Institutional analysis of Urban Land and Housing Policy shift in a Metropolitan Region,

Case National Capital Region, Delhi, India.

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Date: 15/05/24
Mode of Presentation: Online

Under construction Project in Greater Noida, India in close proximity to agricultural land

Housing Dilemma

| Increasing slums and informal settlements – leading to **housing shortage** | **?** | Unsold and delayed projects in the urban periphery – leading to **over supply** |

Core Cause
Land Development Policies

Research Questions

1. What is the **cause of demand-supply gap** and sometimes the underutilization of formal housing units at the urban periphery particularly in Delhi Urban area ?

2. How far do the **different development models within the Region** lead to difference in the formal housing supply ?

3. What is the **role of actors of development** (State/Public and Market/Private) within formal institutions of Urban Land development and Housing in developing economies?
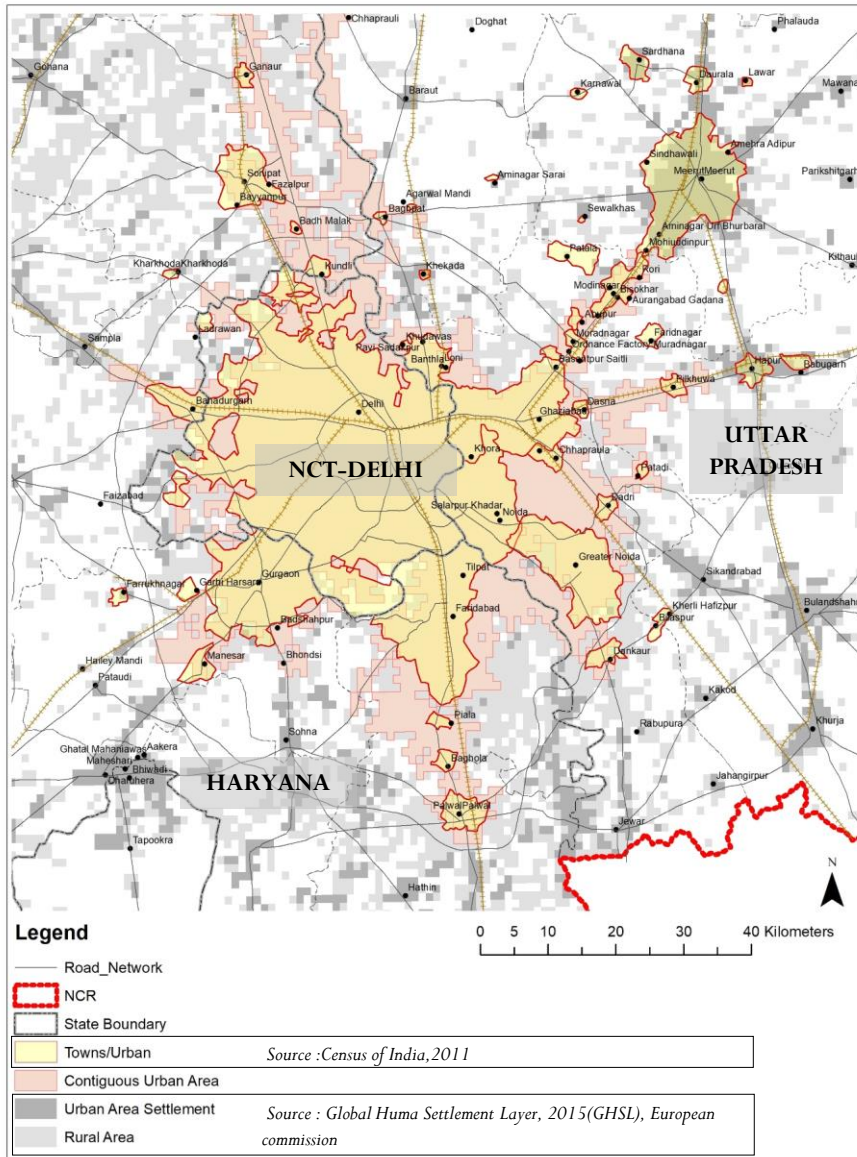
Introduction to Case study area
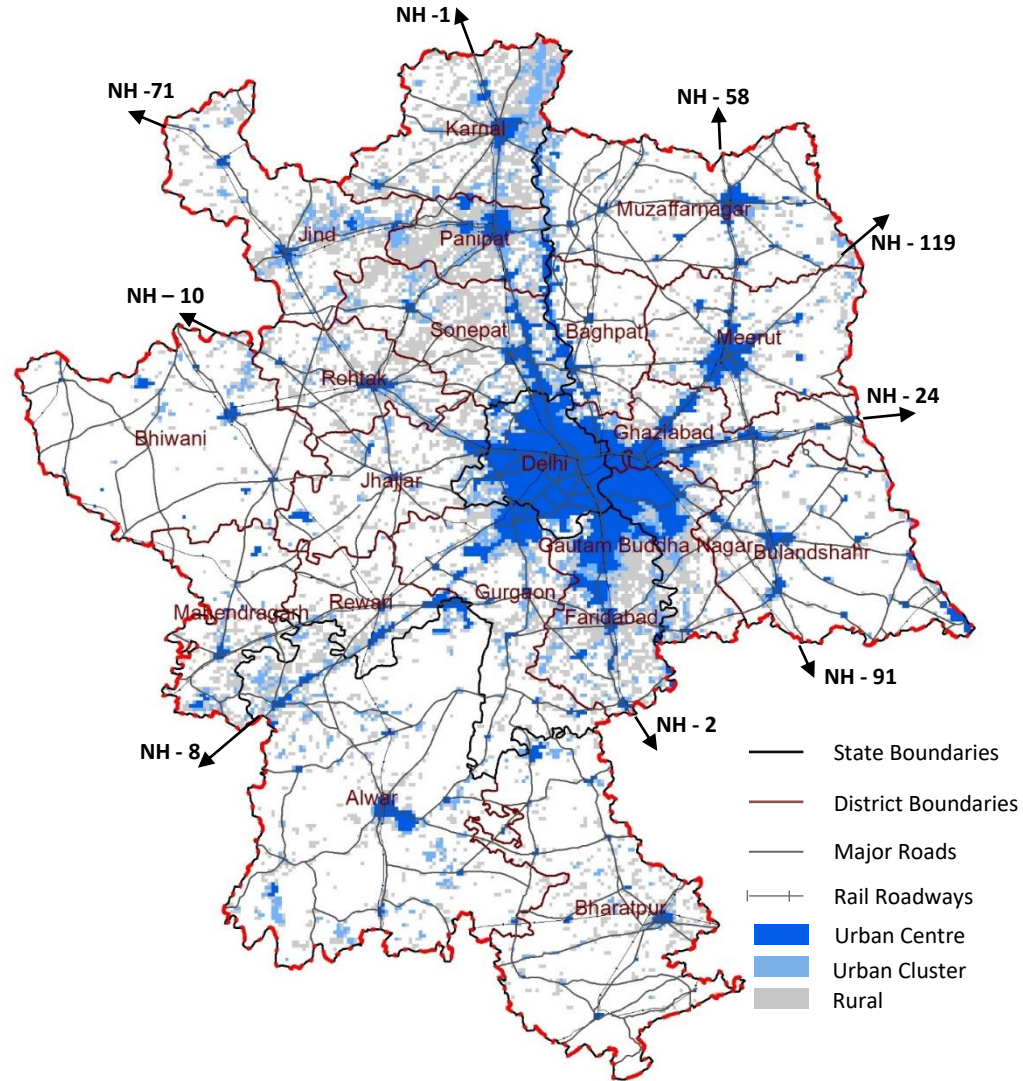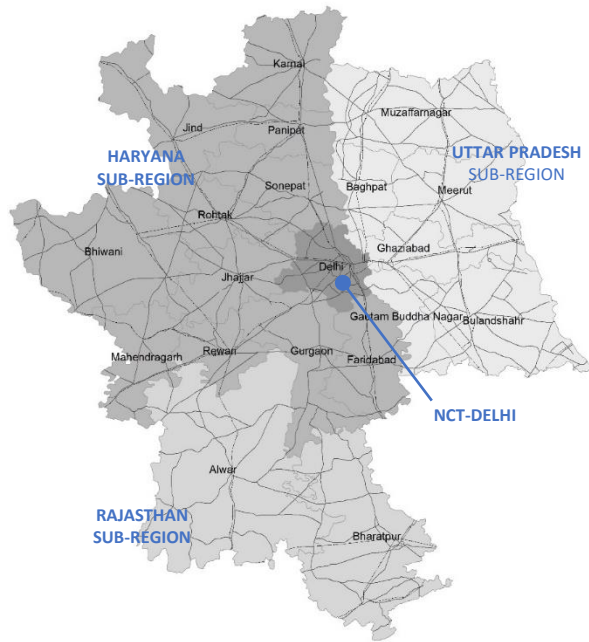
UNIQUENESS : NCR is the largest (population-wise) and the only identified metropolitan region spread over multiple state government authorities and NCR Planning Board (NCRPB) is the nodal agency

