

Rise of Growth Centers: Current Trend in Strategic Spatial Planning

Anwasha Aditi

B.Plan (Maulana Azad National Institute of Technology, Bhopal)

M.Plan – Urban Planning (School of Planning and Architecture Delhi)

Abstract— Urbanization is the current emerging problem in today's world and metropolitan cities face the adverse outcomes of urbanisation whereby they become dominant centers of commercial and administrative units leading to crowding and congestion at an unprecedented scale. Cities are initially smaller outgrowth areas which eventually grow into new growth centers that are properly planned and segmented around big metropolitan cities to reduce the burden upon them and act as nodal points of development for other smaller settlements who earlier depended on metro cities to fulfill their basic requirements. These are known as growth centers that have their own sphere of influence or hinterland, the size of which is based on the degree of specialization of a growth center. This paper enquires about the rapid physical development process in the outgrowth areas of Gurgaon and Navi Mumbai and deals with ways to delineate them with an integrated approach and devising strategies to solve any future problems in such areas. A comparative study has been done to analyze how each of them grew up to be the respective growth centers for the cities of New Delhi and Mumbai and the delineation method for those areas.

Index Terms — Urbanisation, growth centers, outgrowth, sphere of influence, delineation, localization, nodes.

1 INTRODUCTION

A Growth center may be defined as service center which has a potential for further development and hence needs to be supported by further public and private sector investment. They are conceived as points of attraction for the people who otherwise would go to large urban areas that are brimming with population. These growth centers account for a piece of land that may be a designated village or an upcoming town/city that has the potential to cater to the needs of the growing population. A growth center substantially incorporates a mix of uses that include: commercial, recreational, industrial, and residential uses to enable compact development.

A growth center refers to a pattern of concentrated, higher-density, mixed-use development that replicates and builds upon traditional patterns of development; defined by an urban growth or infrastructure service area boundary; planned to accommodate the most anticipated growth in the community without resulting in widely scattered, low-density sprawl; supported by public investment in infrastructure, within designated service areas; features a variety of land uses, including formal and informal public spaces; and supports walking, public transit, and alternative forms of transportation¹ ((VPA), Growth Centers in Vermont: A Vermont Solution to Sprawl, 1998).

In India, people of all status and of all areas are not equally benefited by spatial opportunities. This is because of the fact that economic opportunities along with distribution of resources are generally restricted to large cities and towns.

India is an agricultural economy but paradoxically villages

have been neglected the maximum as far as the basic facilities for life are concerned and the rural areas are devoid of opportunities for development. Policies, plans and programmes are generally oriented towards only a few privileged sections of the society, and the areas which actually are in dire need of assistance remain neglected. These settlements have the least accessibility with the urban areas where opportunities may be available and further do not possess linkages either with the towns or the large villages where the required services may be utilized within their means. All such circumstances require careful thinking about the spatial distribution of such growth centers and the nature and degree of amenities and services that are available there.

2 CURRENT SCENARIO

The current need of the hour is the identification and delineation of regions keeping in mind its sphere of influence and accessibility of those settlements up to which it is capable to cater the required facilities and services. In the modern times several such growth centers have developed all around the country and are majorly developed in the metropolitan cities so as to reduce the growing pressure and burden on the existing resources. Example: the "Millennium City" of New Delhi as Gurgaon and the "Industrial Hub" of Mumbai as Navi Mumbai.

The potential growth centers give us an idea about the functional capacity of the individual settlements and their influence on its hinterland² (Kukadapwar, 2006). The methodology adopted for the development of a new growth center with different industrial and economic activities is as shown below:

¹ ((VPA), Growth Centers in Vermont: A Vermont Solution to Sprawl, 1998).

