



NEOLIBERAL URBAN GROWTH AND THE SHOCK CITY OF GURUGRAM : A SPATIO-TEMPORAL ANALYSIS

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-----ABSTRACT-----

The land-use transformations have been the dominant factor in the growth story of Gurugram in the last three decades. 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 built region of Gurugram is the center of producers' services such as financial and accountancy for the region. It also acts 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 gives it an edge over self-propelling urban growth in the city region apart from the influence of spatial proximity to Delhi. The neoliberal transformations in the landuse have the backing of local government policies and the City growth generally follows the formal planning documents of the city. The city has been built on the agricultural land of the hinterland villages which leads to the socio-economic transformations in the interstitial space of these villages.

KEYWORDS: Neoliberalism; LULC change; Edge city; Urban Doughnut; Master plan-----

1.1 INTRODUCTION

In the recent past, there has been an emergence of 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 the 1980s. Such private-led growth took a sharp rising curve after the 1990s (Pramanik et al. 2021). For instance, the private builders developed the Gurugram cityscape and these colonizers set the stage for the investment cycle. 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 (Singh, 2015; Singh et al., 2020). Urban space is being transformed within the neoliberal philosophical trend (Banerjee- Guha 2010). The transformation of agricultural land after the 1980s in the old city's hinterland gave rise to the phenomenon of "Urban Doughnut" (Hall, 2012) 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 (Pramanik et al. 2021). The policy of neoliberalism and its implementation have created opportunities for the citizens and other private players (Singh et al., 2020). 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 see the Spatio-temporal land use and land-cover changes that occurred in Gurugram City over the periods.
- III. To understand the contextual specificities of the neoliberal policies and the path dependencies of the neoliberal processes that happened in Gurugram City.

1.3 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 is 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 the other sides are bounded by the Gurgaon district.



Figure Error! No text of specified style in document..1: Map of the Study Area

1.3.1 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.

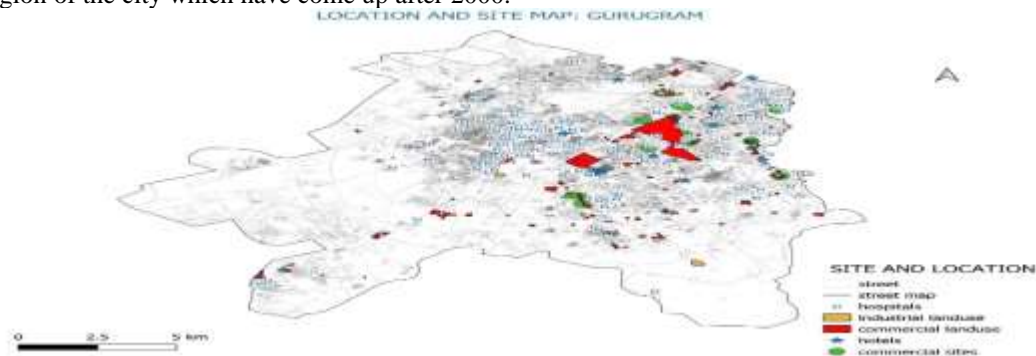


Figure Error! No text of specified style in document..2: Site and Location Map of Commercial and Industrial Landuse

1.4 DATABASE

1.4.1 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 Error! No text of specified style in document.: 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)

