsuperscript{12}. The National Council of Applied Economic Research (NCAER) estimates that though India’s Tier I cities remain the country’s richest; those in Tier II are emerging as the new growth centers. While Tier I cities represent 6 percent of the population and contribute about 14 percent of the India’s GDP, Tier
II cities represent about seven percent of the nation’s population and contribute about 13 percent to GDP\textsuperscript{13}.

The latest data provided by the 58th round of the National Sample Survey (2002) specify the level of disparities in the modes of access for water supply across states. The states performing poorly in providing tap water to urban households are Bihar (35 percent), Assam (35.5 percent, Kerala (40 percent), U.P. (50 percent) and Orissa (50 percent). In nine other states including large states such as Maharashtra, Andhra Pradesh and Gujarat, 90 percent of the urban population receives tap water.

Data on sanitation services, from the 54th round of NSS (1998)\textsuperscript{14} also indicate considerable state wise variations. Sanitary standards are abysmally low in the urban areas of Bihar and Madhya Pradesh where more than 45 percent of the population has no access to any type of latrine. The septic tank is the most common mode of sanitation in use with more than one third of the urban population relying on them. Sewerage is virtually non-existence in Bihar, Madhya Pradesh, Orissa, and Assam. Punjab, Maharashtra, Gujarat and Tamil Nadu are placed better (Zerah, 2006).\textsuperscript{15}

National Sample Survey had given press note on Housing Condition and Amenities in India, 2008-09\textsuperscript{1} data reveals that 74 percent of urban households with ‘tap’ as major source of drinking, 11 percent did not have any latrine, Nearly 22 percent of urban households no bathrooms, 62 percent who were residing in own dwelling and 92 percent of the urban households lived in pucca structures.

The Urbanization is not a side effect of economic growth; it is an integral part of the process. As in most countries, India’s urban areas make a major contribution to the country’s economy. Although less than 1/3 of India’s people live in cities and towns, these areas generate over 2/3 of the country’s GDP and account for 90% of government revenues\textsuperscript{16}. India’s towns and cities have expanded rapidly as increasing numbers migrate to towns and cities in search of economic opportunity. Slums now account for 1/4 of all urban housing. In Mumbai, more than half the population lives in slums, many of which are situated near employment centers in the heart of town, unlike in most other cities in developing countries.

With urban growth comes the challenge of delivering services, finding the resources to pay for those services, and coordinating service delivery across municipal boundaries. These challenges are particularly acute in developing countries like India where the population is poor and resources are limited. To deal with this problems metropolitan governance are imperative.

1.5. Metropolitan cities - Governance issues and problem statement

The paradox of cities is evident from their stark display of economic and social disparities with extremes of wealth and poverty co-existing side by side. As the UN-Habitat (2006: viii) notes, “urban poverty and inequality will characterize many cities in the developing world, and urban growth will become virtually synonymous with slum formation in some regions”. Metropolitan governance today can be seen as a composite function of overlapping institutions. Neither a centralist model with instruction and execution, nor the federal model with subsidiary delegation of functions is adequate in forming lasting solutions. Metropolitan governance therefore falls quite naturally into the debate on describing and understanding the functionality of polycentric development.

The following issues are common in Indian Metropolitan cities. They are:

1. Fragmentation and Jurisdiction conflicts – the most serious problem faced by many metropolitan cities in India is political and administrative fragmentation. Typically, a Metropolitan region is made up of a central city and adjacent municipalities, towns, districts, wards, or villages that compete against each other for resources. Some of these units may have organically evolved from indigenous settlements or may trace their origins from colonial legal structure. A common feature of these local organizational units is a strong adherence to local autonomy and an antagonism to the powers and prerogatives of higher-level governments. The complex and confusing interrelationships among the various agencies in Metropolitan region seen in Mumbai. A World Bank study reveals that although the Mumbai Metropolitan Region Development Authority (MMRDA) is formally charged with coordinating transport in the region, it actually has little influence on the planning and provision of this important service. For one jurisdiction over, the
suburban railway service rest with Indian Railways, a specialized central government agency. Two zonal railway systems in the Mumbai suburbs are also run by independent agencies that pursue their separate policies and activities without any significant efforts at service integration.