² (Kukadapwar, 2006)

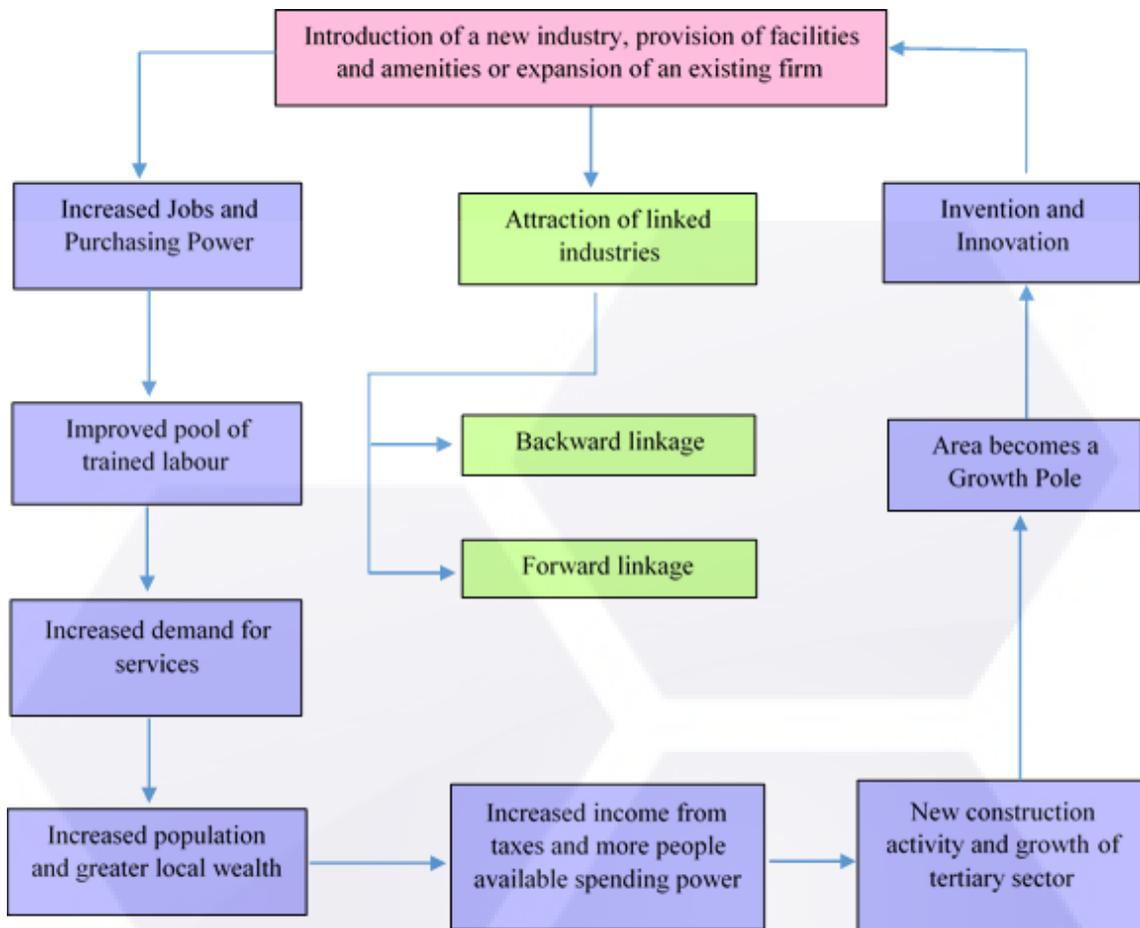


Figure 1: Development of a new growth center with industrial and economic activities

Source: Barcelona Field Studies Centre, 2011

3 CHRONOLOGY OF DEVELOPMENT OF GROWTH CENTERS IN INDIA

The initial concept of growth centers emerged at the time of Mahatma Gandhi where he wanted the rural communities to be integrated with the main economic stream. Thus, in the Fourth Five year Plan (1969-1974) a Pilot Research Project for Growth Centers was conducted by the Department of Community Development for identifying the growth centers in different states (Shah). The project envisaged the preparation of "Integrated Area Development" plans for the all-round development of 20 centers. The community development work in India has a history of about two decades now.