NCR – Delhi, Key statistics	
Area	34000 Sq Km
Net Population	46 million (census 2011)
Urbanization level 2011	21.75 %
Governance structure	Centrally coordinated inter-state collaboration
Planning Strategy	Multi nodal growth approach

NCR– Delhi 2015 Settlement Pattern (Built-up and population density combined)

Source : GHSL, European commission

Introduction to Case study area – Urban Agglomeration

Legend
- Road_Network
- NCR
- State Boundary
- Towns/Urban
- Contiguous Urban Area
- Urban Area Settlement
- Rural Area

Source : Census of India, 2011

Source : Global Huma Settlement Layer, 2015(GHSL), European commission

The Definition of Urban agglomeration as per Indian Census limits considering the contiguous settlement in one single state, thus in order to understand the regional demographics one needs to looks beyond administrative boundaries. 71.2 % of total NCR's urban population resides in the re-defined Delhi Urban Agglomeration

Administrative divisions	Metropolitan Region (NCR)		Urban Agglomeration Redefined	
	Unit	Urban Population Census 2011	Unit	Urban Population Census 2011
Municipal Corporation (M.Corp.)	57	17,738,622	5	15,014,111
Municipal Council (M.Cl.)	82	6,701,137	8	1,260,497
Census towns	195	6,866,099	129	6,068,508
Cantonment area	2	203,663	1	110,351
Total	336	31,509,521	143	22,453,467

