CHAPTER 12

TESTING OF HYPOTHESES,
SUMMARY, CONCLUSION AND RECOMMENDATIONS OF THE
STUDY

Introduction

There are two broad ways to dissecting and analyzing a city. The first is to consider the
city as a crafted product. This involves its conceptualization and concept plan, its detailed
land use plan and its infrastructure engineering. The second is to look at how it is run,
pointing largely towards its governance aspects. While much of the focus with regard to
cities has been on the governance aspects, this research attempts to look at the more
ignored side of the cities - that is their planning aspects. For this purpose, a set of
hypotheses was framed and a group of cities in Maharashtra were selected that are of
varied demographic sizes and at different stages of their developmental life. The set of
hypotheses and the results of the test are detailed in the following paragraphs. They are
followed by chapter summary, conclusions and recommendations of the study.

12.1 TESTING OF HYPOTHESES

The research began with a set of hypotheses that made certain basic assumptions about
city planning in Maharashtra. These were that

i. the current urban planning benchmarks will not sufficiently respond to the
   unfolding urban dynamics in the State,

ii. the conceptual backdrop to current urban planning glosses over the emerging
   urbanization of poverty that will continue to 'unplan' cities through
   'informalization' and growth outside plan,

iii. the execution of urban plans in the given time frame will remain highly
    improbable through current methodologies and practices, and

iv. the present development control regulations of cities are hugely inadequate to
    deliver livable cities.

With a view to test these hypotheses, this research took stock of the planning process in
Maharashtra with particular reference to the five research cities. The provisions of the
Maharashtra Regional and Town Planning Act were recounted and an historical view of
urban planning was taken. For a clearer understanding, the process of preparation of
development plan and its development control rules were traversed. Stock was also taken
of poverty planning in Maharashtra in the context of cities, infrastructure planning and the
challenges countenanced by cities in Maharashtra.

The research then got into the development plans and development control regulations of
the five research cities, the land use plan proposed in their development plans and the
amendments to plan and development control regulations. These provided insights into
the processes and the status of these plans.

The research paid special attention to the phenomenon of urban poverty and the treatment
of urbanization of poverty in development plans and development control regulations.
The phenomenon of slums drew greater focus and so did the provision of basic services in
slums. A detailed study was made of the national five year plans, the draft slum policy
and the attempts in Maharashtra and research cities in the provisioning of shelter vis a vis
development plans. The research also delved into the questions of the informal economic
sector and analyzed the national policy on urban hawkers, court judgments on hawking
and the reaction of research cities to this phenomenon.

**Critical Examination of Hypotheses:** We may now take up each hypothesis and
critically examine whether it can hold itself in the light of the data that was brought into
play.

**Inferential Analysis**

12.1.1 *Hypothesis 1: The current urban planning benchmarks will not sufficiently
respond to the unfolding urban dynamics in the State.*

The urban planning benchmarks that the State of Maharashtra has adopted deal primarily
with certain public amenities that need to be provided to city dwellers. These are in regard
to education, health, transport, markets, public services and utilities. An analysis of these
urban planning benchmarks that are currently used revealed that firstly, they were neither
comprehensive enough, nor exhaustive nor adequately responsive to the socio-economic
dynamics emerging in cities. They did not provide norms for many of the activities that
cities must perform and would need land parcels to engage in those activities. A most
glaring omission is solid waste management that requires wide-ranging benchmarks right
from collection, segregation to transportation, treatment and disposal. Globally, solid
waste is collected off streets and in a manner that is least intrusive and does not create eye
sores and health hazards. Since the planning benchmarks do not deal with this in detailed and decentralized fashion, cities collect their garbage on streets and have no decentralized system of transportation, treatment and disposal.

Similarly, Development Plans in Indian cities were seen economizing on roads. None of the cities studied showed roads exceeding 15% of land area devoted to roads and most of them were closer to 10 per cent. This is highly inadequate, especially in Indian conditions, where cities have a wide variety of multi-modal traffic and a proliferation of all kinds of vehicles. Since BRTS would occupy one lane on either side, the width of roads for passage of other kinds of vehicles needs to be much wider than what they are seen to be today. The paucity of space for mobility is further compounded on account of limited space for parking and parked cars tend to eat into the carriage width of roads. Hence, as cities become larger, they are facing larger and larger traffic bottlenecks, more travel time and added environmental pollution. The problem arises out of the lack of planning benchmarks for roads, buses, parking and rail-based systems.

The problems of housing also seem to emanate from perfunctory treatment of planning benchmarks for housing. The current norms are extremely broad. Housing zoning earmarks certain percentage of land for housing. Some land for economically weaker sections is specifically provided. However, the planning benchmarks do not seem to have been decided on the basis of an all-inclusive analysis of the socio-economic profile of the city, segmentation of the population on the basis of their economic strengths and the housing affordability of each group and the delineation of land accordingly. As a consequence, large populations struggle for a decent living place and the housing market ends up loaded in favour of the rich and the higher middle class.

The needs of the poor were especially found lacking, either in respect to their shelter or livelihood. While it is true that land use plans find it difficult to get into many of such areas, it is incumbent that the planning process must get to the grinding details at the planning stage. These shortcomings become evident as cities develop beyond the plan into informal settlements and informal enterprise.

The above cited features are evident in city after city with scarcely any city hoping to claim to be an exception. It could therefore be safely assumed that this particular hypothesis seems to be in a large measure borne out by the facts on ground and the empirical evidence across cities.
12.1.2 Hypothesis 2: The conceptual backdrop to current urban planning glosses over the emerging urbanization of poverty that will continue to ‘unplan’ cities through ‘informalization’ and growth outside plan.

All cities that were studied showed that urban poverty is on the increase. At the same time, there was evidence in all cities that urban poverty was being informalized and was being pushed into slums. The slums in general lacked in access to basic services of potable water, sanitation and hygiene. The slum dwellers faced longer hours in transportation and had poor access to health and education. While there were some works done in the area of the provision of basic services, the backlogs became larger with the rise of slum population as provisioning could not keep pace with the informal growth. Despite such a trend noticeable for several decades, planning for the poor continued to be outside the walls of formal planning, primarily under the Slum Act. In none of the research cities, urban poverty was given any substantial consideration in the DP. Both its key requirements – provision for shelter and for informal enterprise – have been referred to only in the passing. Efforts have been mainly in the area of resettlement rather than on upfront settlement. As a consequence, cities have found themselves saddled with larger and larger percentages of slum population, increasing number of hawkers resulting in the greater unplanning of the planned process and mounting growth outside of the development plan. This has been a phenomenon across cities and not limited to a few exceptions.

While the 74th Amendment Act to the Constitution listed ‘slum improvement and upgradation’ as well as ‘urban poverty alleviation’ in its 12th Schedule, a fresh out of the box thinking on these aspects does not appear in evidence. This is despite the fact that current methods in operation have not offered any long-term and tangible solution to the issue of poverty. Resettlement has been the key concept practised, meaning thereby to allow new slums to be formed and then devote energy to their orderly resettlement. This policy evidently has resulted in more slums and an unending job of resettlement. Similar has been the policy in regard to hawking. The most significant feature of municipal reaction to this problem has been piecemeal tackling of hawking zones as hawkers rise in numbers, and make do with carving out fresh areas for hawkers by compromising on footpaths, open spaces, pedestrian spaces and other conveniences.

All this has happened outside the planning process. And this has been the rule rather than exception. In the absence of any comprehensive amendment to urban law on planning,
Development Plans have not been able to deal with this issue. And this has quite naturally further radiated to development control regulations that are part the Development Plan. They lack in any specific tools of implementation that would be customized for the poor. Since the Development Plans have scant consideration of the needs of the poor, it only follows that the development control regulations (being part of the Development Plan) would not have specific tools of implementation that would be customized for the poor. Their concerns with proper planning and the need for avoiding undue congestion have led to regulations that disallow very small constructions or activities such as hawking. Slums are, therefore, not allowable under DCRs of cities. Neither is hawking, since it does not find reflection in Development Plans. Whatever infrastructure/service provisioning happens in slums is under the Slums Acts and not under the MR&TP Act, where slums remain outside plan. Similarly all hawking in the cities happen outside the provisions of the DP and DCRs. Hence in a sense, slums and hawking are activities violate the DP/DCRs and find little place in the urban rule book.

