

Urban Governance in Neo-Liberal World and its Impact on Urban Landscape: A Study of Gurugram City

**Dissertation submitted to Jawaharlal Nehru University
in partial fulfillment of the requirements for the award of the degree of**

MASTER OF PHILOSOPHY

Submitted by

NAVDEEP MALIK

Under the guidance of

Dr. Madan Mohan



CENTRE FOR THE STUDY OF REGIONAL DEVELOPMENT

SCHOOL OF SOCIAL SCIENCES

JAWAHARLAL NEHRU UNIVERSITY

NEW DELHI-110067

2022



जवाहरलाल नेहरू विश्वविद्यालय
JAWAHARLAL NEHRU UNIVERSITY
 Centre for the Study of Regional Development
 School of Social Sciences
 New Delhi-110067

DECLARATION

I, Navdeep Malik, hereby declare that the dissertation entitled 'Urban Governance in Neoliberal world and its Impact on Urban Landscape: A study of Gurugram city' submitted by me in partial fulfillment of the requirements for the award of the degree of 'MASTER OF PHILOSOPHY' is my bonafide work. This dissertation has not been submitted so far in part or in full, for any other degree or diploma of this university or any other university.

Date: 27/9/2022


*Navdeep
malik.*
 (Navdeep Malik)

CERTIFICATE

It is recommended that the dissertation be placed before the examiners for evaluation.


Madan Mohan

Dr. Madan Mohan

 Centre for the Study of Reg. Dev.
 School of Social Sciences
 Supervisor
 Jawaharlal Nehru University
 New Delhi - 110067

Milap Punia

Professor Milap Punia

 Chairperson
 Centre for the Study of Reg. Dev.
 School of Social Sciences
 Jawaharlal Nehru University
 New Delhi - 110067

Acknowledgement

I am highly indebted to my research supervisor Dr. Madan Mohan, Associate Professor, Centre for Study of Regional Development, Jawaharlal Nehru University, New Delhi, whose gracious support always encouraged me to work with interest in the field, I would like to express my sincere gratitude to him for his incomparable supervision and quality guidance. It was his constant motivation, regular monitoring and gracious affection for me that made the dissertation work reality.

I would also like to thank my senior Urmila Shakh for her kind gestures and support during the writing of the thesis. It would not have been possible without the moral support and encouragement provided by her.

I would also like to thank myself for being in the positive frame of mind and believing in myself in the fearful time of Covid- 19. At one point of time I was losing hope and decided to drop the course but difficult time gives us new hope, and rays of light strikes the inner core. I think that ray of light keeps me going and supported my abysmal fall.

I would also like to thank my friend Marshal for providing me space to stay in Gurgaon during the field work and his rustic cuisine helped me to be in good shape.

Last but not the least, I would like to thank everyone who have supported me during the research work as without their help it would not have been possible.

Sincerely

Navdeep Malik

TABLE OF CONTENT

| | |
|--|----|
| Title: Urban Governance in Neo-Liberal World and its Impact on Urban Landscape: A Study of Gurugram City | 1 |
| List of tables, Figures and Graphs | 7 |
| 1 Chapter 1: Introduction | 8 |
| 1.1 Introduction | 8 |
| 1.2 Objectives | 9 |
| 1.3 Research Questions | 9 |
| 1.4 Hypotheses | 10 |
| 1.5 Database | 10 |
| 1.5.1 Satellite Imagery | 10 |
| 1.5.2 Census of India:..... | 12 |
| 1.5.3 Plan and Policy documents: | 12 |
| 1.6 Methodology..... | 12 |
| 1.6.1 Quantitative methods..... | 12 |
| 1.6.2 Qualitative techniques: | 17 |
| 1.6.3 Primary Field Survey..... | 18 |
| 1.7 Study Area | 19 |
| 1.7.1 Physiography..... | 19 |
| 1.7.2 Demography..... | 20 |
| 1.7.3 Commercial and Industrial sites | 21 |
| 1.7.4 Climate..... | 22 |
| 1.7.5 Build-up landuse | 23 |
| 2 Chapter 2: Urban Transformations in the Neoliberal Era | 24 |
| 2.1 Introduction | 24 |
| 2.2 Neoliberalism as a concept in urban space | 30 |
| 2.3 Trends of Neoliberalism | 35 |
| 2.4 Neoliberal Sphere of Thoughts | 37 |
| 2.5 Aspects of Neoliberal Philosophy | 38 |
| 2.6 Neoliberalism and structural reconstruction of urban space..... | 40 |
| 2.7 Urban Development during Neoliberalism..... | 40 |
| 2.8 Urban Governance during Neoliberal Period | 44 |

| | | |
|-------|---|-----|
| 2.9 | Urban Transformations and Geospatial Technologies | 49 |
| 2.10 | Summary | 51 |
| 2.11 | References | 53 |
| 3 | Chapter 3: Spatio-temporal Land Use Land Cover Classification and Change Detection..... | 56 |
| 3.1 | Introduction | 56 |
| 3.2 | Land use Land cover classification: 1990 | 57 |
| 3.3 | Land use Land cover classification: 2000 | 60 |
| 3.4 | Land use Land cover classification: 2020 | 63 |
| 3.5 | Land Use Land Cover Change Detection: | 67 |
| 3.6 | Urban Transformations in Gurgaon City..... | 70 |
| 3.6.1 | Urban Zonation of Master Plan 2021 | 71 |
| 3.7 | Field Survey - Infrastructure Facilities Provision | 72 |
| 3.8 | Comparative Geographical Features of Gurugram City and Delhi Metropolis | 80 |
| 3.9 | Conclusion..... | 82 |
| 3.10 | References | 83 |
| 4 | Chapter 4: Urban Governance and Neoliberal Policies of Gurugram City | 84 |
| 4.1 | Introduction | 84 |
| 4.2 | Urban Growth Processes | 86 |
| 4.3 | Gurugram Transformation by Neoliberalism..... | 88 |
| 4.4 | Evaluation of Development Plans and Policies | 91 |
| 4.4.1 | BYLAWS OF URBAN DEVELOPMENT | 93 |
| 4.4.2 | HUDA PLANS AND POLICIES:..... | 94 |
| 4.5 | Neoliberal Approaches to Urban Development | 96 |
| 4.6 | Welfare Schemes for Marginalized Society | 98 |
| 4.6.1 | HUDA WELFARE POLICIES | 103 |
| 4.7 | Conclusion..... | 103 |
| 4.8 | References | 105 |
| 5 | Chapter 5: Summary of Conclusions | 107 |
| 6 | REFERENCES..... | 124 |
| 7 | Appendices | 129 |
| 7.1 | Appendix – I: Master Plan of Gurugram..... | 129 |
| 7.2 | Appendix II: Table of Data source..... | 129 |
| 7.3 | Appendix III: Potential Information Content in different Virtual Bands | 130 |

7.4 Appendix IV: Illustrative Photographs of Gurugram city 132

List of tables

| | |
|---|----|
| Table 1.1: Details of the Landsat satellite data: 1990-2020..... | 11 |
| Table 1.2: Landsat satellites data and its characteristics..... | 11 |
| Table 1.3: Spectral Reflectance Response of various Terrain features..... | 14 |
| Table 3.1: Land Use Land Cover Classification: 1990..... | 59 |
| Table 3.2: Accuracy Assessment, 1990..... | 60 |
| Table 3.3: Land Use Land Cover Classification: 2000..... | 62 |
| Table 3.4: Accuracy Assessment, 2000..... | 62 |
| Table 3.5: Land Use Land Cover Classification: 2020..... | 65 |
| Table 3.6: Accuracy Assessment, 2020..... | 66 |
| Table 3.7: Landuse Landcover Change Matrix (1990-2000)..... | 68 |
| Table 3.8: Land use Land cover Change Matrix (2000-2020)..... | 69 |
| Table 3.9: Trends of land use land cover changes (1990-2020)..... | 70 |
| Table 4.1: Details of Urban Developers of Gurugram City..... | 96 |

List of Figures

| | |
|--|----|
| Figure 1.1: Map of the Study Area..... | 20 |
| Figure 1.2: Site and Location Map of Commercial and Industrial Landuse..... | 22 |
| Figure 1.3: Built-up Land Use of Gurugram City, 2021..... | 23 |
| Figure 3.1: Landuse Landcover of Gurugram City, 1990..... | 58 |
| Figure 3.2: Land use Land cover of Gurugram City: 2000..... | 61 |
| Figure 3.3: Land use Land cover of Gurugram: 2020..... | 64 |
| Figure 3.4: Landuse Landcover change Detection, Gurugram City (1990-2000)..... | 68 |
| Figure 3.5: Land use Land cover change Detection, Gurugram City (2000-2020)..... | 69 |
| Figure 3.6: Comparative Geographical Analysis of Gurugram City and Delhi Metropolis..... | 81 |

List of Graphs

| | |
|--|-----|
| Graph 3.1: Landuse Landcover change 1990-2020..... | 70 |
| Graph 4.1: Trends of Population Growth in Urban Area of Gurugram Tehsil..... | 91 |
| Graph 4.2: Capital Investment by the MCG in Various Privately Build-Up Areas..... | 97 |
| Graph 4.3: Trends of Capital Expenditure by Municipal Corporation of Gurugram (MCG)..... | 102 |

1.1 INTRODUCTION

In the recent past, there has been an emergence of the Gurugram as a millennium city which showed a phenomenal growth over the last three decades. The urban space was transformed and structured using private capital as the investment poured by multinational companies (MNC) for building urban infrastructure since 1980s. Such private-led growth took a sharp rising curve after 1990s. For instance, the private builders developed the Gurugram cityscape and these colonizers set the stage for the investment cycle. The emergence of the privately developed colonies such as DLF, Sushant Lok, and Udyog vihar started the trend of private investment. Some of the roles traditionally performed by the State and its agencies were undertaken by these private colonizers. This not only reduced the role of the State, but opened the door for the private capital investors to restructure the urban dynamics and determine the growth story of the emerging city, Gurugram.

The role of the State in this dynamism of the urban space and its growth has been contested by the private players. The State played the role of a facilitator and regulator for this private capital; but remained in continuous friction for power-sharing with them. The role of local government in Gurugram was influenced by the private capital. The local milieu in urban space, its dynamics are the product of the States' effort, local government role and emerging role of private players. The problem took an intense turn at the juncture where the private capital and State agencies do not align themselves in the growth dynamics of Gurugram City. This friction opened the space for the State agencies to re-establish themselves in the urban milieu, especially in determining the dynamics of urban growth. It is in this context and specificities related to Gurugram, that the present study focuses on the role of the State and its changing dynamics in the urban milieu. The restructuring of the local governance and its role in the urban space, especially the role of the welfare of the marginal section of the urban populace is being looked upon. The urban space in Gurugram City is being transformed using private capital, and the logic of profit has unintended consequences for the marginal section of the society.

The associated urban transformations in the neoliberal era have been a dynamic case for Gurugram where the private players played a major role in the growth dynamics and the spatial expansion of the city space. Urban space is being transformed within the neoliberal philosophical trend. The transformation of agricultural land after the 1980s in the old city's hinterland giving rise to the

phenomenon of “Urban Doughnut” in urban space transformation and the phenomenal growth rate after the 1990s has been a sui generis in the urban space of India (Narain, 2014). The urban transformations have intra-city dynamics in terms of infrastructure development, investment, and restructuring of old structures leading to points of high growth and investment. The study focuses on these intra-city growth dynamics and the urban transformation of the city which led to its horizontal expansion leading to the land-use change over the periods.

The policy of neoliberalism and its implementation have created opportunities for the citizens and other private players. The newly build residential space for the burgeoning population has neoliberal logic of profit and private capital. It is in this context of neoliberalism in Gurugram City that the dynamics of neoliberal policies and neoliberal urban space are being analyzed in the study to understand the specificities of neoliberal urban space and how it is being implemented in the urban milieu.

1.2 OBJECTIVES

The main objectives of the present study are mentioned as follows:

- I. To understand the role of neoliberalism in determining the urban growth process and dynamics of urban change over the periods.
- II. To analyze the role of local governance and the dynamics of global-local in the development process emerging at the intra-city level which creates intra-city urban space differentiation.
- III. To see the Spatio-temporal land use and land-cover changes occurred in Gurugram City over the periods.
- IV. To understand the contextual specificities of the neoliberal policies and the path dependencies of the neoliberal processes happened in the Gurugram City.

1.3 Research Questions

The research questions of the present study are mentioned as follows:

- I. How the urban growth processes in urban areas are affected by the neoliberal policies?

- II. What is the role of the State in determining the urban growth dynamics and how are the planning and the policies of the State impacting the urban milieu?
- III. How the Land-cover/Land-use changes have been occurred in Gurugram city beginning from city centre to the periphery in the last three decades?
- IV. What are the contextual specificities and path dependencies of neoliberalism in Gurugram City?

1.4 HYPOTHESES

The hypotheses of the present study are mentioned as follows:

- I. The Urban growth in the global south particularly in India is the resultant of the urban superstructure which is the outcome of the deep structure of neoliberalism.
- II. The spatial fix of accumulated global capital is fixed spatially in the city which leads to the hyper-development of some areas of the urban landscape, which also influenced by the governance strategies at the intra-city level.
- III. The role of the welfare of the State is being restructured and reinforced by the private and government led development agencies.
- IV. The process of urban development begins with the horizontal expansion which was the modus operandi of urban growth over the period.

1.5 Database

1.5.1 Satellite Imagery

The satellite images have been downloaded from the freely available Landsat series of data on USGS earth explorer. The images of 1990, 2000, and 2020 have been used for the spatio-temporal analysis. The images are selected for March and April months as this period is before monsoon ensuring clear sky conditions and also humidity is lowest at this time of the year, reducing the haze effect of water molecules.

Table 1.1.1: Details of the Landsat satellite data: 1990-2020.

| S.no. | Acquisition date | Satellite series | sensor | Path | Row |
|-------|----------------------------|------------------|----------|------|-----|
| 1. | 3 rd April,1990 | Landsat 5 | TM | 147 | 40 |
| 2. | 6 th April,2000 | Landsat 7 | ETM+ | 147 | 40 |
| 3. | 7 th March,2020 | Landsat 8 | OLI-TIRS | 147 | 40 |

Source: United States Geological Survey (USGS)

Table 1.2: Landsat satellites data and its characteristics.

| Satellite | Landsat 5 | Landsat 7 | Landsat 8 |
|-------------------------------|-------------------------|-------------------------|---|
| Sensor | TM | ETM+ | OLI-TIRS |
| Operation period | 1982-1998 | 1999-2009 | 2013-present |
| Temporal resolution(days) | 16 | 16 | 16 |
| Altitude (km) | 705 | 705 | 705 |
| Swath width | 185*185 | 185*185 | 170*185 |
| Spatial resolution | 30*30 | 30*30 | 30*30 |
| Radiometric resolution (bits) | 8 | 8 | |
| Spectral resolution | 0.45-1.78 μm | 0.45-1.75 μm | 0.43-0.45 μm (coastal aerosol) |
| Blue | 0.45-0.52 μm | 0.45-0.52 μm | 0.45-0.52 μm |
| Green | 0.53-0.59 μm | 0.53-0.59 μm | 0.53-0.59 μm |
| Red | 0.64-0.67 μm | 0.64-0.67 μm | 0.64-0.67 μm |
| Near infrared | 0.76-0.91 μm | 0.77-0.90 μm | 0.85-0.88 μm |
| Mid infrared | 1.57-1.78 μm | 1.55-1.75 μm | 1.57-2.29 μm |
| TIRS | Not Applicable | Not Applicable | 10.6-12.51 μm |

Source: United States Geological Survey (USGS)

1.5.2 **Census of India:**

The Village and Town directory of Gurugram district, series no. - 6, District Census Handbook, Part- XIII (A and B), Village and Town Directory, village and Town wise Primary Census Abstract, Haryana, Census of India series (1971, 1981, 1991, 2001, and 2011) published by Registrar General of India, Government of India, has been used in the present study.

1.5.3 **Plan and Policy documents:**

The municipal corporation of Gurgaon Budget documents 2008- 2020 has been used to study the municipal spending under different heads. The Detailed Project Reports (DPR) prepared by various private firms have been studied to understand the Municipal Corporation of Gurugram City (MCG) approach towards privately developed colonies, as these areas were transferred to MCG after 2017.

The Master plans of Gurgaon (2021, 2025, and 2031) have been used in the present study which were prepared by the Town and Country Planning department of Haryana and published in 2007, 2010, and 2012 respectively. In addition to this, the Policy documents and notifications issued by Haryana Urban Development Authority (2000-2020) were also used. The various State government acts which have been analyzed in the study are as follows. The Punjab New (Capital) Periphery Control Act, 1952 (enacted by the government of Punjab, 1952). The Punjab Scheduled Roads and Controlled Areas Restriction of Unregulated Development Act, 1963 (enacted by the government of Punjab, 1963). The Haryana Development and Regulation of Urban Areas Act, 1975 (Government of Haryana). Haryana Urban Development Authority (HUDA) Act 1977 and Gurgaon Metropolitan Development Authority (GMDA) Act, (Government of Haryana), 2017.

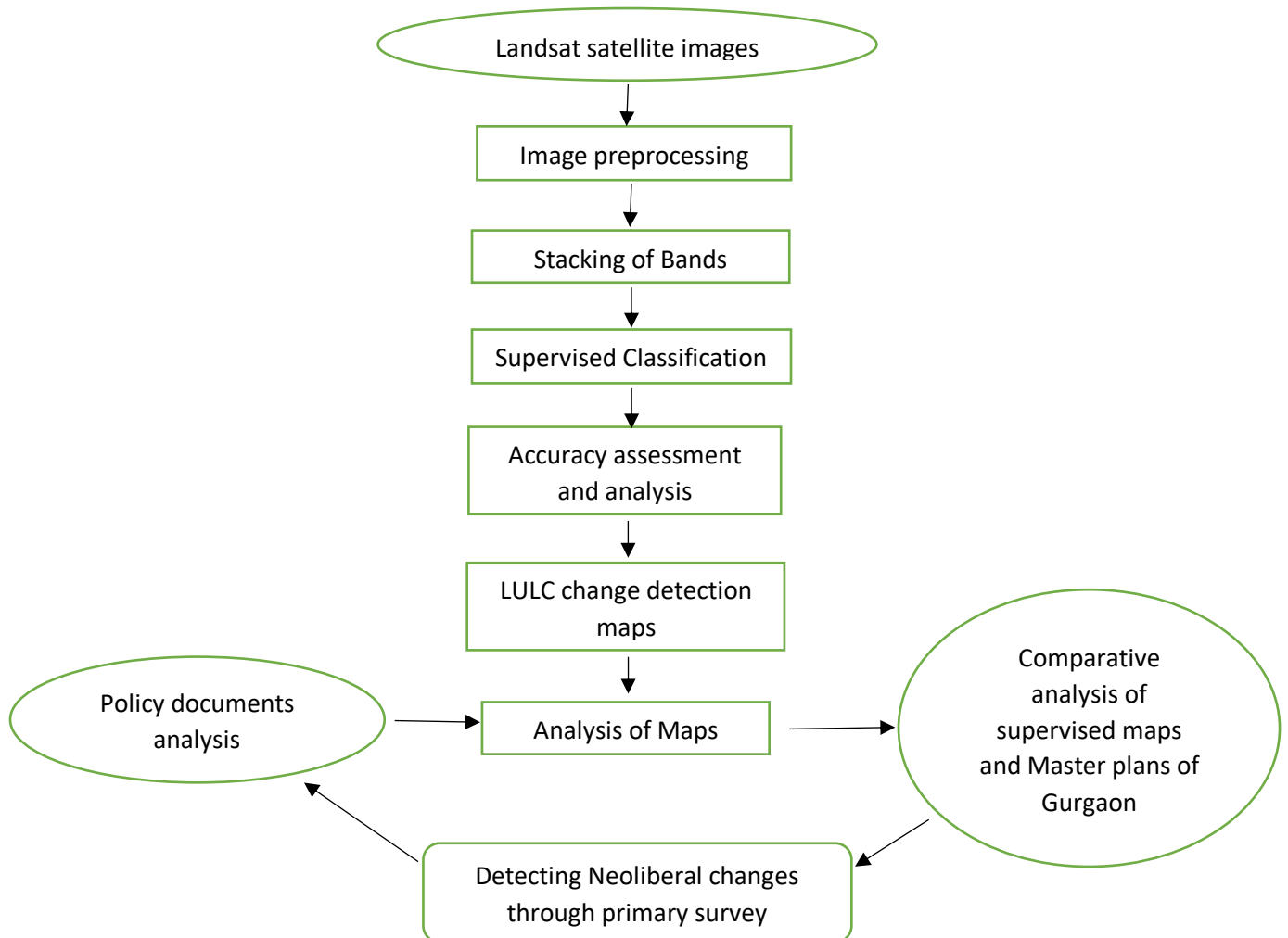
1.6 **Methodology**

1.6.1 **Quantitative methods**

To show the landuse landcover change in the city and the hinterland region over the periods has been done using satellite image interpretation and digital image processing (DIP) technique of supervised image classification. Landsat images of three years i.e.1990, 2000, and 2020 have been taken to analyze the landuse landcover changes of the city, which have been downloaded from the USGS website. The analysis of the data images have a temporal scale of three decades i.e. 1990, 2000, and 2020. To prepare the thematic maps of the study area QGIS version 3.24.1 has been used in the study.

Digital Image Processing - Supervised classification

The raw images of the three specified periods has been processed and the desired study area was extracted using mask layer of vector file, that had been prepared using create vector layer option. The study area has been selected to include the build-up of the city and the hinterland which has been proposed as ‘urbanisable’ in the Gurgaon-Manesar urban complex master plan 2031. The virtual band using the stacking of image data layers has been developed, on which training samples are applied for supervising the software to classify the image into different classes using the “maximum likelihood algorithm”.



Methodology - Flow chart

The classification of images have been done into five major landuse class i.e. Residential, Roads, Open Forest, Open Plot and Vegetation. The selection of the major classes is based on the prevalent land-use in the study region which has been analyzed through a visit to the city, studying the master plans, using google earth images, and documents related to zoning of the land-use. The category Residential in the classified maps have all types of build-up area comprising residential, commercial, and other types of concretization of the city and its hinterland. The selection of the images in the temporal slot of March- April has been done to overcome the cloudiness and haze problem of monsoon and winter months as the two months have relatively clear weather. The classified category “Vegetation” includes all type of vegetation and agricultural land. The category “Open Plot” includes all the land which has been acquired by the private and government agencies for development. These plots have been detected through their spectral signature and shape/size of the plots. However, the selection of the images has been done within the March-April temporal slot which is the major harvesting season for the wheat crop grown in the region of study. But during this season the chlorophyll content in the vegetal matter, especially in the standing crops, is minimal and hence the reflectance is minimum in the IR bands, due to this, the standing crop has a very light shade of pink.

Table 1.3: Spectral Reflectance Response of various Terrain features

| Terrain Feature | Spectral Reflectance Response |
|---------------------------|---|
| Man-made Build-up feature | Two prominent materials are used in the man-made features i.e. Asphalt and concrete. The spectral reflectance curve increases from the visible to the IR region. With age the two feature show differences, as concrete ages it becomes darker and as asphalt ages it becomes lighter. |
| Vegetation | The reflectance of vegetation depends upon chlorophyll and water content in the leaves. Also, the health of the leaf, age of the leaf and leaf structure, and type of leaf determine the spectral reflectance in various shades of color. |
| Soil | The organic content and moisture in the soil determine the reflectance. As both increases, there will be a decrease in the reflectance at all wavelengths. Also, the texture is a major factor in determining the reflectance and as the texture or particle size became small, the tone becomes lighter. |

| | |
|--------------|---|
| Water Bodies | High reflectance in the visible spectrum. Clearwater has less reflectance due to the absorption in the IR region of the band. Turbidity is determined due to the reflectance of the suspended particles. Clearwater has peak reflectance in the green region, while turbid water with inorganic particles has peak reflectance in the red region. |
|--------------|---|

Source: National Remote Sensing Centre (NRSC), Hyderabad, India

The technique of supervised classification is better than the unsupervised classification as it is done using the active help of a base map of google earth, showing present condition, however the problems regarding the historical classification of the images especially the 1990 image has been encountered due to the non-availability of base map of google earth. Historical planning maps have been studied prior to the classification of 1990 image in order to understand the landuse landcover of that time.

Landuse/ landcover change detection maps have been prepared using the QGIS software which shows the increase or decrease in the spatial extent of different land-uses. The change detection maps have been prepared using different shades of the same color in a particular class of the supervised classified images, which helps us to detect the change in landuse of a particular class.

The accuracy report of the classified images has been prepared using the Semi-Automatic classification plugin by auto-generation of picture elements and manual comparison of these auto-generated pixels in the classified images to the actual feature in that pixel on the ground. Google Earth images have been used in this process for the 2020 images but for the older images of 1990 and 2000, virtual band in the 4-3-2 RGB color composite has been used along with old policy documents, old images of Gurgaon, planning maps which had been published in the district handbook of Gurgaon, census of India series 1991 and 2001.

Accuracy Assessment:

The error matrix has been prepared using the SCP plugin in QGIS. The User's accuracy has been analyzed for each class to understand the applicability of classified maps in studying the classified features on the map and their actual presence on the ground. User accuracy helps us to understand the importance of the classified map in studying the particular landuse and its actual presence on

the ground. Producer's accuracy is the statistics that shows the accuracy with which the features have been classified by the producer of the map and how many of the classified samples have been correctly classified in the image.

User accuracy = 100% - commission error (type II error)

Producer accuracy = 100% - omission error (type I error)

Omission error: Also known as type one error, it is calculated with respect to reference data in the columns of the error matrix. The incorrectly classified data samples are divided by the total reference samples to calculate the omission error.

Commission error: Also known as type II error, it is calculated with respect to the classified data in the rows of the error matrix. The incorrectly classified data samples are divided by the total classified samples to calculate the commission error.

Different classes in the classified images have different user and producer accuracy depending upon the accuracy of the sample collection. The User's accuracy shows the applicability of supervised maps in studying the area and its importance in understanding the changes. Higher user accuracy shows that the classified images are good substitute of primary survey in understanding the changes in the study region and user of classified images can rely on the classified data to understand the changes. On the other hand the producer accuracy shows the proficiency of the classifier of the images to classify the data images into various classified images. The class wise user and producer accuracy shows the classification accuracy and how much that particular class is classified accurately. High user accuracy shows the reliability of the classified images in studying the changes both temporally and spatially.

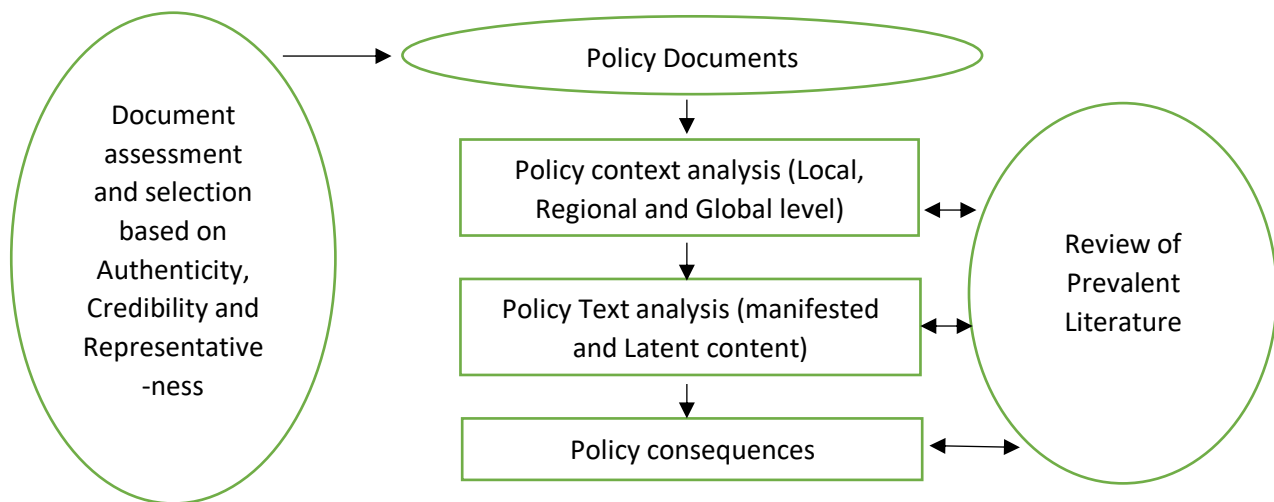
To show the densification of residential and road landuse, maps of build-up areas have been prepared using the QuickOSM plugin in QGIS software. Also using the same plugin, maps showing the commercial and industrial locations in the city has been prepared.

The landuse landcover change trend in the time period is shown using the tabulation of temporal landuse landcover areas. Subsequently graph of this table has been prepared to analyze the trend over the time period. The change in land-use use has been shown in terms of percentage of the

total area of the study. Graphs and tables have been prepared using the MS-Excel software which helps in the enhancement of quick analysis of the trends and data figures.

1.6.2 Qualitative techniques:

To understand the policy documents with respect to the city, document analysis of the official and private policy documents is done using the ‘content analysis technique’ with the non- frequency approach in the analysis of the document data. The content analysis of the policy documents related to the city focused on the ‘Policy text’, ‘Policy context’, and ‘Policy consequences’. This technique of document analysis is qualitative in approach and focuses on the non-frequency, non-quantitative and non-statistical methods of analyzing the policy documents (Bryman, 2012).



Flow-chart of Qualitative Methodology

Policy context: The policy documents are analyzed in terms of policy context at the local, regional and global levels and a literature review has been employed to understand the dynamics of policy formulation and implementation. The context within which policies are formulated speaks volumes about the underlying philosophy, morals, ethos, and values that guide the policy documents.

Policy Text: The text related to policy documents is analyzed both in relation to the manifested text and the latent content which is hidden in the texts of the documents. Policy texts and themes related to neoliberal policies are categorized to analyze the textual data.

Policy Consequences: The actual implications of the policy documents is their manifestation on the ground level. This has been analyzed through LULC change maps, illustrative photography, and semi-structured interviews in the study area.

1.6.3 Primary Field Survey

The interviews for the study followed the technique of ‘Semi-structured’ interview’ technique in the qualitative interview methodology (Bryman, 2012). The ‘interview guide’ is prepared in light of the major research theme and research questions of the study. However, the qualitative nature of the technique has the scope of deviation from the guide prepared for the interviews. This method has the advantage of being flexible favoring the interviewees’ viewpoint as well as the advantage of structuring which guides the interview and has the advantage of being focused on the topic. Some of the other advantages of this approach are the flexibility of deviation from the interview questions, which helps in bringing more insight into the study along with the possibility of detailed answers to the questions. This in-depth approach to interviewing helps in widening the scope of the study and gives new insight into the research topic.

The ‘interview guide’ has been prepared with adequate precautions regarding the spontaneity and flow of questions, the language of questions (both Hindi and English depending upon the context), and adequate attention related to the preparation of the ‘facesheet’ both general and specific, which helps in the contextualization of the respondents.

To ensure the quality of the generated data, two pilot interviews were conducted prior to the roll-out of actual interviews in order to test the Interview guide and other onsite difficulties. The interviews were audio-recorded using a Mobile phone and after each interview, this recorded audio has been transcribed and hand notes has been prepared. To ensure the quality of the interview, the flow of the process starts with the ‘introducing questions’ which make the interviewee comfortable with the setting, it was followed up with the follow-up main questions as mentioned in the ‘interview guide’ and then ‘probing questions’ and ‘interpreting questions’.

The results of the interviews are analyzed and presented in a summarized manner and analyzed with the policy documents and other quantitative methods employed in the study. However, direct quotations from the interviews have been done wherever required to establish a viewpoint.

The cross probing of different methods of the research, which have quantitative as well as qualitative analysis in the study area, helps in boosting the results of the analysis.

1.7 STUDY AREA

The study area is situated in the northwestern region of the Gurugram district as shown in the below Figure 1.1. The geographical extent of the study area are as 28.32 N- 28.53N latitude and 76.89E-77.13E longitude. The Study area is bounded on the northwest by the Jhajjar district, Haryana, whereas on the north-east by the Union Territory of Delhi and other sides are bounded by the Gurgaon district. Gurgaon city has a clear demarcation between the old and the new Gurgaon. The old area is as congested as any other old city with high population density and ever-growing demands for improved infrastructure, heavy inflow & outflow of traffic. The new Gurgaon area (actually) former agricultural land, built primarily by private companies and/or builders, is also experiencing ever-growing population & infrastructure demands. This part of Gurgaon is infrastructurally much advanced, presenting skyscrapers, flyovers, expressways, metro rails, wider roads, big shopping malls, golf courses, commercial complexes, and many more technologically advanced infrastructures. Anyhow, both areas have traffic jams, stray animal problems, potholes, garbage, leaky pipes, hanging (congested) electric wires, electricity failures, water problems and beggars on streets & crossings, and the ever-growing congestion problem.

1.7.1 Physiography

The physiography of the city region has rolling plains with small outcrops of Aravalis in the eastern margin of the study area. The plain area of the city spreads over the Gurugram tehsil region. Some of the areas of the Manesar region have also been included in the study area due to the emergence of the Gurgaon- Manesar urban complex. As the area falls under the semi-arid region, the agricultural economy has been developed following the climatic limitations and the cropping pattern follows the dictates of semi-arid region limitations (Goldstein, 2015).