Urban Planning Policy Hierarchy and Framework in NCR- Delhi
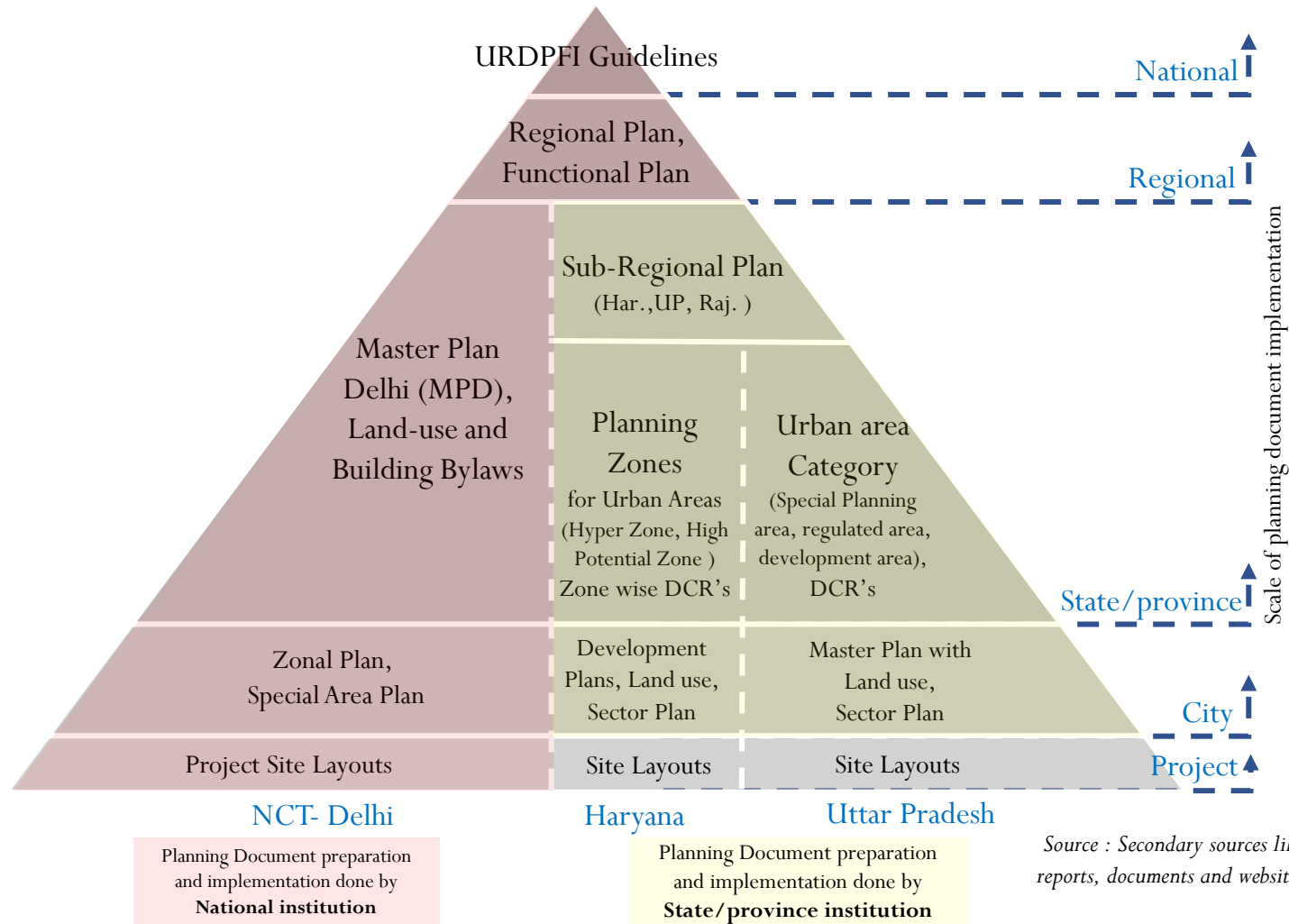
The Urban Regional Planning process is **governed by both national and state institutions**. The master plan, Land use and development plans of all Urban areas within NCR, have to be **approved by the NCRPB** before implementation and is in accord to the proposed Regional Land use map.

Urban development Institutional Network in NCR- Delhi
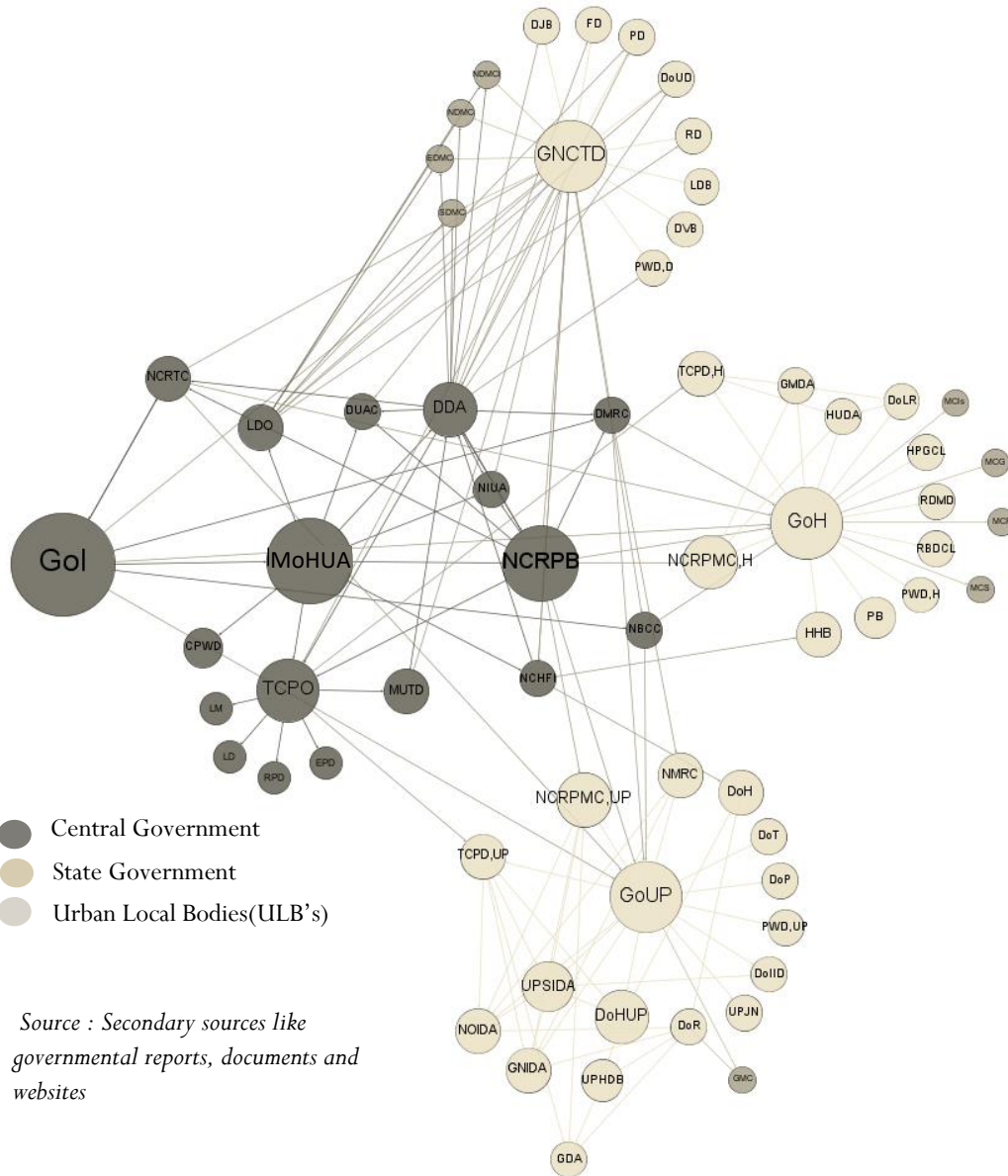
Urban development institutional network of the NCR comprises of national, state and local body organizations and departments which are functioning with National Capital Region Planning Board, NCRPB (Under Ministry of Housing and Urban Affairs, GoI) as the Nodal agency.

