

The Urban Form of Indian Cities and Outline of Indian Urbanization: A Multidisciplinary Approach

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ABSTRACT

Urban form is the study of human immigration and the process of their creation and revolution. The objective of the study is to figure out the economic structure and complexion of metropolitan cities of India by analyzing the arrangement pattern of its constituent parts and the progression of its development. Study begins with the analysis of substantial populace at diverse scales in addition to patterns of migration, property use, density, possession and livelihood in Indian cities. The study tries to explore the roots of divergence in urban form through assessment with socio-economic growth indicators and ancient forms in many Indian cities. The study is expected to discover the various challenges in urban form and urbanization growth of Indian cities.

Keywords: India, Infrastructure, Sustainability, Urban Form, Urbanization.

1. INTRODUCTION

More than 50 % of the world's populace currently lives in cities, compared with 14% a century before (U.N Report 2001). This escalating urbanization drastically modifies the natural balance of landscapes. Land-exploit planning is the prime policy intervention which seeks to influence the substantial figure of towns and cities [1].

Over the last 2 decades, sustainability has come become ambient target of urban planning [2]. The effects take in:

- Amendment of habitat, such as thrashing and crumbling of natural flora [4]
- Formation of new housing types [2, 4]
- The variation of resource flows, together with diminution in net major production
- Rise in district temperature [2, 5]
- Dilapidation of atmosphere and water quality [4, 5]
- Change of fracas regimes, with several habitats experiencing more recurrent distraction
- The variation of species composition and species multiplicity [4]

As the hasty expansion of world population and its deliberation in cities of the world takes place, urban development has created a crucial element disturbing the long-term stance of humanity [6]. With the wish to accomplish urban development that "meets the desires of the current generation without arbitrating the capability of upcoming generations to meet their desires", urban development is requisite to curtail risks from:

- Extravagant use of non-renewable resources
- To circumvent the uncompensated environmental overheads onto other places [5, 12] and
- Controlling the resource base and waste amalgamation capacities to the levels which do not interrupt vibrant stability of the ecosystem [4, 8]

With the ever-increasing recognition of sustainable development as a governing concept, researchers have focused improved attention on aspects/factors of urban form (as shown in fig. 1) that leads to the start of the contemporary planning and urban studies [8, 11]. An emergent body of writing looks to a first-class city form or sustainable metropolitan form to augment economic liveliness and social impartiality, and decrease the degradation of the environment.

Latest deliberations of *urban sprawl* in the U.S and of *compact city* in France, Turkey evident this rising obsession [1, 3]. In India, there are few deliberations on sustainable urban form.

As the devastating share of urban growth in the subsequent century will take place in developing nations, the issue of urban form in these more vibrant settings is particularly forcing the importance for topic [3, 9]. So far, not only debates about urban form, but perceptible work on indicators, seldom focuses on urban regions. Even in more urbanized Asian mega cities like Bangalore and Mumbai, subjective application of actions from U.S and Europe have proved unsuitable for many years due to indecent business relationship between India and these nations [9].

FACTORS		
ECONOMY	SOCIETY	NATURE
Type of Livelihood Per Capita Income Work Power Management Govt. Policies and Rules Sources Profits	Historical Background Science and Art Philosophy and Ideology Technology and Knowledge Mentality Population Language and Race	Geographical Location Topography Ecological and Climatic Features Flora and Fauna Water Rain Soil

Fig 1: Effective factors drawn in the structure of urban form

2. URBAN SCENARIO OF INDIA

Indian colossal cities are stepping up to afford superlative infrastructure to hail funds investment. Cities are considered as driving force of country's growth; this frequently-used assertion has become a catchphrase for urban policies in modern times [7, 10].

2.1 Urban Boom

As per the survey of Ministry of Urban Development (MOUD), in India, out of the entire population of 1210.2 million as reported in 2011, around 377 million are in built-up urban areas. The total addition of population in inner-city areas over the last decade is approx 91 million.

The percentage of town population to the whole population of the country is only 31.6. There has been an increase of 3.4% in the share of urban population in India during the year 2001-2011.

The momentary results of "Indian Census 2011" concede that there is an augment of 2774 towns comprising 242 constitutional and 2532 ballot towns over the decade. Development rate of populace in urban areas was around 32% (MOUD Survey).