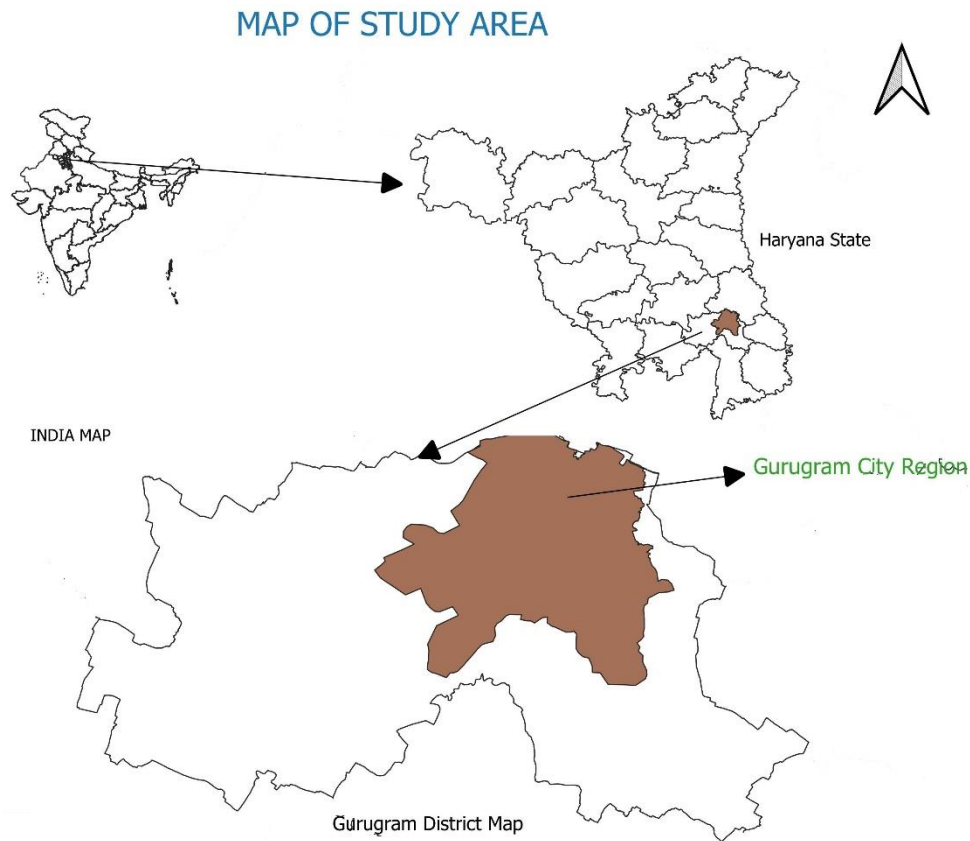


Figure 1.1: Map of the Study Area

1.7.2 Demography

As per the census data of 2001 Gurgaon district population was 8.8 million and it doubled itself in the next decade reaching 1.5 million (census, 2011). The Gurugram district has a population density of 1241 inhabitants per sq. km, a population growth rate of 79.93%, a sex ratio of 853 females per 1000 males, and a literacy rate of 84.4% (census, 2011). The population composition of the city has two extremes. On one side there are the rich, well-educated urban professionals who work at the big companies, live in big houses/flats, and have awareness and knowledge of what & how to demand the right infrastructure, whereas, on the other side, there are people who are oblivious of their rights for required infrastructures, living in slums with minimum level or no basic infrastructures. The city view often covers big houses adjacent to urban slums, home to villagers who used to own the land where Gurgaon now stands, and migrants, who come to do blue-collar jobs. As the city growth story has the land-use conversion phenomenon where hinterland villages and their agricultural land has been converted into build-up area with the help of private builders. To avoid the demarcation of the city boundary, which has been very dynamic

in the last two decades and changes every year by new build-up, new ways of communication and accessibility. Hence the reason for taking the extent of the study area beyond build-up land is the emerging Gurgaon-Manesar urban complex, which has been the main focus of the government and capital investors since the development of the master plan of the region in 2007. So to understand the urban change phenomenon and to understand the suburban growth, particularly the implementation scheme of the Gurgaon- Manesar master plan, it has been decided to take the study beyond the city build-up limits in order to understand land-use change (Narain and Singh, 2019).

1.7.3 Commercial and Industrial sites

The location and site map of various uses have been prepared to show the commercial and industrial establishment of the city. The map shows the commercial area along NH8 and the southern peripheral road which was also planned in the master plan 2021 prepared in 2007. The industrial sites are more scattered along the eastern side of NH8 and the southern region of the city which have come up after 2000. While hotels are scattered more in the southern region, the hospitals have more sites in the northern region of NH8 in the old city region and other areas. The spatial distribution of the various activities as planned in the master plan follows the land zoning scheme of the plan. The major infrastructure projects, transport network, high-class residential space, and hotels have spatial proximity in the southern part of the study area which was developed as green field investments by private developers. The southern region of the city depicts the spatial proximity phenomenon of various land uses in its building and investment plans. Different landuse in this part of the city has a multiplier impact on each other and the requirement of one creates the requirement for other landuse (Master plan: Gurgaon Manesar Urban Complex, 2031).

LOCATION AND SITE MAP: GURUGRAM

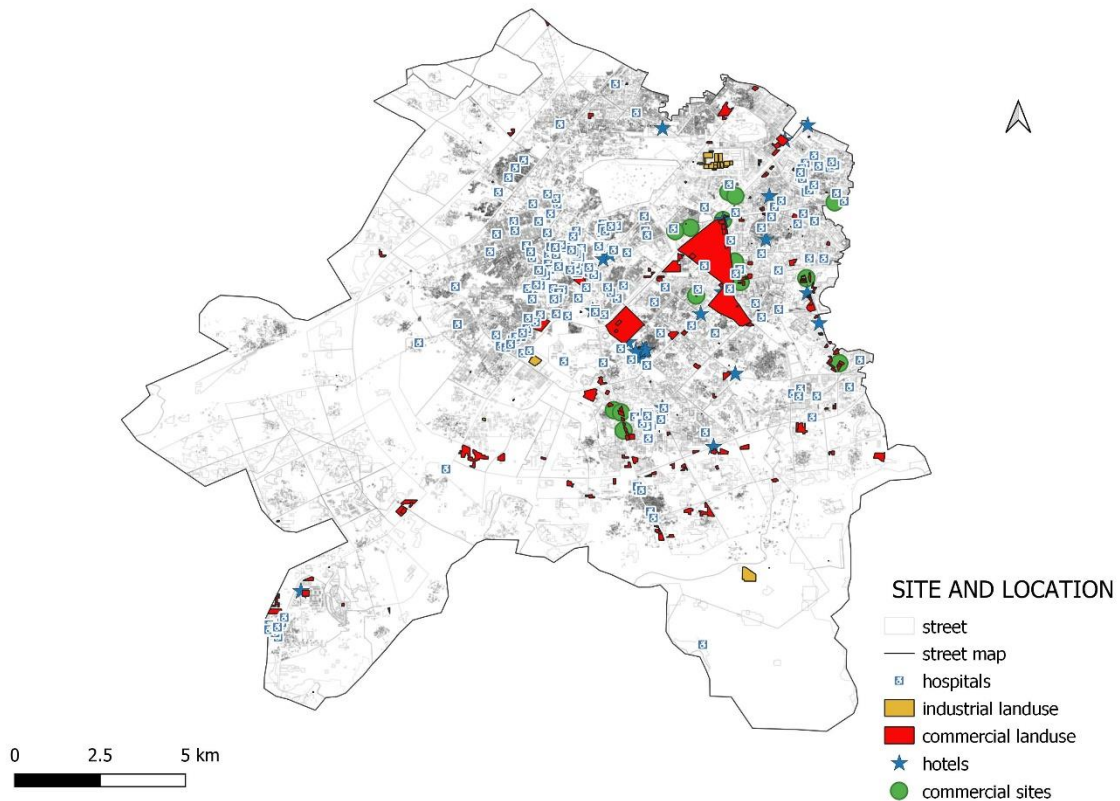


Figure 1.2: Site and Location Map of Commercial and Industrial Landuse

1.7.4 Climate

Under the Koppen climate classification, Gurgaon experiences a hot semi-arid climate (BSh). The city experiences four distinct seasons – spring (February–March), summer (April–August), autumn (October–November), and winter (December–January) – along with the monsoon season (June–September) setting in towards the latter half of the summer. Summers, from early April to September, are typically hot and humid, with an average daily temperature of 40 °C (104 °F). The season experiences heat indices easily breaking 43 °C (109 °F). The Western Disturbance brings some rain in winters that further adds to the falling temperature. Spring and autumn are mild and pleasant seasons with low humidity. The monsoon season usually starts in the first week of July and continues till August. Thunderstorms are not uncommon during the Monsoon. The average annual rainfall is approximately 714 millimetres (Narain and Singh, 2017).

1.7.5 Build-up landuse

The last three decades witnessed a massive build-up phenomenon in the study region. The city region have been transformed in its landuse from agriculture to various types of build-up structures, such as residential buildings, multistory apartments, commercial structures, industrial space, transport and communication lines in the form of roads. Concretization and asphaltization is the major change happened in Gurugram City in the last three decades.



Figure 1.3: Built-up Land Use of Gurugram City, 2021

2 **CHAPTER 2: URBAN TRANSFORMATIONS IN THE NEOLIBERAL ERA**

2.1 INTRODUCTION

There was an emergence of neoliberal policies after the fall of the Bretton wood system and the emergence of the “New Rule” under the eyes of Margaret Thatcher, subsequently downsized the Keynesian model of welfare after the 1970s. This had huge implications on the global model of growth and development. In particular, the impact of a new order in the global south where the emergence of neoliberal policies contextualize the process of socio-economic transformations and molded the States’ intention toward marketization (Banerjee-Guha, 2010). This contextualization of global neoliberal policies can be argued through the lens of global-local, where global policies are contextualized in the local space in “postmodern urbanism” (Dear and Flusty, 1998).

The impact of the new global order on the urban structure and form, leading to the centerless urban space polemical to the Chicago school, has seen the light of acceptability in an urban structure called “Keno Capitalism” (Dear and Flusty, 1998). This restructuring of urban space has led to the changing role of urban structural elements, new tactics and strategies are employed to overcome the structural obstacles that were present due to the historicity of the old order of “welfarism”. Urban space is transformed under the impact of these actors, which subdue the old elements and provide the space for new elements to establish themselves under the new model of governance (Chattopadhyay, 2017).

Urban governance in the new order play by the rule of competition and adversarial attitude where cities compete with each other for the global capital (Banerjee-Guha, 2010). This spirit of competition provides the space for new actors in the urban context to establish themselves as a key urban element in this structure and process of the urban form. The emergence of new actors especially the private players in the city governance and city development provides new avenues for capital creation and its circulation. This not only provide avenues for global capital to outsource

itself, especially in the global south but also the reduced role of local government in service provisioning and infrastructural development (Chattopadhyay, 2017).

Urban transformations are impacting the minutiae of governmentality and government structure. This is ultimately changing its role as a regulator and allocator of resources, as the new players in the urban space work on the principle of marketability (Banerjee-Guha, 2010). The catering to the needs of citizens is filtered through the affordability sieve of the urban populace. This marketability of services and service provisioning has an impact on the marginal people especially their exclusion from these basic services (Chattopadhyay, 2017). The role of government is transformed and its position vis-à-vis the private players has been weakened (Chattopadhyay, 2017). The global capital is the master rooster of the urban game and its structural transformations.

It has been a major theme among critical geographer's circle that State has been reduced in the overall game of socio-economic organization and urban governance has been rescaled, reorganized, and restructured (Whitehead, 2012). It is where the cities have been tested on the entrepreneurial scale (Banerjee-Guha, 2010), under the hyper-exploitation, non-formalization and contractualization of the workforce. The global south has been the new avenue for the commodification of services (Banerjee-Guha, 2010). Hence, the urban milieu in the global south is getting transformed to suit the global capital and urban governance's role has been renovated by the global flow of capital. This is leading to the competitive model of city development, the emergence of the public-private partnership (PPP) mode of investment, and the marketization of basic services (Banerjee-Guha, 2010).

This deconstruction and attempted reconstruction have been described by various terminologies and can be summarized in evocative vignette using “informalization, deindustrialization, reindustrialization, beyond Fordism, global city, entrepreneurial urban space, privatization, gentrification, green gentrification, and socio-spatial polarization” (Brenner and Theodore, 2005). This not only highlights the hues of neoliberalism in its various forms but at the same time speaks a lot about the criticality of the urban system in the new order.

The social implication of this process of restructuring is the emergence of extreme inequality, social polarization, and differentiation of space in the urban milieu (Banerjee-Guha, 2010). This restructuring in the new order not only provides the avenues for the global capital to invest, but at the same time also the avenues of slumization and shanty development. Urban restructuring and

reconstruction highlight the shades of “accumulation by dispossession” (Banerjee-Guha, 2010). It is where collective and community rights are being commodified, privatized, and traditional rights are eliminated. This not only has superstructure implications (Yadav and Punia, 2014) in terms of hinterland transformation from agriculture to built-up in Gurgaon’s case, but also the interstitial space is being transformed (Singh et al., 2020).

However, this neoliberal restructuring and transformation at the philosophical level have the logic of ‘individualism’, ‘private property, and market-based mode of production and distribution (Harvey, 2008), where rights of private property and logic of profit engulf the traditional rights of people (Banerjee-Guha, 2010; Harvey, 2008). These traditional rights were based on organic development and the use-value of the resources determine their monetary value. This traditional system sees a very low level of commodification.

The emergence of collective sense in making the city, especially the work of Harvey where he argued: “that not only the right to resources which are important in the urban milieu but city structure and features evocatively described the desire of our heart” (Harvey, 2008). It is where the city needs to be the superstructure of our philosophical consideration and collective rights to change, determine the cityscape, embodying our philosophy, rights, inclusion, and social issues (Harvey, 2008).

The emergence of an urban structure embodying the above-specified traits modulates itself in the power structure, where power determines the philosophy of urban transformations. This power is the modulating factor for the emergence and establishment of certain rights, inclusion of certain traits, and voice to the social issues which can be found in Bentham’s idea of the Panopticon, Foucault’s idea of the surveillance society, and Shoshana’s idea on surveillance capitalism. So it can be rightly argued that cities and their structure, processes, systems, ideas, organization, values, philosophy, and above all its habitants can be explained as an organic whole, where every aspect affects and influence each other and this feedback mechanism in the system can be the basis of any further analysis within the city’s structure.

However, the basis of this whole gamut of influence and being influenced among the various aspects and factors of urban structure whether tangible or intangible is the basis of concentration of surplus in society under the different modes of production. This concentration light up the power structure within society both spatially and temporally (Harvey, 2008). The surplus value and

production under different modes and associated power structures determine the urban form. The post-war Fordist- Keynesian model and its associated urban form is transforming with the emergence of the new emphasis on the philosophy of liberalism, market mechanism, and private involvement in the urban processes (Brenner and Theodore, 2005). It is through this new mode of production and “creative destruction” in Schumpeter’s terminology, that the urban form is undergoing a fundamental transformation after the “New Rule”.

However, the question arises is how this new socio-economic and political order popularly termed “Neoliberalism” is different from the earlier order and its implications on the urban structure and urban form. It is of utmost importance to grasp the various hues of this new phenomenon to understand its implications for the urban form, especially when seen through the lens of political and economic ideology and its framework within the neoliberal philosophy, impact of institutional forms within contextualization, socio-political linkages and local forms with multiple contradictions among various actors (Banerjee-Guha, 2009).

It is this philosophical consideration at the deep structural level and local contextualization which determine the urban form along with various specificities such as inter and intra-urban unevenness and spatial inequalities and uneven development at various scales (Banerjee-Guha, 2009), as Harvey (2008) argued for the coexistence of slum and gated communities together and Narain (2014) argument of hyper glittering urban form and shanty of construction workers within line of sight in Gurgaon city. These ills of the present system do not confine themselves to the inequality at various scales but there are polemical contradictions found at various scales (Banerjee-Guha, 2009).

It is worth mentioning the underlying coercive version of State to establish and prove its entrepreneurial character belying the philosophy of liberalism and freedom of economic decisions (Brenner and Theodore, 2005). So the system is inherent with contradictions not only if analyzed spatially and at a particular scale, but even it has changed the role of the State and local government to be coercive and hard-handed at one level to provide the playing field for the accumulated global capital and its circulation. At the same time its shows its flattery and eager attitude to attract the private capital under the guise of being entrepreneurial and innovative, even disposing of its assets at throwaway prices. This duality of its functions and management highlights the contradictory nature of the global “new order”.

One of the city-level analyses of the new philosophy that is setting the stage for restructuring and reconstruction guides us to the duality of its effects. It is constraining the local government and State of their welfare functions, reducing their operational capabilities and functionalities, reducing flexibilities to the planning by statutory 'City Master Plans', land use zoning and regulatory institutions (Banerjee-Guha, 2009), but this constraining feature gives effect to the new restructuring and creative constructions by involving private players, the commodification of services, informalization of labor rights, shedding of democratic rights, panopticon urban surveillance for peaceful law and order, allaying the fear of the capital of turmoil and disorder, gentrification for the elite consumption (Brenner and Theodore, 2005).

These contradictions give rise to the "Belligerent Urbanism" (Banerjee-Guha, 2009) in the global south leading to creative destructions at multiple scales and spaces where the dominant ideology of the "new rule" and neoliberalism philosophy is being employed for the sake of the perpetuation of global north "Hegemony" and its egotist attitude towards global economic order (Lefebvre, 1991). This process is underlined by the logic of the market mechanism where profit orientation determines the organizational structure, favored by the philosophy of competition, modern values, and the logic of liberalism.

However, the structural uniformity with the uniqueness of gigantism in neoliberal cities and the inclination of the urban economy toward a market economy gives it a distinctive character in the neoliberal urban development (Banerjee-Guha, 2009). This urban structural transformations (if compared with the earlier economic order and associated urban form) in the developed world is not as contrasting and paradigmatic as compared to the global south. It is in this sphere of circulation of the capital where Harvey (2008) compared the logic of reinvestment under the capitalist structure with the 'Faustian dilemma' where hyper-competition favors investment rather than spending on pleasure and compounding growth of money, capital, output, and population. The urban growth mimics this compounding, and parallel hyper urban growth is the outcome (Harvey, 2008). This compounding effect also has other impacts on the urban form, architecture, culture, labor market, flexibility in the pattern and process of consumption (Amin, 1994).

It was started by the Nixon declaration of the end of the urban crisis after the Pruitt-Igo housing project dynamited, depicting the modern philosophy of Le Corbusier and further consolidated by the "Reagan Recession" of 1981. Hence it can be argued that the political-economic

transformation and paradigm shift in the policy framework transform not only the physical aspects of the city structure but even the cultural and intellectual sphere of urban form (Amin, 1994). In the post-war era, the urban space that was the epitome of rationality, functionality, and efficiency (Harvey, 1995) got transformed into market flexibility, horizontal functional integration, and global efficiency with processes like outsourcing giving effect to spatial rationality and integration.

This new process depicting flexibility, horizontal integration, and spatial fixation of global capital create contradictions in the urban space where contestation and conflict are underlined in the process of capital's spatial fix and the associated dispossession. It is in this context of contradictions within the urban form, Harvey (2008) argued that the rights of city dwellers not only limited to habitation but the scope of whom can be enlarged encompassing different aspects, with a major focus on the right to decide the developmental trajectories of the urban space (Harvey, 2008).

On one hand, global capital is bypassing the crisis stage of over-accumulation by employing the spatial fixity of capital in the global south, which determines the fundamental change in the structure and functionality of these urban spaces. At the same time it also gives a second blow to the urban dwellers by creating contradictory spaces, and even the welfare function is sidelined creating and perpetuating exiting marginalities. It is a juxtaposition of extreme riches and extreme poverty within the perceptible range of urban space. Does this contradiction is inherent in the nature of urban restructuring in the neoliberal era? Does it have implications on the emerging inequality, does it have an equalizer aspect in the long run, does the urban space transformations are sustainable, does the efficiency of the system have overall increased, what is the role of the State in general and urban local government in particular, is welfare functions are significant and what are the role of local government in this era of commodification and market orientation? These are some of the tough questions which come up while analyzing the urban space and it's restructuring in the neoliberal era.

The emergence of restructuring and reconstruction in the intra-city space is the overlain feature of the deep structural transformations in the socio-economic and political-economic space of the global order. The emergence of new geographies of production and consumption, spatial integration of the global north and global south, horizontal integration, and emergence of supply chains, distribution of production processes, Fordist assembly lines to spatial lines, space-time

convergence, competitive advantage employment, flexibility in labor, production, just in time, customization, spatial economics, contractualization, and above all spatial fixation of capital are some of the new aspects which can be seen in the neoliberal political-economic space(Sassen, 1991).

The overlying transformations and restructuring is the product of these deep-lying processes and urban form is the outcome of these processes. There is a great degree of uniformity in the global north and global south cities in terms of infrastructure development as magnanimity, structural uniformity, and perceptible outlook is the new norm (Banerjee-Guha, 2009). As global south cities have emerged as the local regional center for the global MNCs and these regional headquarter tries to attract the global capital by employing competitive techniques and emulating the infrastructure needs (Gurgaon is the major destination as a regional headquarter for the 250+ of the fortune 500 companies (Narain, 2014)).

It can be reasonably argued that the emerging global south cities are fundamentally different from the developed world cities. The contextualization and local geographies give space for the spatial fixation of capital but with contradictions and contestations in the urban space. The emerging production geographies and supply chains create contradictions at the global level where global cities especially London, New York, and Tokyo have emerged as the global managerial space and financial hubs deciding the rule of the game and depicting the major innovation hubs at the global level, while cities of the global south serve the purpose of regional centers, being productive at their level with its contradictions. This flux of global-local processes can be examined at various scales but both are complementary. Cities are transforming in this flux of global-local contradictory processes.

2.2 NEOLIBERALISM AS A CONCEPT IN URBAN SPACE

The emergence of competitive economic policies at the city level with limited regulation, shedding the Keynesian welfare logic, emergence of a State with no interference in the market along with the new model of governance, with increased role of privatization of services and State taking the backstage in providing even the basic civic amenities to the people are some of the basic underlying transformations happening in the city space. The decrease in the role of the State with low financial measures and the opening of the urban front for the private sector is the broad aspect of

neoliberalism (Peck et al., 2009). The role of the State is decreasing in the urban governance and the State is merely the regulator with little interference in the economic model of neoliberalism. This led to the emergence of a new form of challenges with new issues on the urban front and foremost would be the opening of different sectors for the private profit-oriented people. Where economics is driven not by welfare measure but by the paying capacity of the people.

The exclusion of people from the basic services, civic amenities and led to the emergence of the phenomena where the accumulation of capital takes place through dispossession and people especially the marginalized section of society are dispossessed from the customary rights. This led to their exclusion in the new development model based on neoliberal policies. The limited role of the State in this new model has led to the emergence of a new set of challenges in the urban landscape, where the poor have no rights in the city environment and the city system is driven and governed by the model of profit orientation. People are devoid of civic amenities and basic services in this profit-oriented model if they don't have the paying capacity for the services.

In this new model of neoliberalism, cities have emerged as competitive entities where their growth depend upon the flexibility, deregulation, openness, loss of barrier, space with least hurdles and red-tape, no regard to environment and local sustainability and above all, cities as growth engines based on the private investment (Brenner, 2004). This create an urban front which is created to facilitate the investment by the private sector for creation of new city as a kind of 'creative destruction' and as an avenue for investment of the accumulated capital in the developed world.

The emergence of tertiary circulation of capital in the city environment where commodification of services is the basic premise for the profit motive. One of the outcome of this process is the emergence of better urban service to a certain section of the society which is made possible through the flexible governance model, flexibility in the law to accommodate the private sector, to create suitable ambiance for the private sector investment and make the city competitive on the global scale to attract capital which has been accumulated in the developed world (Harvey, 2003). While at the same time this emerging model creates a different set of problems for the city populace who are marginalized and could not afford the new urban system of profit-oriented investment. These people face the wrath of this new model of competitive city as they are dispossessed of their customary rights and marginalized in the new system of urban form. They have no right to the city

and their mere being in the city is the emergence of marginalized work which have emerged on the sidelines and this created the dual city space where extreme poverty is adjunct to the extreme riches.

This new model is a boon for a certain section of the city populace, while at the same time it is also a bane for the majority which could not afford the profit orientation of the city and the State has become the side spectator in this process of exploitation and profit extraction. The emergence of new relations, a new system of governance, and a new model of investment led to the evolution of the public-private partnership model of service provisioning in the city. The new types of management strategies and municipal services have emerged on the competitive lines. Along with this change, what has emerged is the competitive city where city governance is based on the idea of attracting the capital of private sector and no city wants to be a laggard in this process (peck et al., 2009).

City governance has shed its traditional roles and its municipal services have adopted a competitive model based on the principle of competition and profit orientation with the active engagement of the private sector. It is in this context we see the emergence of global capital moving in from the developed part to the developing world and these cities are competing for this capital. This is a system of formal exclusion of marginal people who couldn't afford the private and profit-oriented city amenities and this led to their exclusion in the city, ultimately dispossessed them of their traditional rights (Jessop, 2002).

The emergence of the process of neoliberalism in the urban landscape led to the modification of territoriality, where institutions and governance initiatives are so modeled and implemented so as to make the space more attractive for the inflow of capital, and urban transformation is done in such a way to attract this capital for investment in the city. Hence the whole process of reterritorialization is done basically to make the urban space more attractive and more efficient for the global capital (Theodore, 2002). The emergence of this reterritorialization and modification of the existing structure with the new role of the city governing agencies and involvement of the private players have led to the realignment of the traditional system but with context specifications. Where the underlying deep structure and logic of neoliberalism is same at all the places, there is

an emergence of the different superstructure which are context-specific and path-dependent and policy defined and oriented (Molotch, 1987; Keil, 2002; Theodore,2002).

This contextualization of neoliberal policies and outcomes can be seen in different cities at the world level where super-structure or the physical outcome of the policies and interventions are very contrasting and unique in many ways but if we look deep and try to analyze the underlying pattern, we find the infrastructure and deep structure as envisaged in the structuralism. The deep structure is the underlying neoliberal policies which orient and reorient the urban landscape although with context specification. Hence it can be argued that deep underlying policies which led to the restructuring and realigning of urban governance policies are manifested and guided by the deep logic of neoliberalism.

Neoliberalism has given rise to different outcomes in different regions of the world. As in the developed world where societies are fundamentally different from the developing world, the urban forms and its structures have low pressure of population leading to less informalization and high status of living with little regard to the environment. In the third world countries the emergence of neoliberalism gives different context-specific outcomes due to their high pressure of population and low status of living, informalization, hyper-urbanization phenomenon. This led to the emergence of alienation of marginalized people, their rights in the city, their traditional system along with the emergence of hyper elevation in property prices and accumulation by exclusion.

A fundamental restructuring of the city governance is happening in the third world with low State spending on the welfare and provision of free civic amenities to the poor people. This led to the emergence of public-private partnership model, involvement of private players in the urban system and setting the stage for the investment by the private sector. This process of accumulation by dispossession also led to the conflicting nature of development where a section of society is dispossessed of its resources to prepare the ground for the profit of the other section. This process of othering and exclusion led to the emergence of conflict, but subdued due to the formal nature of this new governance model. Be it the emergence of a gated community, private guards for night security, surveillance system, all this indicate the presence of this conflict where a section of society is marginalized, which led to the emergence of city vices such as crime, crowding, gentrification and slum- shanty settlements (Keil,2002).

This emergence of a new growth model and deep structure of neoliberalism with context specifications and this amalgamation of global-local led to the process of globalization with local inherited spatial dynamics, which is more commonly known as 'glocalization'. There is no denying to the fact that global capital is shifting to the developing world and this shifting requires the restructuring and new alignment of policies suitable for this investment. Cities need to provide the basic underlying infrastructure, economic policies, regulation, and governance which is suited to the investment. This investment is always contested at the local level which ultimately give rise to local support as well as resistance to the implementation of the neoliberal model of growth. This ultimately give rise to the contextual phenomena of diversity emergence at the local level and also scale specific whether temporal or spatial (Swyngedouw, 2003).

The Neoliberalism model of urban growth and development is all about the emergence of new policies, phenomena, institutional arrangements, and governmentalities at the local level which suits the need for global capital formation, as well as provides the venues for the circulation of global capital and its investment in the third world. The regional specifications emerges out of this process. So, at one level there is a process and phenomena which are leading to the investment of accumulated capital in the developing world, but this investment requires modifications at the local level, that leads to the change and modifications of structures at the local level. This ultimately gives rise to the emergence of diversity or the so-called 'glocalization' at the local level. However, this is flavored by the capital of global processes as well as having the tinge and spices of local productions, but this is mediated by the structural changes at the local milieu and it is this structural changes which are criticized by Harvey in its Marxist oriented critical approach to urban growth in 'The Right To City' and also by 'The Urban Question, A Marxist Perspective' of Manuel Castells.

There is an emergence of phenomena at every level of government to facilitate the changes, which prepare the ground for investment and set the tone, which leads to structural changes in the modus operandi and governmentality at the local level. These structural changes are the manifestations of change in policies, programs, models, plans, and deep structures. This emerges as different manifestations in the diversity of superstructure and local specificities. The superstructure has emerged in urban areas as the destinations which support the tertiary circulation of capital. The emergence of the new process of urban growth, where new underlying neoliberal philosophy gives

rise to new processes of growth like the PPP model, gated communities, gentrification, beautification, green growth, green gentrification, the emergence of the private sector in municipal services and land transfer which leads to contested growth, erosion of traditional rights and avenues of sustenance for people. The emergence of contested ideas of growth leads to the avenues of accumulation as well as dispossession. The traditional rights are replaced by the formal rights and the traditional land-use system underwent a transformation, where the circulation of capital leads to accumulation by dispossession and erosion of traditional rights (Castell, 1977).

2.3 TRENDS OF NEOLIBERALISM

Neoliberalism in urban areas can be seen through the lens of different shades, which explain the emerged superstructure through different perspectives. It can be argued that the manifested contextualization of these processes can lead to different outcomes with spatial, social, temporal, and political implications and have different impact on different groups. One line of thought argues for the marginalization of people through different processes and leading to the dispossession of their rights. The emergence of new groups, whether elites or dispossessed, leads to the formation of new contested space, where political and social processes lead to structural marginalization of people and their informal traditional rights in urban space are replaced by the structures of formal dispossession (Brenner and Theodore, 2002). This argument can be sighted in the texts of the 'Marxist approach to urban growth' and was the major theme of 'The Urban Question book', where Castells argued that urban transformations are the part and parcel of tertiary circulation of capital and its manifestations can be seen in every form, from structure to governance and infrastructure to urban art.

It is argued that urban manifestations of neoliberalism lead to the emergence of inequalities, where urban space is blotted with ultra-riches and marginal people. Where marginality is not defined on the geometrical scale but economics yardstick which can be explained by the slum dwelling in the city center or the sub-urban rich neighborhood. An urban space where spatial scale is narrowed to the minimum and ultra-riches and extreme poverty lies side by side (Geddes, 2010).

On the other hand, the second trend of thinking focuses on the positive aspect of the above mentioned structural transformations. Neoliberalism is seen as a boon for democratic thinking and politics based on democratic ideals and philosophies. It has been argued by this group of scholars

that the structural transformation due to neoliberalism provides avenues for the larger group of marginalized people to claim the urban space, due to their right to elect the government and urban space is being transformed according to the whims of popular politics, although underlying neoliberalism shapes the contours. This trend deviates from the Marxist scholars who consider new arrangements as exploitative tools leading to different forms of marginalities and instruments of dispossession. The opposite trend argued that the new marginal groups gain a political voice in the democratic setup and claims for the urban space, also having a voice in shaping the local policies. It has been argued that neoliberalism is not the dominant actor in urban space transformation, but local politics, and global investment in urban space are modified according to the underlying local politics (Holston, 2008).

The urban space seen from this perspective gives some power to marginal people. They are not the mute spectator in the transformation of urban space, although the elite claim major resources. The marginal people contest this claim on space through exceptions in law and policies which makes the whole process of transformation of urban space temporary and gives an unstable character to the circulation of capital and its outcome (Chatterjee, 2006 and Sassen, 2004). The emergence of this line of trend is due to the contextualization of urban investment which is guided by the social, cultural, and political factors. The global policies are transformed to suit the local needs and local governmentality makes temporary and informal arrangements that can be against the law and policies and even act against the neoliberal structure.

The two trends of thinking give two perspectives of thinking on neoliberal policies and structure. The urban space is the outcome of an amalgamation of global as well as local factors, where space is contested and rights are confirmed. This gives stability and a sense of surety to the invested capital, but changing the goal post and temporary arrangements with exemptions in law and policies cannot be denied in the third world and global capital is under the influence of local political whims. This sense of power due to democratic values to the marginal people is seen by people and argued by scholars in favor of neoliberalism, where global capital is not the exploiter of resources but provides avenues for the people to claim their rights even if they are against the law and policies of the government (Chattopadhyay, 2017).

2.4 NEOLIBERAL SPHERE OF THOUGHTS

The emergence of neoliberal policies and philosophy engulf in itself every sphere of socio-economic, political aspects and governance institutions is not an exception to it. It can be argued with evidence that neoliberal policies and philosophical thought first appeared in the government institutions. This set the stage for the other dimensions of the sphere of society and governmentality is the basis for neoliberal policy implementation. The inclusion of the private sector in governance, the emergence of the PPP model for civic amenities, the inclusion of contract workers in the government departments, and the inclusion of private firms in service provisions which were the exclusive domain of government earlier set the stage for structural changes and technology aspect of governance and governmentality. This transformation also led the new arrangement of governance to move away from the welfare State. The government emerged in the hybrid form underlying the norms of market orientation and profit motive, which can exclude people from the services, narrowing the sphere of public goods which are based on the principle of non-exclusion (Roy, 2009).