Central Government
State Government
Urban Local Bodies(ULB's)

Source : Secondary sources like governmental reports, documents and websites

Key Institutions	
GoI	Government of India
MoHUA	Ministry of Housing and Urban Affairs
NCRPB	National Capital Region Planning Board
TCPO	Town and Country Planning Organization
DDA	Delhi Development Authority
NOIDA	New Okhala Industrial Development Area

Urban development Institutional Network in NCR- Delhi

NCT-Delhi Network
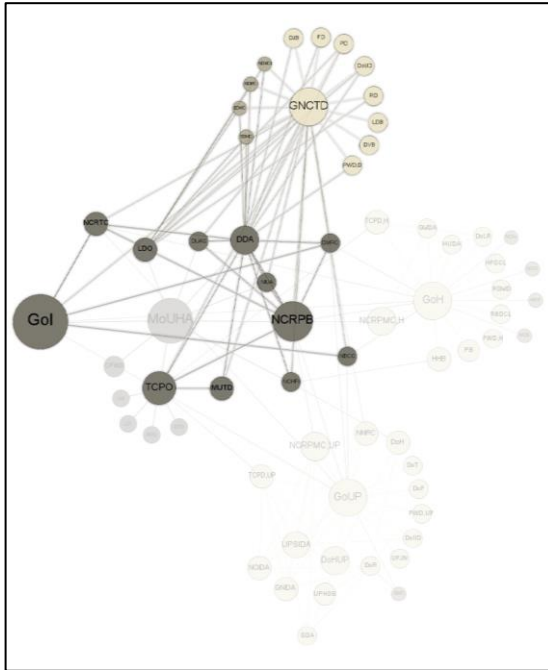
Haryana State Network
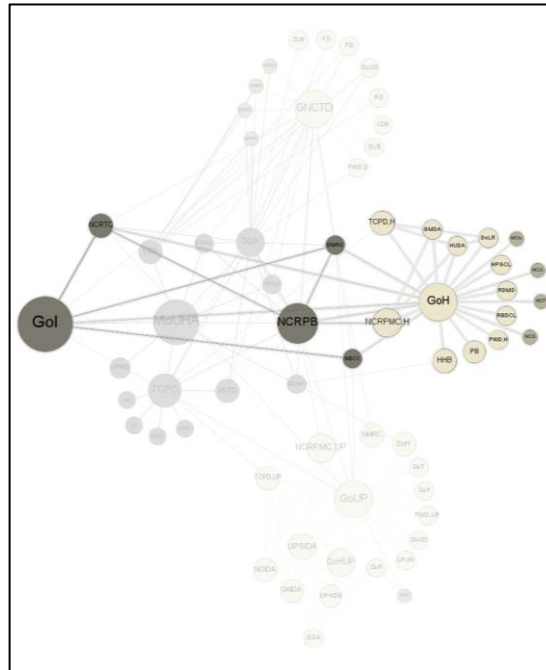
Uttar Pradesh State Network
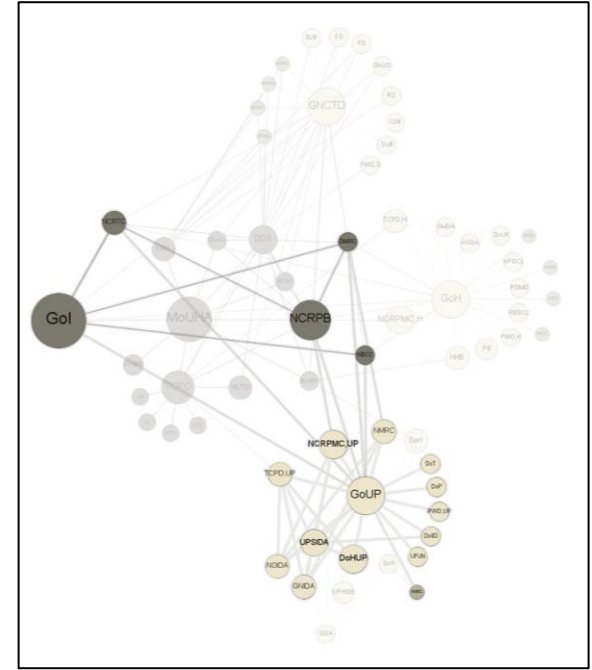
Source : Secondary sources like governmental reports, documents and websites

Central Government
State Government
Urban Local Bodies(ULB's)
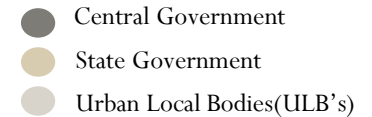
- Urban and Land development legislative powers are vested in the state governments as per the Indian federal system of governance but **NCT-Delhi being Union territory enjoys special status**.