Furthermore the figure of "Million Plus Cities" or "Urban Cluster" has risen from 35 to 53 from Census 2001 to 2011. Some of the new contender Indian cities along with their states are mentioned here; Srinagar (Jammu and Kashmir), Chandigarh, Jodhpur and Kota (Rajasthan), Ghaziabad (Uttar Pradesh), Ranchi (Jharkhand), Gwalior (Madhya Pradesh), Raipur (Chhattisgarh), Vasai Virar and Aurangabad (Maharashtra), Kozhikode, Thiruvananthapuram, Thrissur, Malappuram, Kollam and Kannur (Kerala), and Tiruchirapalli (Tamil Nadu). So whilst the State of Jammu & Kashmir and Chhattisgarh, now also have million plus city, Kerala now has 7 Million Plus Cities, a magnifying jump from the condition in 2001 when just Kochi was a Million Plus City in Kerala (MOUD).

A latest *World Bank draft* on urban growth in India, catapulted recently in capital, New Delhi, shows India's urban areas mounting more rapidly than expected, adding 90 million new inhabitants in the last ten years. By 2030, Indian cities are anticipated to be residence to a further 250 million people. Whilst the population of

India's cities grows up, employment growth remains sluggish. The major metropolitan cities – Delhi (NCR), Mumbai, Kolkata, Bangalore, Chennai, Hyderabad, and Ahmadabad saw a 16-18% loss in industrialized jobs from the year 1995 to 2005, while industrialized employment growth in rustic areas (10-50 km from their urban center) increased by 55 %.

The latest report urge better agility between property use and infrastructure, so infrastructure restores as cities get condensed. It also addresses the need for steady corporate reforms to help fundamental facility providers, recuperate costs for facilities or services and reach shoddier neighborhoods and remote areas [13, 14].

2.2 Level of Indian Urbanization

Among all Indian states and union territories, New Delhi and Chandigarh city are most urban and developed with 97.5% and 97.3% urban population respectively, succeeded by Daman and Diu (75%) and Pondicherry (68%).

According to MOUD survey, among all states, Goa is at present the most urbanized state with 62% urban population, a momentous boost since 2001 when urban populace of Goa was only 50%. Another noteworthy example of swift urbanization is that of Kerala state, its urban population is 2011 around 48%, while in 2001 it was just 26%. Among the North-East India, Mizoram state is most urbanized with 52% urban population, however in terms of utter contribution to net urban population in the country, Mizoram's part is just 0.1%. Likewise Sikkim, which was just 11% urbanized in 2001, became almost 25% urbanized in 2011. Among other bigger states, Tamil Nadu remains the most urbanized state with 49% of the population existing in metropolitan areas chased now by Kerala (48%) overshadowed by Maharashtra (45%). The fraction of urban population sustain to be the lowest in state Himachal Pradesh with 10% pursued by Bihar with 11%, Assam (14%) and Orissa (17%). In terms of sheer number of people living in metropolitan areas, Maharashtra continues to be in front with 51 million persons which encompass 13.5% of the whole urban population of the country. State Uttar Pradesh records 44 million, followed by Tamil Nadu at 35 million (MOUD Survey). Share of urban population acquired from last ten censuses is shown in fig. 2.

The total figure of towns and cities has greater than before 5161 in 2001 to 7935 in the year 2011 (India Census 2011).

India's existing urban population is around 400 million people and this will rise to 800 million by the year 2050. Between 2016 and 2050, the number of countryside/rural residents in India is expected to drop by 50 million. Chennai, Hyderabad, Bangalore and Ahmadabad city with populations between 5 million and 10 million presently are anticipated to become colossal cities in the imminent years. India is projected to have 7 colossal cities by 2030 excluding these four. Kolkata, Pune and Surat will adjoin a total 27-28 million citizens to their population by 2030. Kolkata, Bangalore, Chennai, Hyderabad is probable to be among the world's 30 prevalent & largest cities by 2030 (MOUD, Govt. of India). The *World Bank report* show that in 1990, there were 10 megacities of 10 million or more residents, habitat to a total 155 million people. In 2014, the world had 28 megacities, habitat to 455 million people, or about 12% of the world's total urban population. By 2030, the world is expected to have 40+ colossal cities [7]. These cities will counter great challenges in satisfying the requirements of shelter, infrastructure, transportation, power and employment, as well as essential services such as schooling, IT and health services [7, 11].