4 PARAMETERS ADDRESSED FOR THE DEVELOPMENT OF GROWTH CENTERS

The regional imbalances in India are majorly a result of uncontrolled and haphazard growth concentrated at certain places due to geographical, social, political and economic factors. This type of haphazard growth prevents the development of the surrounding hinterland and leads to a skewed pattern of development. The most important thing for the development of "Growth Centers" is the implementation of certain programmes and provision of amenities that would enable economic development.

The programmes should have a practical implementation process, should enable attraction of external sources of investment, localization of business within the growth center and cater to the basic minimum needs of the people within and around the growth center. The parameters addressed for the development of urban growth centers are the nearness of the growth center to the nearby urban area, growing population within the city, growth potential of the city, need to fulfill the demands of the people, to reduce the congestion within the city area.

• Anwesha Aditi is currently pursuing master's degree program in Urban Planning in School of Planning and Architecture Delhi, India, PH-7692932518. E-mail: anwesha.aditi@gmail.

Generally the metropolitan cities face the adverse outcomes of urbanization and suburbanization whereby they become dominant centers of commercial and administrative units leading to overcrowding and congestion at an unprecedented scale. Unable to meet the growing standards of these cities, people start residing in squatter settlements and the formation of slums takes place.

These create problems in the urban service delivery and the city tends to reach its maximum possible limit and then comes the need for a self-sufficient entity that would provide the necessities and bridge the gap between the rural and urban areas.

The major need is to absorb the population from such big cities and divert them to better places around the neighbouring cities where they would have an access to all physical and social services without any hassle.

5 DEVELOPMENT OF GROWTH CENTERS IN INDIA: CASE STUDY OF DEVELOPMENT OF NAVI MUMBAI AND GURGAON

5.1 Navi Mumbai: Introduction

Navi Mumbai (New Bombay), a planned growth center was formed in 1972 in order to cater to the growing needs of Bombay. This planned decentralization was the outcome of efforts by the government to make Bombay more "sustainable". Urbanization and subsequent suburbanization of Bombay have created a linear city such that the central business district (CBD) and residential areas have become further apart from the nearby settlements for the easy access of facilities and amenities.

Bombay's high concentration of docks, trading posts, textile mills and government offices have made it the prominent port of Western India. This range of activities led to severe crowding within the city. In Bombay, for those who could not afford to make the long commutes, squatter settlements all over Bombay became the way of life. Navi Mumbai was designed to provide a better quality of life, especially to the middle and lower class of people (Ananthakrishnan, 1998).

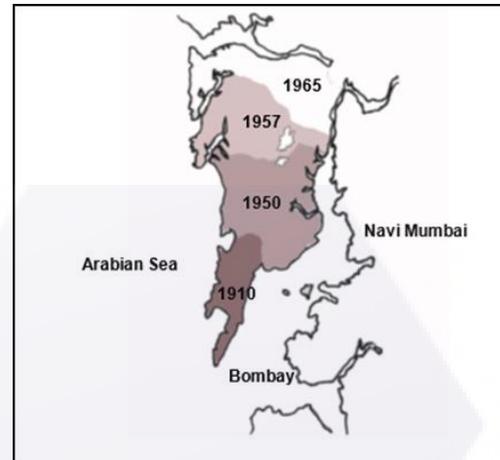


Figure 2: Chronological growth and development of Mumbai
Source: (Mehrotra, 1995)

Bombay had reached a certain level of unmanageable growth by the 1960s. Bombay's infrastructure facilities were stretched to the maximum limit and could not sustain itself anymore. Commuter distances had become larger because of increased suburbanization with no change in location of the CBD. The "Development Plan of 1967" estimated a housing shortage of 131,000 houses, and 24 percent of the one and two room tenements were over crowded.

Seeing the aggravating situation of Bombay, eminent architects and planners such as Charles Correa, Pravina Mehta and Sirish Patel presented a proposal in 1964 for the construction of a new growth center across the Bombay harbour on the mainland. The Bombay Municipal Regional Planning Board recommended a new city to be designed within the Bombay Metropolitan region to facilitate the decongestion of Bombay³ (Ananthakrishnan, 1998).