- The urban development authority (DDA) of NCT-Delhi draws its powers from the **national government** while Haryana and Uttar Pradesh development agencies are governed by respective **state governments**.

Urban Land and Housing POLICY SHIFT in India and NCR- Delhi

Timeline axis: 1950 — 1960 — 1970 — 1980 — 1990 — 2000 — 2010 — 2015

Economic Reforms (~1990)

2008 Real estate slump

2014 First policy to regulate formal Housing

National Government

Planning Commission established

(1969-74) Urban Development accorded high priority in 4th economic plan

1988 First National Housing policy with focus on slum improvement and public Housing and Rural Housing

Shift in Urban Development Policy with introduction of Private Players

2007 Shift from Rural to Urban level Development for infrastructure provision and Housing through JnNURM

2014 Land Acquisition, Rehabilitation and Resettlement Act, 2013 enacted with provision of Market rate for land acquisition

2016 Real Estate Regulatory Authority (RERA) Act and Real Estate Investment Trust (REIT) Act enacted

2018 Draft Public Private Partnership for Affordable housing Policy

State Level

1957 DDA established Bulk land acquisition for Development of notified Urban Delhi

1962 MPD -1981 published (Need for regional planning recognized)

1976 Bulk Acquisition of Land by UP govt. for establishment of Industrial Town- NOIDA

~1981 2nd Bulk land notification and acquisition by Delhi Govt. for development of 3 sub cities in Delhi

2007 First development plan for urban areas of Haryana proposed with provision of development licenses for private developers

2010 Delhi Land pooling Policy(DLPP) and Low Density residential area policy (LDRA) introduced with provision of private developers in the state

2018-19 DLPP approved

Regional Level

1985 First Regional Plan for NCR with focus on Multi nodal growth and identification of Satellite Towns, focus on physical infrastructure

2018 Need for Regional Land and Housing Policy recognized

Socialist approach with governments/public agencies acting as **providers** for Urban development

➡

Market based approach with governments/public agencies acting as **enabler/regulator** for Urban development

Institutional Analysis

Institutions have different definition derived from the context of social sciences, polities or economics. It can be set of norms , guiding principals, formal or informal which result an outcome within the society.

Institution

Actors /Agents

Roles and Relationships

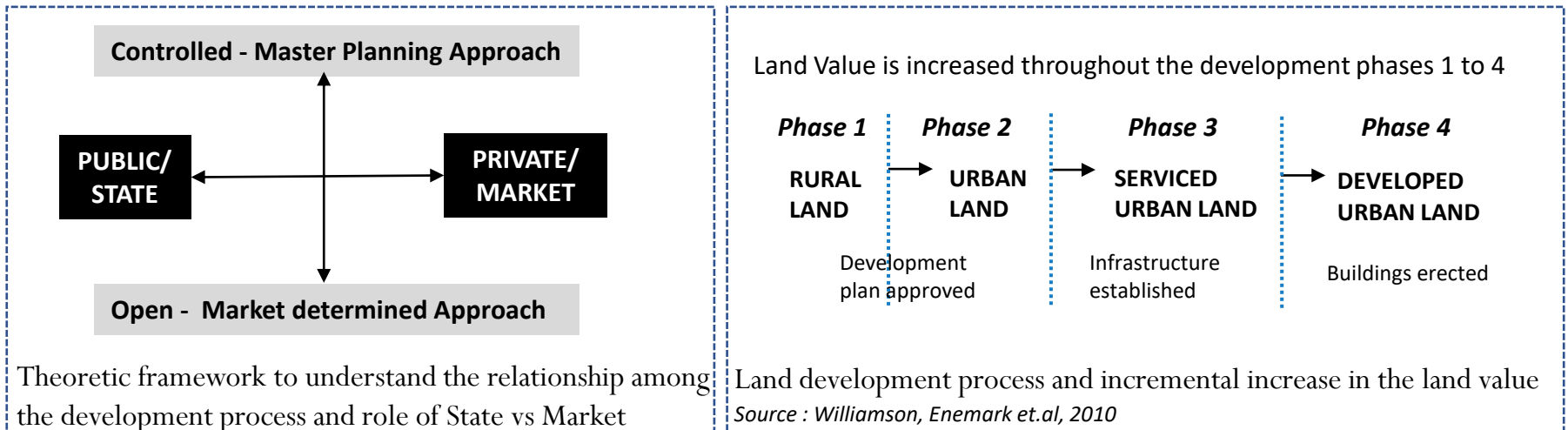*North 1990, Ostrom 1990, Patsy Healy 1992*
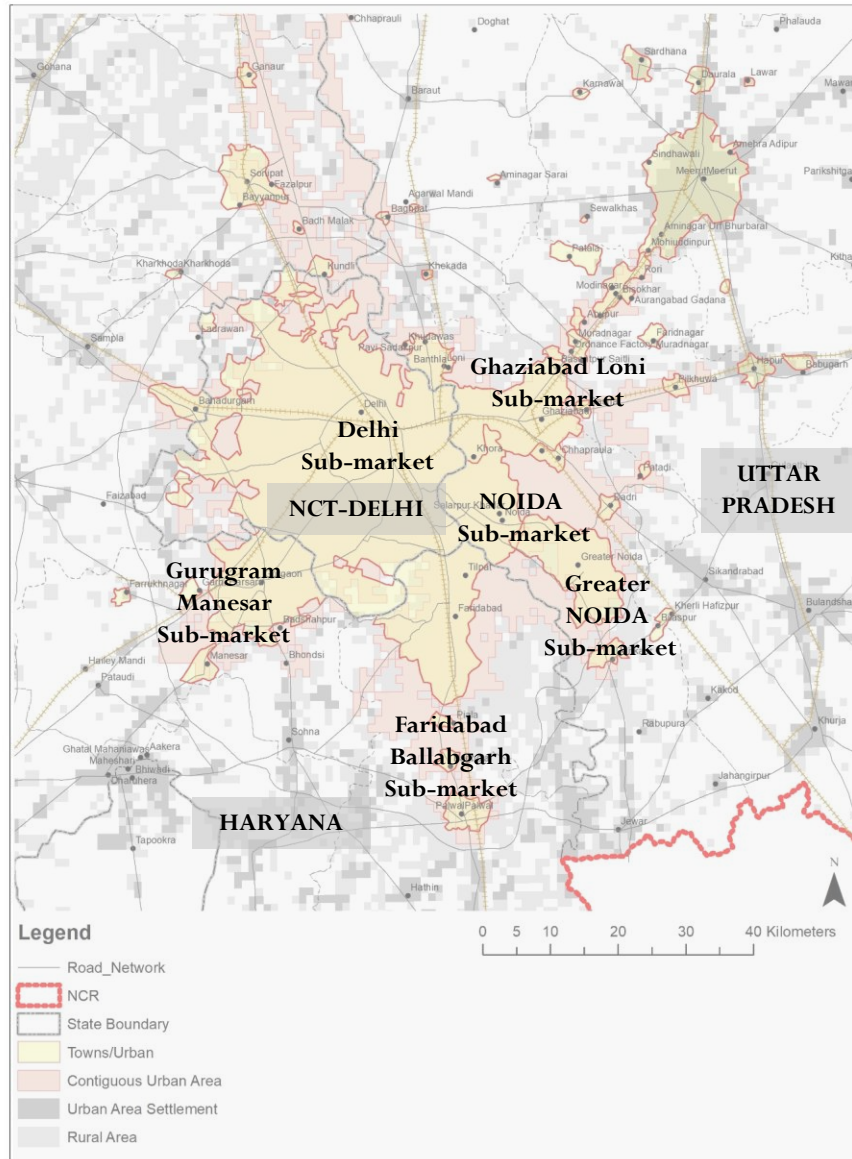
Analytical Framework