Hence the hypothesis that urbanization of poverty will continue to 'unplan' cities through 'informalization' and growth outside plan finds support both from the current planning rule book and the ground scenario tellingly appearing on ground.

12.1.3 Hypothesis 3: The execution of urban plans in the given time frame will remain highly improbable through current methodologies and practices

Development Plans are required to be fully implemented within a period of twenty years. The study of implementation of development plans across research cities revealed that despite the statute requiring the complete implementation of Development Plans within a period of twenty years, no city appeared to be anywhere close to the target. It came out that Plan preparation itself in every research city was mired in delays, sometimes very long delays. This has been compounded by inordinate hold-ups at the approval stage at the State Headquarters. The outcome has seen massive growth in the meanwhile in the cities making plans largely redundant for the planned development of cities. Further, land acquisition for amenities provided in the development plan remained difficult, primarily on account of costs of acquisition. Every research city was found struggling to acquire land on account of resources and procedures. While TDR had partly solved part of the financial problems of urban local bodies, institutional resources of these bodies to tackle land acquisition remained weak. Every research city had a huge backlog and was struggling with acquisition of amenity land.
The lands also got mired in legal issues and the ULBs were found wanting in defending their interest in the law courts. Legal weaknesses were compounded by lack of technical manpower in ULBs, especially planning professionals who could concentrate on plan formulation and implementation. Without an exception, the planning teams were understaffed and non-integrated with implementation wings. Amendments to law that allow a landowner to give purchase notice to the local bodies, meaning thereby compelling the ULB to buy the land in a time frame or surrender it has pressed the panic button in municipal councils. There is evidence to show that ULBs have lost lands on this account. This means that vital amenities have disappeared from the Plan.

The financial commitment to the implementation of development plans was found weak at all levels. While the municipal resource base was weak, even the scarce resource it had was primarily spent on matters other than the development plan. Despite its significance DP implementation was not the first charge on municipal budget. The State exercised a stranglehold on the municipal tax domain, disallowing the imposition of fresh taxes not forming part of the taxes approved by the state. The ULBs themselves were loath to enhance rates of taxes and kept these at very low levels for political reasons. State financial support to municipal bodies was meagre and nothing was specifically earmarked for expenditures mandated exclusively for DP implementation. The central finance commissions also did not have much to offer to the cities. The JNNURM was the first central scheme to allow a substantial share of central grants to flow to ULBs. But they had conditions attached and they in any case were available to only a very limited number of cities.

Such meagre support had to be assessed in the backdrop of actual costs of operationalizing the DP. It was found that no city would be able to manage to implement even a fraction of its DP in the given time frame with the kind of resources at its command. This got reflected through an analysis of the current level of municipal services provided by ULBs and the norms set by GoI. Moreover, the ULBs had not strategized anew. Thus its use of land instruments for operationalization of DP was marginal. The use of PPP mode advocated by GoI, experts and others had been largely ignored and this had not touched any of the core areas of municipal services. A host of factors, not least the attitude of the municipal masters to resist any dilution of their monopoly have led to the failure of many of the initiatives undertaken by municipal management. There has been a consistent stand on their part that implementation of the development plan must continue to be in the grip of municipal monopoly as in the past.
Nor were cities willing to allow private participation in areas where that could be forthcoming and cities continued to hold on to municipal monopoly in the provision of services. Its use of land instruments for operationalization of DP was marginal.

All the above factors quite conclusively establish the hypothesis that the execution of urban plans in the given time frame will remain extremely unlikely through current methodologies and practices.

12.1.4 The present development control regulations of cities are hugely inadequate to deliver livable cities.

Developmental Control Regulations of a city have a unique significance as instruments for translating a plan on ground. They specify details of how a structure would be built, how much of land would be built on, how high would the building go and what safety norms would be observed. They should also try through DCRs to make the cities look neat and aesthetically possess form and shape. Cities across the world, especially in the developed world, pay a lot of attention to aesthetics, form and shape of the city. An examination of the development control regulations of ULBs in the developed world shows that these are specifically provided for. DCRs have been seen to determine in cities, especially in Europe and USA the kind of uniformity and aesthetics, form and shape a city would show to the beholder. With newer developments impacting cities such as construction technological innovation, green technologies, water preservation and new energy solutions, it is the DCRs that bring them in practise by mandating their use. Recent additions have been rain water harvesting structures, incentives for use of green technologies, provision for fire safety in tall buildings, specified width of stairways etc.

While there has been some movement in some of these areas, the study revealed that DCRs in research studies were quite weak in specifying aesthetic designs, intelligent use of SI and design for amenities and sufficient safety as well as parking considerations. Design was never a conscious primary consideration in the way our cities are being planned. As a consequence few Indian cities have a decent form and shape. This emanates from the inadequacies of DCRs. Constructions have no appealing pattern or design, plots have odd shapes, infrastructure as a consequence has to fit the kind of development that would happen. As a result, no city gives an appealing look. This is because no such thing is necessitated on account of the existence of regulations that mandate the observance of shape and form. Aesthetics has been entirely alien to Indian cities.
FSIs for cities are one of the most important elements prescribed in the DCRs. Our study shows that there has been an overwhelming concern to keep FSI as a low, flat and uniform benchmark in Indian cities. This has not helped in either bringing down costs, or controlling density or protecting environment. A more imaginative use of FSI to serve the purposes of planning is expected. But this has not happened. Instead, the instrument appears to have got manipulated to the advantage of certain sections of the business without reaping benefits to the common citizen.

Our study further tells us that Indian DCRs have not been careful in design aspects of various amenities such as footpaths, road signage, safety requirements of public places and numbering of streets. Footpaths do not follow any standard design, nor are there standards specified for signages. Sufficient safety requirements are not always built in to the rule book. In many cities it is nightmarish to find out the location of a place on account of haphazard and complicated numbering.

As cities grow, newer requirements of planning and regulation crop up. So does technology impact on what a municipal body does or prescribes. The planning process did not appear alive to these changes. Wherever cities finally reacted and brought in changes, massive undesirable development had already happened and could not be undone.

In the cited background, it could therefore be concluded that the hypothesis that the present development control regulations of Indian cities would struggle to deliver liveable cities that would have a reasonably satisfactory quality of life finds substantive support in the study.

Overall, therefore, it could be concluded that all the four hypotheses seem to have passed substantial scrutiny and have emerged positively through their testing.

12.2 SUMMARY OF THESIS (ALL CHAPTERS)

12.2.1. Chapter 1 deals with a treatment of sociological theoretical perspective. It begins with the perspectives of Marx and Engels and comes down to the 21st century with special reference to Tonnies, Durkenheim, Simmel, Weber and the Chicago School. It deals with the contemporary theoretical perspectives of Geddes, Park, Wirth, Hoyt, Castells, Giddens, Harvey and others. It also gives an account of Indian sociologist, social effects of urbanization and urbanization in 21st century. In regard to urban policy in post independent India, it traces the main policy landmarks during each five-year Plan, the
enactments in regard to urban issues, the JNNURM and a review of these initiatives. It then states the hypotheses and objectives of the study.

12.2.2. As regards research methodology (Chapter 2), the choice of data and their collection methods have significant implications upon research findings. This research deploys a specific methodology that comprises the choice of research design, data sources, data collection techniques and analytical techniques.

A research design is a structure crafted for the purpose of investigation. It provides an overall guidance for the collection and analysis of data of a study. In this study, the descriptive research method was employed as it allows the generation of factual information in regard to the study and a comprehensive analysis of an existing situation in an economical way. For this research both primary and secondary data were gathered. Primary data were derived from the answers of the participants to the questionnaire. Secondary data were obtained from published documents and literatures. These included survey data and documentary data, many of them unpublished and prepared by urban local bodies or state organizations for internal use. The use of secondary data was central to this research as these were available directly from the most reliable source - the ULBs, State organizations and world organizations. Numerical data and statistics are the main substance of quantitative instruments. On the other hand, qualitative approach generates verbal information and holistic analysis. The researcher opted to integrate the qualitative approach with the qualitative method for this study.