The philosophy behind the neoliberal sphere can be seen in the destruction of older socio-economic and political aspects and construction of new structures favoring new approaches, new outlook, new goals, and, new ideas which are required to make the new structure functional and new aspects worthy of being transformative. As Edward Soja (1987) argued that the need for deconstruction and structural reconstruction is breaking the norm, and the 'secular trend' which proved incapable to deal with the changed circumstances, this led to the sequence of events that destroy the existing structure in order to set the stage for a new and noble structure to emerge out of the reconstruction process. This also changes the socio-economic and political aspects and provides the new structure for workable space.

Neoliberal is not a single strand of philosophy but a flux of philosophical ideas dealing with different spheres and different limbs of the structure. This can be seen in the philosophy behind all the processes which signify the neoliberal trend that had emerged after the 1980s. some of the significant processes regarding this trend are, the emergence of the concept of global city model where cities emerged as a limb of global capital, the new trends in urban development and growth, whether it is Gentrification, entrepreneurial growth, conflicted and contested space in urban areas

or the deconstruction of old structure and reconstruction which provide space for new issues, especially the emerged socio-economic and political polarization.

The philosophical background for neoliberalism not only provides the space as a contested and contentious area of the urban environment, where rights are broken and new formalization takes place, where new social issues of ultra-rich and extreme poor coming together in the urban space. This also provide the dynamicity to the urban environment. The linear model of transformation is redundant to explain the changing phenomena and the end point of transformation cannot be predicted given the urban space a contentious, volatile and of uncertain character (Brenner and Theodore, 2005).

This philosophical doctrine led to the orientation of institutions and governmentality towards the market principle and to policy realignment across the world. It is this economic space which gave impetus to the ideational and ideological change in the socio-economic and political sphere. The field of political economy is enlarged, the government and governance follow the neoliberal economic governmentality, that shifts the idea of welfare to the background and led to the emergence of profit orientation, market mediation, and, social contestation. These new principles and philosophies have been criticized but also favored by different trends as highlighted above and this is where perspective plays an important role in dealing with the new socio-economic and political problems which have emerged in the urban space.

2.5 ASPECTS OF NEOLIBERAL PHILOSOPHY

Neoliberalism emerged as a process where the structural transformation that in Soja's language is 'the destruction of old structural aspects and reconstruction of the new structure' to set the stage for the socio-economic transformation and politics of the space along with governmentality. This process of transformation is continuous and is guided by the philosophy of market, which derives the policy change, structural transformation and put a carpet on the welfare function of the State. But it can be argued that this structural transformation and realignment of philosophical guidance is not the linear process as the first light reflects, but a complex set of processes that are not isolated

but had been and has been guided by the socio-economic and political aspects. It is further influenced by the geography, historicity of a place and always path-dependent.

This set an amalgamation of different strategies which guide the transformations and realignment of ideologies that are path-dependent. This, in a sense, means that they vary spatially and have an influence on the historicity of a place. This led to the emergence of diversity in institutional transformation and superstructure, but this doesn't mean that the underlying ideology and philosophy of market orientation lose its significance. The importance of deep structure which guides the neoliberal idea is intact and steadfast, giving the effervescences of the market to the reconstructed structures and create a new form of social, political inequalities, and new sets of conflict (Peck and Tickell, 2002; Gough, 2002).

This emergence of market orientation doesn't mean its predominance, and that the government is shadowed by the neoliberal policies, but government and governmentality are the part and parcel of neoliberal structure and actively involved in the process of transformation and maintenance of the neoliberal structure. It can be argued that the goal post has been changed, not the players, although the addition of new private players to make the system more efficient as argued by the neoliberals or make the system more exploitative and new ways of exploitation as argued by the Marxist. But one thing is certain, that the government and its agencies are the active agents of neoliberalism. Hence State power is used to reach the desired ends and the State shies away from its earlier functions especially freebies and welfare.

The system have become market-oriented and exclude the marginal people due to their purchasing power. This whole process of transformation and reconstruction set the space for the new form of conflicts and contestations, where old structural conflicts assume new forms and new contest emerges in social groups, economic agents, and political elites.

There has been criticism that the active involvement of government legitimizes the ills of neoliberalism and led to the formalization of exploitation as in the case of loss of traditional rights of people, but it also provides new avenues for the marginalized mass to raise their voice and strengthen the democratic setup of the social and political structure (Brenner and Theodore, 2002). The contestation and conflict sets the stage for its outcomes which seems to be fatal and destroyable under its own weight, but deep analysis showed that neoliberalism always device new

strategies to save itself from this cataclysmic event and always reinvent itself into new forms socially, economically and politically along with transformed governmentality and governance institutions (Babb, 2002; Gill, 1998)

2.6 NEOLIBERALISM AND STRUCTURAL RECONSTRUCTION OF URBAN SPACE

The analysis of the transformation of urban space in the post-Fordism era, the emergence of ‘new rule’ dealing with Thatcherism, the emergence of third world countries as the destinations of capital investment, the tertiary circulation of capital in the global south, brought with it the free market philosophy in their governance structure, economic organization. The economics of welfare was discarded in the traditional sense. The urban areas are the prime sites for these structural transformations leading to the structural destruction and reconstruction. However it can be argued that the emerged structure and neoliberal space is not the carbon copy of theoretical ideation, but emerged as a space full of contestations, conflicts, complexities, and diversities due to the path-dependent neoliberal outcome, geographical specificity, and historicity of the urban space. It is this uniqueness and diversity of outcomes in urban space which make the analysis of neoliberal outcomes special and interesting worthy of being analyzed at the individual city level (Peck and Tickell, 2002).

These diversities of outcomes have been underscored by Theodore and Brenner as the ‘actually existing neoliberalism’ which has emerged in the urban space based on path and context dependencies. Urban space provides the initial bedrock with historicity and place specificities on which the neoliberal policies and structural specifications are applied and worked upon. It is these context specifications that give the diversity to the outcomes of policy applications and the superstructure is based on the amalgamation of both factors which is diverse spatially (Agnew and Corbridge, 1994; Brenner and Theodore, 2002; Peck and Tickell, 2002; Gill 1998; Bourdieu, 1998; Babb, 2002).

2.7 Urban Development during Neoliberalism

The emergence of market philosophy in the global order led to the transformation of urban areas according to the structural requirements of neoliberalism, which led to the structural destruction and reconstruction. This ultimately led to the transformation of urban space, urban morphology

and internal structure of the city. A city is modified and reorganized according to the socio-economic and political conditions of the urban space. These underlying factors which can be considered as the 'deep structures' as outlined in the paradigm of structuralism, undergo a transformation under the influence of neoliberalism (transformation of elements of an open system where the links of the elements and the element itself undergo transformation). So it can be argued that the system analysis can be a good way to explain the undergoing transformations as it is easy to have an idea of change when the constituting elements change or their links undergo the transformation. This system analysis or structuralism in the neoliberal era can be the guiding methodology to have a comprehensive idea of how the system undergoes the transformations along the lines of neoliberalism.

The most fundamental way to understand the effect of neoliberalism is the emergence of 'supra-local' (Brenner and Theodore, 2002) forces which are the most visible form of change in urban governance. The emergence of new policies, laws, bylaws, appropriate planning, and above all the attitude and philosophy of the local government which shied away from the welfare function of government. It based its operational capability on the principle of the market which is exclusionary and exploitative. This model is intensely protected and advocated by the local government to be efficient, matching the global practices, its long-run trickle-down effect and as a boosting factor for the local capital to invest in the public-private partnership (PPP) mode of arrangement. But the basic argument which led one to think 'why do the local governance and local political elite are so much concerned about the protection and defense of neoliberal ideas and philosophy', there are many dimensions to answer this and argue about them, but the simple logic of global-local collusion where global capital is seeing the third world and other areas as the possible destinations for the investment of accumulated capital. The local elites are benefitting by the infrastructural investment by the foreign capital which advocates private participation and private local investment in the name of efficiency and better mode of service provisioning.

This is a contested field as can be seen in different urban aspects, say the loss of traditional rights of people and erosion of customs in the urban space, which led to the emergence of new formalities and informalities, where traditional urban space claim of people is replaced by the new formalities by the use of laws, bylaws, and policies. At the same time this structural transformation also led to the urban informalities in new forms and new space like the urban shanty colony,

marginalization, gentrification and recent green gentrification in Boston is the prime examples. Neoliberalism has led to the emergence of new forms of inequalities and new forms of dispossession. The 'accumulation by dispossession' phenomena of the neoliberal order is intensely and furiously protected by the global and local governance factors. This led to the increased contestations, conflicts, and also political mobilization of people which is considered to be the deepening of democratic values, but argued by the critiques that this led to the erosion of the order itself in the long run as exemplified by the surrender of local governance policies, laws, and bylaws to the local pressure which are able to secure temporary relief in the form of concessions, monetary benefits and other instrumentalities (Agnew,1998; Harvey,2000; Castells, 1972).

The emergence of 'the right to the city' idea in the Lefebvre's work "Le Droit a La Ville" in 1968 and the subsequent work of Castell and Harvey gave the central idea of inequality and commodification in the urban space. The classical Marxist 'circulation of capital' ideas with special reference to the emergence of basic idea about capitalism that it modifies its operational structures just to save itself from the destructive cycle. The "neoliberalism" is just one way to bypass the destructive phase of capitalism. So in one sense it can be argued that present form of capitalism and its modus operandi especially the neoliberal economic order is nothing but the capitalism at its new heights of exploitation and destruction, just to save itself from the apocalypse.

The critique of neoliberalism is also extended to the modus operandi of local government to diffuse the contestations, conflicts, oppositions, and dissents through different policy frameworks. This set the stage for the basic socio-economic-political and moral change in the societal values of the urban space, where new values and morals are thought to be the guide and lightning conductor for the oppositional philosophies. It is tactic to save it from the oppositional philosophies and mobilizations, which ultimately secure the perpetuation of neoliberal philosophy, although with contextual modifications and socio-economic and political dynamism (Bhide, 2006).

The emergence of these phenomena in the urban arena led to the emergence of new socio-economic and political restructuring of the governance in the urban space. It is where a new form of contestation has emerged due to the emerging dynamic structures, which create a new class of political elites and new structures which favor few over many. This create new kind of inequality and led to the differential treatment from the governance angle. The emerged governance structure

is meddled by the private sector, leading to loss of transparency and loss of exclusive government clout over the policies of governance. This leads to the emergence of increased say of the private sector in the developmental projects and setting the developmental contours. Governance has become the privately meddled affair. The profit of the projects and the economics of the system determine the feasibility of various schemes and their implementation.

At the same time, the major function of governance is limited to the stabilization of existing structures and limiting to the role of welfare, allocation, and distribution. It can be validly argued that the scope of government in the governance aspects has been undermined and in some specific non-essential sectors it has been completely replaced by the private sector. The urban governance structure is dominated by the PPP mode which is argued to be the best system, most efficient, economically viable, culturally acceptable, and technologically feasible, which is highlighted by the emergence of the private sector in technology and better provision of service due to the better range of goods and better range of services. So the new structure although create exclusion and marginalization of a certain section of urban dwellers, also have some positive aspect and one of them is the better provision of services, an increase in the range of goods, and efficiency in the system of governance. The government is been argued to be more responsive, accountable, and better equipped with the emerging urban challenges (Keil and Boudreau, 1980).

The urban transformation is guided by the philosophy of neoliberalism and it has been argued by different city-level studies that urban transformation has been shown to undergo restructuring depicting the neoliberal philosophy. The Greng's study on 'Los Angeles' where urban transit policy had been restructured for the affluent section who had the ability to pay for the costly transport and neglect the needs of lower-class people who depend mainly on the transit system to the city accessibility. This shows the emerging trend of urban transformation where the restructuring is been guided by the philosophy of neoliberal thinking, market and profit, not the idea and philosophy of the welfare State. Martin (2017) argues about the effect of neoliberal policies at all Indian levels which have been implemented after the Balance of Payment (BOP) crisis of the 1980s which itself was the outcome of excessive spending. The emergence of the winner and loser class out of the phenomena of neoliberalism has been argued by Martin, where the looser class is the agriculture-related activity through the "structured and formalization of marginalization" of these primary activities through policy initiatives, whether in financial sector

liberalism where priority sector takes a back seat or the decrease in investment in the agriculture sector, which decreased from 14 % to 6 % in between 1986 to 2000 (Posani, 2009). This has been linked to the urban space as the stress in the agriculture sector and emulation of Lipton's "urban bias" in the country led to the huge migration in the urban space, which created new kinds of problems for the urban region, which itself was going under neoliberal transformations. It led to the creation of slums, informalities, and overcrowding which filtered every kind of socio-economic and political development in the urban space. (Banerjee and Guha, 2006) argued that in Mumbai metropolitan region, 60% of the population lives in 6% area of the city mainly slums and shanty makeshifts.

2.8 URBAN GOVERNANCE DURING NEOLIBERAL PERIOD

The emerging field of analysis is the role of government in the policy implementation and space setting for neoliberal policies. The key aspect and foundational pillar of neoliberalism are the market forces at the global level which determine all other structural aspects, but this can be futile if economic-political collusion and consensus fail (Fox Piven, 2015). The process of deregulation of business, the "erosion of commons" as the State receded from the key service provisioning in the urban space, flexibility in labor laws and their dilution, weakening of consumer laws, environmental laws, workplace safety, etc., these all are the product of the favorable policies of the government and as argued by (Fox Piven, 2015) would doomed to fail if the political dispensation has not cooperated.

The economic-political collusion has been achieved through the sidelining of labor parties, especially in the USA where the economic might of business has been used to lobby the key government policies (Fox Piven, 2015). The era of redistribution has undergone a fundamental transformation, where corporate taxes are being slashed and the middle working class is being burdened by taxes to finance the debt obligations of the State, which used the money to create infrastructural requirements for the new order (Harvey, 2008). The redistribution if at all to the poor and marginal section is done very restrictively, where State philosophy is being transformed from being "welfare" to "workfare" (Fox Piven, 2015).

However, the stage of urban growth and its restructuring in the neoliberal era is evidentiary and critical literature bluntly puts up the arguments for the ills of neoliberalism as has been argued above, but seeing the process through the single frame runs the risk of being biased. Hence, it becomes essential to analyze the positive aspects of the neoliberal policies in the light of urban transformation, particularly the role of governance and local factors which gives rise to spatial specificities. The role of neoliberalism and economic development which is paralleled by urban development has been accepted even by the staunch critiques of neoliberalism (Harvey, 2008). The process of commodification is not the exclusive product of neoliberal policies as it had been the main mode of accumulation in the earlier modes of production (Harris and Scully, 2015).

The commodification is a historical process even before the dawn of capitalism as a philosophy. The process of de-commodification in the neoliberal era in the global south and the economic policies predating neoliberalism in these countries under the hubris of “welfare” (Harris and Scully, 2015) is no less important in analyzing the urban structure in the light of historicity of urban transformations. So it can be argued with evidence that even in the Keynesian era, when States were expected to play a greater role in the welfare of the masses, the policies in the global south were not seeing the eye of the target and not fulfilling its philosophical objectives. The importance of the State in general and local government in particular in terms of social assistance (Harris and Scully, 2015), the emerging local elites, and its political implications under collusion of local politics and private capital (Singh et al., 2015), the welfare function of local government under the democratic political compulsions are not less important in analyzing the emerging role of the State. It has been argued that in the era of neoliberal policies, there has been an increase in the social assistance programs in the global south contrary to the prevalent belief (Harris and Scully, 2015).

There has been a great emphasis on the restructuring and associated fallouts of neoliberalism in the socio-economic setup, while at the same time, neglecting the historical Keynesian model and associated welfare. This bleak the role of the State as a welfare organ working for its people and it is in this context (Blad and Fallov, 2018) argued the modified role of the State, especially in the welfare. This has not vanished but has modified itself to the demands of restructuring under the market orientation and it can be argued that it has even increased in some spheres requiring social assistance as a foundational plain for the neoliberal policies (Blad and Fallov, 2018). This is by no

means to State that there is no structural challenge to the welfare policies in the restructured urban space, as there are policy responses and restructuring under the “New Rule” which makes it difficult to align the welfare policies to the neoliberal outlook.

The structural challenges and philosophical constraints can be in the form of the right-wing rise under the new socio-economic order based on xenophobia and populism, especially in Europe and the USA (Buono, 2018). But this may not be the case in the global south and it is in this context of spatial variability and specificities with the influence of local contextual factors that the response of the welfare State towards the social assistance programs is varied and localized. This non-uniformity and non-universality of the policies and associated impact on the welfare approach give it a dynamic character (Blad and Fallov, 2018). The impact of citizens’ protests and demonstrations played a key role in keeping the flame of welfare policies alive and their impact on policy modification and the duress of this in making the State to approach the welfare of the masses (Ciccio and Concha, 2018).

The democratic political setup and electoral politics of south Asia is a prime example of this locale politics and power of the demos. The decline of the traditional approach to the rights demand, especially the reducing role of trade unions and their fall out is also associated with the engagement of the State to the different sphere of inclusion and welfare. New actors have emerged to assist the State in its welfare approach especially the NGOs and local government institutions (Blad and Fallov, 2018), and the State is focusing on the home as a unit of inclusion and social welfare (Fallov and Nissen, 2018).

It is not the issue when social welfare takes a back seat but why it took that, and it is in this context where social issues are sidelined and believed to be solved by the market forces in the process of development. The emergence of new problems and associated inequalities made it obligatory for the State and people at large to shun the idea of market equalizer even in the context of political forcing in a democratic set up, to look for the new ways of welfare approach with new actors and modified implementations (Pettinicchio, 2020). This process is mediated by the welfare professionals as NGOs, voluntary organizations, self-help groups, who emerged in the neoliberal conflicting environment, where they negotiate with the competing institutional setup and played the role of intermediators between the top echelons and marginal sections. They play the role of

an equalizer and basic provisions fulfillment, but also provide the ground for unhindered implementation of neoliberal policies and helps in dissipating the emerging discontent in society.

The role of these intermediaries is more important in the urban space due to densification, marginalization, and informalities in the cities of the global south (Blad and Fallov, 2018). The impact of neoliberal forces and associated restructuring give rise to the varied State responses towards the welfare policies, as different States have different strategies to deal with the globalized market logic and space-time convergence. The resolution of the simmering discontent among the masses and defending the logic of the market in the democratic political system led to innovative steps of welfare, which are deviant from the past system of social welfare and more logically satisfied the avenues for neoliberalism (Pettinicchio, 2020).

New actors in social welfare have emerged as a savior for the community either in congruence with the State or as independent organizations, institutions and financially supported by transboundary funding. These new actors fill the 'void of welfare' created by the reduced role of the State by engaging in providing welfare services (Desroches and Poland, 2021). It can be argued that the welfare programs have not lost its essence and have been modified to suit the logic of the market and neoliberal expectations. However, there are examples where welfare does follow the traditional suit, and at least in the case of social housing projects in Canada where the social housing projects does not follow the neoliberal expectations (Desroches and Poland, 2021).

There is always a justification given for the restructuring and redefining of the social welfare work in the changed political, economic, and social context. This not only tried to justify the reduced role of the State, but also gives enough space for the explanation of the reorientation of welfare itself (Spolander et al., 2014). The fundamental question regarding the welfare aspect and inherent societal variations related to it, has been dealt with (Spolander et al., 2014), where knowledge of what constitutes social welfare, especially in the global north and global south, gives rise to the contextuality and localization of social welfare policies and its variability across time and space.

The emergence of new public management with the involvement of the private sector in public service provisioning shed the light on the uniformity of neoliberal policy implementation and associated philosophical consideration of better services, efficiency, reliability, and long-run equalizing effect. While under this uniformity there is contextuality, where the degree of new public management by privatization and superstructure related to it speaks the variability hues

(Spolander et al., 2014). The impact of neoliberalism and associated “structural violence” that disproportionality affects the vulnerable most (Sakellariou and Rotarou, 2017) can have an impact on the associated spatial processes and local variability, with varied impacts on different people and their vulnerabilities (Spolander et al., 2014). So it can be argued that the associated variability in socio-economic and political processes across space, leads to two determinants, local vulnerability of people and global vulnerability of a State (global north or global south in global context), therefore analysis of both the factors are important in determining the welfare analysis in the neoliberal era.

Welfare functions of the State and societal welfare have a deep correlation with the economic policies of the State and neoliberalism has a deep impact on this, as this new system of economic organization impacted welfare functions by its impact on marketization, consumerization, managerialisation, and de-professionalization (Ornellas et al., 2020). The restructuring of social work impacted by the new above-mentioned traits of neoliberalism leads to the management of social work along the lines of new economic order. This highlighted the new focus of social welfare due to challenges that emerged out of the restructuring and the emergence of a new type of marginality in society (Ornellas, 2020). The emergence of new actors in the welfare function and associated implementation policy underwent restructuring (Pettinicchio, 2020), which implies issues related to welfarism.

Social welfare professionals understand the importance of changes in the neoliberal policy framework and it is this understanding which is an important attribute for the social worker to carry on with the intent of social justice and welfare of the marginal section. This understanding of social problems led to initiatives at the international level to tackle the policies of neoliberalism, and a holistic approach to the welfare of the masses as “The International Federation of Social Workers (IFSW, 2014) and the International Association of Schools of Social Work (IASSW)” adopted a new definition of social work, with a renewed focus on welfare functions highlighting the importance of “ Theory and knowledge of social work with local specificities and a paradigm shift from the western dominated social welfare understanding, with a renewed focus on collectivism rather than individualism and macro analysis of social problems with structural analysis (Ornellas et al., 2020).

This renewed focus highlighted the importance of critical geographers' domain and their structural interpretation of inequality and associated poverty, which require collective action and focus on the masses. The contradiction of neoliberalism and social welfare especially, the welfare of the masses stands polemical and the approach to social welfare is contextually modulated and articulated with modifications both to suit the global neoliberal policies and local context. It is in this context (Ornellas et al., 2020) argued that there is a divergence between utopian definition and actual ground practice.

The emergence of 'marketization', 'consumerization', and 'managerialisation' (Spolander et al., 2014) in the public services reduced the importance of social work professionals just to give way to the modified versions of them in the neoliberal era, where social work has been modified under the new order. This emerging 'de-professionalization' (reducing professional discretion, deskilling social work, and diminishing professional autonomy and identity) (Ornellas et al., 2020) does not wipe out the social work, but opened new avenues and refocuses on the new marginal structures that emerged in the neoliberal era. The focus of the State on the welfare of the family as a unit and reducing the labor rights at the same time reduces the collective bargaining power (Harvey, 2008; Spolander et al., 2014) as a case example of restructuring of welfare Functions in the Neoliberal Era.

2.9 URBAN TRANSFORMATIONS AND GEOSPATIAL TECHNOLOGIES

The LU/LC change mapping requires spatio-temporal data analysis of the satellite imagery. There are various methods to analyze the change detection based on the satellite imagery. There are various approaches used for analysis and interpretation of satellite imagery. The approaches can be post-classification cross-tabulation, cross-correlation analysis, knowledge-based expert system, neural network, and object-based classification system (Civco et al., 2002). The change detection can be in terms of the ratio-unit change in the areal extent of a particular type of land feature as the build-up area. The analysis of the post-classification data obtained after the image classification using supervised and unsupervised image classification can be done using different techniques. However, the single method focused to analyze the change detection cannot be employed due to methodological limitations of any single method and change detection to be done through a multi-method approach to overcome the limitations of different methods (Civco et al., 2002).

The analysis of the post-classification cross tabulation method where tabulation shows the possibility of change and impossibility of some changes. Some changes are highly noticeable such as the change of agricultural land into the urban built-up area. While some changes are highly improbable and very low chances such as the change of residential area into forest area. These changes can be shown in the cross-tabulation as highly improbable nearing impossibility and through this cross-tabulation, a matrix of change probability with a gradation can be prepared to study the change of land use in urban space.

The cross-tabulation helps us to understand the probability of urban land use transformations and its possibility under different circumstances. It can be a nutritious feed to the critique where it can be argued that water body can be transformed into a build-up or barren feature under different circumstances of land reclamation and dwindling water source in the catchment which is valid up to a certain extent. It can be seen in urban transformations but the probability is very less and in some cases, it is nearly zero. So cross-tabulation is a good option to show the urban land use transformations and their possibility to get transformed into different types.

However, the modeling of LU/LC does not remain specified to the change detection spatially and temporally but can be a suitable guide for urban development scenarios and prediction can be done through the modeling process which can give us the insight into future growth in urban space in a *ceteris paribus* situation. This modeling can be used for the local development as prediction is the basis of any developmental intervention. LU/LC modeling focuses on the urban land-use dynamics, diagnostics modeling, and predictive emphasis (Brown et al., 2012).

Modeling of LU/LC for the urban areas is an important task not only for the present State analysis but for future prediction, especially to highlight the importance of sustainability in the urban space. It can be argued at the global level that the urban land cover is just 2% of the total land area and can have minimal impact on the sustainability at least in the global level analysis, but this could be erroneous as it forgets the hinterland dependence of urban settlements and impact of this dependence on the land use of the hinterland (Lambin et al., 2001). This can be fairly argued that at the local level as in the case of Gurgaon where this lightning rise of the city could have implications for the sustainability apart from the socio-economic transformations and one area of the sustainability issue is the emergence of water scarcity in the region generally and city region specifically (Singh and Kumar, 2015). However, the scope of Gurgaon city's impact is not limited

to the land-use change within the hinterland as argued by (Yadav and Punia, 2014) in terms of city growth at the expense of agricultural land and (Pramanik et al., 2021) argument of core densification after 2008 in the city, but fair analysis can take the study beyond the city and its hinterland as the city is the seat of migrated labor, capital, and technology and its implications can be felt in the faraway areas in the form of “remittance landscape” (Lambian et al., 2001), but this analysis is beyond the scope of this study and focus should be spatially limited to the city region itself due to wanting of time and simplicity.

2.10 SUMMARY

The emergence of neoliberal policies and associated neglecting of welfare functions has been highlighted by the critical literature on neoliberalism where the State has reduced its role in welfare at least in the traditional sense as restructuring of socio-economic order also gives rise to the restructuring of social welfare and this led to the emergence of new approaches to welfare with new social actors working out within the constraints of the neoliberal order and the market mechanism. The neoliberal policies with different hues of informalization, deindustrialization, reindustrialization, beyond Fordism, global city, entrepreneurial urban space, privatization, gentrification, green gentrification, and socio-spatial polarization has been employed contextually in the global south with new modes of governance and its position vis-à-vis private players with a new model of service provisioning, a new role of the State, and power structure in this flux. The old socio-economic order has been transformed and new policies give rise to new approaches to welfare in the social context. The emergence of private players in the new context reduced the role of local government in the provisioning of services and associated welfare policies but this does not mean it shedding of welfare altogether as the new approach has been adopted in the changed global-local context. The principle of marketability has allowed the space for the local governance to rescale, reorganize and restructure itself and the emergence of entrepreneurial scale leads to the space for non-formalization, contractualization, and commodification.

Urban space is the milieu of differentiation and space of dispossession where space is being transformed and restructured to suit the global capital and led to the dispossession of traditional rights of the people, however, it is not confined to this as it has been a space for new avenues and opportunities and traditional urban players and new urban elements are adopting new strategies to

balance the forgone and incoming opportunities. The urban milieu is being restructured to suit the needs of neoliberal capital but it can also be fairly argued that even in the reduced role of local governance factors under the new conditions, the role has been very significant and there is evidence of a new form of social welfare as welfare itself has been restructured and reoriented to suits the emerging needs. The logic of neoliberalism and its market philosophy determine the urban needs and want but in this milieu, the urban governance role has not been reduced to zero and the impact of neoliberalism would have been more devastating to the marginal section of the urban population especially in the global south if the State and local government factors had completely abdicated its functions of welfare and fall in the line of market principle. So the fair argument is that the role of State and local government in the welfare sphere has been transformed by the neoliberal policies and there is no complete abnegation of welfare policies by the State.

This reduced role of the State in one sphere as it allowed the private players to determine the urban structure and urban form by involving it in the requirements of urban needs adopting the logic of 'individualism', 'private property, profits, and market-based mode of production and distribution but it also has another aspect where the role of the State has been transformed to function efficiently in the role of regulation, allocation and restructuring of distribution especially the welfare function and this restructuring and transformation of functions can be seen through the critical lens or otherwise as it can be a facilitator for capital creation, multiplier effect and increasing the size of the pie for redistribution and an overall increase in the wellbeing of society as a whole.

The neoliberal policies also have an effect on urban land use and its transformations. The emergence of the private sector in the urban civic amenities although on one hand leads to the emergence of better municipal services but at the same time, also leads to the exclusion of people especially the marginalized section of the society, and led to the process of accumulation by dispossession. These policies and their implications have a far-reaching effect on urban life and its institutions. The dominant actors of institutions have been restructured by the inclusion of private players and their dominant logic of profit maximization is giving the laissez-faire philosophical angle to the whole process where there is no State intervention in the economy and market factors decide the availability and prices of goods and services.

The process of urban transformations whether it is its infrastructure in the form of Gated communities, gentrification and emerging phenomena of green gentrification in the western cities all show the process of systematic exclusion of marginalized people. The economics of urban space is driven by the process of profit maximization and the market as the dominant player in the allocation of goods and services. The logic of money and commodification of various services shows the tertiary circulation of capital. The emergence of the private sector in the municipal services and the receding of the State from its welfare function shows the neglect of duty by the State which had a dominant role in welfare earlier. However, we need to be cautious with the last argument about the welfare function of the State as welfare itself has been restructured and transformed with a new approach of targeting the marginal and it is debatable to argue that the State has diminished its role of the welfare of the people.

The urban space is being guided by the logic of capitalism and neoliberal policies and their implementation is marginalizing people with a new logic of private is best and most efficient but what about its exclusionary effect and its implication on the traditional rights of people. The emerging urban problems especially hyper-urbanization and extreme poverty can also be attributed to the neoliberal stroke. There is a growing literature that is arguing against the market principles and its exclusionary effect which is dispossessing people of their traditional rights and also displacing them to marginal areas examples of which can be shanty slum settlements. Urban is being transformed by the logic of neoliberalism and its exclusionary effect is more explanatory now.

2.11 References

- Banerjee-Guha S. (2009) "Neoliberalising the 'Urban': New Geographies of Power and Injustice in Indian Cities", *Economic and Political Weekly*, Vol. 44, pp. 95-107.
- Banerjee-Guha, S. (ed) (2010) "Accumulation by Dispossession: Transformative Cities in the New Global Order", *SAGE*: New Delhi.
- Brenner N. and Theodore N. (2002) "Cities and the Geographies of Actually Existing Neoliberalism", *Antipode*, Volume34, Issue3, pp. 349-379.
- Brenner N. Theodore N. (2005) "Neoliberalism and the urban condition", *City: Analysis of Urban Change, Theory, Action*, Volume 9, Issue 1, pp. 36-42.

- Bardhan P. (2002) “Decentralisation of Governance and Development”, *Journal of Economic Perspectives*, Vol. 16, No. 4, pp. 185-205.
- Bhattacharya P.C. (2002) “Urbanisation in Developing Countries”, *Economic and Political Weekly*, Vol-XXXVII No. 41, Pp. 56-63
- Blad C. and Fallov M.A. (2018) “Social Welfare Response in a Neoliberal Era, Policies, Practices, and Social Problems”, *Critical Global Studies*, Volume: 132/08, pp. 87-93.
- Benjamin S. (2010) “Manufacturing neoliberalism: lifestyling Indian urbanity” SAGE.
- Castells M. (1980) “The urban question: A Marxist approach”, *MIT Press: Cambridge*.
- Chatterjee I. (2011) “Governance as ‘performed’, Governance as ‘inscribed’ new urban politics in Ahmedabad”, *Urban Studies*, vol.48 pp. 2571-2590.
- Desroches M.E & Poland B. (2021) “The place of care in social housing in a neoliberal era”, *International Journal of Housing Policy*, DOI: 10.1080/19491247.2021.2002657.
- Harvey D. (1976) “Labor, capital, and class struggle around the built environment in advanced capitalist societies”, *Politics & Society*, vol. 6(3), pp. 265-295.
- Harvey D. (1985) “Consciousness and the urban experience”, *Oxford: Blackwell*.
- Harvey D. (1985) “The urbanization of capital”, *Oxford: Basil Blackwell*.
- Harvey D. (1990) “Flexible Accumulation through Urbanization Reflections on "Post-Modernism" in the American City”, *Perspecta, Theater, Theatricality, and Architecture*, Vol. 26, pp. 251-272.
- Harvey D. (2003) “The right to the city”, *International Journal of Urban and Regional Research*, vol. 27(4), pp. 939-941.
- Harvey D. (2003a) “The New Imperialism”, *Oxford University Press*.
- Haris K. and Scully B. (2015) “A hidden counter-movement? Precarity, politics, and social protection before and beyond the neoliberal era”, *Springer Science+Business Media Dordrecht*, pp. 67-74.
- Lefebvre H. (1984) “The Production of Space”, translated by Donald Nicholson Smith, *Basil Blackwell Ltd*, Oxford, UK.
- Lefebvre H. (1991) “The production of space”, Oxford: Blackwell.
- Ornellas A., Engelbrecht L. and Atamtürk, E. (2020) “The fourfold neoliberal impact on social work and why this matters in times of the COVID-19 pandemic and beyond”, *Social Work*, vol.56. pp. 87-92.
- Paddison R. (1993) “City marketing, image reconstruction and urban regeneration”, *Urban Studies*, Vol. 30, No. 2, pp. 339-349.
- Perlman J. E. (2007) “Globalization and the urban poor”, United Nations University: Helsinki.