Land Development Actors

Primary Decision actors	Land Owner(L)
	Private developer (PD)
	Consumer/ buyer/property owner (C)
	Renter/Tenants (R)
Secondary Decision actors	Development authority/Planner (DA)
	Property investors/owner (PI)
	Financial Institutions/ Investors (FI)

Analytical Framework

Land Development Processes

Controlled - Master Planning Approach

PUBLIC/ STATE

PRIVATE/ MARKET

Open - Market determined Approach

Theoretic framework to understand the relationship among the development process and role of State vs Market

Land Value is increased throughout the development phases 1 to 4

Phase 1 — *Phase 2* — *Phase 3* — *Phase 4*

RURAL LAND → URBAN LAND → SERVICED URBAN LAND → DEVELOPED URBAN LAND

Development plan approved

Infrastructure established

Buildings erected

Land development process and incremental increase in the land value
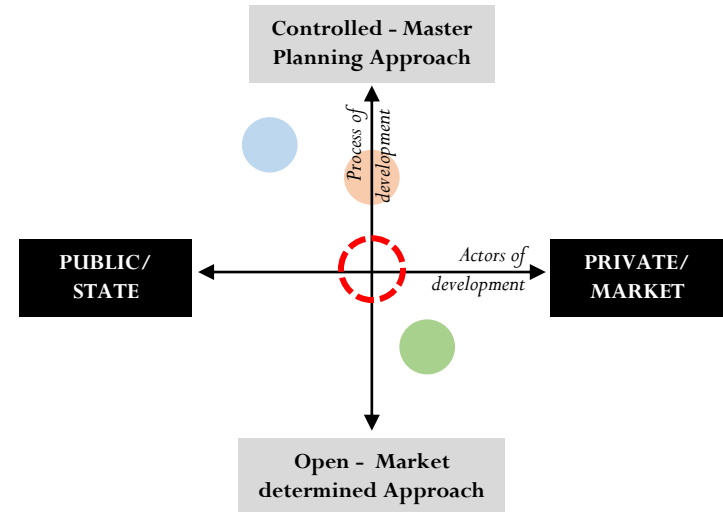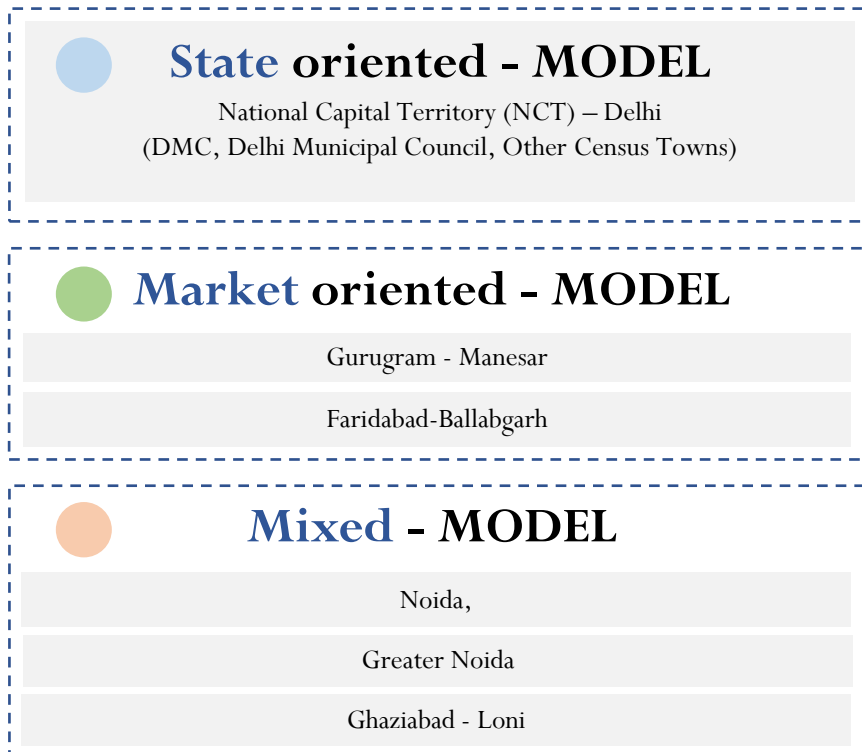*Source : Williamson, Enemark et.al, 2010*