The researcher prepared a questionnaire that was circulated to a select group of knowledgeable respondents who could add value to the research with their insightful replies. They either answered the questions in writing listed in the Questionnaire or gave answers in person or over the telephone. For this research, the study population comprised a total of 15 respondents. Apart from municipal employees, those working in the town planning department of the State under the Directorate of Town Planning and the State’s Urban Development Department. The survey questionnaire was used as the main data-collection instrument for this study. The element of anonymity associated with the questionnaire survey technique greatly enhanced candid and honest replies from the participants. For the research judgmental sampling was used. The researcher chose the participants who were considered as the best source of information pertaining to the cities under study and inferentially to the subject of this research as explained in previous paragraphs.
Collected data was then processed, analyzed and presented. Wherever possible, tables, pie charts and bar graphs were used. The data collected by the researcher was analyzed using both the inductive analysis and deductive analysis techniques. The research followed a four-stage process. The first stage devoted itself partly to an overall literature survey and use of secondary data to provide the context of the research. The second stage attempted a detailed study of the ‘operationalization’ of the development plans and the development control regulations of cities on ground. The third stage analyzed their content, consequences and the deficits that they contained or created. The fourth devoted itself to possible strategies that could help provide solutions for bridging the deficits.

12.2.3. Chapter 3 has an introduction to the study and deals with trends in urbanization. The global trends of urbanization have strengthened over the last fifty years, making the twenty-first century the "Century of the City". In 1950, only 29% of the world's population lived in urban areas. By 2030, almost 61% of the world's population will be urban. The developed world displayed the first signs of urbanization; these western countries today are the most urbanized. They also broadly happen to be the ones with the highest GDP per capita. In the coming decades, countries in Asia and Africa will witness the highest urbanization. By 2050, Asia alone will host 63 per cent of the world's urban population, while Africa will host nearly a quarter. Almost all future population growth in Asia will be in towns and cities. Asia will dominate the list of world's largest cities. 16 of the world's 24 megacities will be located in Asia. Many factors have propelled urbanization. Geography, technological progress and state policy in regard to economic development, migration, ethnic conflict, famine, better quality of life, natural population multiplication from within cities have been some of the most important.

Cities in India are categorized under the Constitution as nagar panchayats, municipal councils and municipal corporations. The Census definition of towns The Census towns require them to satisfy the three criteria of a minimum population of 5,000, at least 75 per cent of male working population engaged in non-agricultural pursuits and a population density of at least 400 persons per sq km. As per the provisional Census Report 2011, of India's 1.21 billion people, its urban population stood at 31.16 percent (Census 2011). This accounted for world's 17.5 per cent population, second only to China. India's headcount now is almost equal to the combined population of the United States, Indonesia, Brazil, Pakistan, Bangladesh and Japan put together. Natural multiplication, the emergence of new towns, expansion of existing towns and migration fuelled urbanization. Within India, Tamil Nadu, Kerala, Maharashtra and Gujarat are more than 40 per cent urbanized while Arunachal Pradesh and Himachal Pradesh are less than 10
per cent urban. While Class 1 cities dominate India’s urban demography, the growth of metro cities is significant. In the process of India's urbanization, the urbanization of poverty has been one of the principal trends.

Maharashtra has the largest urban population among states in terms of absolute numbers and this now stands at 5.08 crores. Most of Maharashtra’s urbanization has been driven by the Mumbai metropolitan region, Thane, Pune and Nagpur. The urbanization of poverty in Maharashtra in the form of slums has gone hand in hand with the process of urbanization. As per Census 2001, Maharashtra had 1.06 crore people in the slums, with Mumbai sharing 58.2 lakhs, Nagpur 7.3 lakhs, Pune 5.3 lakhs and Nashik 1.4 lakhs. Larger numbers are emerging from Census 2011.

Mumbai is India's largest city and currently ranks as the fifth largest in the world and is destined to become the second largest city on the globe after Tokyo. It moved from a population of about 30 lakhs in 1951 to 125 lakhs in 2011. The city has also grown denser and now ranks as the densest city in the world with a population of 28,508 persons per sq km. Its slum population is more than half of its total population living in just about 6 percent of land area. Pune is India's eighth largest city and the second largest of Maharashtra. It moved from a population of about 5 lakhs in 1951 to 37.8 lakhs in 2011. It has a population density of around 15400 persons per sq km. In 2001, a total of 13.75 lakh persons were slum dwellers forming 57.83 percent of the total population. Nashik is among the fastest growing cities in the State and in India. It moved from a population of about 1.5 lakhs in 1951 to 11.52 laks in 2011. It has a population density of about 4360 per sq km. The slum population in Nashik, however, is surprising low. The city had a total slum population of 2, 14,769 in 2001. Kolhapur is one of the growing cities in Maharashtra. It moved from a population of 1.36 lakhs in 1951 to 5.79 lakhs in 2011. It has a density of 7565 persons per sq km. There are 54 slums in Kolhapur with 11.60% of the city’s total population. Baramati, a ‘B’ class municipal council has a population of about 55,000 in 2011. It has a population density of about 11,000 per sq km.

As the Indian economy moves up the growth trajectory with greater trade and investment, there would be a resultant decline in the dependence of population on agriculture. This would suggest that migration from rural to urban areas is likely to be an important factor contributing to the process of urbanization of the Indian economy. However, urbanization in the sense of simply having people move to cities does not guarantee growth. The latter depends on the nature of urbanization and on the absolute quality of urban opportunities.
After recording a growth rate of 5.5 per cent per annum during 1981-2001, there was acceleration in India’s GDP growth to 7.7 per cent per annum during 2001-11. The rapid economic growth has brought about a considerable structural transformation in the country’s economy. The share of agriculture in the GDP declined from 34 per cent in 1983-84 to about 15 per cent in 2009-10. The share of services in the GDP went up from 40 per cent to 57 per cent and there was some increase in the share of construction, while the share of industry remained unvarying at 20 per cent. Evidence also shows higher levels of per capita income with higher levels of urbanization and greater ‘metropolization’ of Indian cities.

As economies move to a more mature phase of development, they become more knowledge-based and service-oriented. Notwithstanding the IT revolution and death of distance' arguments, there are aspects of agglomeration and the resultant spatial concentration which remain intrinsic to the industry and services sectors. Cities, migration, and trade have been major catalysts of progress in the developed world over the past two centuries. These stories are now being repeated in the developing world’s most dynamic economies. Growing cities, ever more mobile people, and increasingly specialized products are integral to development. In industrialized economies, economic activity in urban areas accounts for as much as 80 per cent of GDP. The urban share of economic activity in less-developed economies is typically around 50 per cent. In India, in 1999-2000, cities and towns contributed 51.7 per cent to the GDP, and the share is estimated to be around 62 per cent in 2009-10.

Preparing India's cities for a rapid growth scenario will require a paradigm shift in planning for urban infrastructure and reforming the institutions for service delivery. Regional and urban planning have an important role to play in generating new spaces and in rejuvenating existing city spaces so that a healthy socio-economic environment can be created in which the fast-growing urban population of India can live with higher standards of public service delivery and contribute to growth. Unfortunately, in the past, there was no deep engagement with planning in the urban sector, and socio-economic planning was not linked to spatial planning. A beginning was made with the 74 Constitutional Amendment Act of 1992, which mandated the setting up of elected municipalities as 'institutions of self-government' thereby creating political space for ULBs. The concentration of the Amendment, however, was more on the governance aspects of a city and less on its planning aspects.
It is quite evident that as the Indian economy engages in major structural transformation, planning for urbanization assumes enormous importance, because that is where the future of India lies. The study delves into the current status of such planning and derives on the basis of the emerging urbanizing scene, the inadequacies in the planning process.