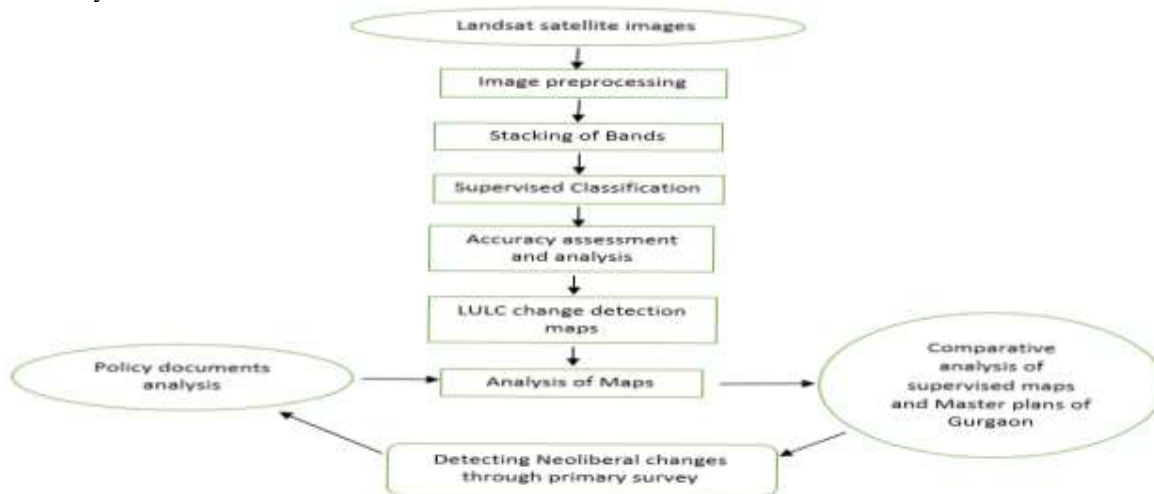
1.4.2 Plan and Policy documents:

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.

1.5 METHODOLOGY

1.5.1 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.



Methodology - Flow chart

1.5.2 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).

1.5.3 Primary Field Survey

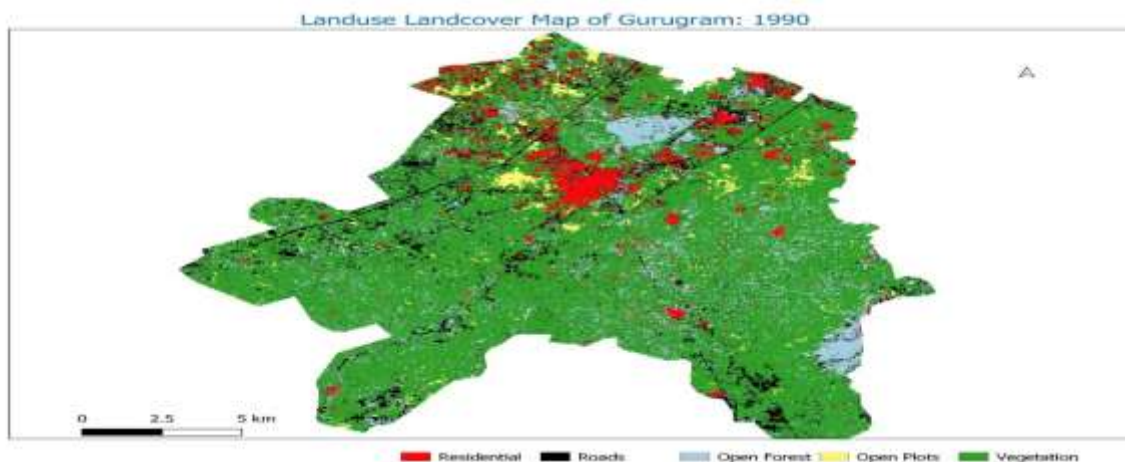
The interviews for the study followed the technique of ‘Semi-structured’ interview’ technique in the qualitative interview methodology (Bryman, 2012). The ‘interview guide’ is prepared in light of the major research theme and research questions of the study. However, the qualitative nature of the technique has the scope of deviation from the guide prepared for the interviews. 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.



1.6 LAND USE LAND COVER CLASSIFICATIONS

The classification of images has been done into five major land use classes 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 has all types of build-up areas comprising residential, commercial, and other types of concretization of the city and its hinterland. The classified category ‘‘Vegetation’’ includes all types of vegetation and agricultural land. The category ‘‘Open Plot’’ includes all the land which has been acquired by private and government agencies for development.