Navi Mumbai covers an area of 344 sq. km. It is a self-contained city independent of Bombay although there is still a visual connection to Bombay. It was hoped that the nearness to Bombay would facilitate the relocation of people from Bombay. Correa, Patel and Mehta designed this regional plan based on three basic objectives: a planned new development, financing physical and social infrastructure through land sales, and improving Bombay by drawing off pressures for growth into the new area⁴ (Patel, 1997).

³ (Ananthakrishnan, 1998)

⁴ (Patel, 1997)

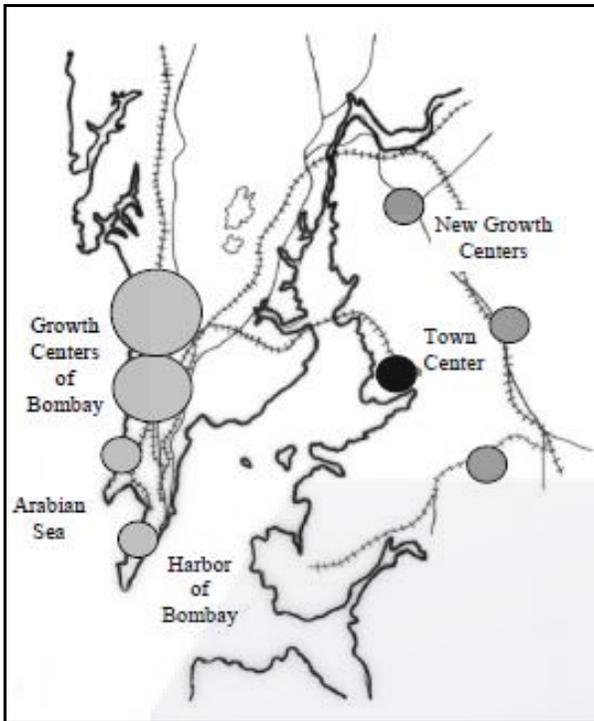


Figure 3: Growth centers in and around Mumbai
Source: (CIDCO, 1973)

5.1.1 Reasons for the creation of Navi Mumbai as a growth center

The major objectives for the creation of Navi Mumbai as a growth center were:

- a. To reduce the growth of population in Bombay city by creating a center that would absorb immigrants, and also attract some of Bombay's present population.
- b. To support a statewide Industrial Location Policy which will lead eventually to an efficient and rational distribution of industries over the State and a balanced development of urban centers in the hinterland.
- c. To provide physical and social services, raise the living standards and reduce the disparities in the amenities available to the different sections of the population.
- d. To provide an environment which would permit the residents of New Bombay to live fuller and richer lives in so far this is possible, free from the physical and social tensions, which are commonly associated with urban living.
- e. To provide a physical infrastructure which prevents ethnic enclaves among the population.

5.2 Gurgaon: Introduction

Gurgaon is a district in the state of Haryana located just to the southwest of Delhi. Gurgaon was little more than a village in 1979, when it was split administratively from the more populous and developed area of Faridabad in Haryana. At the time, Faridabad had access to transport and public utilities and was a strong industrial city while Gurgaon was largely barren, with no local government, public utilities, or transportation. As late as 1991, the Gurgaon district had an urban population of some 121,000; by 2001, this had expanded to 870,000 and by 2011 to 1.5 million (1991 Census).

The lifting of restrictions and Gurgaon's natural advantage in being close to Delhi (itself labouring under restrictions) allowed private developers to build residences, office parks, and manufacturing facilities that met the demands of India's booming high-tech sectors during the high-growth period that followed liberalization of key sectors in the early 1990s.

Gurgaon emerged as a boomtown due to the emerging land and infrastructure problems in New Delhi. Initially the Delhi Development Authority managed the supply and demand of land following the rigid control mechanisms of socialist planning. Zoning and land-use rules restricted the supply of land in Delhi, resulting in heightened scarcity of basic services and amenities, which in turn led to a proliferation of illegal construction and corruption in virtually all kinds of building and land allotment (Tabarrok, 2014).