12.2.4 Background to urban planning in Maharashtra is discussed in Chapter 4. This chapter highlights the urban planning is complex since it involves organizing many lives and multiple activities in a highly compact land mass with high density. In its comprehensive form, urban planning comprises land use, socio-economic and environmental planning for economy, efficiency, sustainability and an acceptable quality of life. Since the dynamics of towns lead to an on-going expansion, urban planning cannot be a one-time activity, but needs to continuously respond to upcoming challenges. India, in the modern era, has borrowed substantially from urban planning ideas of the west. Even for the west, however, this underwent a learning process. There was a time that western cities were poorly planned and quality of life was dismal and there was large growth of unsanitary slums. Significant legislation was later passed to make cities more planned and livable.

Urbanisation is a twentieth century phenomenon in India and so are urban laws, as we know them today. In the earlier part of the twentieth century, town planning was considered a part of municipal functions. With the growth of bigger cities, improvement trusts were created that took up ambitious city schemes, but with time they were merged into municipal bodies. A number of town planning laws were passed in the first half of the twentieth century. Ultimately, a three-tier planning process was established. At the apex of macro planning is the Regional Plan, which looks holistically at a city or a group of closely knit cities along with the hinterland, aiming at balanced regional growth. The Regional Plan is followed at the second level by the Development Plan treating an entire city as a unit and looking at it comprehensively. Reservations for public purpose are a significant element of DPs. At the bottom is the Town Planning Scheme, which takes up part of a city for the purposes of micro-planning, and providing an implementation tool.

Coupled with the Development Plan are the Development Control Rules which lay down the details and the working tools of how development and construction would be permitted and controlled. Access, layouts, open spaces, area and height limitations, lifts, fire protection, exits and parking requirements are stipulated. FSI, TDR, accommodation Reservation are important concepts contained in the DCRs. The urban planning process in Maharashtra traverses several stages. The local urban body declares its intention to
prepare a Development Plan. The State then appoints a Town Planning Officer to assist the ULB in the preparation of the Development Plan. Based on surveys and data collected, the Town Planning Officer prepares a draft plan. This is then presented to the ULB. The draft plan is then published and objections and suggestions are invited. A Planning Committee considers these and makes recommendations. The General Body of the ULB then considers the Planning committee’s report. The Plan is then submitted to the Government which sanctions the plan with or without modifications.

Poverty in India, as in the entire developing world is rapidly acquiring an urban face. This is known as the urbanization of poverty and has been accompanied by the informalization of poverty. They together impose overwhelming legal and institutional constraints on poverty, negatively impacting shelter, livelihood, health, education, human dignity, access to basic services, credit, and any chance of integration into the city and upward mobility in life. In many fundamental ways, almost all these infirmities turn out to be a factor of land tenure. However, under the Indian Constitution, the role of the Central Government is limited. The principal urban function rests with the States. Maharashtra has pioneered a number of innovations in regard to tenure to slum dwellers. The Maharashtra Slum Areas (Improvement, Clearance and Redevelopment) Act of 1971 was the oldest in a series of legislations in the country and provided for protection against eviction. The recently announced State Housing Policy talks of providing adequate lands for the weaker sections in close proximity of cities, towns and rural areas. It advocates inclusionary zoning provisions for low income group housing in private layouts. It emphatically states that security of tenure would be the basis of all rehabilitation/redevelopment options and that government lands would be offered after redevelopment to cooperatives on occupancy or lease-hold basis. For crafting such change, the Policy indicates legal and regulatory reforms, the erection of an institutional framework, a housing sector regulatory commission, encouragement to foreign direct investment, a special township policy, redevelopment of run down areas and dilapidated buildings.

The job of providing infrastructure facilities in cities of Maharashtra has primarily been the job of municipal entities. It has been the common experience, however, that municipal bodies find it increasingly difficult to meet the rising requirements of cities. Money from JNNURM to some cities has been of assistance. But they have been insufficient. Other cities have had even greater resource crunch. One good indicator is the performance of the cities in terms of implementation of the Development Plan. The average
implementation percentage in the State hovers around the one-fourth mark and no one city has exceeded 35 percent.

It is evident that on account of urbanization, the cities of Maharashtra face enormous challenges. These are challenges of rapid demographic expansion, of planning, of traffic and transportation, of parking, of collection and disposal of waste, of general order and security, of governance, of infrastructure, of resources, of globalization, of poverty and of the allocation of land and resources between the tripod of economy, environment and equity. It is also obvious that cities would have to be the primary area of attention in regard to the well-being of the State.

12.2.5. Principal features of the DPs and DCRs of select cities indicates that the City Development Plans are investment plans enabling the city to qualify and draw finances from JNNURM and UDISSMT that are GoI schemes to the A class cities and towns. For the purposes of this thesis, we shall exclusively deal with the statutory Development Plans (Master Plans) under the MRTP Act and draw from the City Development Plans only relevant data. Every municipal body under the MRTP Act 1966 must prepare a Development Plan for the area under its administrative jurisdiction. Development plans enable planning for orderly development of a town. The Development plan includes an existing land use map of the entire area within the municipal boundary with a report of various surveys, statistical data and analysis of information. A procedure is prescribed under the MR and TP Act for its preparation. With a view to easily distinguish different land uses, planners use different colours in maps.

Mumbai Development Plan

Mumbai has a physical area of 437.71 sq km. Its first Plan extended up to 1981. This plan could not meet met time lines; it faltered on infrastructure and amenities proposed could not fructify. The Second Development Plan was prepared for the period of 1981-2001 and suffered from similar shortcomings as the first one. Despite the currency of the second DP till 2013, a fresh Plan is already under preparation. The current land use Development Plan has to contend with Coastal Regulations of GoI and the Regional Plan of MMR. Part of the DP are the Development Control Rules of Mumbai. They comprise definitions, the process of building approvals, FSI computation, parking Spaces. Subsequent interpolations in regard to Resettlement & Rehabilitation, information technology, textile mill land and heritage have been made. 12.6.2 Pune Development Plan
Pune has an area of 243.96 sq km. It prepared its first DP in 1966 and a ‘revised’ Development Plan was sanctioned in 1987. This is currently under revision. Its current land use has about 42 per cent residential. The DCRs permit the use of TDR and accommodation reservation. PMC has so far cumulatively been able to implement the sanctioned DP to the extent of 28.5%. Quite clearly timelines of the DP have not been met and town planning schemes have not been implemented despite being framed. Slums have proliferated and populations have mounted.

**Nashik Development Plan**

Nashik has an area of 268.22 sq km. Its DP was prepared in 1988. Of the 524 reservations in the DP, NMC has developed 101 sites. While this is better than many cities it still falls short of targets of the DP. The DCRs of Nashik now incorporate the provisions of TDR and accommodation reservation. An analysis of the prospective land use with the older DP provisions shows that more land is being committed to developable use and open areas are substantially decreasing. It is evident that development would take its toll on openness in the city.

**Kolhapur Development Plan**

Kolhapur city has an area of 66.8 sq km. The first DP for the city was sanctioned in 1977. The plan was later modified and is under implementation since 2000. As population pressures have increased, the area allocated for development has doubled with a proportionate reduction in the non-developable area. The city has only 3.55 percent of the total area allocated to open spaces, well below the mandatory 10 percent. Kolhapur is facing problems such as treatment of sewage, developments in the Red Zone and unavailability of space for solid waste management. Of the total reservation of 386 sites for public amenities, only 7 sites have been implemented. The municipal authorities reported that the DP is not necessarily a reference point when the annual budgets of the municipal corporation are framed.

**Baramati Development Plan**

Baramati, a "B" class municipal council, had its first DP sanctioned in 1967 and revised in 1977 and 1991. The DP for its extended area got sanctioned in 1983. Currently, the two DPs (old area and extended area) are under sanctioning process. The DP had a total reservation of 38 sites. Of these, the Municipal Council has developed 7 sites. This puts the development percentage at 26 % in a total period of twenty-one years since the
approval of the Plan. The Council has adopted the Standardized Building Bye-laws and Development Control Rules for B and C Class Municipal Councils approved by GoM.