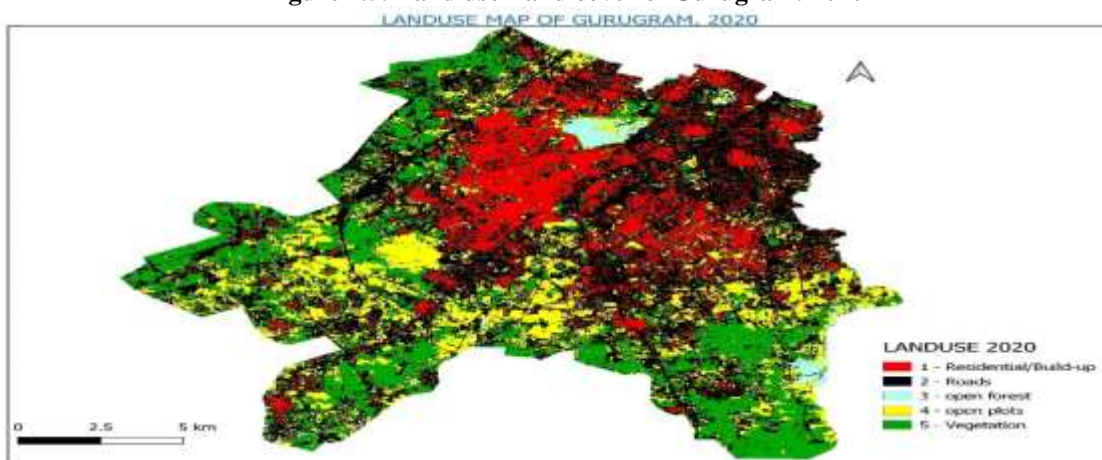
Figures 1.3: Landuse Landcover of Gurugram City 1990



Figures 1.4: Landuse Landcover of Gurugram City 2000



Figure 1.5: Land use Land cover of Gurugram: 2020



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

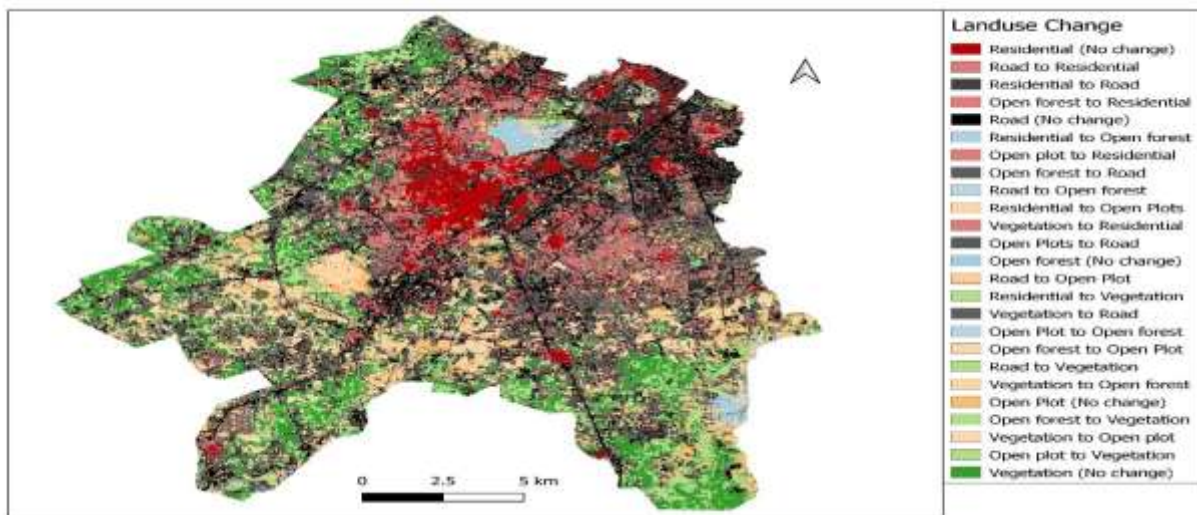
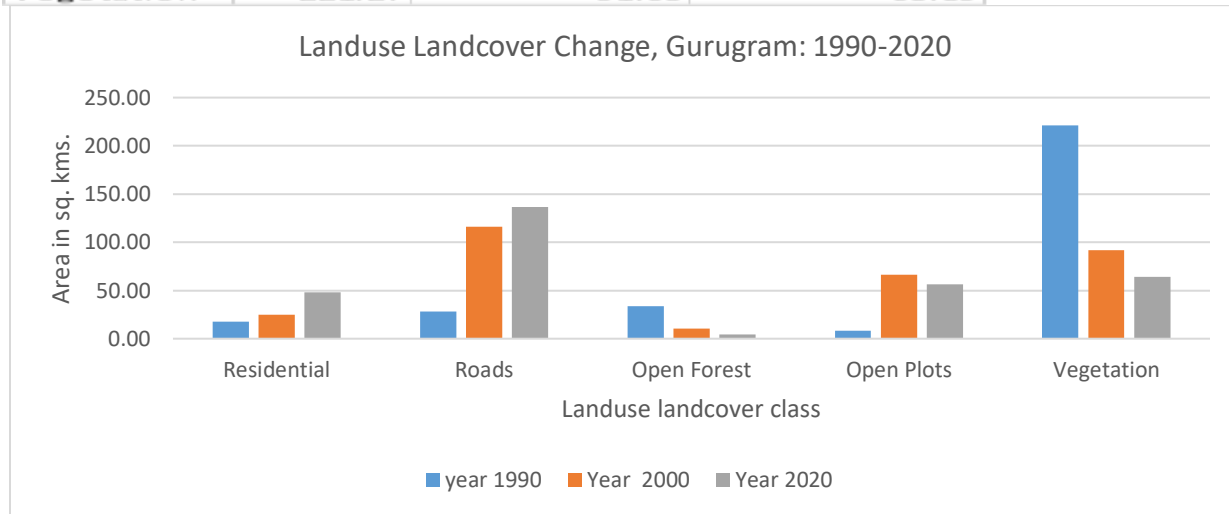