Certain factors such as Gurgaon's proximity to Delhi and its nearness to the Indira Gandhi International Airport made it a preferred and desirable choice. Between the mid 1980's and 1990's, Gurgaon developed as Delhi's industrial and residential suburb. This initially began with the establishment of an Indo-Japanese joint venture in 1982, the Maruti-Suzuki automobile plant and its ancillary factories. In another important collaboration, Hero Motors and Honda set up a plant in Gurgaon in the mid-1980s to manufacture motorcycles. Several other factories in such diverse industries as car components, telecommunications equipment, and fashion garments followed this trend and started establishing operations in Gurgaon (Tabarrok, 2014).

5.2.1 Formation of Gurgaon

After India's independence, Gurgaon continued to be a part of Punjab until 1966 when Haryana formed a separate state. 1970 marked the beginning of the city's growth and its development journey. Around 1990, huge population started moving towards the city, giving rise to globalization and liberalization.

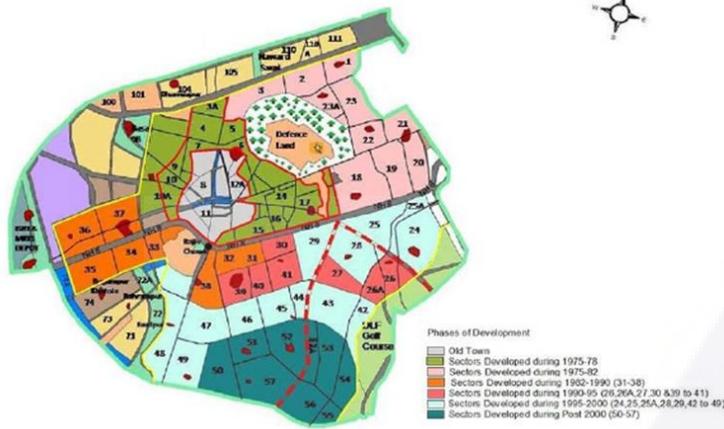


Figure 4: Phase wise growth and development of Gurgaon
Source: *The Growth Journey of Gurgaon to the Millennium City (Book)*

With the advent of 1970, Gurgaon started expanding near to the old colonies of Gurgaon. Gradually, the entire areal expansion of Gurgaon started encroaching upon the agricultural land of the villages surrounding Gurgaon town such as Gurgaon village, Dundahera village, Mulahera village. Later, Gurgaon was classified as priority town in metropolitan area that supplemented to Delhi needs. It experienced a spur in the employment opportunities during the end of 1990's. From 1971-81, population in Gurgaon city grew almost by 56% while the population in villages grew only by 35.3%. The tables turned during 1981-91.

The villages in Gurgaon have shown a much higher growth rate than Gurgaon town, the average being 64.71% during 1981-91 decade compared to 36.32% for the city. Four villages have shown a growth rate of more than 70% during the same decade.

But in the last two decades, the population growth has shifted to the surrounding peripheral villages as a result leading to change of these villages into urban villages and the acquired spaces of these villages into New Gurgaon.

5.2.1 Gurgaon – Manesar Master Plan 2001-2021

The Millennium City in the process of its growth is bound to expand spatially in the years to come. The plan shows and intends to develop the Manesar, the adjoining township to the west integrated along with Gurgaon.

From the Master Plan 1981 to the Master Plan, 2001 there is a huge change as the Master Plan 2001 has planned development of Manesar linked to Gurgaon. The Gurgaon's Master Plan, 1981 was already in the process of acquiring the surrounding villages has further added on the villages beyond the city limits in the Gurgaon-Manesar Master Plan (The Growth Dynamics of Gurgaon).

Gurgaon with its dynamics has grown and become a class I city in 2001 and a million plus city in 2011. It has also turned into a globalized and cosmopolitized city that today constitutes its new urban personality. Gurgaon city is known as the "Millennium City" because it has grown as much as a city can develop in a

millennium. Moreover, simultaneously there has been an aerial increase and spatial change in the form of largely built-up area dominating the city.