2. Inappropriate decentralization schemes: Conceptually, there are two types of decentralization. They are: the process of decentralization delegation of authority and process of decentralization is devolution. The process of delegation of authority and responsibility from the central government to field units to enable these units to carry out specific functions. For example Mayors of municipalities under the direct supervision and control of the central government in China (Beijing, Shanghai etc) are appointed by the center. The other meaning of decentralization is devolution, which is the transfer of both responsibility and authority to local government units from the central government.

3. Issues related to transparency and accountability: Metropolitan region require investments in urban services, such as transit systems, water and sewerage, energy supply, roads, ports, harbors and other high-priced items. The large amounts involved and profits that can be gained from these projects provide opportunities for graft and corruption. Unless governmental processes can be instituted to ensure transparency and accountability in public transaction, inefficiency, waste and moral decay could afflict urban governance.

4. Metropolitan Service delivery- Important task of metropolitan governance is delivery of essential services. The deficiency in delivery of services varied widely from city to city. What were formerly straightforward, limited types of services and delivery systems confined to local areas (urban areas), have often needed urgent expansion on a vast, metropolitan scale. The abilities of efficiency, responsiveness, and quality of service delivery are insufficient, inadequate, and lagging behind any sound standard of quality of services that could be offered to the citizens of the metropolitan cities. While poor service delivery is evidenced in most of these services, their cost appears to be high. One of the reasons for deficiencies in the urban basic services delivery is very poor revenue base of the Urban Local Bodies (ULBs) and dependency of the
ULBs on the financial transfers from higher levels of government (Mohanty et al 2007)\textsuperscript{17}.

5. \textit{Unsustainable land use (Spatial Planning)} – Massive urbanization has serious crash on spatial planning. At the metropolitan level, the prime issue, in terms of spatial planning, is primarily a lack of legal constructs (including administrative guidelines). Many metropolitan areas mix incompatible land uses within the short distance of each other. The Metropolitan Master plans are often unrealistic and lack of strategic sense and outcomes on the ground diverge widely from what is proposed in the plans lose credibility, importantly in the eyes of other government agencies and private developers.

6. \textit{Institutional Constraints}- The metropolitan wide assessment of needs and resources and the establishment of sectoral and area priorities have seldom been undertaken on a continuing basis. Even where metropolitan development authorities have been created, either they have not been mandated to undertake these specific tasks or their structure has not been designed to enable them to develop the metropolitan perspective (\textit{Sivaramakrishnan. K.C. 1986})\textsuperscript{18}.

7. Economic development in most metropolitan areas is very uneven, and job creation in the formal sector has been disappointing (\textit{Fainstein 2001})\textsuperscript{19}. Most urban regions lack economic development strategy, either in terms of promotion of enterprises or development of entrepreneurship, much less spatial planning and Government incentives tends to be at the senior levels and aspatial.

8. Transportation and basic infrastructure systems have not kept pace with urban growth, further disadvantaging the poor. Road systems are piecemeal, grossly overloaded and under maintained, while the number of motorized vehicles increased at extraordinary rate (\textit{World Bank 2001}\textsuperscript{20}, \textit{Figueroa 1996}\textsuperscript{21}). Public transportation, which tends to be fragmented between public authorities and a myriad of private carriers, cannot extend to many of improvised settlements because the quality roads is so bad.

9. Water and especially sewer systems in poor areas are often totally deficient, exacerbation of public health problems, contributing to environmental destruction and disaster prone areas. Paradoxically the improvement of water
supplies, when not mirrored by improved sanitation, aggravates surface water drainage and water borne decease problems (UNCHS 1996). Solid waste disposal is often the same sad state. The spatial scale of urban problems is vast (Bartone, Bernstein, Leitmann and Eigen 1994).  

10. The urban development patterns and the forms of urbanization are often thousands of individual location decisions, and bear little relationship to a land use plan, even if one exists. Massive sprawl covers the Landscape, Industrial, Commercial and Residential uses are often poorly sited in relationship to each other, to transportation requirements, to physical features of topography, flood plains, natural hazards zones, aquifer re-charge areas or protect forest. The good agriculture land consumed by random subdivision, central area strangulated under congestion and polluted air, new office towers and hotels, usually fenced and guarded, gated communities in attractive locations (Pirez 2002).  

11. Lack of basic services such as public transportation, fresh water, parking areas, waste management, sanitation and public toilets.  