Figure 1.6: Land use Land cover change Detection, Gurugram City (2000-2020)



Table 2: LULC change (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 1.1: Landuse Landcover change 1990-2020

1.7 URBAN TRANSFORMATIONS IN GURGAON CITY

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 categories 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 capital. 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 was planned in the master plan of Gurgaon 2021.

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 has a direct link with the Delhi city center (zone A, B, and D. where A and B are considered as a 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 as urbanisable areas. So this proposed master plan of Delhi has an influence on 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.



The master plan of Delhi 2001, which was published in 1990 has a major impact on the city’s growth as we can see in the direction and location of the 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 extensions in the 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 were limited in the north due to the presence of Defense land adjacent to the old Delhi-Gurgaon road which is categorized as an 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: 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						

Table 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							

Table 5: 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							

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 channels 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 the 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 the master plan of Gurgaon and Delhi. These roads also connect the city’s 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 the 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 extensions, 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 use the connectivity advantage either through the peripheral road which connects the city with Dwarka and Faridabad or the connection of sector 29 adjacent to NH8 which connects it with the city Centre of Delhi.

1.7.1 Urban Zonation of Gurugram Master Plan 2021

The master plan of Gurugram 2021 shows the land use zoning of the urban complex. The area along NH8 has been categorized as residential in the master plan. 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 the 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 commercial development. It has prospects for 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.

1.8 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 manage 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.