Figure 5: Gurgaon-Manesar Master Plan 2001-2021
Source: *Town and Country Planning Division, HUDA office*

6 METHODOLOGY: IDENTIFICATION OF THE POTENTIAL GROWTH CENTERS

6.1 Factors Influencing selection of Growth Centers

The major problems facing the metropolitan cities in the modern times are the increasing urban population and growth and the concentration of jobs in such cities. Specific centers should be developed to accommodate the growing population based on polycentric pattern of development, spatial development of employment centers, use of land use zoning and development controls as tools of environment creation (City and Industrial Development Corporation, 1997).

The selection of new growth centers depends upon certain factors like:

- Accessibility to the city through the inner and outer ring roads and nearness to the commercial establishments.
- Spatially dispersed centers with reference to the existing and future availability of infrastructure and all the economies of agglomeration.
- These growth centers would also enable ready-for-occupation houses i.e., ready availability of ownership houses and more emphasis being given to the lower income group people.
- Nearness of the growth center to the existing congested city that would facilitate the relocation of people.
- To develop a slum free and pollution free city based on its potential to develop as a smart city in the upcoming days based on its available resources and in-

- frastructure.
- f. Presence of a water body or other rail road connections that could help boost the growth of the city.
 - g. The geomorphology and topography of a site that suggests the construction of a human settlement.
 - h. Ways in which the physical and economic landscape allows for communication with the other regions.
 - i. Ways in which natural and manmade features satisfy the needs for protection and defense.
 - j. Ways in which the existing climate of that particular growth center will lead to sustainable building solutions.
 - k. Certain socio-cultural factors depending upon caste, linguistic, religious and ethnic diversity will also determine the development of a new urban center.

6.2 Delineation of Growth Centers

An ideal growth center or an urban center would be one where principles of modernism and sustainable development are implemented keeping in mind the well-being of the people. Some of the principles to be kept in mind are:

- a. Decentralization by the design of self-sufficient townships or nodes.
- b. The size of each node being determined by its nearness to the working places or transit nodes.
- c. Development of residential neighborhoods in the form of planned sectors.
- d. Single-use zoning as opposed to the traditional multiple-use zoning.
- e. Self-sufficiency of the node to cater to the needs of the people in terms of schools, hospitals, recreation spaces etc.
- f. Adequate green spaces and buffer zones to ensure reduction of soil erosion and to retain the excess run-off during the monsoon season.
- g. Promotion of employment and other commercial activities.
- h. The natural and scenic beauty of the city that would attract tourists and foreign investors towards it.

7 RESULTS AND FINDINGS: CRITERIA FOR DESIGNATION OF GROWTH CENTERS

The criteria issued by the Ministry of Industry, Government of India, for the delineation of growth centers are:

- A. **Growth centers shall not be located:** Within 50 kilometers of the boundary of 7 cities in the country with a population above 25 lakhs; · within 30 kilometers of the 2 cities with a population between 15-25 lakhs; and within 15 kilometers from the boundary of the 12 cities in the country with a population between 7.5-15 lakhs.

- B. **The growth centers should be located close to district/sub divisional/block/taluk headquarters or developing urban centers.**
- C. **Growth centers shall have access to basic facilities -- proximity to railheads, national or state highways, water supply, power, telecommunications, and educational and health facilities:** If such facilities are not readily available, it should be ensured that they are developed with priority and commitment.