2.3 Urban Infrastructure

According to the High Powered Connoisseur Committee (HPCC), delegated by the Ministry of Urban Development, which gave its proposition to the Government in 2011, there is a necessity of speculation in urban infrastructure up to 650 million dollars over the next 2 decades.

As per the assessment of the HPCC, the uncompleted work in urban road and rail network is very outsized, 44% of this outlay requires to be for urban roads or highways, while irrigation, sewerage, solid ravage management, storm water management, highway lightening would require another 20% of investment, while 13-14% investment would be requisite for transit and traffic linked infrastructure. Among others, urban restitution together with retrofitting of slums would need 10% of investment and competence building for enhanced urban governance 2.5% of investment.

Taking into account the vast anticipated prerequisite of investment, sum amount of these values cannot be positioned only from the reserved assets of central, state and local governments [15]. Coercion has, therefore, arises to ingress the financial resources from the marketplace, and motivates the private segment to contribute in urban development programmes and plan [15, 16].

At the moment, the implementation of the 12th Five Year Plan (FYP) 2012-2017 is under approach.

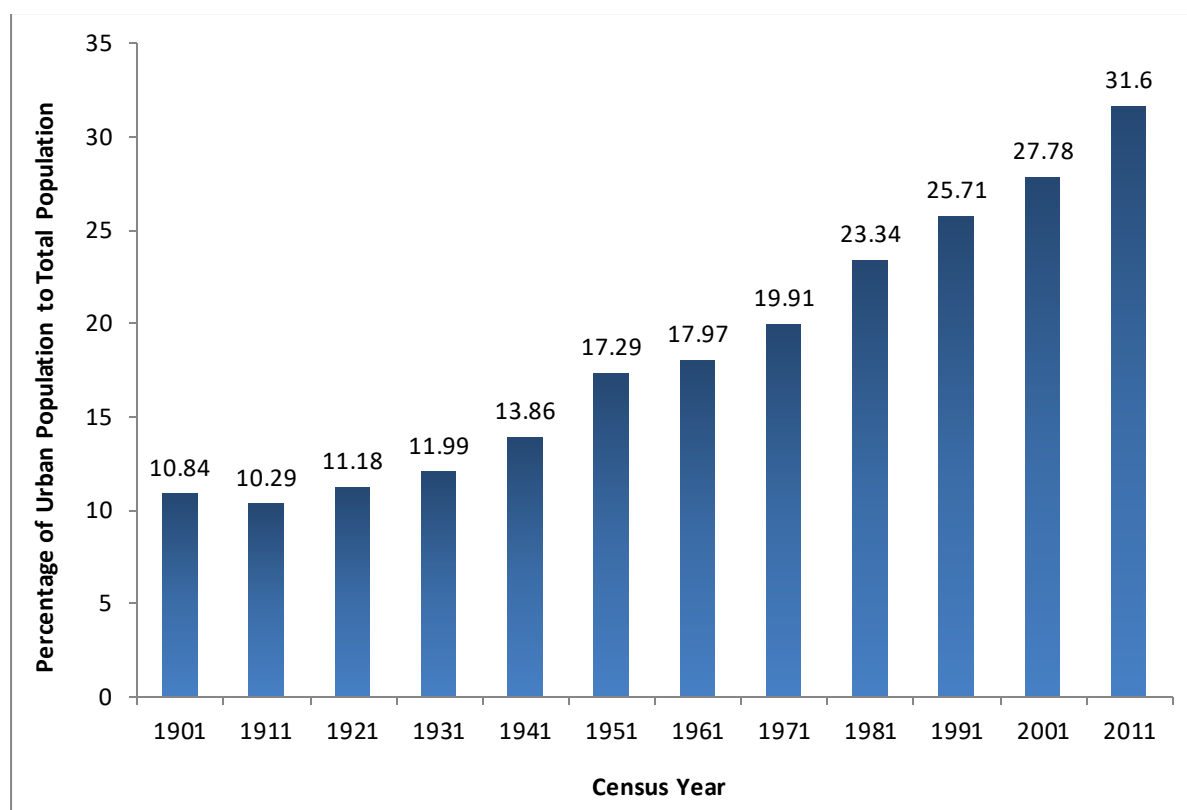


Fig 2: Percentage of urban population to total population from year 1901-2011 (Source: NIC Report)