12. Lack of financial capacity - In a survey of 46 countries conducted in 1997, it was found that about 82.5 percent of governmental income went to central governments, 4.5 percent to sub national units, and 13.0 percent to local governments (Ebel Vaillancourt 2001, 158-59) indicates unclear allocation of functions and a mismatch between function and fiscal resources. In India Constitution does not mandate the roles of different levels of Government, nor are there national administrative guidelines per se; metropolitan functions are often duplicated at different levels, or undertaken at inappropriate levels.  

1.6. Justification for the Study  

Most urban issues are not only inter-related and over-lapping; both in effect and scale, but also public sector agencies set up to address these issues with regard to multiplicity of agencies and overlapping mandates.  

There are not many studies on Metropolitan Governance issues and choices in the Indian context. This study attempts to bridge the gap between Metropolitan center and Metropolitan Region in the context of metropolitan governance framework,
delivery of services and spatial planning. The study intends to understand the issues, reexamine the present policies, the varieties, the decision-making processes and the strength and weaknesses of contemporary thinking about metropolitan governance, and its relationship with National or State Government on the one hand and local (Municipal) government on the other.

Many planners, policy makers, public administrators and city managers have studied, analyzed and presented the existing problems of Metropolitan Cities with regard to Metropolitan Governance. All are aware of the problems but are frantically striving to arrive at a solution. We all know that something has to be done but, unfortunately not many suggestions or answers available. It is precisely due to this situation, a need for the study to arrive at solutions, the study has been undertake.

1.7. Analytical framework of study area

This study is on ‘Metropolitan Governance issues and choices - A study in interrelationship between Bangalore Metropolitan Center and Metropolitan Region’. The following framework has given a wider perspective and in-depth analysis of metropolitan governance and interrelationship between the Metropolitan center and Metropolitan regions. Suburban expansion, planned or unplanned, takes places blurring the boundaries between the ‘urban’ and ‘rural’ and between one administrative unit and another. While metropolitan development contributes to economic growth and generates jobs, an important question that arises is who governs the metropolitan areas? In spatial-economic or socio-economic terms, a metropolitan area may form a functional unit but not necessarily so in administrative or organizational matters. More often than not, a metropolis is characterized by multiplicity of authorities and fragmentation of responsibility. An overview of metropolitan area is given below:

1.7.1. Overview of Metropolitan area

A metropolitan area is a large population center consisting of a large city and its adjacent zone of influence, or of several neighbouring cities or towns and adjoining areas, with one or more large cities serving as its hub or hubs. The Metropolitan area as ‘an area having a population of ten lakhs or more, comprised in one or more districts and consisting of two or more municipalities’. The definition of
‘metropolitan areas’ and metropolitan institutions are extremely variable, and are subject to change as populations grow and formal institutions proliferate. They may be classified according to their spatial form, their special identifying characteristics or their institutional configuration. Metropolitan areas are usually defined by the extent of the urban area and its immediate surrounds. Metropolitan area is large urban settlements with high population densities, complex and diversified economies, and a high degree of functional integration across a larger geographic area than the normal jurisdiction of a municipality.

Broadly there are three approaches to territorial definition. The first is the contiguous area of urbanization, in which one would expect to find the full range of urban services water, sewer, and a complete road network etc., for example Singapore. A second approach is to define the functional metropolitan area – this is the approach often used by geographers and census takers – and involves consideration of size, population density and commuter-shed or common labour market. In the sixties and seventies the arguments for metropolitan government were based on the need to create structures to fit their social and physical development25. A third approach is that of the so called ‘new regionalist’, who consider city region as the basic building block towards new forms of governance (Savitch and Vogel 200026, Norris 2001, Wheeler 2002)27. The dramatic resurgence of city regions since the 1990’s replaces the concept of Megalopolis, a term coined by Jean Gottman (1961)28, to describe metropolitan growth and fusing of metropolitan regions along with eastern seaboard of the United States.