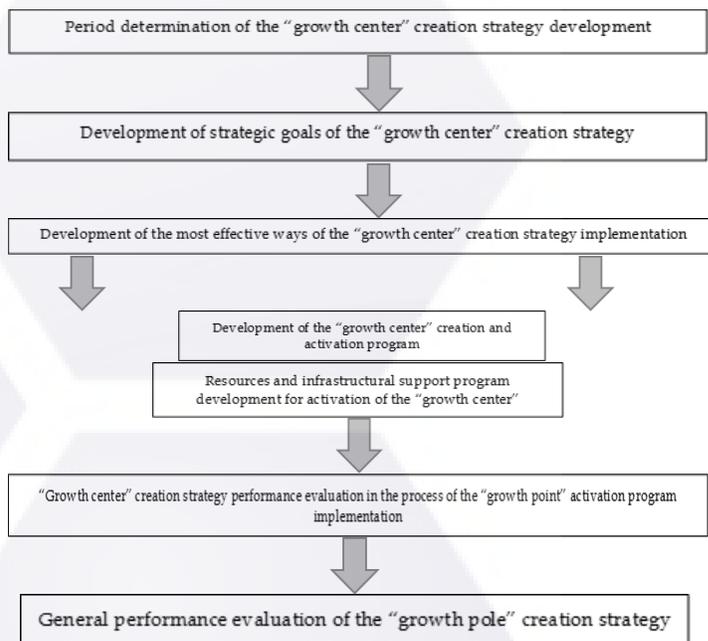


Figure 6: Process of formation and implementation of formation of a growth center

8 CONCLUSION

To achieve the true objective of the development of growth centers the urgent and utmost need is to put a check on the existing development and to discourage and limit any kind of development outside the growth centers with the help of land use regulations, conservation subdivision design, plans and policies the transfer of development rights (TDR) and other conservation and protection strategies related to upcoming growth points or nodal centers.

This kind of planning of cities will increase the efficiency of the city in terms of its production, inter-regional and intra-regional inequalities and promote sustainable development. Also these centers will also attract some of the immigrant population, support and industrial base or development of a port city depending upon its characteristics, raise the standard of living and provide adequate social and physical infrastructure to promote ethnic heterogeneity.

9 ACKNOWLEDGMENT

The successful accomplishment of this paper is the outcome of sheer hard work and the contribution of a number of individuals. First and above all, I praise God, the almighty for providing me this opportunity and also with the required stamina and impetus to proceed successfully. I would like to extend my sincere thanks to all such people who have given me the required support and guidance that has been instrumental in making this paper a success.

I would like to express my sincere gratitude to the Institute, to my then Head of the Department, Dr. Anupama Sharma and to my guide and supervisor, Dr. Preeti Onkar Singh, Department of Architecture and Planning, M.A.N.I.T. Bhopal, for their guidance, patience, motivation, enthusiasm and constant supervision, for providing necessary information as well as for their support in completing this paper. I take this opportunity to express gratitude to all of my Department faculty members for their help and support.

Last but not the least I place a deep sense of gratitude to my parents, Mr. Tarun Kumar Sinha and Dr. Nandini Sinha and all my friends who have been a constant source of inspiration during my work. I also place on record, my sense of gratitude to one and all, who directly or indirectly, have lent their hand in this venture.

REFERENCES

- [1] (VPA), V. P. (1998). Growth Centers in Vermont: A Vermont Solution to Sprawl. Vermont.
- [2] Ananthakrishnan, M. (1998, April). The Urban Social Pattern of Navi Mumbai, India. Blacksburg, Virginia.
- [3] CIDCO. (1973). The Draft Development Plan. Bombay: Bombay: Government Press.
- [4] City and Industrial Development Corporation, N. M. (1997). Sustainable Urban Development: A case of New Bombay. Institute of Housing and Urban Development Studies.
- [5] Kukadapwar, V. A. (2006). Regional Planning through the development of a Central Place. ITPI Journal, 7.
- [6] Mehrotra, S. D. (1995). Bombay: The Cities Within. Bombay: India Book House Pvt. Ltd.
- [7] Patel, S. (1997, March-April). The thirty year journey: Architecture+Design. pp. Vol. XIV, No. 2.
- [8] Shah, S. (n.d.). Development: Growth Pole or Agropolitan Approach. In S. Shah, Growth Centers for Urban and Rural Development.
- [9] Tabarrok, S. R. (2014). Lessons from Gurgaon, India's private city. In Cities and Private Planning. Anderson Print.
- [10] The Growth Dynamics of Gurgaon. (n.d.). In The Growth Journey of Gurgaon to the Millennium City. 34.