- Piven F.F. (2015) “Neoliberalism and the welfare State”, *Journal of International and Comparative Social Policy*, 31:1, 2-9, DOI: 10.1080/21699763.2014.1001665.
- Pettinicchio D. (2018) “Social Welfare Responses in a Neoliberal Era”, edited by Mia Arp Fallov and Cory Blad. Boston: Brill. pp. 301-307, ISBN: 9789004323926.
- Rao U. (2010) “Making the Global City: Urban Citizenship at the Margins of Delhi”, *Ethnos*, Vol. 75, No. 4, pp. 402-424.
- Sakellariou D. and Rotarou E.S. (2017) “The effects of neoliberal policies on access to healthcare for people with disabilities”, *International Journal for Equity in Health*, 16:199, DOI 10.1186/s12939-017-0699-3
- Spolander et al. (2014) “The implications of neoliberalism for social work: Reflections from a six-country international research collaboration”, *International Social Work*, Vol. 57(4) PP. 301–312.
- Springer S. (2013) “Accumulation by Dispossession: Transformative Cities in the New Global Order”, *Urban Study*, vol. 50, pp. 40-45; DOI: 10.1177/0042098012467839.
- Singh et al. (2020) “Neoliberal Spatialities in Gurgaon”, *Traditional Dwellings and Settlements Review*, Vol. 31, pp. 7-22
- Saunders P. (2003) “Social theory and the urban question” *Routledge*.
- Sassen S. (2001) “The Global City: New York, London, Tokyo” *Princeton University Press*.
- Yadav A. and Punia M. (2014) “Socio-Economic and Ecological Transformations of the Peri-Urban Region of Gurgaon: An Analysis of the Trickle-Down Effect in the Post-Globalization Era”, *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Volume XL-8.

3 CHAPTER 3: SPATIO-TEMPORAL LAND USE LAND COVER CLASSIFICATION AND CHANGE DETECTION

3.1 INTRODUCTION

Landuse and landcover are spatial phenomenon which determines the spatial coverage of earth's surface. Landuse is more related to the human activities and have an anthropogenic angle to the land. In very simple terms, landuse is the human use of land for various socio-economic and political purposes. Some of the prominent landuse can be categorized into major activities, such as Primary, secondary and tertiary activities. Primary activity is concerned with the landuse of agriculture, mining, quarrying. Secondary activity concerned with the landuse of manufacturing such as the modern industrial space, while tertiary activities are more related to the services and other managerial functions, example commercial space, retail outlets. One of the most ubiquitous landuse category is the residential settlements which is found in almost every part of the world (Kerle et al. 2004).

Landcover is the surface cover on the ground, whether vegetation, urban infrastructure, water, bare soil and other. It covers both the natural and human made phenomenon. One major category is build up cover in the urban environment, while build-up cover can be further categorized into different landuse such as residential, industrial, roads, commercial and retail. So landcover is a physical phenomenon, while its further categorization is determined by its use by the humans that determines the landuse of the space (Kerle et al. 2004).

The supervised image classification technique using the maximum likelihood classifier is used to study the spatio-temporal land-use changes of the Gurgaon city. The technique of supervised classification is better than the unsupervised classification as it is carried out using standardized classification methods and with the active help of a base map of google earth, and satellite images. To understand the spatio-temporal changes in the land use of the city, the base map is prepared following the areal coverage of the Gurgaon-Manesar master plan prepared in 2007. The build-up area of the city along with the urban fringe have been taken up in the base map area as the city is not confined to the Gurgaon tehsil region due to the development of the Gurgaon-Manesar master plan in 2007 and its subsequent revisions. So to overcome the difficulties of selecting the

boundaries of the city region, the region's shapefile have been prepared using QGIS software that is subsequently taken up as the study area in the image classification and interpretation.

To determine the spatio-temporal expansion of the city and its densification, three base year has been chosen for the study i.e. 1990, 2000, and 2020. The technique of supervised image classification has been used to demarcate the build-up area from the other uses of land. To overcome the impact of environmental factors preprocessing of the images and selecting the images in the temporal slot of March- April has been done to overcome the cloudiness and haze problem of monsoon and winter months as the two months have relatively clear weather. The Residential class in the classified maps have all types of build-up area comprising residential, commercial, and other types of concretization of the city proper except the roads. It has been seen in the classified images that the build-up area has increased at the expanse of agricultural land. Agriculture land is first converted into open plots and these open plots were subsequently converted to build-up space. The impact of the private sector is seen in the transformation of the city which has been confirmed by the primary survey and google earth images. However, the problems regarding the historical classification of the images especially the 1990 image has been encountered due to quality of the image. Planning maps are used to understand the landuse at that time and image are classified with the help of planning maps.

3.2 LAND USE LAND COVER CLASSIFICATION: 1990

The residential built-up land in the city region was around 18 sq. km in 1990 and this category includes all categories of buildup area i.e. commercial, residential, and other concretization of the urban space except roads. The road class accounted for about 28 sq.km category includes National highways, State Highways, local roads, streets, and other semi-metalead pathways. The open forest category includes coverage of areas where vegetation is old and scattered tree growth is found, and in the 4-3-2 virtual band category depicted by the darker hues of red color and it covers an area of 34 sq.km.

The vegetation category covering an area of 221 sq.km, includes agriculture land in the region along with other type of vegetation such as scattered trees along the roads, fields, and other vegetation coverage such as grass, shrubs, and herbs, urban parks, barren land where vegetation is grown naturally. The vegetation category also includes the areas of the agriculture category, which is a major economic activity during that time and hence vegetation class emerged as the largest

landuse class in the classified map. The agriculture fields in the image also have current fellow land and does not have vegetation coverage as the image captured time is the end of ‘Rabi’ agricultural season (March-April). It cover various hues of red color and have included in itself very light pink shades to dark pink along with the light brown shades of the current fellow land of agriculture in the 4-3-2 spectral band. The vegetation category covers the most area in the classified image and this depicts that it was the major landuse/landcover of 1990.

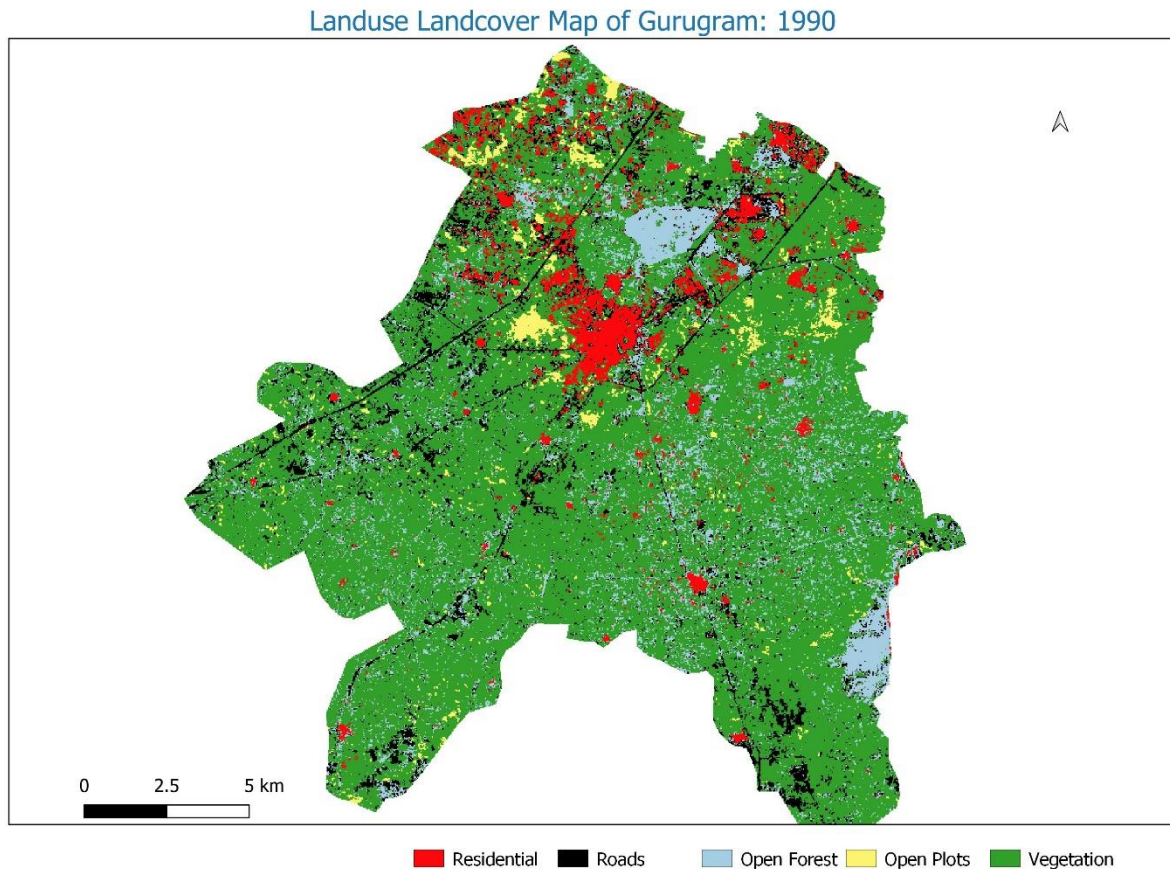


Figure 3.1: Landuse Landcover of Gurugram City, 1990

The urban build-up land during 1990 was concentrated around the intersection of major roads coming from different directions to Gurgaon. It gives a clustered, concentrated urban growth around this point of interaction. The other red zones in the map shown, are the hinterland villages in the region. The urban settlement is mainly confined within NH48 (Delhi-Jaipur Highway, earlier it was known as NH8) and Railway line further north in the region (Railway line is classified as Road class in the classified image map in order to keep small number of landuse landcover classifications).

The direction of urban expansion is towards the Delhi side of Gurgaon along the two roads coming from Delhi to the city (NH48 and old Delhi- Gurgaon road). The expansion of the city in 1990 towards Delhi side is further supported by the Delhi Master plan 2001 published in 1990, in which the Gurgaon city have a direct link with the Delhi city center (zone A,B and D. where A and B is considered as special area, D zone is already developed as the city center) through NH8 road (now its name is changed to NH48). Also in the Delhi Master plan 2001, zone J which is adjacent to Gurgaon district and Dwarka, through which comes the old Delhi-Gurgaon road and NH8 were proposed urbanisable area. So this proposed master plan of Delhi have an influence in the growth direction of the city.

The land use of Gurgaon in the northeast of the district adjacent to the capital city Delhi had a very slow beginning as a city with limited build-up area in the old city region adjacent to the right side of NH48 going from Delhi to Jaipur. The residential build-up area in the city was around 18 sq. km only while the majority of the region was dominated by agricultural land. The dominance of agricultural land in the region in the semiarid condition provided the basis of the city's expansion in the later phase of the city as it was this land that was acquired by the private players for the development of residential and commercial build-up structures.

Table 3.1: Land Use Land Cover Classification: 1990

| Class | PixelSum | Area [metre ²] | Area in sq. kms. | % of class area to total area |
|-------------|----------|----------------------------|------------------|-------------------------------|
| Residential | 19911 | 17919900 | 17.92 | 5.79 |
| Roads | 31382 | 28243800 | 28.24 | 9.12 |
| Open Forest | 37733 | 33959700 | 33.96 | 10.97 |
| Open Plots | 9177 | 8259300 | 8.26 | 2.67 |
| Vegetation | 245859 | 221273100 | 221.27 | 71.46 |

Note: Above table calculation based on Landsat 5 satellite imagery.

Accuracy Assessment: 1990

The overall accuracy of the classified image map of 1990 is more than 90% and kappa hat is around .8 which shows the usefulness of the classified map in studying the landuse landcover features of the study region. The user accuracy for all the classes is more than 85% except the road category. As the spatial resolution of Landsat 5 (Thematic Mapper) is 30*30 and hence it become difficult to classify the roads at this spatial resolution, so is the user accuracy of the road class. The high

overall accuracy of the image map shows the low error of omission and commission also known as Type I and Type II errors.

Table 3.2: Accuracy Assessment, 1990

| V_Classified | Residential | Roads | Open forest | Open plots | Vegetation | Area |
|-----------------------------------|-------------|----------|-------------|------------|------------|-----------|
| Residential | 0.0496 | 0 | 0 | 0 | 0.0083 | 17919900 |
| Roads | 0.013 | 0.0261 | 0.013 | 0 | 0.0391 | 28243800 |
| Open Forest | 0 | 0 | 0.094 | 0 | 0.0157 | 33959700 |
| Open Plots | 0 | 0 | 0 | 0.0229 | 0.0038 | 8259300 |
| Vegetation | 0 | 0 | 0 | 0 | 0.7146 | 221273100 |
| Total | 0.0626 | 0.0261 | 0.107 | 0.0229 | 0.7814 | 309655800 |
| Area | 19394743 | 8069657 | 33143143 | 7079400 | 241968857 | 309655800 |
| SE | 0.0154 | 0.0168 | 0.0204 | 0.0038 | 0.0258 | |
| SE area | 4778427 | 5208941 | 6309975 | 1179900 | 8002582 | |
| 95% CI area | 9365718 | 10209525 | 12367551 | 2312604 | 15685061 | |
| PA [%] | 79.1963 | 100 | 87.8261 | 100 | 91.4469 | |
| UA [%] | 85.7143 | 28.5714 | 85.7143 | 85.7143 | 100 | |
| Kappa hat | 0.8476 | 0.2666 | 0.84 | 0.8538 | 1 | |
| Overall accuracy [%] = 90.7105 | | | | | | |
| Kappa hat classification = 0.7805 | | | | | | |

3.3 LAND USE LAND COVER CLASSIFICATION: 2000

In the year 2000, the landuse landcover change in Gurgaon can be seen in the build-up area, as the residential build-up class area increased from 18 sq. km to 25 sq. km and roads area increased from 28 sq. km to 115 sq.km. The growth of the residential build-up followed the earlier pattern and mainly concentrated between the old Delhi- Gurgaon road and NH8 towards the direction of Delhi. The major growth in the road area is due to the increase in road length of urban local roads and streets as during 2000, we could see another major change in the landuse. The former agricultural land adjacent to the city in the south direction has been acquired by the private players and converted into developable plots. Roads were the first structures which were developed in these areas in order to make them a potential area of investment for the perspective buyers. We could see an increase in the open plot category area from 8 sq.km to 66 sq.km. It was this land which was converted from agriculture to open plots, and subsequently it was build-up by these private developers in various residential and commercial structures. So there is an increase in build-up area, roads area and open plots area, all this at the cost of vegetation category which includes agricultural land. The vegetation class area decreased from 221 sq. km to 91 sq.km, it can be argued

that the agriculture land of Gurgaon was converted into various other uses with the help of private developers.

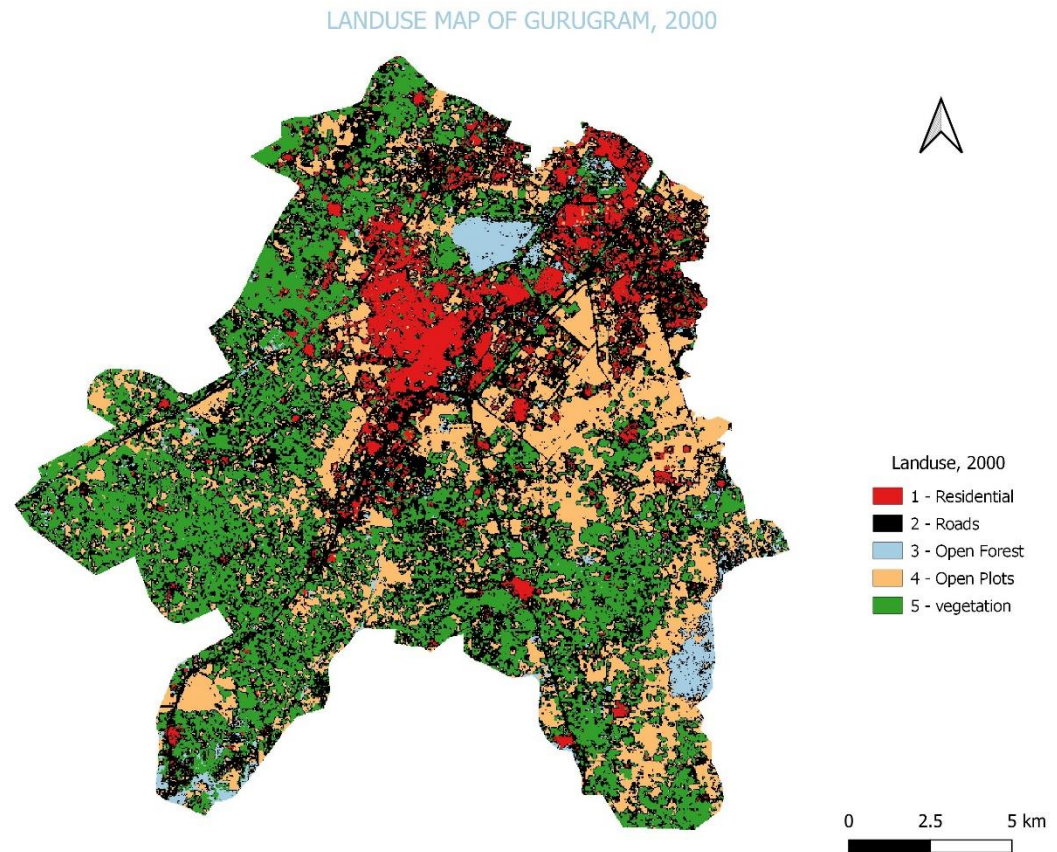


Figure 3.2: Land use Land cover of Gurugram City: 2000

The master plan of Delhi 2001, which was published in 1990 has a major impact on the city growth as we can see in the direction and location of build-up area emergence. The area adjacent to J-zone and Dwarka of the master plan of Delhi which was proposed for the urban extension in 1990, has an impact on the city infrastructure growth. As the adjacent area to these proposed urban extension in master plan of Delhi positively impacted the growth dynamics of the city of Gurgaon. So the urban extension of J-zone and Dwarka does not happen in isolation, but it spreads in the neighboring areas of Gurgaon.

We could see the emergence of Open plots to the south of NH8, which was the agricultural land of the nearby villages. As the prospects for urban growth was limited in the north due to presence

of Defense land adjacent to old Delhi-Gurgaon road which is categorized as Open Forest class. This land is no development zone and comes under the ministry of defense. So the private players acquired the land south of NH8 to develop it for various purposes.

Table 3.3: Land Use Land Cover Classification: 2000

| Class | PixelSum | Area [metre^2] | Area in sq. kms. | % of class area to total area |
|-------------|----------|----------------|------------------|-------------------------------|
| Residential | 27822 | 25039800 | 25.04 | 8.09 |
| Roads | 128837 | 115953300 | 115.95 | 37.45 |
| Open Forest | 11890 | 10701000 | 10.70 | 3.46 |
| Open Plots | 73679 | 66311100 | 66.31 | 21.41 |
| Vegetation | 101834 | 91650600 | 91.65 | 29.60 |

Table 3.4: Accuracy Assessment, 2000

| > AREA BASED ERROR MATRIX | | | | | | | |
|--------------------------------|-------------|----------|-------------|------------|------------|-----------|--------|
| > Reference | | | | | | | |
| V_Classified | Residential | Roads | Open forest | Open plots | Vegetation | Area | Wi |
| Residential | 0.0728 | 0.0081 | 0 | 0 | 0 | 25039800 | 0.0809 |
| Roads | 0 | 0.0749 | 0 | 0.2621 | 0.0374 | 115953300 | 0.3745 |
| Open forest | 0 | 0 | 0.0207 | 0.0069 | 0.0069 | 10701000 | 0.0346 |
| Open Plots | 0 | 0.0428 | 0 | 0.1713 | 0 | 66311100 | 0.2141 |
| Vegetation | 0 | 0 | 0 | 0 | 0.296 | 91650600 | 0.296 |
| Total | 0.0728 | 0.1258 | 0.0207 | 0.4403 | 0.3403 | 309655800 | |
| Area | 22535820 | 38956860 | 6420600 | 136356390 | 105386130 | 309655800 | |
| SE | 0.0081 | 0.0663 | 0.0085 | 0.0718 | 0.0381 | | |
| SE area | 2503980 | 20522709 | 2621199 | 22230329 | 11791189 | | |
| 95% CI area | 4907801 | 40224510 | 5137550 | 43571444 | 23110730 | | |
| PA [%] | 100 | 59.5291 | 100 | 38.9046 | 86.9665 | | |
| UA [%] | 90 | 20 | 60 | 80 | 100 | | |
| Kappa hat | 0.8922 | 0.0849 | 0.5915 | 0.6426 | 1 | | |
| Overall accuracy [%] = 63.5695 | | | | | | | |

The Landsat satellite image has increased spatial and spectral resolution which helped in the identification of minor features and in this image the build-up area has been divided into roads and other residential and commercial structures along with various civic amenities. The residential build-up area had increased in one decade from 18 sq. km to 25 sq. km, hence the whole region had seen a nearly 7 sq. km increase in the residential area which is majorly concentrated in the Gurgaon city region and towards the direction of Delhi. In this case, due to the acquisition of land

by the private players and Haryana Urban Development Authority (HUDA), the class “open plots” which are barren land devoid of vegetation and their shape and size characterize them as open plots which was subsequently used for residential and commercial development of infrastructure in the city region. So as classified in the image of the map, the open plots category is mainly concentrated near the outskirts of Gurgaon and it was this region that was transformed from the agricultural to open plot category from 1990 to 2000. Along with this transformation, the city region has expanded into the earlier agricultural land and the city had seen both horizontal and vertical expansion as interpreted using the shadow of the buildings. So in the year 2000, the city had both horizontal expansion in the expanse of agricultural land and at the same time, it also had vertical growth due to the emergence of high-rise buildings.

The vegetation category includes agricultural land and other vegetation while the open plot category has barren land with high spectral reflectance and a high tone in the reflectance curve. Hence we can see a decrease in the vegetation category in the 2000 classified image. The road category also witnessed an increase in area from 28 sq. km in 1990 to 115 sq. km in 2000 and this shows the increase in road length and width in the form of national and State highways, local roads, and streets in the buildup region. The city region also shows the growth direction of the buildup region and in other words the direction of the city growth is happening along National Highway 8 which connects Delhi to Jaipur. It also has IGI airport which helped in the expansion of the city along the Highway.

3.4 LAND USE LAND COVER CLASSIFICATION: 2020

The classified image of 2020 shows the increase in the residential and road category while a decrease in the open plot category which shows the conversion of open plots into build-up structures and new expansion of open plots in the erstwhile vegetation category, as can be seen in the image. The vegetation category which includes all kinds of vegetation from grass, crops to trees have decreased and this area has been converted either to open plots after its acquirement or to the build-up structures. Also, the build-up area has increased and densified at the expanse of open plots and vegetation. The individual owners of the plots have been coerced by the authorities to build at least 15% of the area to avoid penalty. So the open plot category has been transformed into buildup structures. The Residential area has increased from 25 sq. km in 2000 to 48 sq. km which is majorly concentrated in the Gurgaon-Manesar urban complex which is coming up in the

district region. The city, in the last two decades, is growing in the expanse of agricultural land and prominently in the southern region of NH8 which shows the new growth region and area of new growth points.

The roads area have increased from 115 sq.km to 136 sq.km, the open plots area decreased from 66 sq. km to 56 sq.km. In the open plots the area decreased but also old open plots were build-up and new agriculture land has been acquired by private players to convert them to open plots which will be subsequently build-up. The vegetation category decreased from 91 sq.km to 64 sq.km and it is this area which converted into open plots and build-up area.

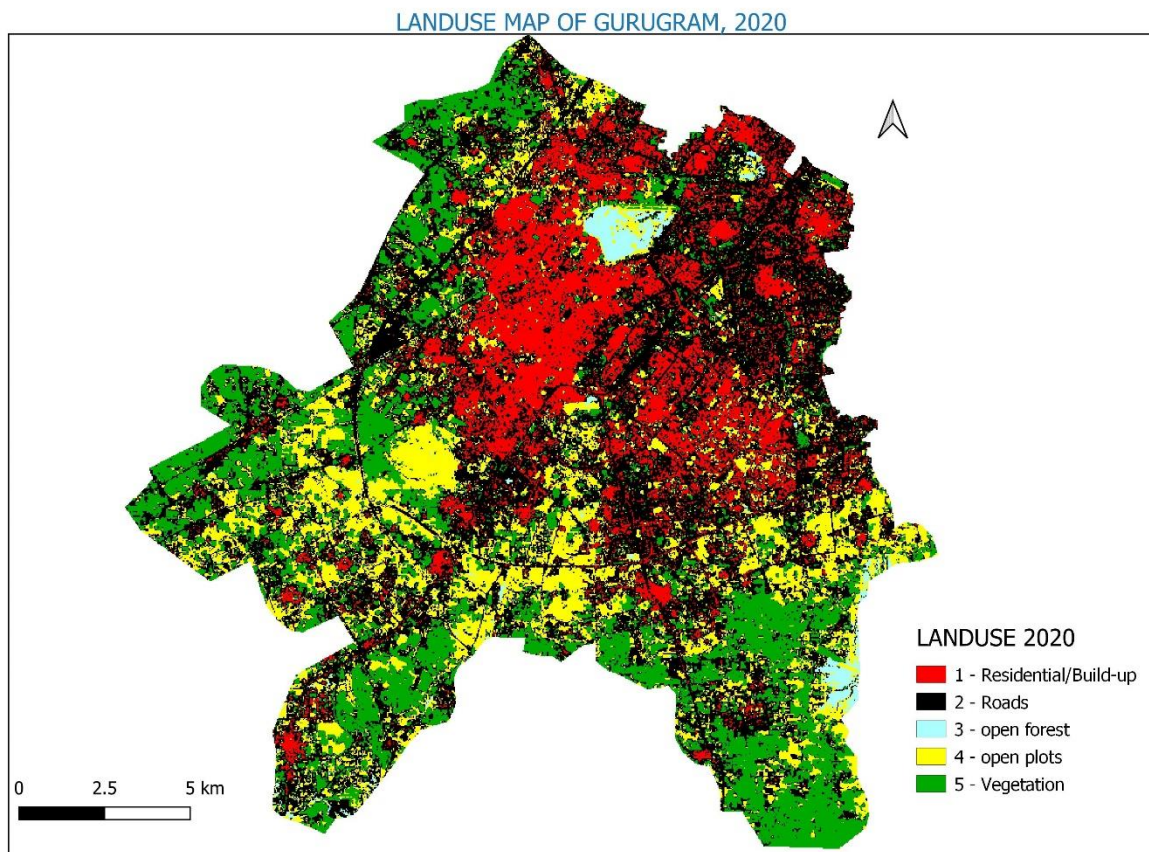


Figure 3.3: Land use Land cover of Gurugram: 2020

The Master plan of Delhi for 2021, which was published in 2007, had Dwarka K-II and J- zone as proposed areas for sub city projects (such as development of Dwarka expressway, Metro rail development, Dwarka industrial units). All this had an impact on the master planning of Gurgaon 2021, published in 2007. This master plan of Gurgaon planned for the Northern and southern peripheral roads and Metro rail development. The adjacent area to these communication channel was planned to develop as industrial, commercial and Special Economic Zones (SEZ) locations. However the SEZ area was subsequently decreased in the revised version of master plan of Gurgaon (Gurgaon-Manesar Urban complex 2031) which was published in 2012. We could see the peripheral road development in the city region following the scheme of master plan of Gurgaon and Delhi. These roads also connect the city commercial and industrial hubs with the major commercial location of Delhi i.e. Dwarka and Faridabad of Haryana. The construction work for the metro rail coming from Dwarka and the extension of Yellow line in the south is also under progress which are proposed to meet along the NH8 going up to Kundli- Manesar-Palwal (KMP) expressway.

The urban expansion of Gurgaon followed the scheme of the master plan of Gurgaon as can be seen in the classified map of 2020. The build-up area south of NH8 followed the master plan scheme. The various sites which have been developed are DLF and its various phases, Sushant Lok and various extension, Malibu town, South city, Unitech residencies etc.

The various commercial hubs are planned to develop along the northern and southern peripheral roads and proposed metro extension. Also the major commercial hub of the city is sector 29 which is designated as the City Centre of Gurgaon in the master plan, near the Indian Farmers Fertilizers Cooperative (IFFCO) chowk metro station. These commercial spaces uses the connectivity advantage either through the peripheral road which connect the city with Dwarka and Faridabad or connection of sector 29 adjacent to NH8 which connect it with the city Centre of Delhi.

Table 3.5: Land Use Land Cover Classification: 2020

| Class | PixelSum | Area [metre^2] | Area in sq. kms. | % of class area to total area |
|-------------|----------|----------------|------------------|-------------------------------|
| Residential | 53472 | 48124800 | 48.12 | 15.54 |
| Roads | 152033 | 136829700 | 136.83 | 44.19 |
| Open Forest | 5064 | 4557600 | 4.56 | 1.47 |
| Open Plots | 62504 | 56253600 | 56.25 | 18.17 |
| Vegetation | 70989 | 63890100 | 63.89 | 20.63 |

Table 3.6: Accuracy Assessment, 2020

| > AREA BASED ERROR MATRIX | | | | | | |
|--------------------------------|-------------|----------|-------------|------------|------------|-----------|
| > Reference | | | | | | |
| V_Classified | Residential | Roads | Open forest | Open plots | Vegetation | Area |
| Residential | 0.1554 | 0 | 0 | 0 | 0 | 48124800 |
| Roads | 0.0884 | 0.1768 | 0 | 0.0884 | 0.0884 | 136829700 |
| Open forest | 0 | 0 | 0.0147 | 0 | 0 | 4557600 |
| Open plots | 0 | 0 | 0 | 0.1817 | 0 | 56253600 |
| Vegetation | 0 | 0 | 0 | 0.0413 | 0.1651 | 63890100 |
| Total | 0.2438 | 0.1768 | 0.0147 | 0.3113 | 0.2534 | 309655800 |
| Area | 75490740 | 54731880 | 4557600 | 96397560 | 78478020 | 309655800 |
| SE | 0.0589 | 0.0722 | 0 | 0.0719 | 0.0719 | |
| SE area | 18243960 | 22344196 | 0 | 22273748 | 22273748 | |
| 95% CI area | 35758162 | 43794625 | 0 | 43656547 | 43656547 | |
| PA [%] | 63.7493 | 100 | 100 | 58.3558 | 65.1292 | |
| UA [%] | 100 | 40 | 100 | 100 | 80 | |
| Kappa hat | 1 | 0.2712 | 1 | 1 | 0.7321 | |
| Overall accuracy [%] = 69.3609 | | | | | | |

Accuracy Analysis:

The validation of the classified image is done using Semi-Automatic Plugin (SCP) in the Quantum Geographic Information System (QGIS) by generating the Region of Interest (ROI) as the reference data and comparison of these referenced pixels with the classified image class. The referenced pixels are also compared with the prominent features of the city such as the defense land in the heart of the city which is categorized as the ‘open forest’ in the image. The 50 random pixels are selected to carry out the accuracy assessment using stacking of satellite images and creation of virtual bands, old maps collected from the district handbook of Gurgaon, census of India, ground survey to observe the prominent feature of the city. These referenced pixels are compared with the classified data and accuracy assessment is done.

The error matrix generated through this process helps us to understand the ‘Users accuracy, error of commission or type II error’ which shows the usefulness of the classified image to study the landuse of the city. This can be calculated using the rows of the error matrix, where the diagonal values shows the correct classification of pixels and other values in the rows show the error of commission or type II error by the producer of the maps. The columns of the error matrix shows

the 'Producers accuracy, error of omission or type I error'. This part of the matrix shows the accuracy on the part of the producer of the map and can be calculated using the column data of the matrix. The error matrix of each image shows the relationship between the reference data and classified data of the image. The overall accuracy of all the images is more than 65% and this low accuracy in the classified map is attributed to the separate classification of residential build-up and roads build-up, which is difficult to classify in the densely build-up in the city environs as the spatial pixel resolution of the Landsat images is 30*30 meters. Hence to differentiate the two build-up feature comes at the cost of low accuracy in the classified images. There is a conversion of agriculture and vegetation category into build-up space either in residential or road category. While open forest category in the classified images also declined in the three decade time period.

3.5 LAND USE LAND COVER CHANGE DETECTION:

The satellite image interpretation of the images using google earth's time slider feature shows that there has been densification and suburbanization of the city showing vertical and horizontal growth, where horizontal growth is facilitated by the conversion of agricultural and vegetation category to build-up areas and vertical growth is employed in the city by converting the single and double story buildings into high rise structures. The image interpretation of the region for the time periods shows the growth story of the city and how the city's build-up environment has been the key to the growth story. The neoliberal policies of the local and national governments provided the space for the private sector to employ the investment of the capital.