12.2.6. Current status of DPs and DCRs in terms of Urbanization of Poverty shows that poverty in the country was declining. This invited the criticism that unrealistically low poverty estimates were engineered and led to the setting up of the Tendulkar Committee in 2009 to make realistic poverty estimates. The Committee estimated India’s poverty at 37.2% of the total population. Over the past several decades, poverty in India has rapidly acquired an urban face, recognized as the ‘urbanization of poverty’. Deprived of a proper urban habitat, the poor are being pushed into slums. And in their search for employment, they find refuge in the informal sector. Urbanization of poverty has thereby been accompanied with the informalization of poverty.

Slums.
The Pranab Sen Committee, appointed by GoI, defined a slum as “a compact settlement of at least 20 households with a collection of poorly built tenements, mostly of temporary nature, crowded together usually with inadequate sanitary and drinking water facilities in unhygienic conditions. It stated that the country's slum population had grown by 17.8 m in the last decade. The Committee projected the slum population in 2011 at 93.6 m, up from 75.26 m in 2001. The Sen Committee put Maharashtra at the top of the chart with around 18.15 million slum dwellers in 2011, followed by UP (10.87 million), TN (8.60 million), West Bengal (8.50 million) and Andhra Pradesh (8.10 million). Among cities, the numbers stood at 8.68 m for Mumbai (around 55 percent), 1.37 m for Pune (around 45 percent), 2.14 lakhs for Nashik (around 19 percent), 56,235 for Kolhapur (about 12 percent) and 3,774 for Baramati (around 7 percent). Quite clearly, the larger the city gets, slums become a greater percentage of its total population.

Shelter.
The critical issue in shelter for the poor is non-access to land on both counts of availability and affordability. Today, about 25 million households in India- 35 percent of all urban households- cannot afford housing at market prices and around 17 million of these households live in slums. While a number of policy pronouncements, five year plan documents, a draft national slum policy and governmental schemes have tried to address the issue of tenure, there is no finality in the matter. Meanwhile, other factors such as globalization are making inclusiveness in cities extremely difficult. Attempts at rehabilitation and shelter provision through additional FSIs have also been made. But they have had limited success and the numbers in slums have continued to swell.
Informal Sector.

The informal sector comprises persons engaged in the production of goods or services with the primary objective of generating employment and incomes to the persons concerned. The informal sector in many urban centers is assuming proportions that are larger than the formal. However, the sector is ravaged by constraints of land, capital and a host of regulations about rentals, labour, registration, licensing and bookkeeping. A National Policy on Urban Street Vendors has been recommended by Government of India in 2009. Court rulings also support the issue of livelihood of vendors. While several states and cities have moved forward to find space and solution to the issue of hawking, efforts have been piecemeal and no real solution to street vending has been found.

Deficits in Urban Planning vis a vis the Urban Poor.

It is clear that in Indian cities the issue of slums and hawking are both becoming huge concerns. The root of the problem is quite clearly the deficits in urban planning and the reluctance to both recognize the issue of urban poverty and the need to find adequate space for their living and their enterprise. The DPs show complete lack of poverty planning. Secondly, India’s cities have not planned for affordable housing. Very little intervention and housing stock is being currently created by States and their parastatals. EWS Housing reservations have been miserly; and even those lands reserved have not been used for the purpose reserved. In the area of mobility, there has been inordinate emphasis on facilitating free movement of cars. Public transport finds little treatment in Development Plans. It is quite consequential that the development control regulations (being part of the Development Plan) would not have specific tools of implementation that would be customized for the poor. They disallow very small constructions or activities such as hawking. Slums are, therefore, not allowable under DCRs of cities. Neither is hawking. While policy pressures and judicial pronouncements are pressing change, the overall conclusion would be that the efforts in this direction are too weak, too slow and too fragmented to make any dent in the sphere of urban poverty. Slums are growing, the hawkers are struggling, transport remains predominantly car driven and social infrastructure generally denies the existence of the poor. The Report on Indian Urban Infrastructure aptly summarizes the poverty deficits of urban planning. It states, "The master planning system has not focussed on spatial planning for the urban poor to provide them 'a place to live', 'a place to work', 'a place to sell', and public transport to move from one place to another."
12.2.7. Operationalization of DPs and DCRs. The central significance of a Development Plan for the planned growth of a city and its desired quality of life cannot be overemphasized. An ideal Development Plan seeks to articulate and satisfy the needs of a city’s population - economic, infrastructural, recreational and environmental. The development control rules seek to manage and regulate property development in such a manner that it conforms to the orderly development of land to create sustainable human settlements. In view of the criticality of DP, the process of making it should be grounded in consensus. The DP must also integrate with other plans. Plan implementation also requires that municipal bodies be empowered, as per 12th Schedule, to do their own urban planning. And if and when the States provide them with this function, they should have adequate manpower.

Land Acquisition for DPs

The DP, in the course of mandating land use earmarks lands for infrastructure and public amenities. The operationalization of such activities would require land acquisition at huge costs. Transfer of Development Rights (TDR) has been a good instrument for this purpose which facilitates getting land without budgetary provisions and cash outgoes. However, land acquisition still remains a problem due to encroachments, lack of legal, institutional and manpower resources and political obstruction.

Financial Support to Operationalization of DPs

It is widely observed that Development Plans are primarily land use plans and do not get into the financials of its implementation. Cities have not done any detailed implementational analysis that prioritizes provision of public services and matches it with resources. Nor have ULBs made DP the first charge on municipal budgets. The revenues that flow to the municipal bodies from the State are few and very meagre and states have not acted upon the advice of the State Finance Commissions. Central financial aid through CFCs has been equally weak. The JNNURM has shored up the finances of some municipal bodies but they are not directed primarily towards the operationalization of DP. In the circumstances, if a stock is taken of all finances available to a ULB the burden it carries for implementing DP, it is quite clear that it is in no position to fund the operationalization of DP. The cities, therefore, have to look for alternate mechanisms such as the use of land instruments. The most important of these are landpooling mechanisms of Town Planning Schemes, FSI (Floor Space Index), TDR (Transfer of Development Rights) and Accommodation Reservation.
DP and PPPs
The use of PPPs could be especially useful in the provision of several public services. In cases, where the land owners, whose lands bear reservations for public amenities, are willing to partner with the ULB, a PPP model could be employed. The model would allow the municipal body to get the service provided at a reduced cost because of private investment in a public service, expecting to be compensated by a stream of revenue that the private developer could tap. Municipal monopoly over service provisioning in a city cannot work because of a combination of several municipal deficiencies – the paucity of time, the inability to attract talent and serious money constraints. In view of these limitations, it is essential that municipal bodies give up insistence on monopolizing service provision and embrace partnerships, especially with land owners. If, for instance, land owners whose lands are reserved for schools want to partner with reputed institutions and provide primary schools, ULBs should accept such proposals as long as the basic parameters of a primary school are met.

DP and Urban Poverty
The operationalization of Development Plans has been sharply hit by the growth of urban poverty in the form of slums and informal enterprises such as hawking. Such informalization needs to be prevented if the Plan and indeed the city must survive. What is required is the adoption of a planning ethos that raises the equity concerns to be a central cross-cutting theme in all urban planning processes.