Michael Goldsmith characterizes metropolitan areas by: “relatively large land area, relatively large populations, large range of economic activities, extensive number of governmental bodies or agencies and/or some formed structure, probably considerable social segregation and possible ethnic diversity reflected by a range of social problems (...), poor physical infrastructure (...) and a range of environmental problems, particularly poor air quality. But they are also honey pots, continuing to attract people from outside to their centre. They are places in which the process of globalisation effectively occurs, acting as centers of innovation, creators of new markets and trends. Finally, such areas may also face public resource crisis, particularly financial (...)” (Michael Goldsmith 2000: 326)29. All metropolises try to
improve their position both in a national and global economy, & what (Sassen, 1991) describes as “global cities” as part of a dynamic process of metropolitanisation, emphasising the importance of new economy and of regulating functions. Global cities have a high range of technological services, high capacity of commercial exchanges (stock markets), financial services with a high power of decision and new juridical services.

In Gottman’s (1979:6) own wards, “Megalopolis is a spectacular and fascinating phenomenon. Facts so huge and stubborn only are caused by the convergence of many powerful and sustained forces”. More precisely, agglomerations are defined according to a variety of criteria ranging from continuous built environment, over economic activities and centrality functions to commuter movement. Metropolitan areas are defined by the flow of commuters between agglomerations (Schuler, 1994).

The topology suggested by Hall and Pfeiffer (2000) is based on the growth characteristics. Here cities are divided into three classes, the city of hyper growth, the city of dynamism and the maturity city. Hyper growth, typified by the cities of Southeast Asia, implies high rates of population increase, a young population structure, and large number of people seeking entry into the labour force, enormous stress on housing, social and educational services, land and infrastructures. Dynamic cities are in demographic transition, birth rates have begun to slow down with increasing urbanization and urban services are beginning to catch up with demand. Mature developed cities, characterized by those of Western Europe and North America, are those with an aging population profile, in which birth rates are below replacement levels and immigration is necessary to maintain growth and fill low skilled jobs.

Overview of Bangalore – History and origin of study area- Early scene of the city till Independence - Kempegowda I, chief of the Yelahanka Prabhus, established Bangalore in 1537 (1510-1570). This fort area and the settlement can be recognised as the Petta area of the city. Along with the buildings and institutions, arts and crafts were promoted and traders settled down.

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2 The State government renamed to ‘Bengaluru’. However, ‘Bangalore’ will be used all through.
The settlement was organised as specialised quarters based on functional activities such as Akkipete (rice market), Taragupete (grain market), Aralepete (cotton market), Chickpete (little town), Doddapete (big town). Following the reign of Kempegowda, in the 17th century the town came under the Kingdom of Mysore, the Marathas as well as the Mughals. During this period, an oval fort, whose traces remain till today, was added to the South of the old fort by the Wodeyar kings and Chikkadeva Rajas.

In mid 18th century, Haider Ali attempted to consolidate his military position of the town by building many defence structures. Bangalore became an important place for exchange of silk, textiles, commerce and trade in spices. Roads were built from Bangalore Pettah to Madras, Pondicherry, Salem, etc. In 1760, the Lalbagh garden was built based on the model of Mughal gardens. Haider Ali’s son Tipu Sultan continued the work of his father until his defeat by British forces in 1799.

In 1807, the British Cantonment Area was formed to the North-East of Petta (Richmond Town, Cleveland Town, Benson Town, Ulsoor) and the general Bazaar (presently Shivajinagar). Between the Petta and Cantonment large open spaces were created and maintained (Parade Grounds, Cubbon Park, and Race Course). In 1859, the East India Company created the Bangalore-Madras railway line.

New neighborhoods of Basavanagudi and Malleshwaram were established in 1898 to the South and North of Pettah. Kalasipalyam (near the old fort) and Gandhinagar were established between 1921 and 1931, then Kumara Park in 1947 and Jayanagar in 1948.

*Bangalore after Independence* - After Independence from the British rule, large scale State enterprises (Hindustan Aircraft Limited (HAL), Bharat Heavy Electronics Limited (BHEL), Indian Telephone Industries (ITI), and Hindustan Mission Tools (HMT) were set up giving the town an industrial and scientific foundation. The new residential quarters (Jayanagar, Jayamahal, Rajajinagar, etc.) were developed under the impetus of the City Improvement Trust Board (CITB). Between 1941 and 1951, the population of the town went up from 786,343 to 1,206,961.