Landuse Landcover Change Map, Gurugram (1990-2000)

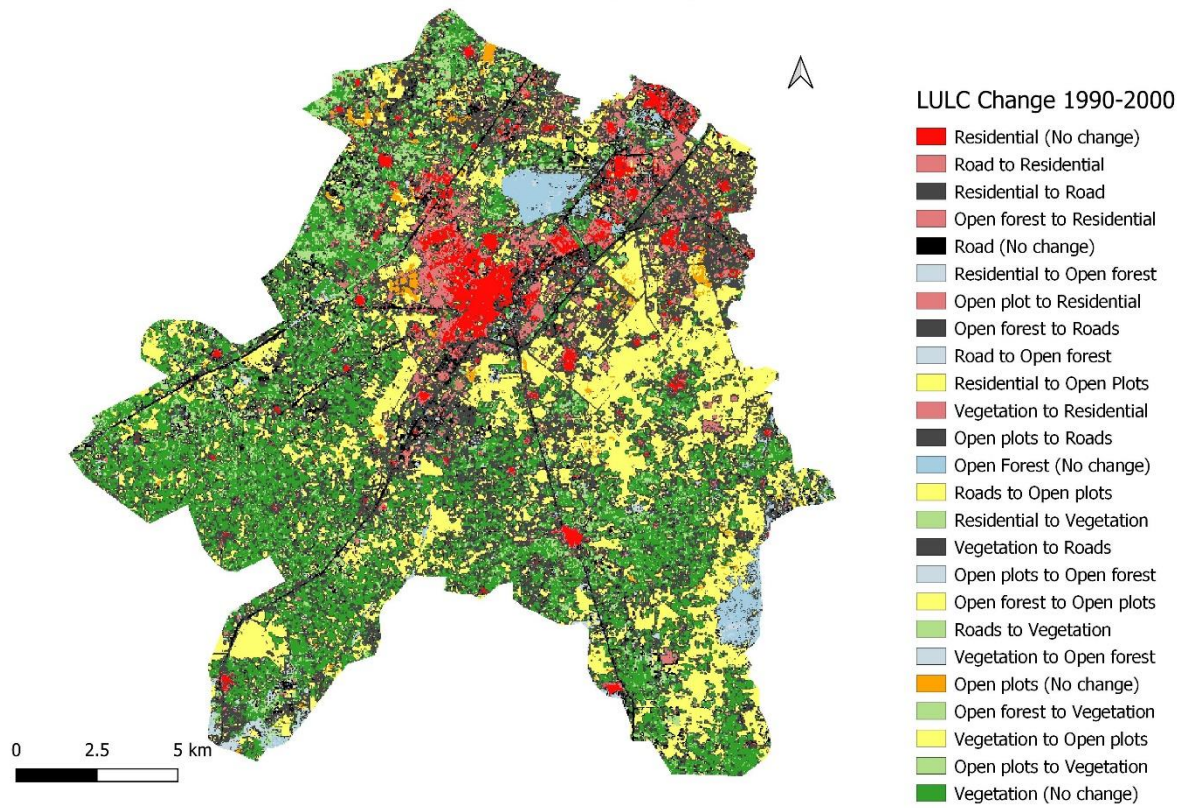


Figure 3.4: Landuse Landcover change Detection, Gurugram City (1990-2000)

Table 3.7: Landuse Landcover Change Matrix (1990-2000)

| > LAND COVER CHANGE MATRIX [metre ²] | | | | | | | |
|--|-------------|-----------|-------------|-----------|------------|-----------|--|
| > NewClass | | | | | | | |
| V_ReferenceClass | Residential | Roads | Open forest | Open Plot | Vegetation | Total | |
| Residential | 10027800 | 4345200 | 137700 | 927000 | 2482200 | 17919900 | |
| Roads | 2385900 | 13745700 | 1750500 | 3370500 | 6991200 | 28243800 | |
| Open forest | 915300 | 11907000 | 5840100 | 5338800 | 9958500 | 33959700 | |
| Open plots | 917100 | 2871000 | 101700 | 3401100 | 968400 | 8259300 | |
| Vegetation | 10793700 | 83084400 | 2871000 | 53273700 | 71250300 | 221273100 | |
| Total | 25039800 | 115953300 | 10701000 | 66311100 | 91650600 | 309655800 | |

The map of land-use change detection in the time period 1990-2000 shows the increase in the build-up area on the northern side of NH8 and along the national highway 8 while the region in the south of this road has been converted from agricultural to open plots which were acquired by the private firms and companies, along with Haryana Urban Development Authority (HUDA). However, there were no northern and southern peripheral roads in the city in 2000. These roads come up later after the proposal of master plan of Gurugram 2021 along with the associated

commercial and other sites, as planned in the master plan of Gurgaon 2021. There has been a small change in the open forest category due to land-use zoning in the master plan of Gurgaon 2021. However, we could see a significant decrease in the vegetation area of the region which is mainly due to the conversion of agriculture land into build-up area and open plot category.

LANDUSE- LANDCOVER CHANGE DETECTION MAP OF GURUGRAM (2000-2020)

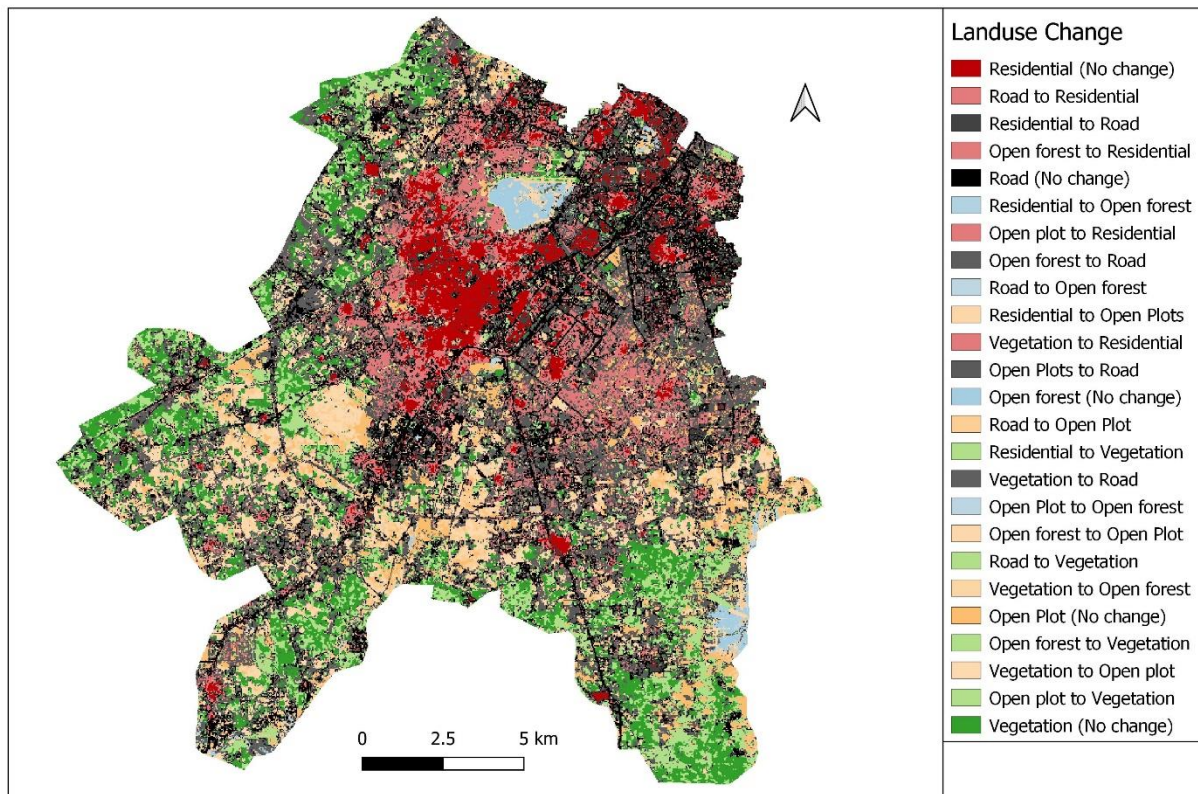


Figure 3.5: Land use Land cover change Detection, Gurugram City (2000-2020)

Table 3.8: Land use Land cover Change Matrix (2000-2020)

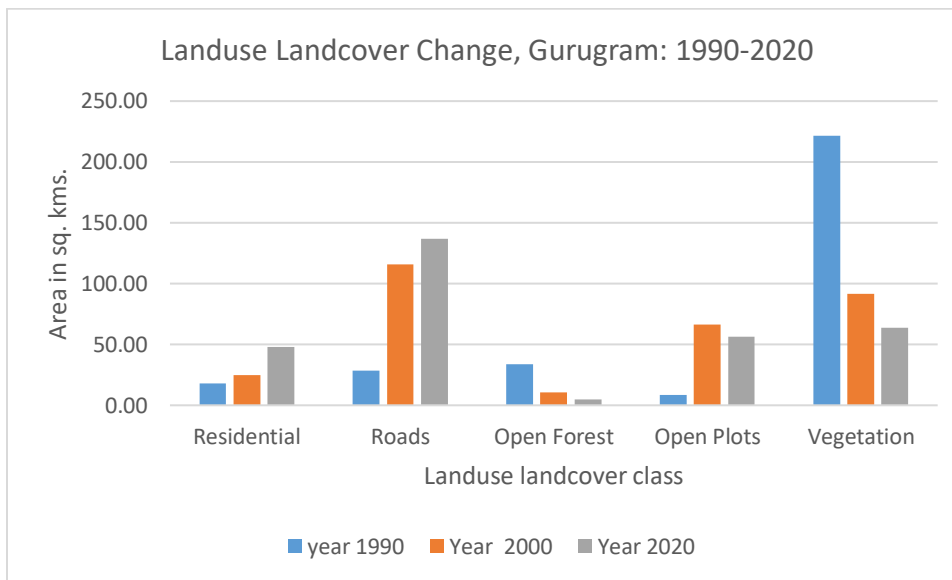
| > LAND COVER CHANGE MATRIX [metre^2] | | | | | | | |
|--------------------------------------|-------------|---------|-------------|------------|------------|-----------|--|
| > NewClass | | | | | | | |
| V_ReferenceClass | Residential | Roads | Open forest | Open plots | Vegetation | Total | |
| Residential | 16402500 | 477900 | 6823800 | 825300 | 510300 | 25039800 | |
| Roads | 21084300 | 470700 | 43905600 | 25787700 | 24705000 | 115953300 | |
| Open forest | 333000 | 18000 | 3313800 | 5107500 | 1928700 | 10701000 | |
| Open plots | 11627100 | 430200 | 22437900 | 19010700 | 12805200 | 66311100 | |
| Vegetation | 6511500 | 236700 | 22084200 | 27452700 | 35365500 | 91650600 | |
| Total | 55958400 | 1633500 | 98565300 | 78183900 | 75314700 | 562401000 | |

The land-use change detection map for 2000-2020 shows the increase in the residential build-up at the expense of the open plot category mainly in the southern region of NH8. Some of the

vegetation categories in the 2000 image along the peripheral road have been converted to open plots and residential build-up. Also some land has been converted to the north and south peripheral road as it was planned in the master plan of Gurgaon 2021.

Table 3.9: Trends of land use land cover changes (1990-2020)

| Class | Area in sq. kms. | | |
|-------------|------------------|-----------|-----------|
| | year 1990 | Year 2000 | Year 2020 |
| Residential | 17.92 | 25.04 | 48.12 |
| Roads | 28.24 | 115.95 | 136.83 |
| Open Forest | 33.96 | 10.7 | 4.56 |
| Open Plots | 8.26 | 66.31 | 56.25 |
| Vegetation | 221.27 | 91.65 | 63.89 |



Graph 3.1: Landuse Landcover change 1990-2020

3.6 URBAN TRANSFORMATIONS IN GURGAON CITY

The urban transformations in Gurgaon have been a rapid phenomenon. The urban area has expanded as the agricultural land has been transformed into buildup structures. The urban sprawl (horizontal expansion) has been the phenomenon in the initial phase as depicted in the classified maps and densification later on, especially after 2009 (Pramenik et al., 2020). Agricultural land has been transformed into build-up structures and this process has been undertaken through the private-led growth process. The private sector not only built the residential space but also

commercial space, which has been leased out to the global Multi- National corporations (MNCs) and a rental economy has emerged in Gurgaon. The rental economy is not limited to the commercial sector and even the residential space has been built to ensure the profits through the rental flow of income. This has been the case even in Jharsa village where a primary survey has been taken and the preliminary findings show that the village economy has been transformed and restructured along neoliberal lines. The rental economy has been a boon for the traditional villagers. If we compare it with the city there has been a tinge of neoliberal growth in Gurgaon in the newly developed city structures especially the urban development in the newly acquired old city's hinterland.

3.6.1 Urban Zonation of Master Plan 2021

The master plan of Gurugram 2021 shows the land use zoning of the urban complex. The area along the NH8 has been categorized into residential which has been depicted in the yellow color in the master plan image (see appendix). The residential category in the classified image of 2020 shows the consonance in the planning along the zoning category of the master plan 2021. The residential build-up in the southern region of the study area, south of NH8 has followed the scheme of zoning of the master plan. The coming up of peripheral northern and southern roads connecting Dwarka and Faridabad respectively has been the last decade phenomenon. The region along these roads has been categorized into commercial use as both Dwarka and Faridabad are ancillary commercial and industrial centers.

So the scheme of master plan followed the regional development scheme, while in the classified image of 2020 the region along the peripheral roads has either the residential build-up category or the open plot category which shows the prospects of commercial development along these roads. The open forest category in the classified image has been zoned as defense land in the master plan, which does not change in all the three classified images and the master plan has separated this land from the development dynamics as it comes under the defense ministry. The region along the meeting of the northern and southern peripheral road in the classified image of 2020 has been depicted as an open plot and vegetation category, while in the master plan it has been categorized as special Economic Zones (SEZ) zone which was subsequently revised in 2012 and SEZ zone was done away. But this land has been zoned for the commercial development. It has prospects for the commercial development. This region is connected by the northern and southern peripheral

roads to Dwarka and Faridabad respectively. The road densification could be seen in the southern region of the city following the scheme of master plan 2021.

3.7 FIELD SURVEY - INFRASTRUCTURE FACILITIES PROVISION

During the primary field survey a number of automated mapping and facilities management (AM/FM) over-view information have been collected and analyzed in the present study:

| Major themes discussed in semi-structured interviews | Key highlighted points and analysis of discussions |
|--|--|
| Urban service provisioning such as waste management, water supply, electricity | <ul style="list-style-type: none"> ➤ Solid waste management is done through Municipal Corporation of Gurugram (MCG) waste collectors and centralized waste management, however, some RWA also manages the wet waste in situ, especially in gated societies. ➤ Electricity is provided by Dakshin Haryana Vidyut Nigam Ltd. Which is the major distributor, but gated societies have diesel gen-sets to overcome power cuts. ➤ Water supply is either through pipelines managed by the local authorities or groundwater pumps. |
| Urban Transport facilities and road network | <ul style="list-style-type: none"> ➤ Rapid metro in the neoliberal privately developed space such as DLF cyber city which was built by IL&FS. ➤ Delhi metro connects the city with Delhi commuters through the yellow line. ➤ However, the majority of the respondents use city bus services owned by the government or privately owned auto rickshaws for their daily commuting within the city. |
| Medical Facilities in the city | <ul style="list-style-type: none"> ➤ Gurgaon is emerging as a hub for medical tourism and a heavy influx of patients from the middle-east, Iran, and Afghanistan as observed during the survey of Jharsa village. ➤ Gurgaon is the emerging medical hub apart from the IT hub distinction it gained in the last two decades. |

| | |
|--|---|
| | <ul style="list-style-type: none"> ➤ Effluent people use private medical facilities while the poor still rely on the civil hospital of Gurgaon. |
| Land acquisition impact on the local villagers and its economy | <ul style="list-style-type: none"> ➤ The land was acquired by private firms, in the initial stages poor compensation but subsequently, a legal course was employed and villagers were recompensed especially after the 2013 land acquisition act. ➤ Recreation of wealth either through property dealing, service provisioning, or rental infrastructure creation. ➤ Village 'laal Dora' land is out of bounds from the legal regulations of the local authorities and hence irregularities, informalities, and violations of formal laws are most dominant in these spaces. |
| Migrant labor force issues | <ul style="list-style-type: none"> ➤ Major migrants are concerned in the IT, medical, and hospitality sectors apart from the construction workers. ➤ High rental demands by the local landlords. ➤ Poor urban services related to transport and electricity power cuts. ➤ Commercial electricity charges even for regular residents living in PGs and other residential facilities. ➤ Exploitation of construction workers with no medical, residential and basic service provisions. |
| Village economy transformation | <ul style="list-style-type: none"> ➤ The economy of the hinterland villages has undergone major transformations in the last two decades as the major agricultural activity which was dominant two decades ago is literally non-existent now. ➤ The emergence of the rental economy in the villages. ➤ Medical tourism is a boon for the villagers as major super specialty hospitals are in the vicinity of the erstwhile agricultural villages which attract both national and international patients and provide a boost to a host of |

| | |
|---|---|
| | <p>activities like residential space providers, water services, local restaurants but foreign cuisines, etc.</p> <ul style="list-style-type: none"> ➤ The village economy is transformed from a primary to a tertiary service economy. |
| Residential facilities | <ul style="list-style-type: none"> ➤ The urban space has neoliberal logic of development. The emergence of gated communities in the newly developed multistory societies, privately managed services erstwhile the domain of local government, outsourcing of urban functions by the local government. ➤ The rental economy facilitated the development of small residential spaces- single room with attached kitchens and bathrooms with small ventilation balconies. ➤ Shanty structures and jhuggis on the roadside of the city can be seen frequently which are the residential spaces for the construction workers or the traditional artisans such as pot makers, ironsmiths etc. |
| Work culture | <ul style="list-style-type: none"> ➤ The service sector demands 9 to 9 jobs, and weekends are used for recreation in bars, pubs, and local discos. Private farmhouse parties are a major attraction for the youth employees. ➤ The nightlife of the city creates a fear in the women employees due to fear of molestation by the local miscreants. ➤ Night shifts are common in the IT sector. |
| Welfare functions by the local government | <ul style="list-style-type: none"> ➤ Local service provisioning like SWM, water supply, maintenance of local roads, city green infrastructure, local parks maintenance, etc. ➤ The targeted approach to welfare for the marginalized especially the people falls in the domain of the intersection of marginalities. |

Source: Above table is based on primary field survey conducted during February to March 2022.

The emerging commercial space in Gurgaon with Udyog Vihar, DLF phases, cyber hub, cyber city, and Maruti Udyog has been associated with the highly modern urban residential space development in this area, especially the residential infrastructure development in DLF phase 1 to phase 5 which shows the close association of workspace and residential space. The spatial geography of workspace and residential space is being built to use the spatial and locational proximity of these landuse. The spatial development in the city is being done along the commercial lines, where macro spatial analysis shows that the city has been built to serve the needs of the affluent and ignore the needs of the marginal section of the society.

The close association of residential and commercial space is being developed to serve the needs of the emerging work culture of a neoliberal era, where work is being performed along competitive lines under the private management and privately set targets. While at the same time the work culture is being promoted with adequate avenues for leisure. The emerging night clubbing culture which is giving rise to a whole set of the new economy in the urban space and requires, ambiance for drinkers, security to drunken, and late-night dropping facility. All this is being managed along the private commercial lines. The simple drinking is being commercialized with the latest ambiance facilities, and demand is being generated. Although exclusively created for those who could afford it. The creation of a private circle of drinkers by the private agencies for the sole purpose of drinking is another level of circulation of capital in the urban space. This is just one case to show the point of how Gurgaon is being liberalized.

The leisure culture which is being promoted for the working class to provide vents for the private circulation of capital and demand is being generated by the residents influenced by the emerging neoliberal philosophy of “work hard, play hard”. All sorts of leisure activities are being promoted by private players. To cite the case of Gurgaon, in the spatial proximity of DLF PHASE IV and phase V, the Sushant Lok, Golf course is being promoted to establish the culture of the elite. The phenomenon of ‘exclusivity of privatization’ is the dominant trait of this development. The private management of the club and its exclusivity to the normal residents, as the membership fee of the club, is so high, which is beyond the capacity of a certain section of the residents. This sense of exclusivity is being boasted by the club members as they regard this as being in the upper hierarchy of the society and giving them a sense of being different in the hoard.

Along with this development, the economy of leisure is being promoted in this region of the city through mall culture, cinematic theatre, gymnasium, residential society sports club, and leisure clubs. The point here is that neoliberalism and its policies are using the private players for providing all sorts of basic services such as water services in the residential sectors, municipal solid waste collection, privately owned Genset for power provisioning during electricity cuts, and private security in the residential societies.

It can be argued that reaching these residential places and talking to the owners is a herculean task as the private management and service providers control the accessibility of these spaces. During the survey, it has been found that the basic services are being managed by the private players usually with formal and informal agreements with the local government, regarding the water, sanitation, and waste management services. The municipal failure to ensure the water supply led to the builder and its management to ensure private arrangements, especially during the morning when demand peaked due to office hours. The private suppliers have been roped in to ensure the availability of water both for drinking and other household purposes. So basic water supply is being provided by the MCG while private arrangements are being done to ensure the regularity and availability in case of failure. The same is the case for electricity where Dakshin Haryana Vidyut Nigam Ltd. is the main provider of electricity, but to ensure its availability during power cuts and failure, privately managed diesel generators are being employed in case of failure of power.

Society-level waste management facilities are being developed to ensure the in-situ waste management after the 2016 national guidelines on waste management. While there are arrangements for the private waste pickers and municipal service of waste management is being supported by the private waste collectors. The residential service management is being interviewed to have first-hand knowledge of the procedure of basic service provisioning in these neoliberal residential spaces. While reaching the residents was a herculean task due to multiple safety nets especially the enclosure walls of the residential society where each entry is closely managed and recorded, where the purpose of the visit is being confirmed through the direct call to the residents by the privately managed security arrangements on the main entrance.

The employment of these security measures in the residential spaces give rise to the emergence of privately managed secured enclaves of affluent citizens, which have economic homogeneity and

sometimes even bypass the social and cultural heterogeneity of the residents as a new culture of residential space emerged based on the corporate working environment, and these differentiating factors of the social and cultural ethos of the society took a more liquid form in these residential spaces. The policies of neoliberalism have been seen in the form of waste collection as Gurgaon's municipal corporation allows the employment of private waste collection units/firms in these residential spaces where waste collection is being associated with the environmental consequences of waste products and residents are nudged to employ the waste separation techniques through the use of different color boxes.

However, the use of diesel gen-sets which had been in limelight due to rising pollution level in Delhi has been the main savior in the frequent power cut space of Gurgaon, as power cut is more common in Gurgaon than in any other millennium city of the world and this is seen both in the residential enclaves as well as the commercial units. This has been guided by the neoliberal philosophy of private sector involvement in the city structures which can be seen in all aspects of life. Some of the erstwhile functions which was the monopoly of the local government have been given to the private sector.

Private capital and its involvement in Gurgaon give rise to local elites, where local private capital and these local elites provide the space for the global capital to flourish, and in the process of this circulation of capital, it enriched itself. While for these local elites, neoliberalism has given ample opportunities for wealth creation, where traditional occupations have been given up to enter the emerging market opportunities in the local urban milieu. While the emerging market structure and neoliberal policies hurt the marginal section of society as seen during the primary survey of the Jharsa village where the traditional occupation of the marginal castes has been replaced by the emerging market. At the same time, it provides very few opportunities for these people to ensure their survival due to a lack of skill in the emerging market situation.

The city's growth structure has been mainly an expansion of the city in the agricultural land of the hinterland villages. The vertical growth has been a late phenomenon as argued in the recently published literature (Pramanik et al., 2021). It can be fairly argued that the private sector involvement in the city is not only limited to the infrastructure development for the residential and commercial purposes, but as the primary survey shows it also speaks volumes about the

involvement of them in the land dealings. The primary survey shows that the property dealing in the region has emerged as the most lucrative and rewarding activity, which not only helped in the speculation of land prices above the circle rate, but also helped in the emergence of local elites which have earned huge profits in their dealings and sucking the money from the common buyers, not to mention the black money market in the dealings.

The process of transformation also has policy guidance, as it has been a guideline in the HUDA sectors where the owner of the plots has to build at least 15% of the plot size to avoid penalty. So the penalty is imposed on the owner of the plot if they fail to build a residential structure on the plot. The horizontal growth of the city is the outcome of this landuse transformation i.e. agriculture land to build-up space. The growth of the new build-up also has neoliberal logic of private sector involvement in the service provisioning, especially in the security feature and private security guards in the walled enclaves, non-walled residential sectors, and modern-day panopticon of CCTV cameras has been a usual phenomenon in all the build-up space and even penetrated in the individual house owners' space.

The spatial association of different build-up structures has given rise to different enclave complexes with the residential-commercial-leisure build-up in close spatial proximity, limiting the need of travelling in the city for different purposes. So it can be argued that the neoliberal growth of the city has liberal space development for different purposes depicting the landuse transformations of Los Angeles' school of thought and segregation of the cityscape either through schematic model of Burgee's concentric zones, Hoyt's sector model, and even the Harris and Ullman's multiple nuclei model is not found in this city.

The other aspect of neoliberal policy implementation at the intra-city level, is the differentiation in modes of accessibility of different regions of the city. The satellite image interpretation shows that the level of densification of roads in the city is different, as we can see from the images that the newly developed commercial and residential sectors have better accessibility in terms of road density and quality of roads. The development of these new areas has a special emphasis on road development keeping in mind the emerging demand for personal vehicles. The image interpretation sheds light on the aspect of accessibility and spatial development and it can be seen from the beginning that intersection of major roads and accessibility of city region to Delhi along

the NH8 is the major factor in its growth towards Delhi. So the spatial expansion of the city was influenced by polarity of Delhi and its master plans.

One of the key features of neoliberal growth is that market is being perceived as the principal agent for economic organization and market forces demand a certain underlying base to function properly. To ensure the accessibility of the residential and commercial areas of the city, the city has world class road and metro rail infrastructure, with further prospects of growth in this infrastructure as planned in the master plan 2031. This enhances the attractiveness of the region for global and domestic capital to invest, the road and metro infrastructure act as a magnet for the capital attraction, which not only helped in the exponential growth of the city, but also the prime reason for the speculation of land prices.

Private capital investment in the basic infrastructure and the PPP mode of road development speaks volumes about the new avenues for the global and local private capital to help in circulation of capital and its generation. However, the reason for basic infrastructure development which adds a multiplier effect to the investment cycle in the region is not the only way to see the exponential growth, but also the government policies. It is in this light, we can see the neoliberal policies of local government which creates enabling environment for the private capital to invest and helped in boosting the confidence of the private players for higher returns. So, to cite as an example, we can see this phenomenon in the newly developed commercial-residential space of DLF phase I-V, Sushant Lok, Maruti commercial complex, golf club region, etc., these regions have better security features, better basic infrastructure, roads, metro accessibility, surveillance system, better law and order management, private service management, residential space developed and managed by private agencies, apart from the involvement of private sector in the urban services, traditionally provided by the urban local government.

This shows the emergence of a new way of urban development which has global capital in mind, to attract it, as well as the issues and demands of newly emerged local elites and emerging working middle class. The employment of various agencies in the demand creation and management has helped in the emergence of the private sector in these service-oriented sectors. This helped in the creation and management of these services guided by the private logic and private capital determine the inclusion and exclusion of these people in these spaces.

3.8 COMPARATIVE GEOGRAPHICAL FEATURES OF GURUGRAM CITY AND DELHI METROPOLIS

The regional scheme of Delhi and its master plans have an influence on the emergence of Gurgaon as an 'edge city'. The Delhi's city centre (zone D) and special zones of A, B as per the scheme of Master plan of the city are connected with the edge city of Gurgaon. Apart from this the proposed sub city projects and urbanizable area of the Delhi region, especially the zone-J, and Dwarka region also have an influence in the development of Gurgaon as an edge city. It has been argued in the schematic representation of 'post-industrial global metropolises' by Edward Soja, that the edge city has its origin and its dependence on the global metropolis. However 'Edge cities' are becoming self-sustaining and fuels the urbanization engine with its own resources as argued by Acharya et al. (eds.) 2017. The emerging urban space in Gurgaon have global economic linkages, paranoid or Carceral build-up space, fragmentation and spatial segregation with inequality, imagined city space and flexibility in economic organization and falls within the edge city of Delhi metropolis of the schematic representation of the soja's post-industrial urban growth.

Edward Soja's Model of Post-Industrial Global Metropolis

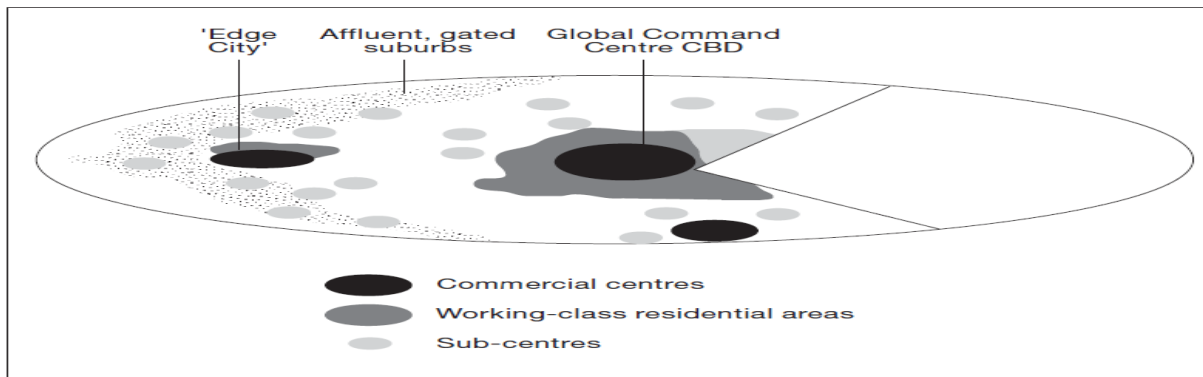


Figure 2.4 The post-Industrial 'global' metropolis

Source: Graham and Marvin (1996: 334)

Source: Tim Hall (2012), urban geography, 3rd edition, PP.13, Routledge Contemporary Human Geography Series

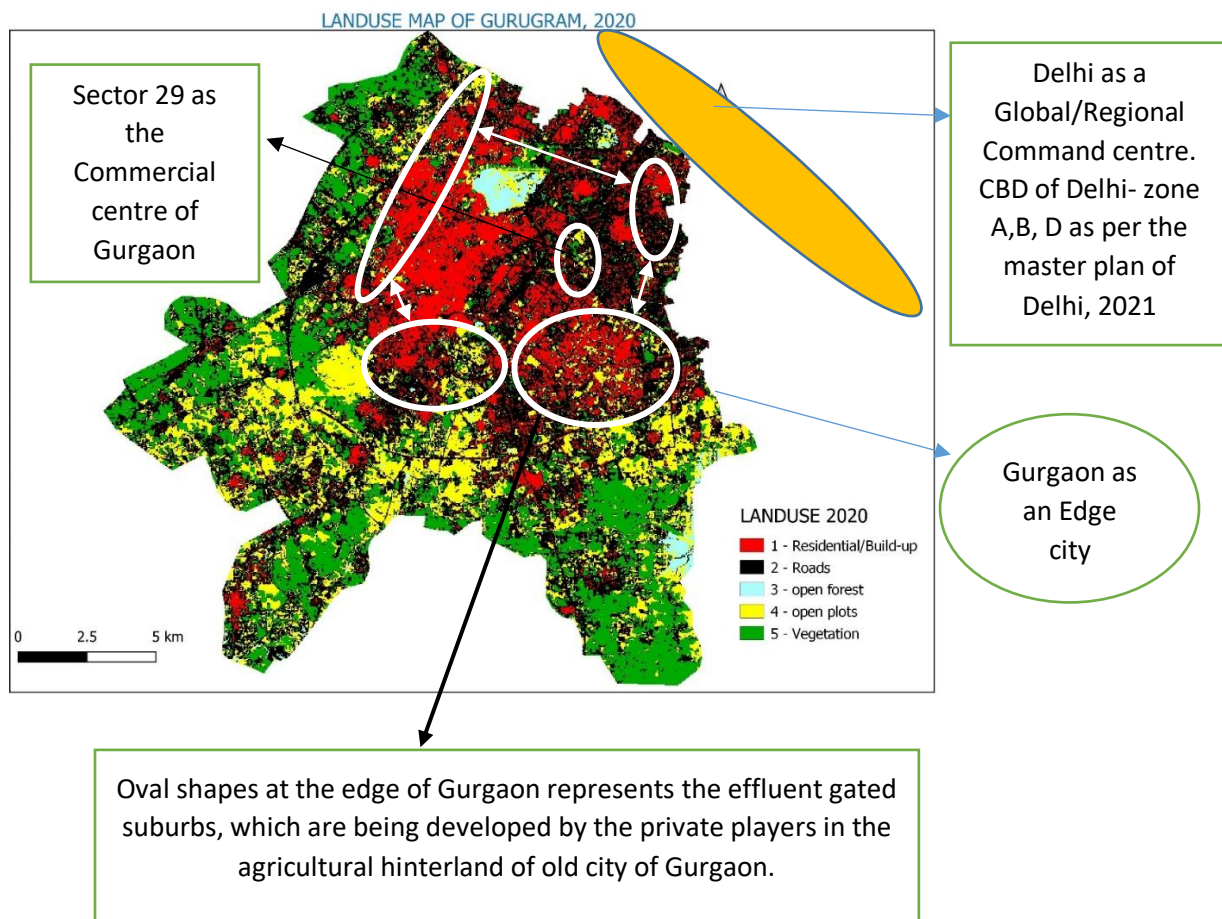


Figure 3.6: Comparative Geographical Analysis of Gurugram City and Delhi Metropolis

3.9 CONCLUSION

The land-use transformations have been the dominant factor in the growth story of Gurgaon in the last three decades, while the period from 1990 to 2000 had seen a good urban Build-up (both residential and road category) growth of roughly 10 sq. km annually, this has been slowed down on an average in the last two decade with more than 2.2 sq. km annually. The rate of conversion of vegetation class (agriculture land) in the other landuse is around 5 sq. km annually in the three decade. Hence, this conversion and transformation have been at the expense of agricultural land of the nearby villages, however, it can be argued that the landuse use transformation had a lag period as the acquirement of the land does not lead to the instant conversion to the build-up area. The 2000 image shows the open plot classification which shows the conversion of agriculture land into open plots through the acquisition of agriculture land by various individuals, including property dealers. This not only led to the speculation of prices, but also a key for the local authority's revenue source due to multiple changes of ownership rights and charge of the registration fee. The built-up land has increased while the agricultural land has decreased. The last three decades in Gurgaon have witnessed the densification of the built-up area, the emergence of multiple connectivity infrastructures, road density, and residential and commercial spaces all at the expense of agricultural land. The land-use scheme generally follows the master plan developed in 2007 for the year 2021 and the land-use categorization in the master plan has come up in the same category in the classified image of 2020. This shows that the urban growth and development have followed the scheme of master plan and land-use zoning in the master plan is generally followed in the urban development policies and schemes.