Re-engineering DP
It is clear that Development Plans have to be re-engineered as more than mere land use plans. This necessarily means widening the scope of planning beyond land use, and to get into the area of how plans shall be implemented. This requires the consideration of implementational tools - land instruments, land pooling, FSI and TDR, accommodation reservation, budgetary support, private investment, PPPs and any other method that could be available. Together they should allow a comprehensive support system that allows the operationalization of the Plan in the given time frame. Since all citizens are stake-holders in the Plan, an institutional shift is demanded from a government driven and controlled initiative to a governance-oriented enterprise where it becomes a collective city effort. The Constitution (seventy-fourth) Amendment Act has laid great emphasis on municipal empowerment. Its 12th Schedule lists urban planning as the very first function to be performed by urban local bodies. However, ULBs continue to be in the clutches of the State. The State both in the domain of finances as well as functions continues to be the arbiter.
12.2.8. Provision of major non-social Municipal Infrastructure

**Water Supply and Sewerage**

Water supply in Indian cities is characterized by many inadequacies. Less than universal coverage, intermittent supplies and poor quality are some of the most prominent features. With the continuing expansion of city limits, the challenge of delivering water in Indian cities is growing rapidly. Many large Indian cities have to source water from long distances due to exhaustion or pollution of nearby sources, thereby increasing the cost of raw water. Poor maintenance and inadequate replacement lead to technical losses in the distribution network. Errors in metering, unbilled water consumption and plain theft contribute to commercial losses. All this leads to high levels of non-revenue water. High levels of commercial and physical losses in distribution are compounded by the unwillingness of local/state governments to levy adequate user charges. Water utilities in India are typically able to recover only 30-35 per cent of the O&M cost. Poor quality of water means that large amounts have to be spent subsequently by consumers on treatment of water-borne diseases.

In regard to water availability in research cities, all cities have water provided daily throughout the year which puts them in an exceptional category of cities in India. Of the four, Pune appears to be the best provided whereas Baramati has the least hours of water supply. The real situation, however, may be camouflaged on account of averages. There are areas in all cities that depend on tanker water or receive very little water. Evidence suggests that the supply reduces as we move outwards from the core of the city towards the fringes. The challenge of sanitation in Indian cities is acute. With very poor sewerage networks, a large number of the urban poor still depend on public toilets. Many public toilets have no water supply while the outlets of many others with water supply are not connected to the city's sewerage system. Over 50 million people in urban India defecate in the open every day. The problem of sanitation is much worse in urban areas than in rural due to increasing congestion and density in cities.

It is estimated that the lack of waste water treatment leads to over $15 billion spent in treating water-borne diseases in India. Often, polluted water is allowed to leach untreated into surface and ground water bodies. In the Ganges Basin alone, there are 223 towns and cities that generate 8250 million litres of sewage each day, of which about 2500 million litres is disposed directly into the Ganges without treatment and 4250 million litres into its tributaries.
Solid Waste Management
The average generation of solid waste from Indian households is significantly below the developed countries. Yet, management systems set up by Indian cities cannot cope with this waste. (Boxes 2.6 and 2.7). The problem begins with the non-segregation of biodegradable waste from the rest by either households or by municipalities. The collection of the garbage from dumpsites is haphazard, processing is not undertaken and disposal rules are not followed. The Municipal Solid Waste Rules were put in place in 2000 but their enforcement has been poor.

Urban Transportation
Problems arising from inadequate investments in urban transport and roads have been exacerbated by the increasing concentration of economic activity and human settlements. Indian cities are increasingly faced with the twin challenges of providing adequate road space for future use and improving the poor condition of existing roads due to the neglect of maintenance over the years. Current road designs do not adequately provide for facilities such as footpaths and cycle tracks. The available road space gets encroached by shops, street vendors, and on-street parking. The variety of vehicles on roads moving at different speeds without any demarcated lanes adds to challenges of urban transport. The highly inadequate and poor quality of the public transport system in Indian cities not only poses a major challenge to realising the growth potential of the economy but also has adverse impact on the health and well-being of the people. Long hours spent on road journeys, lives lost in road accidents, and air pollution are only some of the effects of the acute problem of transportation facilities in and around cities. The motor vehicle population in India has increased 100 times from 1951 to 2004, while the road network has expanded only eight times. Road capacity has come under stress for all these reasons. The share of public transport is estimated by the Government of India at 22 per cent and has been decreasing over the years. The share of buses decreased from 11 per cent in 1951 to 1.1 per cent in 2001. Most city bus services, operated by state-owned public entities, make losses and do not have the resources to renew their fleets.

12.2.9 Deficits in non-social Municipal Infrastructure Planning

Water
Indian cities seem to be lacking in a strategy for integrating land use and water planning based on the principle of total water cycle management. Additionally, in the context of
regional urban planning, land use decisions do not fully take into account where the necessary water will come from, and at what cost.

**Deficits in Water Planning**
Lack of coordination is also evident among departments such as irrigation, agriculture, urban development, rural development and industries. At the city level, while water conservation measures are somewhat reflected in DCRs, these are happening too slowly. In the interim, properties are coming up without adherence to these revised norms. Moreover, no city in the country could boast of a 24 by 7 water system with tap water completely potable. Nor are cities recycling water. The inadequacies of DPs and DCRs are seen in repeated road-cutting for laying water pipe lines leading to enormous costs. Given this lack of non-integration, it would be safe to assume that the current planning practices at the regional and city levels would fail to adequately answer water woes of cities.

**Sewerage and sanitation**
The sewerage deficit in cities is one of the largest. This is more on account of the high costs of treatment and very low recovery. It is clear that if cities struggle to receive water dues, recovery of sewerage dues is even more difficult. And in this situation, providing sewerage services is a far thought. The consequence is that most cities in the country have no sewerage network and many households do not have sewerage connections. Most sewage treatment plants are non-functional leading to dumping into rivers and streams, thereby compromising the drinking water of human settlements downstream. Since densities of cities are increasing, the problem of sewerage is getting worse. The situation in regard to toilets was equally poor.

**Solid Waste**
Since the MSW Rules 2000 mandated by the Supreme Court, solid waste management has been at the top of the agenda of urban local bodies. However, waste collection itself is still struggling, segregation is still a far cry, transportation has a question mark and scientific disposal is almost completely absent. It is quite clear that the urban planning process in our country is oblivious to the needs of solid waste management.

**Urban Transport**
There has been a phenomenal growth of motor vehicles. In larger cities they have been rising four times as fast as population. These results have essentially come out of a
misplaced emphasis on a plan for moving vehicles rather than a plan for moving people. This has led to a neglect of public transport. For the urban poor, the cost of traveling in search of livelihood opportunities within the city centre is rising and the time spent on traveling is climbing as the poor get pushed out on the periphery of cities and in the peri-urban areas. The cheaper modes of non-motorized transport such as walking and cycling have become hugely perilous. A more innovative concept in transport has been the bus rapid transit system. Unfortunately public transport has sadly been neglected.

City Roads
Road planning in Indian cities appears to be in very unfortunate shape. Their quality is poor and there is constant digging. Footpaths are also constantly in a state of disarray, making it very difficult for the elderly to use them. Most roads in cities do not have storm water drains and the ones existing are choked rendering them ineffectual. These problems lead us to conclude that these are largely on account of deficits in the planning of roads in the land use plan. These deficits in the plan process need to be plugged. In their absence, cities will continue to have sub-standard non-social municipal infrastructure.

12.2.10. Deficits in Planning and Development Regulation

City planning is designed to subserve a balanced development of its economy, and its environment (quality of life) and achieve these goals with equity. Planning should enable the ULB to prevent undesirable development and to provide as far as possible resources required for infrastructure and amenities. The Development Control Rules spell out what can be done in terms of development.

Deficits in Development Plan
It is seen that in each case the preparation and approval of a Development Plan has taken inordinately long – sometimes more than a decade. Cities in India have been growing at great pace – some of them witnessing decadal growth rates of 40% to 50%. If the planning process of such regions and cities takes so much time, it is made redundant by substantial growth in the meantime, outside the Plan. A further disturbing trend has been part approvals given to Development Plans. Apart from causing unnecessary delays, it brings into the approval process unwanted practices. Planning processes in the country make limited use of available modern technology such as GIS and its applications that have revolutionized urban planning. In a country and in a state like Maharashtra, where urbanization is happening at pace, the slowness of technology adoption in urban planning is a big disadvantage. Preparation of Plans also suffers from lack of transparency. Peripheral urban areas in many instances are currently left out of the DP
process. The planning norms used immediately outside the plan area are ad hoc and more rural than urban. Their merger into urban areas later makes them permanently blighted areas on account of their haphazard growth. There has been criticism that apart from delays in plan preparation and approval, there are deficiencies in approach. “Planners who have been trained as architects plan space, with little emphasis on ‘planning’ people. Since all city land comes under the land use plan of the Development Plan, their non-utilization consequentially results in the freezing city activities. Most of these are critical physical and social infrastructure. Development Plans also have a difficult amendment process and the inability of the Plan to match the speed of city dynamics makes it a lame duck.