In the 1960s, along with the establishment of Peenya, “the largest industrial zone of Asia”, in the West, and much later, Bommasandra in the South residential areas such as Koramangala, Indira Nagar, Banaswadi, and Banashankari, among others were also established. During the 1970s, the city witnessed development of the textile
and silk industries. The liberalisation of the Indian economy in early 1990s facilitated the emergence and growth of high-tech and software industries, due to which Bangalore became prominent in the World of new technologies.

While the municipal corporation has been in existence since 1949, the municipal councils were created in 1996 to deal with the growing urbanization in the metropolitan area. In planning purpose, the area divided into two, they are; The Bangalore Metropolitan Area and Bangalore Metropolitan Region. The Bangalore Metropolitan Area comes under the planning jurisdiction of Bangalore Development Authority (BDA) and Bangalore Metropolitan Region comes under the planning jurisdiction of Bangalore Metropolitan Region Development Authority (BMRDA).

1.7.2. Bangalore Metropolitan Center (BMC)

The Bangalore Metropolitan Center is comprised of the area of Bruhat Bangalore Mahanagara Palike (BBMP) or Greater Bangalore was formed on November 1, 2006. This covers an area of 800 sq.km and houses a population of 8.43 million (Provisional Census of India, 2011). The BBMP has been divided into 8 zones and 198 wards for administrative purpose. The main aims for creation of Greater Bangalore are as follows;

1. Improve and co-ordinate infrastructure development for road and transportation network, water supply and UGD, Solid Waste Management etc.,
2. Upgrade quality of urban civic services etc.,
3. Strengthen administrative capacity to ensure better enforcement of various rules/regulations as also better co-ordination in service delivery etc., and
4. Optimise expenditure on establishment etc.,

1.7.3 Bangalore Metropolitan Region (BMR)

The BMR is comprised of three districts, namely Bangalore Urban District (BUD), Bangalore Rural District (BRD) and Ramanagaram District (RD-a newly created district carved out of Bangalore Rural district with Ramanagaram, Chennapatna, Magadi and Kanakapura taluks) covering a total of 8005 sq kms. The three districts in the BMR are further divided into 11 Taluks. The taluks in turn have 11 ULBs and 284

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3 The State government renamed to ‘Bengalooru’. However, ‘Bangalore’ will be used all through.
Gram Panchayats covering 2551 villages. The BMR comes under the planning jurisdiction of Bangalore Metropolitan Region Development Authority (BMRDA). It’s controlled by eight local planning authorities and an area consists of 8005 sq.km with a population of 11.66 million (Provisional Census of India, 2011).

1.8. Research Hypothesis, background and questions

1.8.1. Hypothesis - The Bangalore Metropolitan Region (BMR) requires Metropolitan Regional Governance in order to overcome multiplicity of organisation, jurisdiction and their interaction issues. A suitable metropolitan governance model will synthesize harmonious relationship between Metropolitan Center and Metropolitan Region to create a sustainable future.

1.8.2. Background - The various literatures, case studies on metropolitan governance suggest that, Bangalore should have one ‘metropolitan governance model’ to serve overall area of Bangalore with sector specific parastatals like Water, Sewerage, Sanitation, Electricity, Roads and SWM etc. The research intends to test the recommendation to a better understanding. The following questions are framed to develop a discourse.

1.8.3. Research Questions

1. What are the key governance issues of Bangalore Metropolitan center and region?
2. How do we agree spatial planning (Master Plan) in urban areas is related to zoning and land use policies, and giving directions for urban growth?
3. Which are the top three issues that need to be considered in effective implementation of spatial plan (Master Plan) for Bangalore?
4. Does the service delivery meet the citizens’ expectations in BBMP area in terms of: Speed and Quality, Transparency and Accountability, Reliability, Affordability and Accessibility
5. How effective are the existing institutional arrangements across Bangalore for enabling the practice of service delivery for citizens?
6. Is constituting Metropolitan Planning Committee (MPC) and District Planning Committees (DPCs) for Bangalore, would improve the effectiveness in service delivery and allow for effective spatial planning?
7. Which governance model is best suited for enhancing service delivery and spatial planning in Bangalore Metropolitan Region?

1.9. Aims and Objectives

1.9.1. Aims
The study intends to develop a suitable governance model and to synthesize harmonious relationship between Bangalore Metropolitan Center and Metropolitan Region to create a sustainable future.