Gurugram has emerged as an edge city to Delhi with suburbanization features depicting the phenomenon of "Urban Doughnut", with the transformation of agricultural land into residential and commercial spaces. This newly build region of Gurugram is the center of producers' services such as financial and accountancy for the region. It also act as the hub for 'new industrial space' geography and destination for the service sector outsourcing. The technological connectivity of the city with the world's metropolis give it an edge over self-propelling urban growth in the city region apart from the influence of spatial proximity to Delhi.

3.10 References

- Acharya et al. (eds.), (2107) “Marginalization in Globalizing Delhi: Issues of Land, Livelihoods and Health”, *Springer India*, DOI 10.1007/978-81-322-3583-5_4. 2017.
- Brown et al. (2012) “Modeling Land Use and Land Cover Change”, G. Gutman et al. (eds.), *Land Change Science, Remote Sensing and Digital Image Processing* 6, pp. 403-417.
- Butt et al. (2011) “Assessment of Urban Sprawl of Islamabad Metropolitan Area Using Multi-Sensor and Multi-Temporal Satellite Data”, *Arabian Journal for Science and Engineering*, DOI: 10.1007/s13369-011-0148-3.
- Chaudhary et al. (2017) “Human Induced Land Use/Land Cover Changes in Northern Part of Gurgaon District, Haryana, India”, *Journal of Human Ecology*; ISSN: 0970-9274.
- Civco et al., (2002) “A Comparison of Land Use and Land Cover Change Detection Methods”, ASPRS-ACSM Annual Conference and FIG XXII Congress.
- Das G. and Das R. (2017) “A Spatio-temporal Change Analysis and Assessment of the Urban Growth over Delhi National Capital Territory (NCT) during the Period, 1977- 2014”, *International Journal of Research and Analytical Reviews*, vol.4, issue 2, pp. 154-176.
- Dev et al. (2020) “GIS Based Temporal Analysis of Land Use Pattern And Its Impact - Proposed Gurgaon Manesar Urban Complex”, *International Journal of Mechanical and Production Engineering Research and Development (IJMPERD)*, ISSN (P): 2249–6890; ISSN (E): 2249–8001, Vol. 10, Issue 3, pp. 6941–6952.
- Karle et al. (2004), “Principles of Remote Sensing, An introductory Textbook”, *The International Institute for Geo-Information Science and Earth Observation (ITC)*, ISBN 90–6164–227–2.
- Lambin et al., (2001) “The causes of land-use and land-cover change: moving beyond the myths”, *Global Environmental Change*, Vol. 11, pp. 261–269.
- Lo C.P. and Choi J. (2004) “A hybrid approach to urban land use/cover mapping using Landsat 7 Enhanced Thematic Mapper Plus (ETMz) images”, *International Journal of Remote Sensing*, DOI: 10.1080/01431160310001618428

4 CHAPTER 4: URBAN GOVERNANCE AND NEOLIBERAL POLICIES OF GURUGRAM CITY

4.1 Introduction

The Gurugram emerged as a millennium city which was earlier a satellite town just 30 kms outside Delhi on the NH-8 highway. The Gurugram City has been an IT sector as well as the hub of fortune for 500 Multinational Companies (MNC) Headquarters (Narain and Kumar, 2019). The present study uses both names viz. Gurgaon and Gurugram in order to make it more acceptable to the popular culture and the official obligations. Historically, the city of Gurgaon is connected with Mahabharata as the village of Guru Dronachariya and the village is known as “Gaon” in the Haryanvi dialect, hence it is named as Gurgaon.

However, recently the official name has been changed to “Gurugram”, as ‘Gram’ is a Sanskrit word and not in the popular culture of Haryana, hence in the popular culture it is still known as Gurgaon. So, to make the study more acceptable to the popular cultural element i.e. people at large, and to suit the official obligations, both Gurugram and Gurgaon are used in the study. The location of the emerging Gurugram city on NH8 which connects Delhi and Jaipur has an awe-inspiring infrastructure, and one of the oldest among them is the ‘Delhi Land and Finance (DLF) tower, which is the center of attraction for travelers and commuters on the national highway.

The emerging cyber city, one of the biggest cyber cities in India, the luxury apartments, cyber hub, all give a sense of a different world. This shows the shininess of the private investors’ interests and fortunes (Singh et al., 2020). The rise of Gurugram as the epitome of neoliberal policies speaks a lot about the Indian government and local State governments and their favor for neoliberal investments, support to the private sector, private mediated urban growth, and the quest to become a hub for multinational investments (Vij et al., 2018). The favor of the government is returned by the city system in terms of its financial contributions and multiplier effects. It is not surprising that Gurugram contributes more than half of the Haryana State Gross Domestic Product (GDP) with a rising curve since the 1980s. It also has a magnetic effect on the investments in the State attracting more than two-thirds of total investments (Kumar, 2015).

Gurugram has been presented as a cityscape with its high-rise glittering office infrastructure, modern residential housing, hyper-technocratic IT sector, and artificial recreational space underlying the private-led growth model of urban development (Kulkarni et al., 2010). The city emerges out of the well-fabricated government policy of the State to open the satellite town of Delhi for the neoliberal investments and its infrastructure provisioning, not to mention the additional impact of locational proximity to Delhi and IGI Airport (Narain and Kumar, 2019).

The process of urbanization in Gurugram typically shows the phenomenon of dispossession in the hinterland through land acquisition and subsequent capital accumulation. The emergence of formality in the legal sense is typically applied in the spatial context. However, it has been critically argued that the emergence of new spatiality is the work of negotiations of two primary stakeholders in the process i.e. private capital and traditional villagers (Singh et al., 2020). This process led to the emergence of hyper-modern technocratic urban enclaves, where the mere sight of the place enlighten a layman of its foundation based on the globalized capital and the superstructure that emerged in these enclaves speaks the stories of exclusion and dispossession of traditional resources. In the critical lens, it tells the stories of collusion between private capital's power and non-literate villagers (Singh et al., 2020; Narain and Kumar, 2019; Vij et al., 2018; Kumar, 2015).

Gurugram has emerged as the epitome of urbanization based on neoliberal philosophy. It is a patchwork of openness, competition, no regulation, privatization, and the power of capital. It has emerged as a negotiated space for the global-local, rural-urban, formal-informal, modern-traditional dynamics and establishes itself on the equilibrium of this negotiated space within these dynamics (Singh et al., 2020). The spatiality that has emerged from these negotiated dynamics, speaks a lot about the emerging network of politics, local political forces, and the emergence of local capital within the overall global capital flow, under the frame of the principle of negotiability and reciprocity (Singh et al., 2020).

The governance of the city is dominated by the State commissioner, Haryana Urban Development Authority (HUDA), and Zila panchayats at least before the coming up of the Municipal Corporation of Gurgaon in 2008. Before this, there was no democratic tradition in the city government and the State commissioner appointed the council, to collude with the private sector in planning, implementation, and management (Narain and Kumar, 2019; Gururani, 2013). This

sets the space for its development under multiple stakeholders and multiple regulations, ultimately leading to the mosaic of “re-territorialized” space (Brenner, 1999).

In this “re-territorialized” space, each unit in the mosaic has its characteristics, regulations, and specific inclinations to achieve its inherent objectives of space regulation, through the idea of Gatedness, exclusivity, space-specific laws, by-laws, and above all multiple regulating authorities. The various governing agencies such as private players for privately developed urban space, Haryana State Industrial and Infrastructure Development Corporation (HSIIDC) for industrial space, Haryana Urban Development Authority (HUDA) for its colonies, Municipal Corporation of Gurugram (MCG) after 2008, and recently Gurugram Metropolitan Development Authority (GMDA) after 2017, set the rules of this “re-territorialized space” and govern the dynamics of this mosaic of engendered inequity (Narain and Kumar, 2019).

The emergence of this mosaic and the gradual but continuous expansion of the city-region in the contiguous adjacent villages have been studied by the emerging spatial mapping technique using GIS software and remote sensing, which speaks a lot about the engulfed villages, space conversion, redefining of territoriality, and the emergence of ‘rurban’ in the city proximity (Yadav and Punia, 2014; Pramanik et al. 2021). This phenomenon of urban development in the post-liberal era with the use of the hinterland to create a ‘space of flows’ for the Information Technology, Business Process Outsourcing (BPO) led growth and emerging middle class with wider aspirations, is epitomized in the urban hinterland of old Gurgaon city. The glimpses of this can be seen in different post-liberal urban growth of Indian cities speaking of which reminds the glittering space of ‘White field of Bengaluru’; ‘Dholera’ of Ahmedabad’ (Singh et al., 2020; Yadav and Punia, 2014).

4.2 URBAN GROWTH PROCESSES

The Gurugram city has been going through densification and outward growth since the Liberalization, Privatization, and Globalization (LPG) policies of the union government. And there has also been an increase in the urban built-up area by around 30% in the last three decades (Pramanik et al. 2021). However, there is an intra-city differentiation in this process of growth as the first two decades since 1990 has been a “suburbanization phase” where city outgrowth happened at the cost of agricultural land in the proximity villages.

However, since 2009 there has been densification in the urban built-up environment within the city built-up area. The intra-city densification and growth rate of build-up within the city is twice the growth rate of suburban built-up primarily through extension (after 2009). However, the city undergoes a contiguous outward growth rather than the leapfrogging phenomenon, which can be seen in the western post-liberal city structure (Pramanik et al. 2021). This rate of change in landuse landcover (LULC) cast a shadow on the sustainability and resource availability, particularly the declining water-table and negative externality of the urban built-up if seen through the lens of ecology and resilience (Singh, 2015; Pramanik et al. 2021; Singh et al., 2020). The compacted urban growth particularly since 2009 is guided by the philosophy of securitization, gated enclaves, exclusion, and dominance (Singh, 2015).

It has been argued in the literature, particularly through the critical eyes of 'Harvey' and 'Lefebvre' where they argued the inseparability of capitalism and urbanization and the irreversible linkage between them (Lefebvre, 1991; Havey, 2003 and Banerjee- Guha 2010) The circulation of capital in stages from primary to tertiary and its manifestations in the urban space has been studied intensely by scholars and the emerging dynamics of post-liberal capital order have their imprints on the urban landscape of Gurugram which can be seen in various dynamics from social, political, economic and structural transformations. The predictability of urban dynamics is immensely difficult and assumptions in the quantitative studies and their consistency are doomed to fail as the urban system is guided by the principle of flexibility (Gururani, 2013), dynamicity, and variability.

However, within this constant change, there are signs of commonality in the urban systems which signifies the impacts of neoliberal policies on the urban systems and emerging metropolitan cities have similarity in the developmental aspects depicting the hangover of neoliberal toxicity if seen through the critical sphere, while a boon for the private-led growth in the liberalized logic. Harvey (2008) argued that the question now is not the diversity and differences in different cities the World over but the emerging commonalities and homogeneity which is the emerging interest for the researchers in urban dynamics (Singh, 2015).

The prime example of these commonalities and homogeneities which is emerging in the different metropolitans of the World is Gated community development projects which not only provide a sense of security whether real or perceived but a host of basic amenities from assured water supply and electricity to human not to mention the panopticonic surveillance through Closed Circuit

Television (CCTV) along with the prominent feature of 'Gatedness' which ensure exclusion, segregation, isolation, intra-enclave homogeneity, class culture and shows the affluent status of residents (Singh, 2015).

What has made this phenomenon a success, especially in the developing world points toward the emerging private players in real estate and the growth of these private players is the story of urban growth in the developing world of the post-liberal era. The private capital not only ensured better service provisioning, security, and latest trends in the residential sectors to the affluent few, but also share the crime of being uniform, same, monotonous, killing uniqueness, diversity, and heterogeneity not to mention the segregation and exclusionary aspect of city development (Singh et al., 2020; Singh, 2015).

4.3 **Gurugram Transformation by Neoliberalism**

The hues of neoliberal policies can be seen in intra-city level and Gurugram depicts these in the most contrasting way where old city located in old Gurugram has poor infrastructure, abysmal civic amenities vis-à-vis the emerging private-led new Gurugram highlighting the accumulation by dispossession, tertiary circulation of capital, private enclaves with gates, more flexible planning and spatial transformation from a rural ecology to a hyper-urban city environment (Singh, 2015). This new city has a vertical growth with high-rise residential space and after 2009 has a double rate of growth in the urban build-up area as compared to the suburban build-up with the extension of outward growth rather than leapfrogging (Singh, 2015; Pramanik et al. 2021; Singh et al., 2020).

This city environment with the exclusionary features sets the stage for circulation of capital, and global spatial fix, as the new city of Gurugram houses more than 200 fortune 500 companies' regional headquarters and IT service centers, not to mention the Business Process Outsourcing (BPO) and Knowledge Process Outsourcing (KPO) facilitated by the cheap skilled migrated labor force to bypass the high operating cost of the developed world although at the cost of burning the midnight oil in the Indian context.

Singh et al., (2020) argued by citing a view of the scholars Anthony King that Gurgaon, the old name for Gurugram has been undergoing a process of "Globurb" formation. In this context, Singh et al. (2020) argued that the forces of neoliberalism and global order is determining the contours of the social, economic, cultural, and architectural phenomenon of the city within the suburb of

major metropolitan Delhi. In the present scenario, global capital and neoliberal forces modulate the urbanity of Gurugram and determine the logic of the sudden unprecedented hyper-glazed modern urban landscape.

However, the story of this transformation from being a satellite town and suburb of Delhi to the present 'Globurb' started in a major way after the introduction of Liberalization, Privatization and Globalization (LPG) policies and welcoming global capital into the liberalized sphere of policy-making after 1991. But it doesn't mean that its emergence was out of the blue, Gurgaon had been in the policy framework of Delhi and its future development had been highlighted in the Master Plan of Delhi 1962 along with four other satellite towns around Delhi. However, it was considered the least developed satellite town of Delhi until the mid-1970s (Singh et al., 2020).

The water scarcity in the region was a hindrance in the mind of policymakers whenever they thought of planning Gurgaon limiting the possibilities of Industrial development as the service sector was still not a dominant aspect for the circulation of capital. This changed after the establishment of the Maruti factory and Gurgaon took a serious first step toward industrial development in 1982 (Narain and Kumar, 2019). This was augmented by the liberal policies of the Haryana government, cheap land prices due to poor agricultural prospects, low penetrations of green revolution technologies, liberal licensing policies and push factors from Delhi. Private-led development in Delhi was a nightmare due to high regulatory aspects and low prospects of profits and stringent laws. This pushed the private players out of Delhi, especially the Delhi Land and Finance (DLF) and Ansals API real estate developer (Singh et al., 2020).

The liberal policies of Haryana include the favored status and government support for the setting up of cyber-parks, cyber-city, and integrated commercial complexes, this led to the emergence of private colonizers and developers, as the act provided a space for liberal licensing instead of a fee and even space was provided for exemption from obtaining a license in certain conditions if the developer follows a certain plan of development. Bar of jurisdiction of the civil court in matters related to the development and regulation of the urban areas (The Haryana Development and Regulation of Urban Areas Act 1975 and its subsequent amendments in 1996 and 2003). This act provided the policy accommodation space for the Punjab Scheduled Roads and Controlled Areas Restriction of Unregulated Development Act, 1963.

The impact of neoliberal policies and associated globalization has its impact on the local governance aspects which ultimately affects the prior practices, imaginations, and social forms being produced in the context specificities (Borchert, 2008). Gurugram's prior governance practices have undergone a paradigm shift in the globalized and liberalized currents of global capital flow which have a different impact on the different aspects of governance, from being a model of flexibility in planning and development (Gururani, 2013) to the emergence of a new form of collusion of local people and private players in the process of dispossession of villagers of their traditional rights with the emergence of their negotiating power (Singh et al., 2020).

The story does not end here as the transformation of the city has temporal aspects from being the marginal outward growth by moving into the traditional agricultural lands of the nearby villages undergoing land-use transformations and the role of the private sector in these acquisitions and development (Yadav and Punia, 2014). Whereas a study focuses on the temporality in the land-use transformations with the intra-city growth rate in the built-up area with the double rate of growth as compared to the suburban development (Pramanik et al. 2021). The glittering space of DLF and the cyber city with vertical growth of residential space does speak a lot about the flexibility in planning, densification of the core due to high land price, residential-commercial spatial proximity, and private-led growth in the interstitial spaces (Singh et al., 2020; Narain and Kumar, 2019).

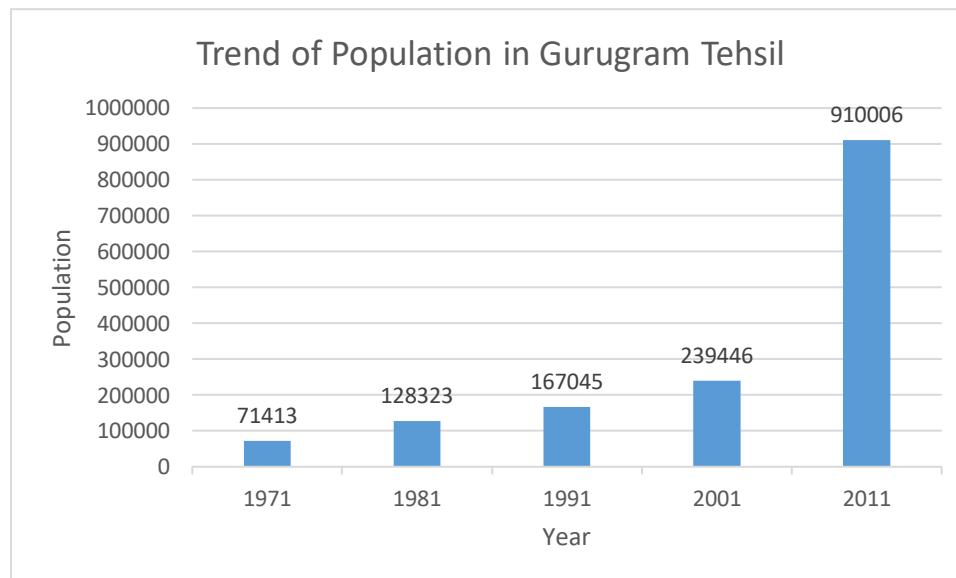
The reverberations of exceptions in the contextualization of neoliberalism in the Gurugram city-space underlying the flexibility in planning (Gururani, 2013), leading to intra-city enclaves development with private players' capital. This is contiguous with the poorly developed city region (old Gurgaon) highlighting the aspects of "Neoliberalism as Exception" (Borchert, 2008). The playing out of neoliberalism philosophy does not always lead to the minimizing of State interference and its homogenizing trend but provide the space to establish exceptions as in Gurugram case. This leads to the emergence of privately developed enclaves which have different governance mechanism along with the city space of poorly developed regions. These intra-city differentials highlight the governmentality of the State in the intra-city region and the differential implementation of neoliberal policies.

4.4 EVALUATION OF DEVELOPMENT PLANS AND POLICIES

The story of urban development in Gurugram especially in the policy sphere emerged in the political vacuum of local governance as it did not have a municipal act till 2008 and had its first mayor only at the beginning of the last decade i.e. 2011. Gurugram emerged in this context by importing humans, capital, imaginaries, and the philosophy of neoliberalism leading scholars to call it the ‘millennium city’. However, this process led to the intra-city differentials of highly developed enclaves with different policy implications and low-developed spaces highlighting typical urban spaces in the Third World.

This process of dispossession of traditional space by engulfing the village agricultural area and associated land-use change led to the emergence of privately governed urban enclaves highlighting the “Neoliberalism as Exception” phenomena in Ong’s terminology while speaking the logic of private capital-village people collusion and negotiation in land price leading to speculations and emergence of ‘Colonists’ in government terminology (Singh et al., 2020; Goldstein, 2015). This process gave birth to the single largest megaproject led by the real-estate actors, highlighting policymakers’ faith in market-driven growth by shedding the logic of State-led megaprojects of urbanization in post-colonial India.

Graph 4.1: Trends of Population Growth in Urban Area of Gurugram Tehsil



Source: Gurgaon District Census Handbook: 1971 to 2011, Census of India, Registrar General Office, New Delhi.

The emergence of Gurugram as a financial hub can be attributed to the fact that it contributed 45 % of the total property-related tax of Haryana (Goldstein, 2015). This process of liberalization in Gurugram cannot be divorced from the economics and politics of the late 1980s particularly the debt restructuring of India using the International Monetary Fund (IMF) system and associated conditionality with this process, this led to the emergence of the private sector, beginning of Foreign Direct Investment (FDI) in India, the emergence of real estate market and deregulation of the land market which opened the urban and suburban land market to private players (Goldstein, 2015).

The emergence of 2nd half of the first decade of the 21st Century put a regulatory lens on the activities of the private-led growth model in Gurugram by the emergence of the Gurgaon Municipal Corporation Act 2008, the Gurgaon- Manesar Urban Complex 2021 published in 2007 by the Department of Town and Country Planning, Haryana with subsequent revisions in 2011 and 2012 for developing a master plan of 2025 and 2031, respectively. The emergence of a specialized statutory authority under the Gurgaon Metropolitan Development Authority (GMDA) act., 2017 provides the beginning of a new institution with a special focus on Gurugram planning and development to provide a continued, sustained, and balanced growth of the ‘Gurugram Metropolitan Area’ and refocusing to provide “urban amenities, mobility management, sustainable management of the urban environment and social, economic and industrial development, to redefine the urban governance and delivery structure in coordination with local authorities in the context of the emergence of Gurugram as a rapidly expanding urban agglomeration”(GMDA Act, 2017).

The Gurugram Metropolitan Development Authority (GMDA) has the provision of top-down and bottom-up planning amalgamation with the Chief Minister of Haryana as the chairman while at the same time also having the Residency Advisory Council to guide the authority in its functions and regulatory mechanism. However, the Residency Advisory Council does not have the representation of people who are dispossessed of their agricultural land in the process of development, especially the people of nearby villages, say the village of Jharsa Village. This village was taken for the primary field survey. Although the village is under Municipal Corporation of Gurgaon and does-not have local village panchayat but this inclusion does not have any improvement in their civic amenities. The dissolution of the village panchayat in 2015 and its

inclusion along with other villages (Bandhwari, Darbaripur, Banola) had led to the emergence of protest of villagers where they argued of being under the property taxation regime and developmental regulation while devoid of the civic amenities of the Municipal Corporation of Gurugram (MCG) in the Laal Dora/ inhabited land/ Abadi land of the village. The local elite was also deprived of their Panchayati powers not to mention the host of other problems regarding official scrutiny.

4.4.1 **BYLAWS OF URBAN DEVELOPMENT**

The three-act governs the urban growth and development, regulates the haphazard growth, and provide a framework for planning in Haryana, which are mentioned below:

- The Punjab New (Capital) Periphery Control Act, 1952 (applicable to Panchkula only).
- The Punjab Scheduled Roads and Controlled Areas Restriction of Unregulated Development Act, 1963. (under this act Master plans are prepared by the Town and country planning Department of Haryana government)
- The Haryana Development and Regulation of Urban Areas Act, 1975. (under this act license of development are given to private colonizers)

The bifurcation of Punjab State in 1966 gave birth to Haryana based on culture and language. The most important act regarding the growth prospects of towns in Haryana in general and Gurgaon, in particular, is the enactment of “The Haryana Development and Regulation of Urban Areas Act, 1975” which provides the space for private sectors in the process of urban development. The department of Town and Country Planning, Haryana provides the license to the private colonizers and developers to develop Residential, Commercial, Industrial, and IT Park/Cyber Park Colonies (Town and Country Planning, Haryana).

The private colonizers are involved to develop urban areas of Gurgaon either through a “company” owning land, individual landowners, or through the land pooling process. These private players are granted licenses under the 1975 act. However, to control the town’s haphazard growth, the licensees are bound by the land zoning regulations and land-use plans developed under the “The Punjab Scheduled Roads and Controlled Areas Restriction of Unregulated Development Act, 1963”.

4.4.2 HUDA PLANS AND POLICIES:

Haryana Urban Development Authority (HUDA) is the key functionary in the urban planning and regulation of urban space in Haryana and along with the private players, it is a key player in the development of Gurugram. Established under the HUDA act of 1977, it succeeded the Urban Estate Department which was established in 1962 and worked under the Punjab Urban Estates Development and Regulations Act, 1964. The HUDA takes up the developmental works and provides the integration of functions hitherto provided by the various government departments. This integration of functions under the umbrella of HUDA led to the development of land planning along with the definite goals of government and it also lead to land valuation and speculation. Like the private players it employed the policies of agricultural land acquisition (although acquired by the State govt. and subsequent transfer to HUDA) and its subsequent development by HUDA with the right of selling and dispose of property with systematic planning and use of the urban land for the development of residential, industrial, recreational, and commercial purposes.

However, it has a welfare function of providing land to the Haryana Housing Board to develop housing projects for economically weaker sections of urban dwellers. HUDA works on the principle of “Transfer- Development-Transfer” where the State government acquires land under the Land Acquisition Act, 1894 (Amended in 2013). After taking possession of land, it transfers it to the Authority on payment. The overall cost of acquisition and enhanced compensation if ordered by the competent court is paid by HUDA out of its funds.

The Haryana government scheme of 1987 to monetize the surplus land under various government departments of Haryana in various towns helped in the monetization of land, revenue realization, and commercial and industrial space development along with the residential requirements of the emerging town. Under this scheme of land monetization, three projects had been taken by the government through HUDA’s modus Operandi of “Transfer- Development-Transfer” in Gurgaon which led to the development of commercial and residential space (Council of Ministers policy approval in the meeting held on 14.12.1987).

Now the present study focuses on the Urban Estate of Gurgaon in the Gurgaon district (as HUDA divided the Gurgaon district into 5 urban estates i.e. Gurgaon, Rewari, Dharuhera, Narnaul, and Pataudi). The various policies of HUDA for the commercial development of the towns have been employed and this influences the urban structure and land use of different towns of which Gurgaon

is not an exception. The clubbing of commercial land (Guidelines regarding clubbing of commercial sites, dated: 17.06.2009) to achieve the economics of scale, commercial requirements, and neoliberal environment for commercialization is an example in the host of other policies to set the urban space for commercial flourishing and Gurgaon used these policy relaxations to emerge as the hub of commercial space in Haryana.

This neoliberal and relaxation measure in the urban towns of Haryana put them in an adventitious position vis-à-vis other States' towns especially Delhi, along with the host of other contextual advantages in Gurgaon cited by different scholars (Singh et al., 2020; Narain and Kumar, 2019; Vij et al., 2018; Kumar, 2015), the commercial space development require a host of other infrastructure and a place like Gurgaon which host the 200+ fortune 500 companies' regional head offices (Narain and Kumar, 2019) require urban hotel and hospitality sector for international travelers and HUDA policy of "light-touch regulation" speaks volume about the emerging burgeoning sector and one such policy which relaxes the regulatory norm to achieve the competitive city model standards provided by the policy space (Relaxation in height norms and exemption of service floor from Floor Area Ratio (FAR) for Haryana Urban Development Authority (HUDA) allotted hotel sites above 1.0 acres in size. Dated: 02.07.2010).

The Communication and Connectivity Infrastructure policy (2013) of the Haryana Government highlighted the importance of Gurgaon in the communication infrastructure development sector and Town and Country Planning, Haryana kept the Gurgaon-Manesar complex into a "Hyper potential zone" highlighting the importance of Gurgaon in the mindset of policymakers. With the introduction of this policy, Haryana became one of the front runners in facilitating the E-enablement of life and work, also it laid the foundation for infrastructure sharing by the private service providers in the form of Optic Fiber Cable (OFC), Fiber To Home, and innovative scheme of using the existing infrastructure through the business model of Open Access Network (OAN).

All these infrastructure and policy facilitation helped the emergence of regional head offices of Multinational Companies (MNC), the emergence of Business Process Outsourcing (BPO) and Knowledge Process Outsourcing (KPO), and the service-sector economy in Gurgaon which led to the multiplier effect on other aspects of the economy, especially the infrastructure and residential sector growth and as argued by (Pramanik et al. 2021) this process is more concentrated in the core area of Gurgaon with double growth rate than the suburban marginal area after 2008.

4.5 Neoliberal Approaches to Urban Development

Due to the rise of population and its pressure on the urban infrastructure and services, the planning and development have been transformed and restructured by using the services of private firms in plan development and its implementation. Due to the implications of urban growth and exponential rise in population, the planned colonies developed by the private players have been under stress and it is because of this the Municipal Corporation of Gurugram (MCG) has been undertaking work with capital investment involving the aim of improving the urban services in these privately developed urban space. The major focus of this restructuring and retrofitting work concerned with the Road, Water Supply, Sewerage, Storm water drainage, recycling, solid waste management, street lights.

However it should be emphasized here that in this process of development, redevelopment and retrofitting, the private planning firms have been involved to develop the plans (outsourcing by Municipal Corporation of Gurugram) signifying the importance of the Public-Private Partnership (PPP) mode of development in the neoliberal era. There is a phenomenon of outsourcing the traditional work performed by the State agencies to the private sector to drive the benefits of their expertise in their particular field.

Table 4.1: Details of Urban Developers of Gurugram City.

| Private Colony | Planning firms hired by MCG to develop Detailed Project Report |
|----------------------|--|
| DLF phase 1 | Ky Consultants Pvt Ltd |
| DLF phase 2 | Ky Consultants Pvt Ltd |
| DLF phase 3 | Ky Consultants Pvt Ltd |
| Sushant Lok 1 | Manav Consultants and Constructions |
| South City 1 | Ky Consultants Pvt Ltd |
| South City 2 Phase 1 | Ky Consultants Pvt Ltd |
| South city 2 Phase 2 | Ky Consultants Pvt Ltd |
| Palam Vihar | Ky Consultants Pvt Ltd |
| Suncity | Malla Consulting |

Source: Detailed Project Reports, Municipal Corporation of Gurugram

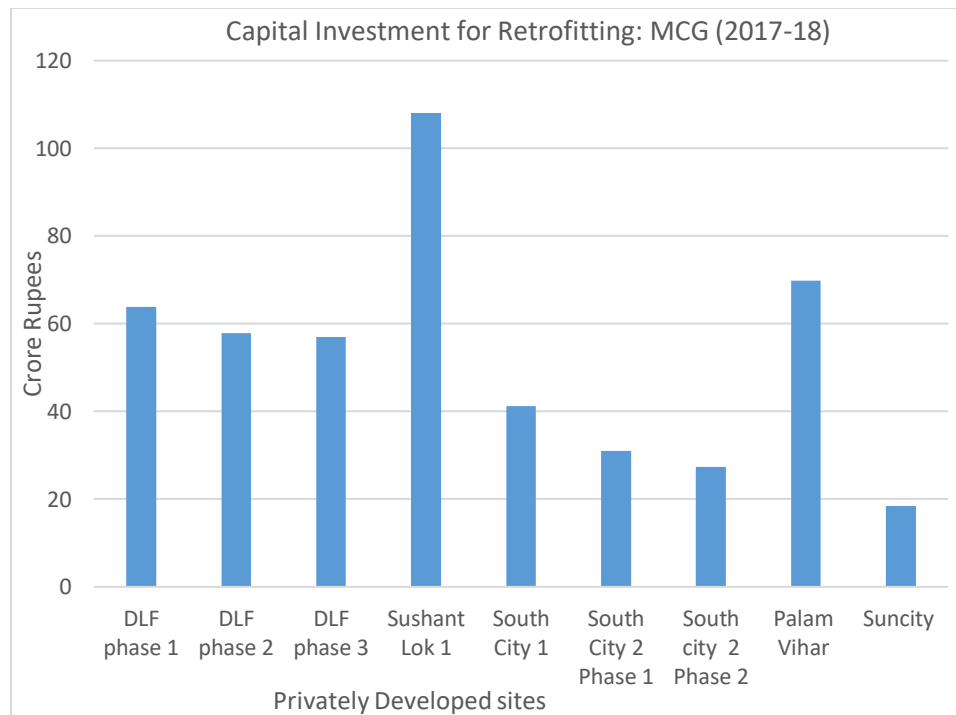
The above table shows the outsourcing of planning of the city to the private firms by the Municipal Corporation of Gurugram. This is the emerging feature in the city and its governance as private

firms are actively involved in the planning and regulation functions of the Government. The trend is seen in different aspects of the city governance.

The involvement of private firms shows the restructuring of planning as a process in the urban space, where traditionally planning had been considered a major work of the State and its agencies which is being outsourced now to the private firms.

The emergence of neoliberal policies force the government to develop the infrastructure facilities in the city regions both for attracting global capital and provide enough opportunities for the local capital to circulate in the process of neoliberal competition as propounded by the competitive city model.

Graph 4.2: Capital Investment by the MCG in Various Privately Build-Up Areas



Source: Municipal Corporation of Gurugram

The above graph showing the proposed investment by the MCG in developing and retrofitting the various basic amenities in the privately developed colonies and residential spaces of Gurugram focusing on providing the civic amenities in these spaces of the city due to the increase in population pressure in the rapid urbanization after 1990s. The focus of this investment will be on

the basic amenities in the urban space but it also speaks a lot about the neoliberal forcing which requires continuous investment in the basic infrastructure to attract the private capital for investment.

4.6 Welfare Schemes for Marginalized Society

As the prevalent literature shows the emergence of neoliberal policies in the urban process of growth and transformation, cities are employing various strategies to attract global capital. The urban system is guided by the philosophy of the neoliberal system where the market and privatization of services are the defining logic of economic circulation and production functions. But do the three pillars of privatization (1) ownership measures, (2) organizational measures, and (3) operational measures (Kim and Panchanatham, 2019) free the government of its welfare functions and provide space for private players to determine the principle of the urban system and its functioning? The answer to this lies in the grey area as privatization and neoliberal philosophy do not let the government wholly shed its basic function, i.e. welfare and social inclusion.