Markets and Sub markets in NCR
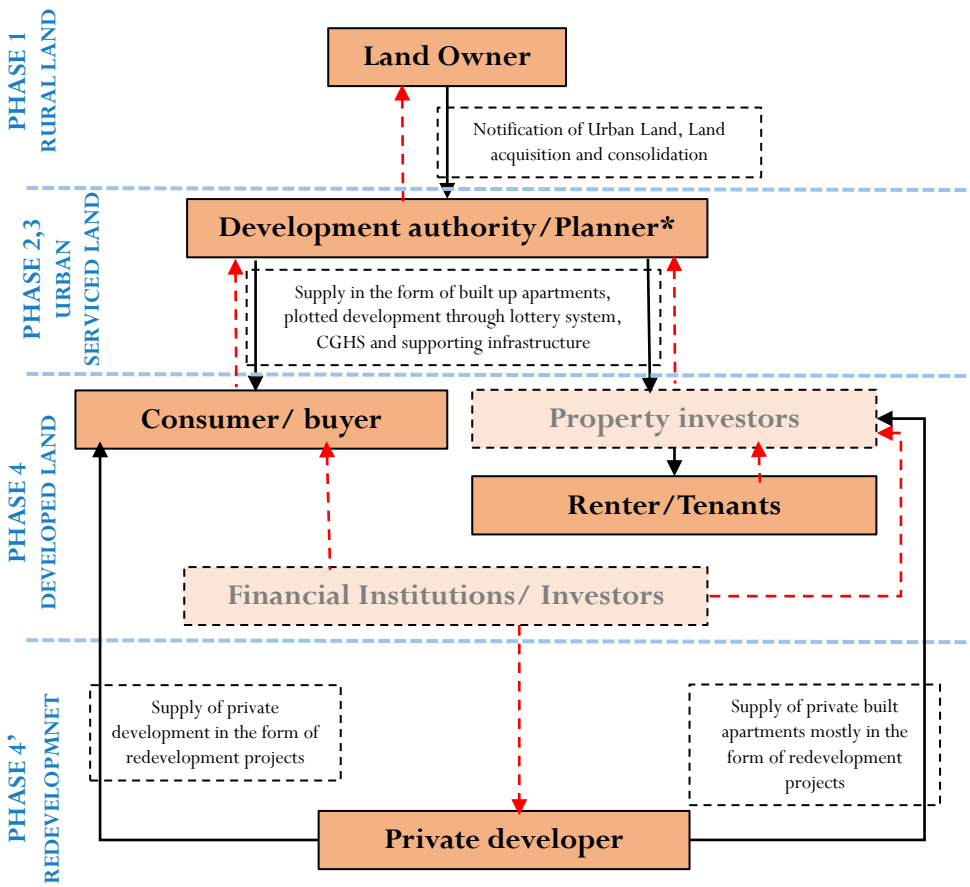
Markets and Sub markets in NCR

Based on the Analytical framework, Institutional Network and planning process of NCR the land and formal housing market in study area has three Models of development

State oriented – MODEL
National Capital Territory (NCT) – Delhi
(DMC, Delhi Municipal Council, Other Census Towns)

Market oriented - MODEL
Gurugram - Manesar

Faridabad-Ballabgarh

Mixed – MODEL
Noida,
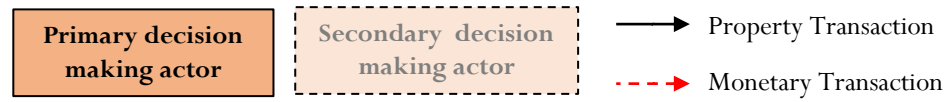
Greater Noida

Ghaziabad - Loni

Schematic representation of the various development models against the analytical framework

A **balance** needs to be established among the role of public authorities and private developers. A tilt towards either of the sector (public or private) leads to irregularities and skewness in land and housing supply

STATE ORIENTED Model

PHASE 1 RURAL LAND

Land Owner

Notification of Urban Land, Land acquisition and consolidation

PHASE 2,3 URBAN SERVICED LAND

Development authority/Planner*

Supply in the form of built up apartments, plotted development through lottery system, CGHS and supporting infrastructure

PHASE 4 DEVELOPED LAND

Consumer/ buyer

Property investors

Renter/Tenants

Financial Institutions/ Investors

PHASE 4' REDEVELOPMNET

Supply of private development in the form of redevelopment projects

Supply of private built apartments mostly in the form of redevelopment projects

Private developer

***NOTE**: The development authority (DA) is the key facilitator for land development in Delhi-NCT therefore the DA can be considered as primary decision agent as an exception in this model

Primary decision making actor	Secondary decision making actor	→ Property Transaction
		---→ Monetary Transaction

Source : Google earth satellite image (2018) with illustration

The State- oriented model was operating in Delhi since the inception of Delhi Development authority (DDA).