In view of the facts of universal need of housing, coupled with issues of universal availability and affordability, a Development Plan needs to get into details of such analysis. This would require not merely futuristic demographic projections, but also segmenting the projection into income groups and housing that would be affordable to each. The DP also needs to proactively consider how affordability can be aided by land use policies and development control regulations and how incentivization through policy instruments could happen. Based on these calculations, housing land would have to be divided up into lands that each segment of population would require. Unfortunately, a DP does not get into the grind of such detailing. Since housing is almost entirely left to market forces in a city, the market responds to only such housing demands that have high profitability.

Urban plans in India have been subjected to a great deal of extraneous pressures and manipulations that have little to do with public interest. Examples of such interference can be seen in the fastening of reservations on urban lands. Indeed, land reservations in a Plan have unwittingly become a tool of great reward and punishment for landowners. Urban planning processes in the past have also left large planning gaps. There has been inordinate increase in pollution, mainly on account of the phenomenal increase in vehicles and vehicular pollution, partly because cities do not have a well integrated transport systems knitted into the land use plan. Solid waste management is a key function and yet, this activity is not integrated either in the Development Plans or the Development Control Rules of the cities. Development Plans have been highly deficient in poverty planning. The Development Plan and DCRs do not have policies or regulatory systems that could engage with informality that already exists. Nor is there a forward thinking on ways and means that would allow the reduction of informality. This must rank as one of the key deficits of urban planning. The non-recognition of informality poses a huge challenge to the Development Plans as growth takes outside of it and tends to destroy the very fabric of a Development Plan.
Despite a multiplicity of vehicles and vehicle types, city planning has tended to economise on the land that gets put to road use. Nor have DPs gone into a good mobility plan. A Development Plan casts a legal liability on the Municipal Council to acquire all the designated sites within a period of ten years. While the JNNURM is the first major effort by the GoI in supporting metropolitan cities, the analysis of the financial burden of DP on ULBs made earlier makes it abundantly clear that the current rate of support from the Centre and States is marginal. Even after such methods are pressed into service, municipal monopoly over service provisioning in a city would not work because of a combination of several municipal deficiencies - time, talent and money. In view of these constraints, it is essential that municipal bodies give up the insistence on monopolizing service provision and embrace partnerships, especially with the owners of land.

**Deficits in Building Bye-laws**

DCRs and building bye laws have shown little concern for form and shape in cities. The TP scheme that allows reengineering of plots has almost been abandoned in Maharashtra as a planning instrument. Further, the adherence to a uniform FSI throughout the city has not had salutary impact either on affordability, or to density or to quality of life. Laws on encroachments on land have been weak and poorly defended.

**12.2.11. New Strategies for addressing Planning and Development Regulation Deficits**

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<tr>
<th>Level of Plan</th>
<th>Planning Authority</th>
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<td>Regional Plan (Metropolitan Areas)</td>
<td>Metropolitan Planning Committee (MPC)</td>
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<td>District Plan</td>
<td>District Planning Committee (DPC)</td>
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<td>Peripheral Plan</td>
<td>PCM/DPC/ULB</td>
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<td>Structure Plan</td>
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<td>TPs/Local Area Plan</td>
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In regard to urban planning the above cited strategy appears appropriate. It is also important that the Regional Plan/District plan should be ready in one year and the State Government should approve them within six months. Failing this, the Plan was to be deemed approved.

The Development Plan should comprise an implementation Plan. The plan period of 20 years should be broken into five year action plan with investment commitments. In regard
to reservations, reservations should be fastened on lands of owners who had multiple holdings. Use of FSI/TDR and accommodation reservation should be harnessed for land acquisition. Levy and recovery of value based betterment charges could be credited to a city development fund and budgetary provisions were to be made at the time of reservations themselves. A detailed mechanism for implementation of Development Plan through town planning schemes was an eminently sensible option. The Municipal Acts to make implementation of the Development Plan mandatory. Digitization of Survey Sheets and application of GIS and information technology for regular updation of survey records was important. The devolution of planning function to local governments by empowering MPCs to create statutory metropolitan plans and transferring local urban planning powers to municipalities was the need of the hour.

A high quality plan requires reliable data base. India’s cities need to improve the country’s data in such fundamental subjects as land availability and usage, population growth and movement, job mix and its prospective evolution, and income mix and forecast changes in that mix. There must be use of latest technology such as use every GIS mapping of existing land use. The Central Government should focus on the first wave of urban planning reform on the 65 largest cities (including 2 metropolitan regions). Local governments should create their own 20-year city development plans based on the new metropolitan or district master plans. Unified Metropolitan Transport Authority (UMTA) proposed under the National Urban Transport Policy (NUTP) for all metropolitan cities should be set up. Judicious use of FSI in the creation of compact cities is extremely important.

An important area of planning which warrants special focus is housing for the poor. In regard to the poor, it is now evident that their informalization is not an acceptable way of providing shelter to them. The solution lies in formally housing the poor. The central importance of urban planning and the urban legal framework related to land that have so critically and adversely impacted the lives of the poor fully justifies that these constraints be investigated. Based on these investigations, a modified set of urban laws and planning tools should be proposed to redress the constraints imposed upon the poor. Land along transport corridors could be used for housing the poor. This would provide then better access to transport. A cheap and efficient public transportation system will help in provision of affordable accessibility to the poor and would enable a higher economic order for the city. A fresh review ought to be made of lands earmarked for open spaces. It is likely to transpire that there is excessive land that is left unused in urban areas. All lands that emerge from such economies would have to be brought under residential use.
It is seen that cities across the world, especially in the developed world, pay a lot of attention to aesthetics, form and shape of the city. They provide for particular kinds of public and private frontages and standards for the façade of the building, that is the exterior wall of a building that is set along a frontage line or a ‘Lot line bordering a Public Frontage’. Facades facing Frontage Lines define the public realm and are therefore more regulated than the Elevations (an exterior wall of a building not along a Frontage Line) facing other Lot Lines. It is interesting to note that the Smart Code does not believe in all out uniformity and standardization of Rules. There is sufficient customization depending on the requirements of a specific area or building across Transect Zones (areas on a Zoning Map). Further, the provisions of the Smart Code are not always mandatory. This is beautifully stated in the following manner, “Provisions of this Code are activated by ‘shall’ when required; ‘should’ when recommended; and ‘may’ when optional”. Some of these ideas need to creep into our urban planning ethos.

12.3. Conclusions of the Study

This research has been undertaken in the light of global trends of urbanization, India's own urbanization trends and similar trends in Maharashtra. This is in the belief that India’s urbanization is critical to its development, backed by global empirical evidence that economies multiply as nations urbanize. It is quite clear that the twenty-first century is the century of cities. While the developed world has already gone through its process of urbanization, this is currently happening in the developed world. Research has shown that countries with high human development are generally the most highly urbanized. In India, cities are home to about 350 million people, and this percentage is set to grow with years. India's processes of urbanization therefore, supported by a young and growing population has a great potential if it can get its urbanization right.

Getting urbanization right, however, is very largely dependent on getting urban planning right. The plan laid the foundations that would determine how good or bad the city as a product would be. This research took stock of the planning process in Maharashtra with particular reference to the five research cities. The provisions of the Maharashtra Regional and Town Planning Act were recounted and an historical view of urban planning was taken. The process of preparation of development plan and its development control rules were traversed. Stock was also taken of poverty planning in Maharashtra, infrastructure planning and the challenges countenanced by its cities. The research paid special attention to the phenomenon of urban poverty and the treatment of urbanization of
poverty in development plans and development control regulations. The phenomenon of slums drew greater focus and so did the provision of basic services in slums.