Neoliberal growth provides space for market philosophy but it does not let the government recede from its basic function of the welfare of the marginal sections in Gurgaon. The three pillars of privatization do provide space for the neoliberal philosophy to flourish and have implications for the efficiency of firms, deregulation, low government intervention in operational and organizational aspects, and also revenue realization for the State which can be invested further to create capital assets and fuel the cycle of the multiplier effect (Estrin and Pelletier, 2018; Vickers and Yarrow, 1998). But all these hues of privatization and neoliberalism do not bleach the government's involvement in the welfare functions and its approach towards the inclusion of the marginal.

However, as data shows the majority of the State revenue of Haryana comes from Gurgaon around 45% (Narain and Kumar, 2019). The philosophy of neoliberalism and prospects of private sector involvement in the infrastructure sector along with the distributional role is no less important to lure the government to follow the path of privatization in infrastructure development (Vickers and Yarrow, 1991).

The private sector involvement in infrastructure and service provisioning and neoliberal implementation in an urban space is contextually mediated where policies' underlying

philosophies are amalgamated by the local context in terms of socio-economic and political aspects with uniquely placed institutions that determine the outcome and hence its diversity in different regions. This has been argued by (Singh et al., 2020) where Anamika Singh's work on the interstitial spaces of Gurgaon focused our attention on the counter-argument of "accumulation by dispossession" and Gurgaon's collusion of private developers with the village landholder provides a counter stream of processes which provide space to the so-called "marginal" people i.e. the villagers to develop bargaining power by the collusion with the private players.

This has been seen in the primary survey of the Jharsa village area, where it found that the villagers have emerged as entrepreneurs due to the emergence of rental opportunities because of the "Medicity" hospital and the village is a typical example of how the medical tourism can transform the economy, as entering the area from the 39 sector side gave a resemblance of Chandni Chowk of Delhi due to congestion and using every inch of space for medical stores, general stores, rental accommodations, and other services of daily use. The people of this village love to call this street "Chandni Chowk" as it gives them a high rental income and boosts their fortunes. To quote as an example of the bargaining power of these people, "Jitender Thakran, Ramchander, Saroop, Deepak Thakran, Mahender, and a group of other villagers have been fighting a case against the 'Unitech' (a private real estate company that acquired their land for developing private gated residential society) for higher compensation and currently have reached the Supreme Court stage, as the owner of the 'Unitech' company is under custody due to fraud, the villagers are in a dilemma".

The point here is to show the economic power of these marginal people as argued that the village people's collusion with private players for better prospects (Singh et al., 2020). It can be argued that people can go against the high-headed private players with economic might if their demands of compensation are not met, as they have economic and local political standing in the local context. The present argument shows the contextuality in interstitial spaces.

The implementation of neoliberal policies in Gurgaon and its contextual specificities gives us space to argue that the State still performs its basic and most important function of the welfare of the people of the marginal section of society. There is no counter-argument against the "Accumulation by Dispossession" or the hues of neoliberal policies in various aspects. Neoliberalism is seen in every sphere of Gurgaon development and the superstructure which have emerged is a typical example of the emergence of private players in the traditional State roles, but

the policy analysis of the State of Haryana shows that it has provided the space for private players to develop the city to suit the needs of global capital, it has not taken a back seat from the welfare functions. It can be argued that within the neoliberal urban growth, the State still plays an important role in the welfare of the marginal section of the society as market forces fail these people.

The impact of the State on welfare is prominent and neoliberalism would have a very different outcome which could have been disastrous to the marginal section of the society in the absence of State interventions. The State still plays a critical role in terms of infrastructure provisioning, residential housing, and welfare policies, especially for the marginal community of the city. It also put a regulatory mechanism on the private capital to follow the general rule of the game and the State has not receded from its basic functions, although the intensity and logic of those functions and the philosophy behind the welfare State certainly transformed.

The State is guided by the nuances of neoliberalism but it does not mean that it has shed its function of regulating and welfare. The emergence of this duality of targets i.e. to set the space for neoliberal philosophy and policy accommodation along with the welfare function does provide friction and contradictions in the urban space of Gurgaon and it is here that the State plays a critical role in balancing and regulating the different stakeholders. The role of the State has changed but it does not mean that it is under the total influence of neoliberalism philosophy, it always keeps space for itself, its policies, and its electorate in the democratic setup of Gurgaon. This approach to the welfare of the marginal people of Gurgaon is seen in the various policy framework some of which are cited here to justify the argument.

Regulatory Framework and welfare function of Local Government

- *To grant the license to the private players for developing “Residential Plotted Colony” some welfare guidelines*
 1. 20% of the plots are to be reserved for EWS, housing with a minimum plot size of 50 sq. mts.
 2. 25% of the total plots are to be allotted under the category of ‘No Profits No Loss’ plots (NPNL) i.e. at the rate prescribed by the Director.
 3. The plotable area/saleable area in a plotted colony cannot exceed more than 55% of the area of the colony.

➤ *Guidelines to private developers for developing Group Housing*

1. 15% of the total number of flats are reserved for EWS and 10% of the main dwelling units are required for service apartments i.e. for domestic help.
2. Area requirement for EWS and service apartment is 200 sq. ft. and 140 sq. ft. respectively.
3. The maximum habitable height in a group housing complex is 60 meters.

➤ *Guidelines for cyber-city/cyber-park development by private players*

1. In cyber cities, 10% of the area of the site can be utilized for Group Housing and 4% of the area for commercial use.
2. In Cyber Parks only 4% of the area can be utilized for commercial uses. No group housing is permissible.
3. The permissible ground coverage is 40% and FAR is 250.

The Government in the public interest, relax any restrictions or conditions in so far as they relate to land use prescribed in the controlled area in exceptional circumstances. Apart from the regulations and welfare policies under the “The Haryana Development and Regulation of Urban Areas Act, 1975”, the emergence of HUDA as a government agency to integrate the functions of government hitherto performed by various departments and to develop the urban areas on the “Transfer- Development-Transfer” model has a welfare angle in its policy implementation.

The development of the HUDA institution as a statutory body signifies the importance of urban development to secure the societal obligations of the State and development along the hybrid model giving due importance to both the private market principle of engagement in urban space as well as the societal obligations and support to the marginal section of society. From the critical eye, it can be argued that neoliberalism has given rise to the commodification of urban space, exclusion of marginal from the civic services due to wanting of service charges, and local government wantonly following the principles of neoliberalism, but this has also given space for the “entrepreneurialization” of local government (HUDA in case of Haryana) as argued by (Rossi and Vanolo, 2015), the

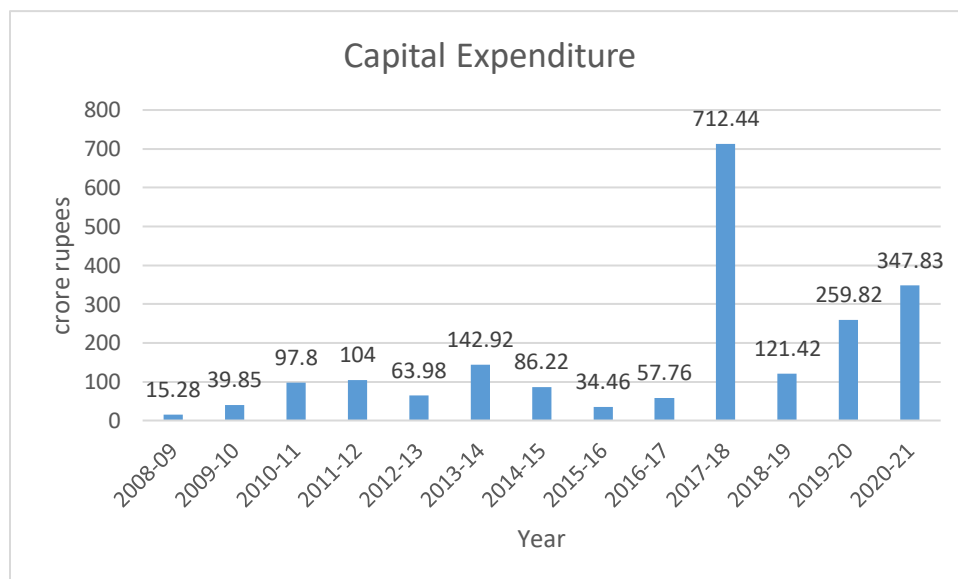
contextualization of liberalization leading to “hybridization and variegation” in the local context of the socio-political and economic system (Rossi and Vanolo, 2015).

The emergence of this entrepreneurialization of local government gives rise to hybrid functions where government follows the neoliberal logic not diminishing the welfare principles to the bottom and this can be seen in the case of Gurgaon where not only urban restructuring and urban development happen to suit the market principles but in this process welfare principle find its due in the contextual setting of the democratic political system.

The emergence of the Municipal corporation of Gurugram in 2008 led to new dynamics in urban service provisioning as it took the role of providing efficient and effective urban services along with the development of urban areas for its rising population and to attract global and local capital, hence it is required to maintain the urban infrastructure and to develop new points of growth in order to maintain the status of the city as a ‘magnet’ to attract the capital.

The following graph shows the capital expenditure undertaken by the MCG after its formation in order to develop required infrastructural needs under various heads like roads and bridges, sewerage, water supply, street lighting, buildings, and all sorts of infrastructural needs of the city.

Graph 4.3: Trends of Capital Expenditure by Municipal Corporation of Gurugram (MCG)



Source: Municipal Corporation of Gurugram Budget

4.6.1 **HUDA WELFARE POLICIES**

- 35% of the plots allotted to EWS in the HUDA-developed areas.
- Women are exempted from the extension fee of the property.
- 2% of industrial plots up to 500 sq. meters. shall be reserved for allotment to entrepreneurs with disabilities.
- Provide free treatment to poor patients in case of allotment of land to private hospitals at concessional rates.
- Allotment of land/building for ECHS at highly concessional rates at par with social/charitable sites.
- Formulation of “Ashiana scheme” through which EWS persons will be allotted constructed flats that will give them a better quality of life.

The above-cited policies do hint toward the welfare function performed by the State in the hues of neoliberalism and it can be argued that neoliberalism could have been more disastrous for the marginal and weaker section of the society if the State have also back footed from its welfare function. In Gurgaon city, the local context gives rise to local government entrepreneurial character viz. HUDA, the scheme of regulation through the 1973 act, and space for private players in the regulated atmosphere for urban development. This process gives rise to the contextualization of neoliberalism with interstitial diversity and localization of liberal market principles.

4.7 **Conclusion**

The emergence of Gurgaon in the neoliberal era after 1990 with a sudden rise in population growth and urban area with contiguous outward growth rather than leapfrogging gives rise to hyper-glazed urban commercial infrastructure with office space for fortune 500 companies. There is an intra-city differential in urban development and even the growth rate varies spatially and temporally. The State plays an important balancing act in the

neoliberal policy hues with its welfare functions. It would be wrong to argue that local government plays at the hands of neoliberal policies and global capital.

There is no cross argument to diminish the implications of neoliberalism in the urban structure and growth, even its exclusionary claim can be seen in the urban space but along with these processes and modalities, there is localization and contextualization of neoliberalism happening in Gurgaon under the democratic political framework and there is a welfare approach of the marginal by the local government in the larger context of neoliberalism. The implications of neoliberalism would have been more disastrous for the marginal section of the urban people with intra-city disparity and inequality if the policies of the local government fall under the trap of neoliberal philosophy.

The State plays an important role in its regulating functions of private capital and even induces a welfare effect through the private institutions. However the approach towards welfare is more targeted and focuses on the specific groups as seen in the policies of the local government. The new groups which have emerged as the targets of local government for welfare are women for gendered approach to resource distribution, Economically Weaker section of the society, persons with disabilities and old age group cohorts. Indiscriminate welfare approach of post war Keynesian is obsolete in the new dynamics and local government is recognizing the lacunae of this approach. The policies of the local government have provided space for the private capital to flourish but the regulatory function of the local government is still not less important as it regulate the private capital and restrict its flourishing, modulate its momentum, guides its growth, demonstrate its dominance, support its subordination but legalize neoliberal logic.

Thus the local government provide the contextualization and path dependencies for the foundational outcomes of neoliberal policies. On one hand it provide the space for the private capital to establish itself in the urban space while on the other hand it tries to demonstrate its dominance and chief player in the urban game. Thus the main functions of the local government of regulation, allocation and distribution although diluted by the hues of neoliberal philosophy but have not eliminated it. Local government still plays the dominant role in the urban milieu in determining its path of growth.

4.8 **References**

- Gavsker K.K. (2017) “Urban Living and Discontented Regeneration of Cities: Reflections on Planning, Social Inclusion, and Challenges in the Post-Neoliberal Reforms India”, *International Journal of Research in Geography (IJRG)*, Volume 3, Issue 4, 2017, PP. 100-111.
- Borchert T. (2008), Reviewed Work(s): “Neoliberalism as Exception: Mutations in Citizenship and Sovereignty” by Aihwa Ong: “Friction: An Ethnography of Global Connection”, by Anna Lowenhaupt Tsing, *Crossroads: An Interdisciplinary Journal of Southeast Asian Studies*, Vol.19, No. 2, pp. 202-205.
- Chattopadhyay S. (2017) “Neoliberal Urban Transformations in Indian Cities: Paradoxes and Predicaments”, *Progress in Development Studies*, vol.17, pp. 1–15.
- Cowan T. (2015) “Fragmented Citizenships in Gurgaon”, *Economic and Political Weekly*, Vol. 50, No. 26/27, pp. 63-73
- Communication and connectivity Infrastructure Policy-2013, Government of Haryana (pp.393-395/dated 14.05.2013).
- Estrin S. and Pelletier A. (2018) “Privatization in Developing Countries: What Are the Lessons of Recent Experience”, *The World Bank Research Observer*, vol. 33, no. 1, pp. 27-34.
- Goldstein S. (2015) “Planning the Millennium City: The Politics of Place-making in Gurgaon, India”, RC21 International Conference on “The Ideal City: between myth and reality. Representations, policies, contradictions, and challenges for tomorrow's urban life” *Urbino (Italy)*.
- Gurgaon District Census Handbook: 1971 to 2011, Census of India, Registrar General Office, New Delhi.
- Jain et al. (2017) “Remote Sensing Enabled Urban Growth Analysis for Gurgaon from 1995 To 2015”, *Advances in Computational Sciences and Technology*, Vol. 10, No. 6, pp. 1745-1757.
- Kim K. and Panchanatham N. (2019) “Reform and Privatization of State-Owned Enterprises in India”, ADBI Working Paper Series.
- Narain V. and Singh A.K. (2019) “Wiley Blackwell Encyclopedia of Urban and Regional Studies”. Edited by Anthony Orum.
- Prakash A. (2017) “The Hybrid State and Regulation of Land and Real Estate: A Case Study of Gurgaon, Haryana”, *School of Public Policy and Governance*, Faculty Working Paper Series.

- Pramanik et al. (2021) “Post-liberal urban dynamics in India–The case of Gurugram, the Millennium City”, *Remote Sensing Applications: Society and Environment*, Elsevier, Volume 22, pp. 45-56.
- Rossi U. and Vanolo A. (2015) “Urban Neoliberalism”, *International Encyclopedia of the Social & Behavioral Sciences*, 2nd edition, Volume 24, PP. 846-853.
- Singh et al. (2020) “Neoliberal Spatialities in Gurgaon”, *Traditional Dwellings and Settlements Review*, Vol. 31, No. 2, pp. 7-22.
- Singh S. (2015) “Understanding cities through the process of urbanization”, *Sustainable Development and Planning*, vol. VII, PP. 749-757.
- Vickers J. and Yarrow G. (1991) “Economic Perspectives on Privatization”, *Journal of Economic Perspectives*—Vol. 5, No. 2, pp. 111–132.
- Vickers J. and Yarrow G. (1988) “Privatization: An Economic Analysis”, Cambridge, MA: MIT Press.
- Vij et al. (2018) “From the core to the periphery: Conflicts and cooperation over land and water in periurban Gurgaon, India”, *Land Use Policy*, vol. 76, pp. 382–390.
- Waldman D. (2019) “Manufactured Magnificence In the ‘Millennial City: The (Post) Colonial Politics Of A Sport-Focused Gated Community Development In Gurgaon, India, Ph.D. Thesis.
- Yadav A. and Punia M. (2014) “Socio-Economic and Ecological Transformations of The Peri-Urban Region Of Gurgaon: An Analysis Of The Trickle-Down Effect In The Post-Globalization Era”, *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, Volume XL-8, pp. 35-45.

5 CHAPTER 5: SUMMARY OF CONCLUSIONS

The urban transformations occurred in the era of neoliberalism have both spatial and temporal dynamics with intra-city and inter-city implications. It not only changes the spatial organization and spatial context but its space is being transformed into a new level of socio-political and economic space with new production and consumption relations, new actors in economic and political space and not to mention the marginalization of a certain section of city populace in this process of transformation. The City is becoming more dynamic to the global capital and adjusting to the need of global capital is giving it flexibility in its planning and development. Global capital is being fixed in the Global South to fuel the wheel of circulation of capital and avoidance of the crises of over accumulation.

The Global South urbanization is undergoing major transformations in this process, providing avenues of investment for the accumulated global capital of the capitalistic system. This transformation of urban structures and organizations has given rise to local actors and Gurugram City are being privately developed, owned, and maintained. This have implications on the efficiency and quality provisions of the services but also has the negative externality of marginality for the certain section of the city dwellers which gives rise to contradictory development trajectories and animosity in the city structures, ultimately giving rise to social tensions, hostile relations and requirement of the new form of social control using physical exclusionary features of privately managed security, gated community, modern form of panopticon with surveillance features such as Closed Circuit Television (CCTV). This led to the emergence of the commodification of services not to mention the implication of service provisioning of basic needs through the private sector which has exclusionary externality in the global south.

Cities in the neoliberal era in general and Gurugram in particular, are in the race for capital investments by projecting themselves as being efficient, productive, safe, hyper-modern, socio-political stable, and economic engines for the generation of capital at a higher rate. There is an immense potential for profits in the global south and recently the emerging trend of sustainability has overshadowed the other image projections as city sustainability is the major theme in the city image projection, creation, and selling. In the milieu of the city environment, the flux of dynamicity of city structure and city functions determining its organization has reduced the role of government as the primary determinant in the socio-economic and political functions and its role

has been reduced especially to regulation. The local government plays a more diminished role in service provisioning. However, the role of local government is not eliminated as a close analysis of the policy implementation in Gurugram gives us an important insight into the role of the government and its local limbs in the neoliberal era.

The role of government has been reduced in certain spheres for certain, but new avenues of government involvement have come up and the local government does play an important role in the targeted welfare. Has it not been the case in Gurugram, then the implications of the neoliberal policies would have been more disastrous for the marginal section. The emergence of private players in the service provisioning and infrastructure build-up gives rise to a new elite in the urban space, which also led to the collusion of private players and local political elements as this nexus helped the implementation of neoliberal policies. Privatization also gives efficiency to resource usage apart from better services with more choices due to open competition.

However, the other side of the coin is dark due to the exclusionary effect on the marginal section of the urban populace as privatization and basic service provisioning based on market principle exclude the people who can't afford the services. This phenomenon is seen in the urban space of Gurugram as the socio-economic profile of 'Jharsa' village is undergoing a transformation where traditionally landed communities are being enriched due to the development of the rental economy in the village while the people of other lower castes are being deprived of these opportunities.

The restructuring and the rescaling of the urban system and associated urban developmental policies give rise to the emergence of new spaces of hyper-development in Gurugram largely built and managed by the private players. In this process, the State has receded from its traditional welfare approach and the State's welfare is being restructured with a targeted approach becoming the new norm. It can be fairly argued that the state's welfare approach is restructured, and transformed but eliminated in this urban milieu of Gurugram. Hence it would be above the watermark to take the argument regarding welfare to the level of elimination.

The logic of neoliberal policies has affected the welfare sphere to align it with the new philosophy. The elimination of traditional rights of the people with the impact on the livelihood has been the major theme of "accumulation by dispossession" propounded by the critical literature but this dispossession of traditional agricultural land in Gurugram has opened up the new interstitial spaces of repossession and new opportunities have emerged for the local elites. However, there is a

differentiation between these opportunities and marginal sections of society although found new opportunities, prospects are certainly less for these marginal communities. The people with traditional agricultural land who have been dispossessed by the neoliberal policies of their traditional land have led to the emergence of new local elites with new economic engagement and emergence of opportunistic attitude in the people but it is a fair argument that traditional marginal section who has been forced out due to neoliberal policies has been overly dispossessed and affected but new opportunities have emerged even for them in the urban space.

These new opportunities acted as a magnet for the people with low skills and skills to flood the city with migrants. However, this also led to the emergence of informalities, slums, and shanty settlements with poor living conditions in certain quarters of Gurugram city and exceeded the city's resilience limits. The emergence of a new form of economic engagement in the urban space has given rise to inequality and the city of Gurugram is blotted with extreme riches and glittered space of hyper-modern work environment while also aligned and abutted with the poorest of urban dwellings with no basic service provisioning and no infrastructure for basic sustenance.

New marginality has emerged and a new scale of deprivation has been the case in the urban space of Gurugram modeled by the neoliberal policies. This not only gives rise to urban contestations and conflicts but is also the prime cause of rising urban crime and frustration that requires the need for panopticonic surveillance and gated community. The emerging trend in urban growth of Gurugram has the logic of a market but an unrestricted market and its associated marginality fallback, pushing the State and local government to endorse the functions of redistribution, although holistic restructuring of the welfare approach has been the case lately.

There is an emergence of new approaches to welfare with new social actors working out within the constraints of the neoliberal order and the market mechanism. This emergence of new social actors in the welfare sphere works in congruence with the government agencies and has wider spatial footprints of their organizations as it does not confine itself to the city space but has supranational character. The local government's engagement with the new social welfare actors give enough space to the stakeholders for implementing a new targeted approach and dismantling the brewing discontent and conflicting attitude in the urban developmental processes. The urban stability and urban resilience have been reinforced by these new social actors and marginal people

have been saved by the wrath of market principles which would have been more disastrous for these people as welfare not restructured and realigned within the new neoliberal space.

It can be fairly argued that the emergence of new social welfare actors has reduced the impact of neoliberal policies on marginality and also provided a new targeted approach to the welfare functions which give quantitative and qualitative enhancements and resource use efficiency while at the same time reducing the burden of welfare from the local government actors. The neoliberal policies with its hues of informalization, deindustrialization, reindustrialization, beyond Fordism, global city, entrepreneurial urban space, privatization, gentrification, green gentrification, and socio-spatial polarization has been employed contextually in the global south with new modes of governance and its position vis-à-vis private players with a new model of service provisioning, a new role of the State, and new power structure in this flux.

These aspects of neoliberal philosophy is seen in the urban space of Gurugram as urban space has been structured and adjusted to the needs of neoliberal policies and their implementation. The process of deindustrialization and the emergence of new spatial fixation of capital especially the process of horizontal integration and vertical disintegration after Fordism has been a boon for the Gurugram city as it has emerged as the space for regional headquarters of the Multinational Companies (MNCs). However, there is a spatial differentiation within the cityscape of Gurugram as along with the hyper modern super glazed infrastructure, it is abutted with slumization and informalization. The case of Gurgaon is a typical example where cities have been developed to attract the global capital and locations for the implementation of neoliberal policies, the use of private capital in the service and infrastructure provisioning, and horizontal integration for the global service outsourcing and supply chain integration.

The principle of marketability in Gurugram city has allowed the space for the local governance to rescale, reorganize and restructure itself and the emergence of entrepreneurial aspects leads to the space for non-formalization, contractualization, and commodification. The restructuring, rescaling, and reorganization have not only changed the urban structure and urban form of Gurugram city but also have intra-city implications and Gurugram city has emerged as a space for intra-city differentiation where some regions have a high growth rate, densification, and high rate of infrastructure development while other region lag in the process of this transformation leading to the intra-city differentiation in the process of rescaling and restructuring.

Urban space of Gurugram city is the milieu of differentiation and space of dispossession and repossession, where space is being transformed and restructured to suit the global capital and led to the dispossession of traditional rights of the people, however, it is not confined to this as it has been a space for new avenues and opportunities and traditional urban players and new urban elements are adopting new strategies to balance the forgone and incoming opportunities. The urban milieu of Gurgaon is being restructured to suit the needs of neoliberal capital but it can also be fairly argued that even in the reduced role of local governance factors under the new conditions, the role has been very significant and there is evidence of a new form of social welfare as welfare itself has been restructured and reoriented to suits the emerging needs.

The story of Gurgaon's city growth has many truths mostly determined by the perspective of the lens used by the scholars in determining their work. There has been a phenomenal increase in the population in the city due to in-migration arising out of the needs of neoliberal policies and the emergence of Gurgaon as a regional node for the MNCs in the global supply chain dynamics. It is in this dynamic urban transformation that the city has been built to suit the needs of global capital.

However, even in this scenario of global demands, the emergence of local context and its importance cannot be denied and in the case of Gurgaon city, it is even more important as the city space and local people somewhat depict the counterargument of critical literature especially the theme of "accumulation by dispossession" and the city growth fortunes has led to the emergence of local socio-economic and political elites to suits the needs and sharing the spoils of this urban transformation. The socio-economic profile of Jharsa speaks volumes about the emergence of the local agriculturalist clan as entrepreneurs, hotel owners, property dealers, and large landowners in other parts of Haryana and Rajasthan. This emergence of local elites due to the spatial location of the village and its proximity to Gurgaon city, the emergence of the Medicity as a popular destination for medical tourism in India especially for middle east patients.

The primary survey also depicts the phenomena of cultural transformation as traditional rights and occupations have been eliminated due to agricultural land acquisitions. However, the story has caste and class dynamics as the primary survey of people of the SC group shows that the traditional occupation has undergone a major transformation first due to the want of demand and the emergence of alternative opportunities for the people as service providers and wage laborers. So it can be fairly argued that the transformation of Gurgaon city following the diktats of

neoliberalism has both spatial and temporal dynamics, firstly the traditional rights of people have been eliminated, and the hinterland of the city and its people has been forced to sell out their land although handsomely compensated later on due to the government policies and court interventions.

The elimination of traditional rights and its implications has caste dynamics as the landowning clan, later on, used the money for reinvestment and emerged as the dominant class economically but the SC group who did not own the agricultural land sold out to the private players had the wrath of this transformation but even they have increased opportunities of livelihood in the urban space of Gurugram. So temporally the dynamics of the transformation favored the people by increasing their opportunities and livelihood resilience. Spatially, the transformation has led to the growth of the IT sector and the city of glittering towers favoring the circulation of capital but there is also spatial differentiation in the process as the city growth has been more contiguous to the hinterland and densification at the core of the city seen in the LU/LC mapping of Gurgaon city.

The conversion of agricultural land in the spatial proximity of the city is the story of transformation and cultural evolution in the hinterland villages of Gurgaon city. So it would be wrong to focus on the city's newly developed space of commercial and residential infrastructure in order to understand the impact of the transformation. The emergence of the zones of commercial spaces and high-class exclusionary residential spaces and the abutted blighted slum zone of the city proper and space of hinterland villages speak volumes about the impact of these spatial locations on the city and itself being impacted by it.

The role of the State has been shared by the private players to determine the urban structure and urban form by involving it in the requirements of urban needs adopting the logic of 'individualism', 'private property, profits, and market-based mode of production and distribution. It also has another aspect where the role of the State has been transformed to function efficiently in the role of regulation, allocation, and restructuring of distribution, especially the welfare function, and this restructuring and transformation of functions can be seen through the critical lens or otherwise, as it can be a facilitator for capital creation, multiplier effect and increasing the size of the pie for redistribution and an overall increase in the wellbeing of society as a whole.

The global policies determine the broad framework and philosophy of governance while the local factors determine the outcome of these policies as neoliberal policies have spatial dynamics and specificities due to the diversity in the local factors. These local factors as in the case of Gurugram

city determine the outcomes of policies of neoliberalism and give it a locally determined context. The contextual specificities of neoliberalism give it a diverse character and the contextually determined specific form and accumulation by dispossession in Gurugram gives marginality to specific castes and the same dispossession of agricultural land gives opportunities to specific land-owning castes further giving them new opportunities to invest and create capital in the city region. While on one hand, it is the dispossession of people from their rights but at the same time this systematic process also led to the accumulation of capital and resources for certain other sections of people say the real estate agents and private land owners of the acquired land in Gurugram city.

There has been a continuous process of accumulation through dispossession in Gurugram which is creating resource-poor people and their marginalization in the urban landscape with high vulnerabilities as well as resource-rich people with a positive cycle of their growth due to rising property value after the emergence of Gurugram as the destination of regional head offices for the world MNCs and service-oriented growth which is highly oriented to IT growth. These new sets of people and their emergence has been facilitated by the governance of the urban environment through policies that favor these systematic accumulations and dispossession. The analysis of urban policies highly points to the direction of a system where resources are created to favor the few at the cost of many and this whole process leads to the transformation and change in the structure of the urban area, in this case, Gurugram and this new structure of Gurugram city is creating regions of high growth but at the cost of people where they have been marginalized through a systematic process.

It can be fairly argued that the process of neoliberalism and policy of market orientation has led to the growth of the city at two levels. One is the hyper-modern urban glittering infrastructure and a space for the regional power to establish itself and control the supply chain dynamics. At the other level, the city also created local elites especially the landowning agricultural clans of the region which opened up a host of opportunities for these people to enter the cycle of circulation of capital and capital creation. However, it can be argued that this same process also created marginalization of a certain section of society, especially the traditional city people i.e. the old Gurgaon as it is the location where urban space was either stagnant or declined in this process of transformation and it still has the remnants of the old city and its infrastructure.

The city transformation is led by the Greenfield infrastructure growth and this new city infrastructure is created by the private sector involvement which not only transformed the old semi-arid type of agricultural practices into a totally new environment of concretization with new work culture and in-migration of service sector IT professionals apart from the medical and hospitality services. The important conclusion which has been argued earlier is that the city and its environment have been transformed, new infrastructure is created and new opportunities are the outcome but there is an intra-city differentiation and regions of high growth such as the cyber city, DLF, and region along the NH-8, while there are zones of stagnation and blight such as the old city.

Hence the process of neoliberalism and privatization has both positive and negative outcomes, on one hand, it has implications for the urban civic amenities and better municipal services which improved the quality of services while at the same time it also led to the marginalization of a certain section of the society. These policies and their implications have a far-reaching effect on urban life and its institutions. The dominant actors of institutions have been restructured by the inclusion of private players and their dominant logic of profit maximization is giving the laissez-faire philosophical angle to the whole process where there is no State intervention in the economy and market factors decide the availability and prices of goods and services.

The process of urban transformations of gurugram city whether it is its infrastructure in the form of Gated communities, gentrification and spatial expansion all show the process of systematic exclusion of marginalized people while also creating new opportunities for them. The economics of urban space is driven by the process of profit maximization and the market as the dominant player in the allocation of goods and services in Gurugram city. The logic of money and commodification of various services shows the tertiary circulation of capital.

The urban transformations of Gurgaon city have been tremendous and sudden and within three decades the old small town has transformed itself into the millennium city of India. There is infrastructural development and build-up area is being increased every year either through the urban sprawl in the hinterland of the city especially the transformation and conversion of agricultural land into the build-up for various infrastructural needs through the private acquisition process or through the densification of urban build-up. This not only gives circulation of capital

and profit prospects but also opened the space for exclusion and marginalization through the exponential rise in land prices far exceeding the economic rent of the land.

The process of demand and supply mismatch skyrocketed the property prices of Gurgaon city and it is this phenomenon of “Creative Destruction” in Schumpeter’s language, which determines the course of urban development in Gurgaon. The State plays the role of a regulator and allocator and its transformed role as a distributor using private players as its agents of transformation. The role of the State in controlling the private capital has been reduced immensely but this does not mean that the State has totally relegated its function as a redistributor and welfare, especially in Gurgaon where local political elites and democratic set-up enforce the government to follow the course of redistribution and welfare of the marginal.

So two contrasting phenomena are happening in Gurgaon city, first, the involvement of private players in city development with associated exclusion and marginalization, while the function of government has not reduced to minima and it still plays an important role in the process of regulation, redistribution, and welfare. However the security of the private capital demands increased surveillance and these phenomena of surveillance through panopticonic arrangements by using CCTV, air drones, modern policing, etc. become lively in the hyper-urbanized city environment of Gurgaon. Private capital is using the “surveillance capitalism” mechanism of profit-making. So the panopticonic arrangements and surveillance capitalism employment not only help the neoliberal policies’ implementation but also a new form of exploitation of the masses. The role of the State in this process has become very important as this above-mentioned process would have been more disastrous for the marginal if the State had completely neglected its welfare functions. Hence neoliberalism in Gurgaon is contextually specified and these local specificities make the city’s urban growth and development case sui generis.

The policy level analysis in chapter 4 shows the importance of the government both at the national and local levels in regulation and allocation functions in the neoliberal era. The welfare functions performed by the government have diminished the impact of neoliberalism on the marginal section in their marginalization and the red flags raised by the critical literature about the neoliberal policies have been counteracted by these welfare policies which not only opened new avenues for the welfare approach but the welfare as a function of government has been transformed and restructured with new targets in the neoliberal era.

This has been argued that the policies of local government and even the higher-level government have prepared the urban space for the neoliberal policies, but the function of welfare has not been abandoned and this has given some argumentative space to the proponents of neoliberal policies scholars to establish the theory that neoliberalism has been an important policy-level intervention for achieving the higher level of production and productivity and even the distribution of higher production can be beneficial for the whole society. However, the targeted approach to the welfare of the marginal has been transformed which targets a new class of people especially the gender equity approach and Gurgaon city shows the gender equity approach in its policy. The city of millennia has a separate policy for the women as it gives favor to it not only in its distribution but also target it to achieve the equity in ownership of land and assets of economic value through the policy of low registration fee, low transfer fee and even stipulating policies for exclusive compulsory ownership of assets for the women section. Similarly, the SC population of Gurgaon has been targeted to achieve caste equity in the ownership of assets and other productive economic assets.