	<ul style="list-style-type: none"> ➤ Gurgaon is the emerging medical hub apart from the IT hub distinction it gained in the last two decades. ➤ 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 activities like residential space providers, water services, local restaurants but foreign cuisines, etc. ➤ 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, and 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 a primary field survey conducted from February to March 2022

1.9 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'. Delhi's city center (zone D) and special zones A, B as per the scheme of the Master plan of the city are connected with the edge city of Gurgaon. Apart from this the proposed sub-city projects and urbanizable areas of the Delhi region, especially the zone-J, and Dwarka region also have an influence on 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 fuel the urbanization engine with their own resources as argued by Acharya et al. (eds.) 2017. The emerging urban space in Gurgaon has 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

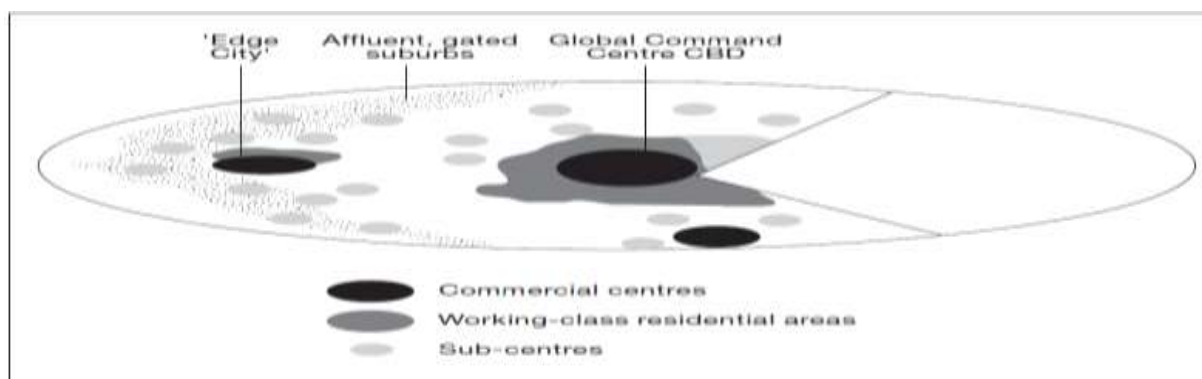


Figure 2.4 The post-industrial 'global' metropolis

Source: Graham and Marvin (1996: 334)

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

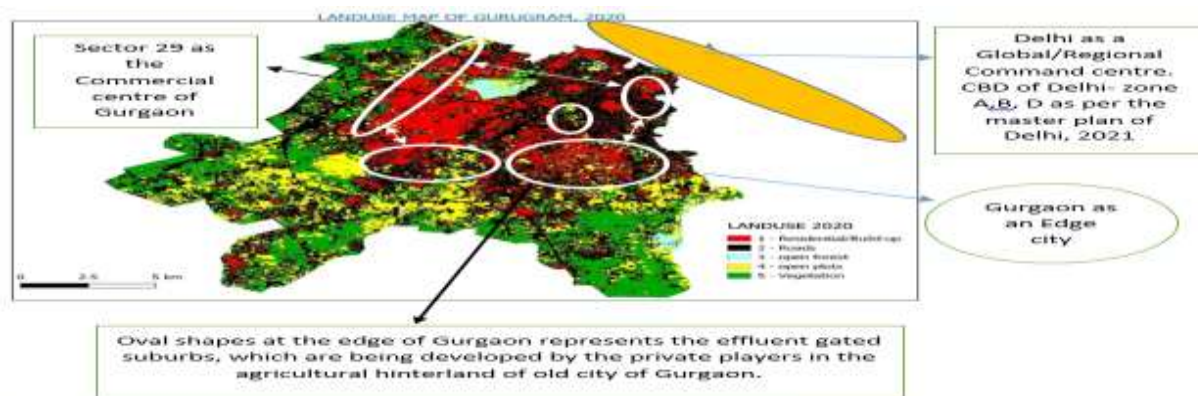


Figure 3.6: Comparative Geographical Analysis of Gurugram City and Delhi Metropolis

1.10 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 agricultural land into open plots through the acquisition of agricultural land by various individuals, including property dealers. This not only led to the speculation of price but



also a key to 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 the 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 built region of Gurugram is the center of producers' services such as financial and accountancy for the region. It also acts 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 gives it an edge over self-propelling urban growth in the city region apart from the influence of spatial proximity to Delhi.

1.11 REFERENCES

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