2.4 Urban Restructuring

India is a constituent of the global movement towards rising urbanization in which more than 50 % of world's population is alive in cities and towns. Intensifying the efficiency of urban areas is innermost to the policy proclamation of the Ministry of Urban Development. Cities hold fantastic latent as driving force of monetary and communal development, producing jobs and generating capital through economy of balance [7]. They need to be unrelenting and enlarged through the high urban output for country's profitable growth. Nationalized fiscal growth and poverty reduction efforts will be gradually more determined by the output of these cities and towns [19]. For Indian cities to become success slanting and industrious, it is indispensable to accomplish a top-notch urban system [7, 16]. This sequentially depends on earning competence and impartiality in the deliverance and financing of urban infrastructure.

The 13th Finance Commission of India, for the first time, has brought in an unparallel element of enforcement based funding in addition to basic funding, in which the responsibility is placed on the state governments to sanction and build competence in the local bodies through carrying out various notorious reforms.

To conquer restraints and confrontation, the Ministry of Urban Development has commenced corporate, fiscal and economic amend. The 74th constitutional revision act documented the significance of local governments in the practice of service liberation in the urban sector. In the year 1996, the central government plan designated – “urban development plans formulation and implementation” were disseminated to all state governments for implementation. These course of action apart from other issues, propose pioneering approaches for financial resource enlistment. In the outlook of the new economic plan in the 1990's, it was implied that the conventional system of financial support based on policy and resource allocations be abridged and eventually introverted due to financial shortfall. Financial aids need to be streamlined and urban development policy and projects need to be positioned on a profitable format by scheming commercially feasible urban infrastructure services and region development projects [18, 19]. This was required to be accomplished by reinstating an appropriate match between functions and source of income by giving supplementary tax measures. Other ground-breaking resource draft process comprises, using land as source, rise in the non-property taxes and using public-private partnerships (PPP) in service deliverance [7, 15].

3. GOVERNMENT POLICIES AND PROGRAMS TO PROMOTE URBAN FORM

Government of India has initiated several schemes for the advancement of urbanization in the past 10 years (as shown in table 1); thus benefitting millions of people.

The aim was to accomplish high and unprejudiced economic growth in the wide-ranging interest while scrupulous programs and actions helped the underprivileged [14, 19]. India's political leaders also alleged that urbanization is the key to economic and fiscal development. This principle was all more persuasive in India because of the country's large size, significant natural resources and needs to expand its personal defense manufacturing.

Table 1: Urban development programmes and plans launched by central government of India

Schemes / Programmes	Advanced Cities Commission for Revitalization and Urban Transformation National Urban Restoration Mission Urban Infrastructure Development Scheme for Cramped and Moderate Towns North Eastern State Urban Development Programme National Urban Info Structure Amplitude Building for Urban Provincial Bodies Communal Finance Development Capital Scheme Scheme for Urban Infrastructure Development in Protectorate Towns in Colossal Cities Round Sum Stipulation Scheme for North East Residents
Policies	National Urban Hygiene Policy National Urban Transportation Policy National Commission on Viable Habitation Service Grade Criterion Policy

4. MEASURES OF URBAN FORM

To commence the assessment of development blueprint in metropolitan India, some measures of urban form are presented. To smooth the progress of consequential evaluation, however, the traits to assess the urban form of "region" are used. Descriptions of each quantify and how it was figure out is given below.