1.9.2. Objectives
1. To study the functions of Urban Local Bodies with particular reference to Metropolitan Cities in India;
2. To review and appraise various Metropolitan Governance Models in India;
3. To assess the current reforms and new initiatives for governing metropolis in the study area;
4. To review the existing institutional framework with respect to Metropolitan Spatial Planning and Service Delivery in the study area, and
5. To work out a suitable Metropolitan Governance Model in establishing a harmonious relationship between Bangalore Metropolitan Center and Metropolitan Region.

1.10. Methodology
The objectives enumerated above are achieved by adopting the following methods:

Firstly, study of literature to know the present problems of Bangalore Metropolitan center and Metropolitan region. Reconnaissance surveys have been carried out for preliminary understanding of study area & mapping the field source. Tracing and mapping of recent initiatives of service delivery and spatial planning mechanisms through secondary information and field source. An in-depth analysis and understanding of various models attempted in Indian Metropolitan cities along with effects of 74th Constitutional Amendment Act to improve the Metropolitan Governance for urban living (flow chart 1). This research is mainly dependent on primary and secondary information and data. The opinion survey has been conducted by choosing a subject expert/ policy makers/bureaucrats/NGOs members etc.
Data collection and samples - The structured questionnaire (closed and open-ended questionnaire) has been used to elicit the information from subject experts/policy makers/bureaucrats etc. while the check list are used to the collection of information from various departments such as BBMP, BDA, BWSSB, BMRDA, BESCOM, BMTC, KUWSDB and various other parastatals agencies within the Bangalore Metropolitan Region. A review of all government reports, proceedings of the meetings and recent government policy and legal framework and enforcement mechanism have been carried out.

1.10.1. Methodology for Opinion Survey

Structured interview schedule- A structured interview questionnaire was designed with maximum closed–ended type’s questions, few questions related with ranked or ordinal, matrix rating types and a likert scale questions. The additional information provided by the interviewer was recorded in the respective questionnaire to be used as a supplement for the final interpretation of the findings.

The exploratory study (opinion survey) was conducted during the months of January, February of 2011 and online survey was conducted in the month of August, September during 2010. Out of 40 respondents, 3 respondents online and rest of it were interviewed through the mode of snowball sampling, categorized into eight groups viz. Head of the Public Stakeholders, Secretariats, Subject experts National and International, Non-Government Organisations (NGOs) members, representative of Premier Institutions, Consulting Groups and Individual consultants who are primarily engaged in shaping the spatial planning and service delivery models (flow chart -2). Such a wide distribution of respondents helped not only to generate a fairly comprehensive database, suggestions and comments but also to cursorily trace who are involved in metropolitan governance in the context with service delivery and spatial planning within the Bangalore Metropolitan Region (BMR). The subject experts at the international level were selected based on the criteria of who are involved in Bangalore projects and well aware about governance and service delivery.

The Survey were carried out using snow ball sampling techniques grouping of samples and having limited constraints to use DELPHI METHOD for making repetitive rounds for interaction of all the key interviewers. A 5-point Likert - scale (ranging from strongly disagree to strongly agree) were used.
1.10.2. Data Analysis

SPSS version 16.0 for Windows was used to calculate frequencies and descriptive statistics (Means and SDs) of panel scores on each statement. The consensus level was set between 80 and 100% agreement or disagreement, and is considered to represent high. The statistical level of agreement with a statement was set at the mean response of >3.00 (Agree) or higher, with a SD of <1.000, whereas the statistical consensus of disagreement with a statement was set at the mean response of 2.00 (Disagree) or lower, with a SD of <1.000.

The correlation matrix is used to arriving results of correlation among the various indicators of water utilities in Bangalore.
Flow Chart 1: Methodology

**TASK I: LITERATURE SURVEY**: to know the problem of:
- Concept of governance
- Governance of Metropolitan center and region
- Governance models

**TASK II: RECONNAISSANCE SURVEY**
- For preliminary understanding of study area
- Mapping the field resources

**TASK III: UNDERSTANDING THE METROPOLITAN ISSUES**
- Structure of Metropolitan Government of Bangalore Metropolitan Center and region
- Primary polices and overall outcomes
- Decision making process for metropolitan issues through horizontal and vertical integration
- Mapping Institutional service delivery matrix