The restructuring of welfare in Gurgaon not only saved the marginal section from the wrath of brute market force and its exclusionary impact but also gives a buffer to the economically weaker section of the city in terms of many policy approaches and policy of accessibility of basic services, especially in the healthcare sector. Hence it would be wrong to argue that local government plays at the hands of neoliberal policies and global capital. There is no cross argument to diminish the implications of neoliberalism in the urban structure and growth, even its exclusionary claim can be seen in the urban space but along with these processes and modalities, there is localization and contextualization of neoliberalism happening in Gurgaon under the democratic political framework and welfare approach of the local government in the larger context of neoliberalism.

The implications of neoliberalism would have been more disastrous for the marginal section of the urban people with intra-city disparity and inequality if the policies fall under the trap of neoliberal philosophy due to its exclusionary policies and the State plays an important role in its regulating functions of private capital and even induce a welfare effect through the private institutions.

However the approach towards welfare is more targeted and focuses on the specific groups as seen in the policies of the local government. The new groups which have emerged as the targets of local

government for welfare are women for gendered approach to resource distribution, Economically Weaker section of the society, persons with disabilities and old age group cohorts. Indiscriminate welfare approach of post war Keynesian is obsolete in the new dynamics and local government is recognizing the lacunae of this approach. The policies of the local government have provided space for the private capital to flourish but the regulatory function of the local government is still not less important as it regulate the private capital and restrict its flourishing, modulate its momentum, guides its growth, demonstrate its dominance, support its subordination but legalize neoliberal logic.

Thus the local government provide the contextualization and path dependencies for the foundational outcomes of neoliberal policies. On one hand it provide the space for the private capital to establish itself in the urban space while on the other hand it tries to demonstrate its dominance and a chief player in the urban game. Thus the main functions of the local government of regulation, allocation, and distribution although diluted by the hues of neoliberal philosophy but have not been eliminated. Local government still plays the dominant role in the urban milieu in determining its path of growth.

The city has emerged as the nodal point for the regional establishment of MNCs and this has led to the growth of world-class infrastructure in Gurgaon both in the residential and commercial sectors which caters to the needs of these private firms for office space development and residential space for the migrants working in the newly emerged commercial establishments. So three-level migration is happening, first is the in-migration of world-class MNCs and fortune 500 companies' regional head offices which transformed the trajectories of the infrastructure development and green field infrastructure growth on the privately acquired agricultural land in the vicinity of old city villages. These global MNCs' in-migration created the demand for the skilled labor force which led to the in-migration of skilled people from all over the country, which created residential space demand and consequential other services demand. The infrastructure demand created the optimum condition for the in-migration of construction workers which is the third-level informal working class in the city. The third level of in-migration of people who helped in developing the city's infrastructure is the most vulnerable people in the city with no basic working rights. The present status of Gurgaon city and its growth has been defined by this three-level of in-migration where neoliberal policies have a differential impact on them. The vulnerability of the third-level

people especially the construction workers opened the space for their exploitation and marginalization.

The urban transformations in Gurgaon city do not happen in the old city space but the city sprawl into the agricultural hinterland and the infrastructural development was mostly Greenfield dominated by the private players' involvement in the development process. The city depicts strong contrast in the build-up space such as the privately developed infrastructure which typically depicts the land use transformations of neoliberal philosophy while on other hand is the old city space especially the cantonment area and the old Sadar Bazaar shows the typical organic growth with narrow lanes and congestion with contextual specificities in the build-up and interstitial space evolution. The marketplace depicts the typical organically developed space having place historicity and soja's 'sense of a place' has been depicted in the descriptive analysis of the daily visitors and ship-owners of the Sadar Bazaar.

However, the development of the city after the 1990s depicts contrasting infrastructure growth with both commercial and residential space showing the vertical growth phenomenon, where high-rise buildings for office space and residential requirements are planned out to overcome the burden of space limitations and land speculations led to the high exponential growth in the land prices which necessitated the vertical growth. Hence land use densification is a uniform phenomenon both in the old city where horizontal space utilization led to congestion due to horizontal densification while the newly developed space in the vicinity of the old city has vertical growth which leads to densification. So there are different processes of densification in the intra-city growth phenomenon, the old city is the product of horizontal space utilization to its maximum with the depiction of organic growth while the new urban space is the product of vertical space utilization with the growth of hyper glittered commercial and residential space.

This intra-city differentiation is contrasting in the old city and the newly developed space, where the new city development has the philosophical outlook of neoliberal traits depicting exclusion, marginalization, otherness, boundaries, and a security system, that not only set the space on the lines of alienation of the outsiders and reducing the approachability of people and limited their freedom of usage of that space depicting and enforcing the private property rights, liberty of growth and the libertarian principle of justice but also created a culture of hyper modernization giving less importance to social values, ethics, and alienated work culture. The two contrasting worlds show

that intra-city differentiation and neoliberal philosophy in city development are not uniformly applied to city growth.

The city still depicts the old ideologies, old infrastructure, old logic of welfare, and old customs and ethics while it also depicts a new ideology of liberalism, new infrastructure, new logic of welfare, and new evolving customs and culture with post-modern ethics. This intra-city contrast is spatially fixed and shows the typical laggard space of growth and development at least in the modern neoliberal sense (Sadar bazaar), while the other end of the contrasting scale is depicted by the typical neoliberal philosophy in the city growth. These two contrasting space is built on contrasting ideologies and the historicity of the old city depicts the remnants of pre-independence days to the welfare State of the second half of the 20th century and later on the old city's growth retarded, plateaued, and discarded at the expense of the new growth in the hinterland.

However, the survival of the old city region especially the old marketplace, the chawani region, and the Sadar bazaar region underline the importance and foundational limbs of the city and its functioning. There are marketplaces in the new city region that have been developed to cater to the needs of the migrant population but even now the bustling Sadar bazaar shows the importance of the old region in its sustainability and functioning. The old city region still caters to the needs of the city populace and the Jharsa village shows that the old generation still feels comfortable accessing and using the old marketplace instead of the mall culture of neoliberal growth. The old generation still has their sense of place regarding the city associated with the old city region and new development does not sideline the old marketplace of the city completely. However, this historicity of place and city space is missing in the newly developed city space as it depicts the neoliberal philosophy where city region work on the market principle, service is marketed and profit-oriented, space is segregated and exclusionary, work is monotonous, services dominate the working activities and privatization is the norm. This not only has a marginalization effect but also contrasts with the old organic growth.

It can be fairly argued that the city has spatiality in its development process and cities' growth and development have spatial fixities. There is a tremendous growth of infrastructure in certain regions of the city modulated by the neoliberal philosophy. The region of the old city's hinterland as has been observed by the 1990's classified map has led us to the conclusion that the hinterland of the old city which used to be dominated by agricultural fields has been transformed into a totally

different landuse and now 2020 classified map shows the dominance of buildup infrastructure. This has been confirmed by the use of google earth and visits to the city.

The land-use transformations have been the dominant factor in the growth story of Gurgaon in the last three decades, while the period from 1990 to 2000 had seen a good urban Build-up (both residential and road category) growth of roughly 10 sq. km annually, this has been slowed down on an average in the last two decade with more than 2.2 sq. km annually. The rate of conversion of vegetation class (agriculture land) in the other landuse is around 5 sq. km annually in the three decade. Hence, this conversion and transformation have been at the expense of agricultural land of the nearby villages, however, it can be argued that the landuse use transformation had a lag period as the acquirement of the land does not lead to the instant conversion to the build-up area.

The 2000 image shows the open plot classification which shows the conversion of agriculture land into open plots through the acquisition of agriculture land by various individuals, including property dealers. This not only led to the speculation of prices, but also a key for the local authority's revenue source due to multiple changes of ownership rights and charge of the registration fee. The built-up land has increased while the agricultural land has decreased. The last three decades in Gurgaon have witnessed the densification of the built-up area, the emergence of multiple connectivity infrastructures, road density, and residential and commercial spaces all at the expense of agricultural land. The land-use scheme generally follows the master plan developed in 2007 for the year 2021 and the land-use categorization in the master plan has come up in the same category in the classified image of 2020. This shows that the urban growth and development have followed the scheme of master plan and land-use zoning in the master plan is generally followed in the urban development policies and schemes.

The agricultural land has been transformed into the build-up either for residential purposes or commercial purposes. The village 'Jharsa' which is situated on the left side of NH8 just adjacent to the old city, this village has been transformed into a "commercial neoliberal village" where not only the traditional occupation and restructuring of social relations are happening but the village has neoliberal philosophy in organizing the newly emerged economic opportunities due to the medical tourism. The Medicity super spatiality hospital has been built on the village's agricultural land and one of the participants in the survey "Jitender Thakran" told the author that "this medical tourism and emerging medical services/ hospitals in the village vicinity have been a boon for the

village and its people". This has led to the commercialization of residential homes, led to the emergence of paying guest facilities, hotels for patients, and the commercialization of food outlets in the residential homes.

All this transformation is happening in the laal Dora/Abadi area of the village which has been demarcated by the revenue officials as the traditional habitation of the village. This village is undergoing neoliberal change where basic services are being commercialized and privately managed on commercial lines. The village people boast their claim even on the public streets and charge vegetable hawkers a fee for standing in front of their houses. The traditional occupation, relations, and social and cultural ethos have been restructured in this process, and privatization and paying capacity decide the accessibility to basic services. The extension of municipal limits in the village's 'laal Dora' has been protested by the village due to the fear that in the guise of municipal services, the village people are going to lose their free hand in the process and the municipality can regulate their activities apart from losing the panchayat formation opportunities which has been a lucrative prospect for the village elites not to mention the claim of taxation on the commercialized space by the Municipal Corporation of Gurugram.

The accessibility of this region is highly developed with roads and DLF phase 5 metro and even the Delhi metro's yellow line has been developed keeping in mind the newly developed commercial workspace of Gurgaon. Due to the emergence of office space and regional headquarters of the fortune 500 companies, the city requires hotel and lounging facilities which have given a fillip to the private sector-oriented growth in this sector. The city and its investment profile have an excess focus on this newly built region especially south of NH-8 due to the revenue-generating capacity and truly depict the competitive city model in the neoliberal capitalist growth system.

The emergence of residential facilities also shows the various hues of neoliberalism where accessibility is restricted for the outsiders, societies are developed with boundary walls, parks, gymnasium, swimming pools, clubs, social function halls, and waste management facilities which traditionally used to be the role of municipal system of governance, now this has been taken by the private players which not only enhance the quality and reliability of service but also give a sense of security and stability in the minds of residents, as nothing is free in the market-oriented neoliberal capitalist world and this is where users have to pay the fee for these basic needs. So, on

one hand, the neoliberal model provides opportunities for the growth and development but on the other hand, it is also taking it away either through the services fee, taxes by the government (income tax), consumerism facilitated by surveillance capitalism, nuclearisation of families which created residential demands and not to forget the tertiary circulation of capital, especially through creative destruction model.

The city resident in these modern neoliberal spaces depicts a new type of socialization that depicts anonymity, exclusion, indifference, superficial relations, and a new club and bar culture which on one hand increases the freedom of people and their liberty to decide the course of their lives while at the other hand this new socialization create new sets of problems especially the stress due to work, hyper-competition, depression, loneliness, which sets the stage for many lifestyle diseases.

Hence it can be fairly argued that the emerging city development is spatially fixed which has regions of high growth modulated by the neoliberal philosophy and neoliberal policy orientation which create the environment for capital investment by the global north and private local elites who are favored by the neoliberal orientation of the economic growth model, while it also create regions of stagnation and low growth which attract poor attention by the local government due to their low attractiveness for the local and global investment and also neglected by the private capital due to poor profit prospects. These regions survive on their traditional functions, however, they undergoes retrofitting, restructuring, and redevelopment due to the eroding base for their threshold sustenance as can be seen in the case of Sadar Bazaar market of the old town which is continuously seeing an erosion in its business due to the mall culture which is emerging in Gurgaon.

So the city has duality in development in the neoliberal era where high-growth regions are often developed at the cost of other regions either directly or indirectly. It can be argued that there is contestation in the growth process of the city at all levels i.e. people vs people, region vs region, caste vs caste, rural vs urban, public vs private. And it is in this context that the local government is trying to reduce these contestations through its welfare functions while at the same time also allowing these contestations to emerge in the first place through its policies which allowed the neoliberal model of growth to flourish and sustain. So even at the local government policy level, there is a contestation where on one hand due to democratic and constitutional obligations it is trying to restructure its welfare functions while at the same time it is working to formulate neoliberal policies for the local and global capital to invest and flourish.

Gurugram has emerged as an edge city to Delhi with suburbanization features depicting the phenomenon of “Urban Doughnut”, with the transformation of agricultural land into residential and commercial spaces. This newly build region of Gurugram is the center of producers’ services such as financial and accountancy for the region. It also act as the hub for ‘new industrial space’ geography and destination for the service sector outsourcing. The technological connectivity of the city with the world’s metropolis give it an edge over self-propelling urban growth in the city region apart from the influence of spatial proximity to Delhi.

-
- Agamben G. (2000) “What is a camp? in Means without end”, Notes on Politics, University of Minnesota Press, Minneapolis, pp. 23-45.
 - Aijaz R. (2007) “Challenges for urban local governance in India”, Asia Research Centre Working Paper 19, Asia Research Centre (ARC), London School of Economics & Political Science, London, pp. 14-57.
 - Appadurai A. (2000) “Spectral Housing and Urban Cleansing *Notes on Millennial Mumbai*”, *Public Culture*, Vol. 12, No. 3, pp. 34-45.
 - Banerjee A. and Raju S. (2009) “Gendered Mobility: Women Migrants and Work in Urban India”, *Economic and Political Weekly*, Vol XLIV, No 28, pp 115-12.
 - Banerjee-Guha S. (ed) (2010) “Accumulation by Dispossession: Transformative Cities in the New Global Order”, *SAGE: New Delhi*, pp. 23-56.
 - Bardhan P. (2002) “Decentralisation of Governance and Development”, *Journal of Economic Perspectives*, Vol. 16, No. 4, pp. 185-205.
 - Baud I. (2004) “Learning from the south: Placing governance in international development studies”, *Oratie Universiteit van Amsterdam*, pp. 67-74.
 - Baud I. and de Wit J. (eds.) (2008) “New Forms of Urban Governance in India: Shifts, modes, networks and contestation”, *SAGE: Thousand Oaks*, pp. 34-47.
 - Baud I. and Nainan N. (2008) “Negotiated spaces for representation in Mumbai: ward committees, advanced locality management and the politics of middle-class activism” *Environment and Urbanization*, Vol. 20, pp. 483 – 499.
 - Baud I. Pfeffer K. Sridharan N. & Nainan N. (2009) “Matching deprivation mapping to urban governance in three Indian mega-cities”, *Habitat International*, Vol. 33, pp. 365- 377.
 - Baud I. Sridharan N. & Pfeffer K. (2008) “Mapping Urban Poverty for Local Governance in an India Mega-City: The case of Delhi” *Urban Studies*, Vol. 45, No. 7, pp. 1385-1412.
 - Baviskar A. (2003) “Between violence and desire: space, power, and identity in the making of metropolitan Delhi”, *International Social Science Journal*, Vol. 55, No. 175, pp. 89-98.
 - Bentick J. V. (2000) “Unruly Urbanisation on Delhi’s Fringe - changing patterns of land use and livelihood” *Netherlands Geographical Studies*, Groningen.
 - Bergill E. (1995) “Urban Sociology”, Mc Graw Hill: New Delhi
 - Beteille A. (2003) “Poverty and inequality”, *Economic and Political Weekly*, Vol. 38, No. 42, pp. 44-64.
 - Bettencourt L. & West G. (2010) “A Unified Theory of Urban Living”, *Nature*, Vol 467, pp.912-913
 - Bhan G. (2009) “This is no longer the city I once knew: Evictions, the urban poor and the right to the city in millennial Delhi”, *Environment and Urbanization*, Vol. 21, No. 1, pp. 127-142
 - Bhattacharya P.C. (2002) “Urbanisation in Developing Countries”, *Economic and Political Weekly*, Vol-XXXVII No. 41, pp. 56-63.

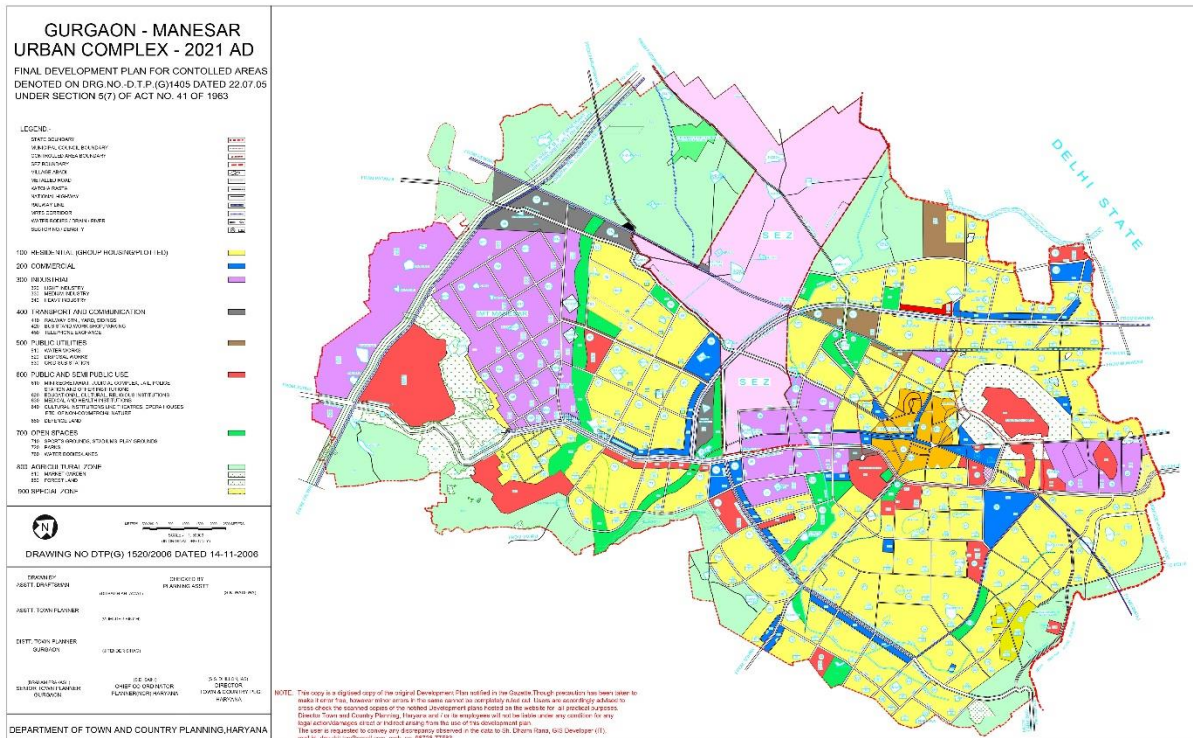
- Bhide A. (2017) “Changing Trajectories of Urban Local Governance” *India International Centre Quarterly*, Vol. 43, No.3/4, *The Contemporary Urban Conundrum*, pp. 172-183.
- Bhowmik S. K. (2004) “Work in globalizing economy: Reflections on outsourcing in India”, *Labour, Capital and Society*, vol. 37 (1&2), pp. 76-84.
- Castells M. (1980) “The urban question: A Marxist approach”. MIT Press, Cambridge, MA.
- Chandavarkar R. (2009) “History, Culture and the Indian City”, Cambridge University Press.
- Chaplin S. E. (2011) “Indian cities, sanitation and the State: the politics of the failure to provide”, *Environment & Urbanisation*, Vol. 23, No. 1, pp. 57-70.
- Chatterjee I. (2011) “Governance as ‘performed’, governance as ‘inscribed’: new urban politics in Ahmedabad” *Urban Studies* vol. 48 pp.71-90.
- Chatterjee P. (2004) “Are Indian cities becoming bourgeois at last?” in *Politics of the Governed: Reflections on Popular Politics in Most of the World*. Delhi, Permanent Black, pp. 23-35.
- Chattopadhyay S. (2006) “Municipal Bond Market for Financing Urban Infrastructure”, *Economic and Political Weekly*, Vol. 41, pp. 87-90.
- Davis M. (2003) “Planet of Slums”, *New Left Review*.
- Datta A. (1995) “Reform in India: Comparative Models and Processes Municipal”, *Economic and Political Weekly*, Vol. 30, No. 38, pp.2395-2398.
- Davis, M. (2004) “The Urbanization of Empire: Megacities and the Law of Chaos”, *Social Text* 81, Vol.22, No.4, pp. 87-93.
- Desai A R. and Pillai D. (2004) “Slum & Urbanization”, *Mumbai: Popular Prakashan*.
- Dupont V. (2007) “Conflicting stakes and governance in the peripheries of large Indian metropolises– An introduction”, *Cities*, Vol. 24, No. 2, pp. 89-94.
- Dupont V., Tarlo E. & Vidal, D. (Eds.) (2002) “Delhi: Urban space and human destinies”, New Delhi.
- Evans P. (eds.) (2002) “Livable cities? Urban struggles for livelihood and sustainability”, University of California Press, California.
- Field E., Levinson M., Pande R. & Visaria S. (2012) “Segregation, rent control, and riots: The economics of an Indian city religious conflict in an Indian city”, *American Economic Association*, vol. 98(2), pp. 505–510.
- Follman A. (2011) “Planning versus Reality – the politics of land-use change along the river Yamuna in Delhi; Rethinking Development in an Age of Scarcity and Uncertainty”, University of York, pp.19-22.
- Friedmann J. & Wolff G. (1982) “World city formation: an agenda for research and action”, *International Journal of Urban and Regional Research*, vol. 6(3), pp. 309-344.
- Ghertner D.A. (2011) “Gentrifying the State, gentrifying participation: elite governance programs in Delhi” *International journal of urban and regional research*, vol. 35(3), pp. 504-532.
- Ghosh A. K. (2008) “Changing livelihood pattern of slum dwellers in Delhi: From a squatter settlement to a resettlement colony”, *Social Change*, Vol. 38, No. 3, pp. 65-70.
- Gilroy P. (2005) “Postcolonial melancholia”, Columbia University Press, pp. 45-80.

- Greene S.J. (2003) “Staged Cities: Mega-event, Slum Clearance, and Global Capital”, *Yale Human Rights Development*, Vol. 3, pp. 161-187.
- Hamel P., Lustiger-Thaler H. & Mayer, M. (Eds.) (2003) “Urban movements in a globalising world”, Routledge, pp. 78-102.
- Harvey D. (1976) “Labor, capital, and class struggle around the built environment in advanced capitalist societies” *Politics & Society*, vol. 6(3), pp. 265-295.
- Harvey D. (1985) “Consciousness and the urban experience”, Oxford: Blackwell
- Harvey D. (1985) “The urbanization of capital”, Oxford: Basil Blackwell.
- Harvey D. (1987) “Flexible accumulation through urbanization: reflections on postmodernism in the American city”, *Antipode*, vol.19 (3) pp. 260–86.
- Harvey, D. (2003) “The right to the city”, *International Journal of Urban and Regional Research*, vol. 27(4), pp. 939-941.
- Harvey D. (2003a) “The New Imperialism”, Oxford: Oxford University Press.
- Hoffman D. (2007) “The City as Barracks: Freetown, Monrovia, and the Organization of Violence in Postcolonial African Cities”, *Cultural Anthropology*, Vol.22 (3), pp. 56-67.
- Heller et al. (2007) “Building Local Democracy: Evaluating the impact of Decentralization in Kerala, India”, *World Development* vol. 35(4), pp. 626-648.
- Harris N. (2015) “From Master Plans to City Development Strategies”, *Economic and Political Weekly*, Vol - L No. 23, pp.45-49.
- Jacobs J. M. (1993) “The city unbound: qualitative approaches to the city”, *Urban Studies*, vol. 30(4-5), pp. 827-848.
- Kundu A. & Saraswati L.R. (2012) “Migration and Exclusionary Urbanisation in India”, *Economic and Political Weekly*. Vol – XLVII, No. 26-27.
- Kundu, A. (2003) “Urbanisation and urban governance”, *Economic and Political Weekly*, Vol – XXXVIII, No. 29, pp. 78-89.
- Kusno A. (2004) “Whither Nationalist Urbanism?” *Urban Studies*, Vol.41, No.12, pp. 80-87.
- Kearns A. and Paddison R. (2000) “New Challenges for Urban Governance”, *Urban Studies*, Vol. 37, No. 5-6, PP. 845-850.
- Lefebvre H. (1991) “The production of space”, Oxford: Blackwell
- Mathur O.P. (2013) “Finances of Municipalities: Issues before the Fourteenth Finance Commission”, *Economic and Political Weekly*, Vol. 48, No. 22, pp. 23-27
- Mathur O.P. (2013) “Finances of Municipalities: Issues before the fourteenth Finance Commission”, *Economic and Political Weekly*, Vol. 48, No. 22, pp. 23-27
- Mohanty P. K., Misra B.M., Goyal R. And Jeromi P. D. (2007) “Municipal Finance in India: An Assessment” Department of Economic Analysis and Policy, Reserve Bank of India, Mumbai, Development Research Group Study, No. 26, pp. 34-45.

- Menon-Sen K. and Bhan G. (2008) “Swept off the Map: Surviving Eviction and Resettlement in Delhi”, Yoda Press, Delhi, pp. 102-107.
- Miles S. (2012) “The neoliberal city and the pro-active complicity of the citizen consumer” *Journal of Consumer Culture*, Vol 12, pp. 216-230.
- Nair J. (2000) “Singapore is not Bangalore's Destiny”, *Economic and Political Weekly*, pp. 1512-1514.
- Oliveira, N. D. S. (2012) “Race and class in Rio de Janeiro and New York City: Favelas and Ghettos”, *Latin American Perspectives*, vol. 23(4), pp. 71–89.
- Official website: Municipal Corporation of Gurugram, (mcg.gov.in).
- Paddison R. (1993) “City marketing, image reconstruction and urban regeneration”, *Urban Studies*, Vol. 30, No. 2, pp. 339-349.
- Pradhan K.C. (2013) “Unacknowledged Urbanisation: New Census Towns of India”, Vol - XLVIII No.36.
- Policy Document Papers: Gurugram Metropolitan Development Authority, pp. 34-87; 102-132.
- Rao U. (2010) “Making the Global City: Urban Citizenship at the Margins of Delhi”, *Ethnos*, Vol. 75, No. 4, pp. 402-424.
- Roy A. (2009) “Why India cannot plan its cities: informality, insurgence and the idiom of Urbanization”, *Planning Theory*, vol. 8(1), pp. 76-87.
- Samanta G. (2014) “The Politics of Classification and the Complexity of Governance in Census Towns”, *Economic and Political Weekly*, Vol - XLIX No. 22, pp. 32-37
- Sassen S. (1998) “Globalization and its discontents: Essays on the new mobility of people and money”, New York, New Press, pp. 63-87.
- Sassen S. (2010) “The global inside the national: A research agenda for sociology” *sociopedia, ISA*, pp. 1–10.
- Sassen S. (2001) “The Impact of the New Technologies and Globalization on Cities, A. Graafland and D. Hauptmann (ed.) *Cities in transition*, Rotterdam, pp. 23-40.
- Shaw A. (2008) “Squatter settlements: urbanised spaces?” *Economic and Political Weekly*, Vol – XLIII, No. 22, pp. 45-47.
- Singh S. (2012) “Financing Urban Infrastructure in India: A review”, *Urban India*, Vol.32 NO.2. pp. 47-49
- Chattopadhyay S. (2006) “Municipal Bond Market for Financing Urban Infrastructure”, *Economic and Political Weekly*, Vol. 41, No. 26, pp. 2787-2791
- Shaw A. (2012) “Indian Cities”, Oxford University Press: New Delhi
- Soja E. W. 2000 “Postmetropolis: Critical studies of cities and regions”, Blackwells, Oxford, pp. 340-370.
- Srivastava S. (2014) “Entangled Urbanism: Slum, Gated Community and Shopping Mall in Delhi and Gurgaon”, OUP: New Delhi, pp. 45-67.
- UN-HABITAT. (2010). State of the world's cities 2010/2011: Bridging the Urban Divide. Routledge, pp. 304-367.

- Vithayathil T. & Singh G. (2012) “Spaces of discrimination: Residential segregation in Indian cities”, *Economic and Political Weekly*, vol. XLVII (37), pp. 60–66.

7.1 APPENDIX – I: MASTER PLAN OF GURUGRAM



7.2 APPENDIX II: TABLE OF DATA SOURCE

| Data set | Source |
|---|---|
| Planning and policy documents, Master plans (2021,2025,2031), city- | Town and country planning(Haryana), Haryana Urban Development Authority (HUDA) |

| | |
|--|--|
| level planning maps, urban services outlay maps | |
| Municipal budget documents | The Municipal Corporation of Gurgaon (2008-2020) |
| Population data of the Gurgaon Tehsil | Village and Town Directory, District census Handbook, census of India series (1971-2011) |
| Urban development zone map | Gurugram Metropolitan Development Corporation |
| Landsat 5,7,and 8 Images Thematic Mapper, and ETM+ and OLI-TIRS sensor | USGS, Earth Explorer |
| Google Earth Images | Google Earth |
| Field survey | Primary data |

7.3 APPENDIX III: POTENTIAL INFORMATION CONTENT IN DIFFERENT VIRTUAL BANDS

| RGB band | Information content reflected by the band |
|----------|---|
| 4-3-2 | This band is a standard false color composite (FCC) in which the vegetation appears in the shades of Red, water bodies appear near black, urban build-up appears cyan blue, and the soil appears in the shades of brown. The water content in the soil or vegetation determines the reflectance and shade of the color reflected. The metal sheet roofs of commercial areas and industries appear white. Ice, snow and clouds also appear white. This is a famous band to study the vegetation content, where deep red hues depict healthy broad leaf vegetation and a lighter side of red/pink depicts grass or sparse vegetation. |
| 5-4-3 | It is also a good band to study vegetation as it is shown in the natural color. The bright green shows the healthy vegetation. Color contrast is high in this band combination. It is a useful band to study different aspects of vegetation. |

| | |
|-------|---|
| 5-4-1 | It is used to study agricultural areas and healthy vegetation is depicted with bright green color. |
| 7-5-4 | It is used in geological studies. It does not have visible bands and hence atmospheric penetration is the highest. The texture and moisture content of the soil can be studied efficiently. |
| 7-5-3 | One of the main bands used is monitoring forest fires. The mid-IR band is completely absorbed in water, ice, and snow and hence highlighted these features with dark blue or black color. It is also useful when the image has haze, smoke and atmospheric disturbance. Vegetation appears in natural green color. Urban features appear in white, grey, cyan, or purple. Hot surfaces appear in red or yellow. |
| 3-2-1 | A natural color band with all visible bands used in this combination. This band is useful to the amateurs as it follow the natural scheme of color combinations to which humans have acquiesced. Healthy vegetation is green while unhealthy is brown or yellow. Current fellow are light. Roads are grey while other build-up are of natural color as appear to human eyes. It is useful in bathymetric information as penetration in water is high. It is useful in urban studies. Both cloud and snow appear white which create problems in detecting them. However it cannot distinguish shallow water and soil and for that 7-5-3 band should be used. |
| 4-5-3 | It helps in defining land-water boundary and hence inland water sources such as lakes and rivers are detected with greater precision. Useful for analysis of soil and vegetation condition due to high precision in moisture detection. More moisture in the soil appear as dark color due to absorption of IR by the water content. |

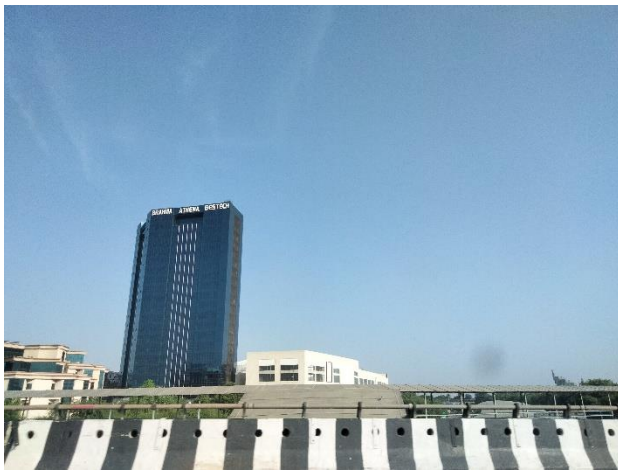
Source: National Remote Sensing Centre (NRSC), Hyderabad, India

7.4 APPENDIX IV: ILLUSTRATIVE PHOTOGRAPHS OF GURUGRAM CITY

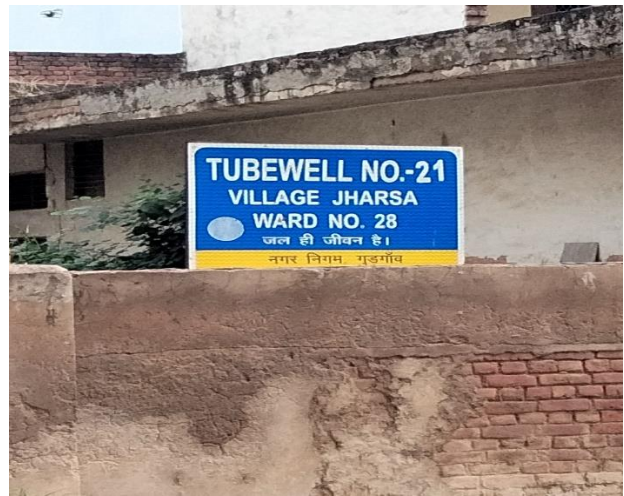
Vertical Growth of the city



Hyper- Glazed urban Infrastructure



Changing socio-economic profile of Jharsa Village



Market place in the old city of Gurgaon