4.1 Road Design and Movement Systems

According to analysis of urban sprawl, present-day housing developments at regional level surround several zigzag streets and dead ends, generating blocks that are too immense and thus have short of connectivity [1]. According to this standpoint, superior connectivity directs to more public walk, transportation and less automobile miles traveled, improved air quality and a better sense of neighborhood among inhabitants [5]. Here, evaluation of connectivity engage the no. of nodes and junctions, the gap between points of admittance into the region, the number and area of blocks, and of dead ends. All constraints measure connectivity within a neighborhood and between the neighborhoods as depicted below in table 2:

Table 2: Constraints of road design

Inner/Domestic Connectivity	Number of road junctions divided by total addition of the number of junctions and the number of dead ends; the higher the proportion, the better the domestic connectivity
Blocks Outskirts	Nucleus perimeter of blocks; the lesser the perimeter, the better the interior connectedness
Blocks	Number of blocks alienated by number of houses; the lesser the blocks the superior the inner connectivity
Length of Dead Ends	Mean length of dead ends; the more concise the dead ends, the better the inner connectivity
Peripheral Connectivity	Mean distance between accesses of two regions; the shorter the access distance, the better the peripheral/outdoor connectivity

4.2 Compactness

The compact city is an urban planning and urban development concept, which sponsors comparably immense residential creation with diverse land uses [3, 7]. It is planted on a dynamic communal transport system and has an urban geography which emboldens promenading, cycling, squat energy dissipation and decreased pollution.

According to analysis of urban sprawl, present-day urban development is subjugated by nuclear family housing units on large masses [3]. Some people consider, this squat density development amplifies automobile reliance, devour ranchland, and elevate the cost of municipal infrastructure. Three dealings of nuclear family development compactness are presented as: family group size, compactness, and ground space [1, 3].

The appropriate measures of compactness are shown in table 3 below:

Table 3: Constraints of compactness

Group Size	Mean size of nuclear family housings in the region; the minor the group size, the higher the compactness
Compactness	Nuclear family housing units divided by the inhabited area of the region; the higher the proportion, the higher the compactness
Ground Space	Mean ground space of nuclear family housing units in the region; the lesser the ground space, the higher the compactness

4.3 Land Use

According to analysis of urban sprawl, present-day urban developments are identical and not have a proper jumble of land exploit. Experts consider that better assimilation of uses aids walking and cycling, lesser vehicle distance traveled, recovers air quality, and augments urban visuals [9].

Two measures of land utilization are presented: One evaluates the definite mix of non-residential land uses in the region; the other evaluates the mix of district non-residential land uses [1, 13]. Table 4 shows the measures of land use:

Table 4: Constraints of land use

Definite Land Use Mix	Acres of commercial, industrialized and public land uses in the region divided by the number of shelter units; the higher the ratio, the larger the land exploit mix
District Land Use Mix	Acres of land district for fundamental, universal, regional, manufacturing workplace divided by the number of shelter units; the higher the ratio, the superior the jumble

4.4 Convenience

According to analysis of urban sprawl, present-day urban development is exemplified by surplus partition between uses; making voyage distances too long [3]. Three assesses of convenience are presented: expanse to market, expanse to a bus stop, and expanse to a municipal recreational area. Each is deliberated as the mean distance from the center of every nuclear family in the vicinity to the center of the adjacent market, bus stop, or municipal recreational area as shown in table 5 below.

Table 5: Constraints of convenience

Market	Mean expanse to the adjoining market; the shorter the expanse, the better the ease of access
Bus Stop	Mean expanse to the nearby bus stop; the shorter the expanse, the better the ease of use
Recreational Centers	Mean expanse to the adjacent recreational area; the lesser the expanse, the better the accessibility

5. TROUBLES & CHALLENGES IN INDIAN URBANIZATION

Though India is one of the less urbanized countries of the human race with only 31.6 % of its population living in urban areas, the country is fronting a solemn catastrophe of urban growth at the current time. Whereas urbanization has been a tool of fiscal, communal and political development, it has led to somber socio-economic troubles [1-3].

The utter scale of the urban population, chaotic and ad hoc growth of urban areas, and a fraught lack of infrastructure are the major causes of such a state of affairs [4, 9]. The swift expansion of urban population both innate and through relocation, has put serious stress on public utilities like shelter, hygiene, transportation, water, power, wellbeing, edification and so on [11, 20]. Paucity, redundancy and under pay among the rustic migrants, robbery, theft and other societal ills are on run riot. Urban sprawl is quickly intruding the valuable farming land.