**TASK IV: TRACING AND MAPPING OF RECENT INITIATIVES OR CHOICES**
- Effective Service Delivery
- Spatial planning mechanisms

**TASK V: IN-DEPTH ANALYSIS AND UNDERSTANDING**
- Various governance models attempted in Indian and other cities
- Effects of 74th CAA to improve metropolitan governance

**TASK VI: FINAL REPORT**
Flow chart 2: Breakup of Cross Section of Respondents

- Public stakeholders (N=9)
- Secretariats (N=3)
- Subject expert-National (N=3)
- Subject Expert-International (N=3)
- NGOs members (N=5)
- Institutions (N=4)
- Consulting groups (N=6)
- Individual Consultant (N=7)

TOTAL KEY INTERVIEWER (N=40)
1.11. Scope and Limitations

The problems of Metropolitan Center and Metropolitan Region with respect to delivery of service and spatial planning aspects only are studied in detail. Specifically, the Bangalore Metropolitan Center and Metropolitan Region are studied. A Governance model is proposed to be suggested at the end of the study for Bangalore Metropolitan Region which may not applicable to the other cities of different nature.

The scope of this research is to find out what urban local governments and various parastatals are doing to meet the human and community needs and what they could have achieved through better governance, examine the ways to close the gap between local government’s present performance and potential performance.

This study mainly concentrates on metropolitan governance issues and choices and their interrelationship between the Metropolitan Center and Metropolitan Region which may provide the solutions to current city functioning. Further the analysis are carried out with the actual city government of Bangalore Metropolitan center and Metropolitan Region to understand the practical nature of the barriers impending improved performance and the difficulty of removing them if any. This research begins with analytical and diagnostic approach and concludes with a prescriptive model.
1.13. Chapter Outline

This research is divided into eight chapters including Chapter I which gives an introduction to the research, issues and problem statements, significance of the study, general framework of the study area, hypothesis, research questions, aims & objectives, methodology, data analysis, scope & limitations and work plan.

Chapter II reviews work done by other scholars in the field of Good Urban Governance, Metropolitan Governance, models, Institutional framework, reforms and Initiatives, followed by Metropolitan Spatial Planning and Service Delivery Framework in India and Abroad.

Chapter III examines the Bangalore Metropolitan Center growth and its changes, institutional framework, metropolitan governance institutions and its governance absences and overlapping mandates.

Chapter IV discusses the Bangalore Metropolitan Region growth and its changes, institutional framework of urban local bodies, and other Parastatals agencies and overlapping mandates.

Chapter V reveals the existing Bangalore Metropolitan Governance constitutional and legal frameworks, various planning and development authorities Acts and Polices. Review of present governance model and various reforms and initiatives on governance.

Chapter VI is the integrated metropolitan spatial planning and service delivery on governance framework. Mainly focuses on evolution of spatial planning, review of master plans, structure plans and interim plans and issues of spatial planning, integrated service delivery for effective implementation water supply services.

Chapter VII reveals that opinion survey results of Metropolitan Spatial Planning and Service Delivery with respect to speed and quality, transparency and accountability,
reliability, accessibility and affordability. Followed by existing institutional arrangement for efficient service delivery and best suited model for the metropolitan governance.

Chapter VIII reveals that conclusion of research, suggestion and models for harmonious relationship between integrating the Bangalore Metropolitan Center and Bangalore Metropolitan Region and gives future research directions.

**Future Direction of Research**

In India, we have so many success stories, best practices and plenty of studies on Urban Governance. In the scale of metropolitan level one can say that it’s very limited. The major issues of Metropolitan governance are Spatial Planning and Service Delivery both are interlinking and correlated. There is a scope for further detailing the *‘CITY GROWTH STRUCTURE VERSUS EXPANSION OF SERVICES AND ITS IMPACT ON CITY GOVERNMENT’.*

**1.14. Summary**

This chapter first presented the urbanisation in global phenomenon, Indian urbanization and its pattern, growth of metropolitan and mega cities, urbanisation trends in Karnataka supported by analysis confirming the growth trends. Followed by absence of metropolitan governance, issues and problem statement supported by case examples, analytical framework of metropolitan area in context with study area, research hypothesis, approaches and questions, aim and objectives, methodology, scope and limitations, plan of work and chapter outline.