The deficits that came to the fore were the following:
The current planning process put too much of decision-making in the hands of the State Government and too little in the hands of the municipal bodies. Municipal Empowerment, continued to be a mirage. Plan preparation in every research city has witnessed delays, sometimes very long delays. This has been compounded by inordinate hold-ups at the approval stage at the State Headquarters. The outcome has been massive growth in the meanwhile in the cities making plans largely redundant. The development plans were found wanting in terms of quality and accuracy of mapping and plotting. This was on account of manual errors since plan preparation did not employ the latest technology available that is globally in use. Plan preparation was found to be a non-transparent process. Serious deficiencies in such transparency were a frequent subject of discussion.

Land acquisition for amenities provided in the development plan remained difficult, despite TDR, primarily on account of costs of acquisition. Every research study had a huge backlog and was struggling with acquisition of amenity land. The lands also got mired in legal issues and the ULBs were found wanting in defending their interest in the law courts. Laws on encroachment were weak and municipal bodies struggled to get encroachments removed from valuable lands. The urban local bodies studied lacked in technical manpower especially planning professionals who could concentrate on plan formulation and implementation. Without an exception, the planning teams were understaffed.

The financial commitment to the implementation of development plans was found weak at all levels. Despite its significance DP implementation was not the first charge on municipal budget. The State exercised a stranglehold on the municipal tax domain, disallowing the imposition of fresh taxes. The ULBs themselves were loath to enhance rates of taxes and kept these at very low levels for political reasons. State financial support to municipal bodies was meagre. The central finance commissions also did not have much to offer to the cities. The JNNURM was the first central scheme to allow a substantial share of central grants to flow to ULBs. But they were available to only a very limited number of cities. It was found that no city would be able to manage to implement even a fraction of its DP in the given time frame with the kind of resources at its command. The ULBs themselves had not strategized anew. Thus its use of land
instruments for operationalization of DP was marginal. The use of PPP mode had been largely ignored. There was a consistent stand on the part that municipal masters that implementation of the DP must continue to be a municipal monopoly as in the past.

In any of the research cities, urban Poverty has not been given any substantial consideration while development plans have been framed. Both its key requirements – provision for shelter and for informal enterprise – have been referred to only in the passing. Efforts have been mainly in the area of resettlement rather than on upfront settlement. As a consequence, cities have found themselves saddled with larger and larger percentages of slum population, increasing number of hawkers resulting in the greater unplanning of the planned process.

The development plan seems to broadly go into land use, but does not get down to the details of planning. Globally, the development plan follows a three-stage process. It begins with a conceptual master plan, followed up by a detailed master plan. Such detailed exercise is missing in the State’s planning process, leaving it an unfinished product not capable of proper implementation.

Apart from this, several key features appear to have very perfunctory treatment in the Plan. The foremost example is solid waste. A detailed analysis of the collection, segregation, transportation and treatment of waste is completely missing in all development plans. If public transport is now the perceived necessity of every city and if rapid bus transport is the preferred option of GoI, the development plans ought to have been quick to react and modify their traffic and transportation plans accordingly. However, this has not been done. As a consequence, cities are struggling to redesign their roads to accommodate a BRTS.

There are planning gaps in the housing strategy of the development plan. Earmarking residential areas is not enough. The democratic profile of any city shows that there would be various economic sections in a city that will require housing with variable affordability criteria. Since housing needs to be made available and affordable to all citizens, residential land must take into account the total requirement of each economic group, work out the densities permissible in each and vary DCRs so that the affordability aspect is adequately addressed. In the absence of such detailed analysis, housing in cities is currently almost completely driven by the market. Development Plans in Indian cities were seen economizing on roads. None of the cities studied showed roads exceeding 15% of land area devoted to roads and most of them were closer to 10 per cent. This is
highly inadequate, especially in Indian conditions, where cities have a wide variety of multi-modal traffic and a proliferation of all kinds of vehicles. The paucity of space for mobility is further compounded on account of limited space for parking and parked cars tend to eat into the carriage width of roads.

A plan is as good as its ability to get itself implemented. And this ability depends upon the ability to finance its implementation. Here, one of the first weaknesses is that this has not been a consideration in the planning process. Our financial analysis has shown that the plan is way beyond all urban local bodies to implement. Given the paucity of resources, town planning schemes have been an innovative mechanism of implementation of parts of DP. But its use was more or less abandoned. Neither have the municipal bodies innovated in the use of land instruments. FSI and TDR have been used in some municipal corporations. A host of other land instruments also exist and could be profitably used in implementing the Plan. But the progress in this direction has been extremely tardy.

12.4. Recommendations of the Study

The above deficits have been well summarized by Ban Ki-moon, UN Secretary General, in his foreword to the Global report on Human Settlements 2009 when he states that “evidence from around the world suggests that contemporary urban planning has largely failed to address these challenges”. In the cited background, it is quite clear that a new, innovative strategy ought to be devised. The old formulations, given the context, will not solve the problems of cities. Some of these steps that need to be urgently taken are the following:

The Global Report on Human Settlements 2009 states that “in some parts of the world, national planning is very dated and is still shaped by colonial planning legislation…..one important reason underlying the failure of urban planning in developing countries is, in part, the importance of foreign models and approaches. ” This is true of India as cited earlier. The Report further adds that”planning systems in many parts of the world are not up to the task of dealing with the major challenges of the twenty-first century, and need to be revisited…. Revised planning systems must be shaped by, and be responsive to, the contexts from which they arise, and must be institutionally ‘embedded’ within the practices and norms of their locale”. In view of the above, urban planning laws in India must be substantially rewritten to answer the questions that are arising in our cities with solutions that are true to Indian ethos.”Innovative planning ideas will only have an effect if they articulate closely with the institutional arrangements, and cultural values and
The phenomenon of urbanization of poverty clearly shows that cities are witnessing high informal growth. This is true of the research cities, especially the larger ones. As the Global report points out, much of urbanization will be “informal and incomes will be generated largely through the informal economy……it is clear that those cities and towns which are able to plan where and how this new settlement takes place will be in a far better position in decades to come.” In this background, “planning has to seek ways to promote social integration and cohesion”. Unfortunately, “conventional urban planning approaches are not designed to engage with informality, and by contrast, actively seek to formalize the informal sector. This formalization process frequently destroys livelihoods and shelter, and serves to exacerbate exclusion, marginalization and poverty. The notion that the poor have to step outside of the law in order to survive in cities is an appropriate one”. Since contemporary planning is “based on spatial interventions that assume a far higher level of affluence than is the case in most developing countries, it fails to accommodate the way of life of the majority of inhabitants in rapidly growing and largely poor and informal cities, and thus directly contributes to social and spatial marginalization……An important task for planning is to devise new forms of regulation that serve to protect both the rich and the poor, while at the same time guiding urban growth in efficient and sustainable directions.”

Looking at how multifaceted cities are and how thorny they become as they grow, there can be no disagreement that city planning is a highly complex matter and deals with a huge array of issues that include in their fold almost all aspects of human life. Given its intricacies and the kind of views that individuals may have on varying and vexatious city subjects, the Development Plan clearly calls for the widest kind of participation and
consultation before and during its preparation. Merely calling for objections after publication of the draft is not consultation – it is simply a ritual where substantial inputs of quality, width and breadth are not possible. An analysis of these responses from the people has shown that these are generally from those who stand to lose from the proposed land use of their properties in the Plan. Some are on behalf of citizen’s organizations. The mass of the population shows scant interest in the Development Plan preparation process.

As city plans are made once in two decades and set the direction in which the city would move for the next twenty years, they leave an indelible stamp on the future course of a city for generations. It is therefore imperative that the widest possible informed consultations precede and accompany the planning process. While the 74th Amendment does demand popular participation, this may not be as professionally informed as desirable. Hence in the interests of a quality Plan, total transparency and informed public debate are called for, not mere suggestions and objections after the Plan is published. Plans under preparation or undergoing revision need to be discussed on public platforms comprising professionals, men and women from the fields of education and health, from NGOS, Chambers of Commerce, and industry. Slum dwellers, landowners, builders, and several such bodies that wish to meaningfully contribute to the future well-being of the city must also be consulted. Further, this consultative process should be coextensive but not coterminous with Plan preparation, and even after the draft is published, objections would continue to be entertained.