The surge in urban population has put remarkable stress on accessible civic utilities and services in the metropolis. The tribulations have become so severe that a few years ago a separate Ministry of Urban Development with a breakfront grade minister in command was formed by the Government of India.

Below are the tribulations that need to be emphasized:

- **Urban Sprawl**

Urban sprawl or existent extension of the cities, both in populace and ecological area, of swiftly rising cities is the origin cause of urban tribulations [1, 3]. In most cities the financial base is incompetent of dealing with the tribulations created by their unwarranted size. Gigantic migration from bucolic areas as well as from undersized towns into large cities has taken place almost over and over again; thus adding up to the size of cities [10].

During 1990-2000, over 20 million people drifted to cities. The maximum stress of the immigrating populace has been felt in the innermost regions of the city where the refugees assemble with their family before they hunt for shelter [16]. Population solidity beyond the old city turns down sharply.

Incidentally, many of the best ever growing urban hubs are big cities. This is due to the reality that such big cities act as crowd-pullers and catch the attention of large number of migrants by indentation of their employment prospects and contemporary way of life [7]. Such agitated urbanization leads to predictable cities sizes of which confront imagination. Delhi, Kolkata, Mumbai, Bangalore, Chennai, etc. are models of urban sprawl due to huge scale resettlement of people from the adjacent regions.

In numerous giant cities rich people are continually moving from the crammed full centers of the cities to the more pleasurable environs where they can build bigger houses and benefit from the liberty and seclusion around the house. In some cities, the peripheries are also added by unlawful residents who build temporary cottages of unexploited land, though they have no authorized right to the land.

In this fashion, towns are endlessly growing and in some areas the environs, a number of adjacent towns may be so shut together as to form a more or less unremitting urban girdle which is called metropolis.

- **Over Congestion**

Over congestion or overcrowding is a condition in which a lot of people exist in a very small space. Congestion is a coherent end result of over-population in urban regions [10, 12]. It is logically projected that cities having a huge size of population compressed in a small space must bear from overcrowding. This is well demonstrated by nearly all the big cities of India. For instance, Mumbai has 1/6th of an acre open space per 1000 population although 4 acre is recommended standard by the city authority's master plan.

Urban cities of India are overfull both in absolute and virtual terms. Absolute in the logic that these cities have an actual high density of populace and virtual in the logic that even if the compactness is not very high, the dilemma of providing services and other amenities to the city inhabitants makes it so. New Delhi has a density of 4,057 persons per sq km (Census 2011) which is the highest in India.

This leads to great demands for infrastructural services like accommodation, energy, water, transportation, employment [11, 20]. Recent hard work to decongest New Delhi by formulating ring towns has not met with the obligatory triumph.

- **Housing**

Overcrowding directs to a persistent problem of dearth of dwellings in urban districts [10]. This dilemma is exclusively more insightful in those urban regions where there is large incursion of unemployed colonists. An Indian study of 1962 signifies that 44% of urban family, as contrasted to 34% of rustic families engaged one room or less. In bigger cities the percentage of families occupying one room or less was as lofty as 67%. Furthermore, the existing tempo of housing construction is very sluggish which makes the problem further complex. Indian cities need yearly around 2.5 million novel homes but less than 15% of the constraint is being created.

The recent *Indian census* accomplished the first ever and the biggest assessment of household facilities and property which points an extreme outline of trouble concerning to housing in India. The result is both informative and uproarious. Taking India as intact, there are 179 million built-up houses, i.e., about 6 people to each residence, 39% of all bridal couples in India do not have a self-sufficient room to themselves. As many as 35% inner-city families live in one-room houses. 1/3rd of urban Indian family's house does not comprise a kitchen, a lavatory and in some cases there is no electricity and water supply. Only 79% urban families live in stable houses. 67% of the urban dwellings are owned by the family unit while 29% are rented (India Census, 2011).

Numerous factors are accountable for the above cited poignant status with respect to housing tribulations countenanced by the urban people. The chief factors are scarcity of building supplies and fiscal resources, derisory growth of public utilities into inhabited areas, poverty and joblessness of urban migrants, burly class and family ties and lack of ample transportation to uptown areas where most of the empty land for new construction is sited [17, 19, 20].

- **Transportation**

With travel blockage and traffic clogging, nearly all cities and towns of India are anguish from severe form of transportation problem. Transportation troubles amplify and become more multifaceted as the town develops in size [20]. With its expansion, the town presents diverse and composite functions. As the town grow to be bigger, even people living within the urban area have to move by car or bus to pass through the town and interlopers naturally bring their cars or move through civic transport. Wherever, business is imperative, commercial automobile such as buses and trucks will create traffic quandary denser [20]. Since the majority of the commercial works of the towns are concerted in the innermost districts, these hubs are areas of utmost obstruction. Such congestion turns into larger when the centre is urbanized with tall skyscraper chunks whose workplaces occupy thousands of workers [10]. This puts terrific pressure on communal transport and causes drives to take much longer time than they usually would. In some towns, the constructions of the roads, which

were built long earlier than the power-driven transport and be deficient in parking conveniences, are the main root of congestion [10].

A study of *traffic crisis* in New Delhi will explain us to traffic situation in the rest of urban India. Already there are more than 9 million vehicles on New Delhi roads which will almost increased by 30% by 2021, when the next Master Plan will be put into service. The road length, however, has not augmented impartially (Traffic Survey, New Delhi, 2011). Urban planners say that by 2021, departing in a car will take extended time than walking. The strategy for New Delhi Master Plan (2021), permit varied land use, multi-storied constructions and regularization of 24 manufacturing domains will add to the cities.

Planning section of New Delhi Government also states that in spite of roads occupying 21% of the whole area of the city, the boost of traffic on major roads is resultant in lesser speeds, overcrowding, junction delays and high contamination level during crest hours. Some liberation is projected with the total completion of metro rail systems. But specialists alarm that by the time the metro rail plan becomes entirely outfitted, the demand for transport services will outpace the ability of both highway and rail transportation.

6. CONCLUDING NOTES

Even though curiosity in urban form is not latest, this analysis shows that author has made substantial growth in emergent and calculating measures of urban morphology. Attention on urban form and urban sprawl is brawny among authors qualified in multiple disciplines [3]. Further, the matter of apprehension to the various restraints often states the level of investigations, the explicit phenomenon of awareness, and the source of statistics.

- In this critique, author has presented numerous measures of urban form and computed them for Indian regions. Further, author found that lots of these dealings enhanced in the early 2000's. Particularly, boost in dealings of livelihood, transport services and density principally after 2001 has been found.
- The density and promptness of urban areas in emergent regions normally surpass the levels throughout urbanized countries. In particular, admittance to services is normally better in denser urban forms.
- Study at the urban scale, mainly by economists, spotlights on city mass and configuration. The data advises that economic profit proceed to urban mass and multiplicity. Even after regulating for divergences in the cost of livelihood, revenues tend to be higher in cities that are big and sundry. These results hold cost-effective growth strategies that errand magnetizing a miscellaneous set of industries to accessible cities.
- Forcing a condensed city strategy on future urban planning is not only foreseeable but also practicable in India; this study supports this quarrel by the verdict that present population densities of many Indian cities are less than the critical density level that may exploit the comprehensive environmental eminence of a city.

As this paper shows, there are many approaches that aspire to attain sustainable urban forms. Diverse approaches use diverse levels of notions, as well as highlighting some notions over others. In practice, many confined governments, planning mentors, countryside architects, and so on are struggling much more exclusively with facets of sustainable urban form through a diversity of planning and design advances and plans.

However, the study of suitable levels of urban density is found to be quite multifaceted and vague. The study suggests following recommendations:

- More effort needs to be done to settle the managerial and the corporeal lines of urban differentiation.
- Additionally, a lack of dependence and constancy of data unconfined in statistical capital in India may manipulate the accurateness of research results of the study.
- More commonly, potential research managing convenience and connected issues of social barring is broad open in terms of the trends that could be adopted.

Work conferred in this paper has dealt with a restricted division of the land exercise and transportation issues supporting social barring. The author considers, however, that ideology of urban form must reflect on countryside, urban and metropolitan design perceptions as well. Only when these ethics are useful at multiple scales and frameworks; they have authentic worth for communal policy.

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