In 2010 DDA introduced Delhi Land Pooling Policy and Delhi redevelopment Policy to invite private developers into development process, thus it can be said that Delhi is not entering a new Phase of Development

Case study introduction – State oriented model

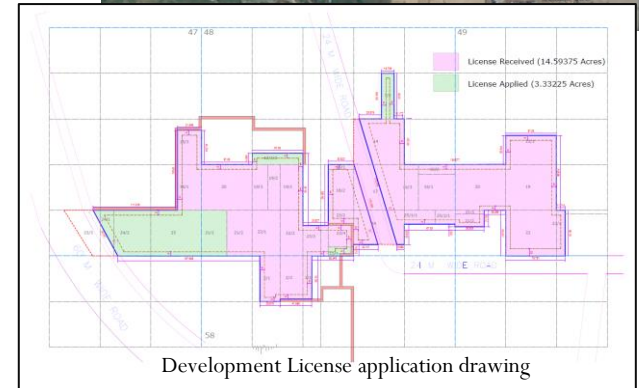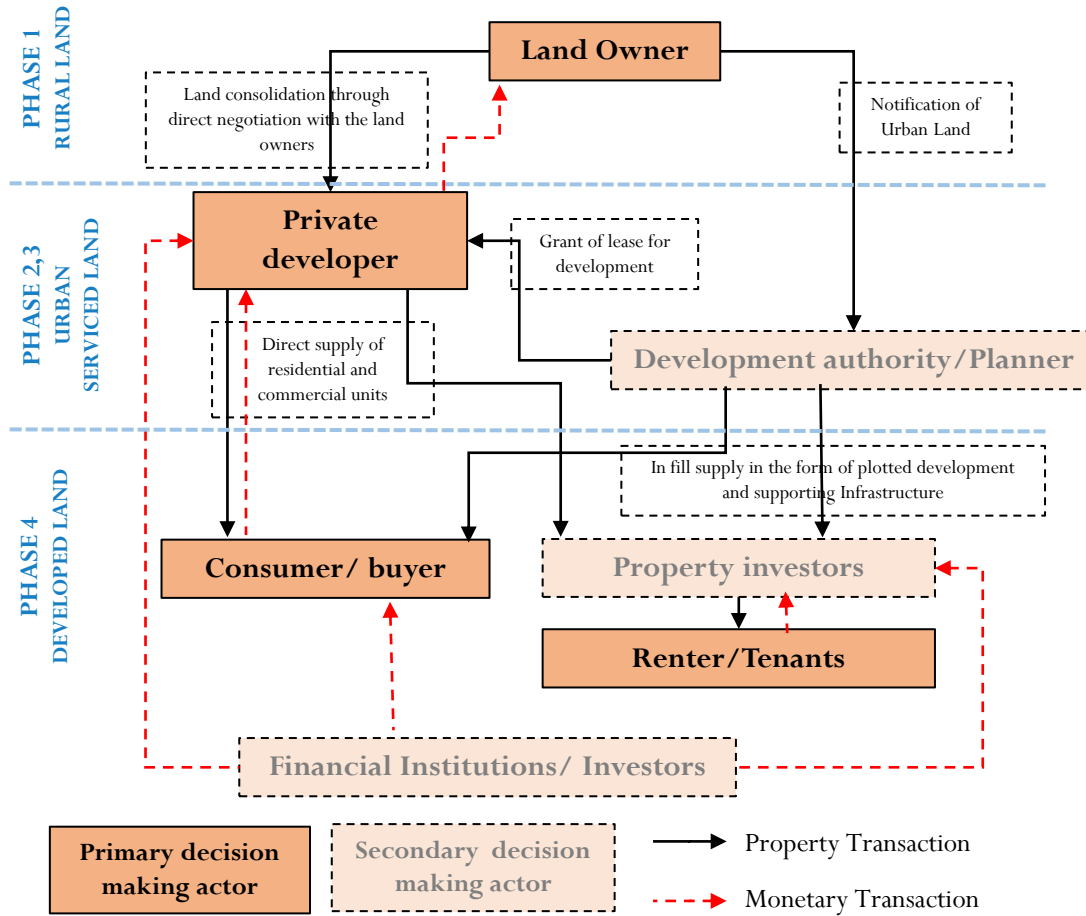
	#1 Platinum Heights CGHS	#2 DDA EWS colony	#3 DLF Capital Greens
Segment/ Developer	Mid segment with 3BHK units by DDA leased on lottery basis	EWS-LIG , Under-construction (since 2018) 1BHK, 2BHK by DDA	Luxury segment project by DLF Private developer on redeveloped industrial land
Site area	2.3 Hac.	4.31 Hac	6.2 hac. of residential development
Completion date	2004	Proposed date of possession in 2021	Launched in 2008, Possession in 2016
No. of Units	302	1640 (LIG 632 units, EWS 1008 units)	2659 HIG, 700 EWS
Occupancy	100%	N.A.	70% in Phase I and Phase II, Phase III under construction (2018)
Remarks	This is a typical residential development by DDA , Land consolidation happened at the time of bulk land acquisition for Dwarka Sub-city.	Development by DDA to prevent/control unauthorized development at the Dwarka Sub-city periphery. The development utilizes precast construction technique to reduce cost of construction	A high end luxury project in the core city region. The developer is facing issues in the form of lack of connectivity and quality neighborhood due to location in old industrial zone.

MARKET ORIENTED Model

PHASE 1 — RURAL LAND

Land Owner

Land consolidation through direct negotiation with the land owners

Notification of Urban Land

PHASE 2,3 — URBAN SERVICED LAND

Private developer

Grant of lease for development

Direct supply of residential and commercial units

Development authority/Planner

PHASE 4 — DEVELOPED LAND

In fill supply in the form of plotted development and supporting Infrastructure

Consumer/ buyer

Property investors

Renter/Tenants

Financial Institutions/ Investors

Primary decision making actor	Secondary decision making actor	→ Property Transaction
		- - -▶ Monetary Transaction

Irregular plots/site boundaries for development are consolidated by the Private developer in order to fulfil the minimum requirement of land (eg. 10 Acre for Group Housing) for procuring development license.

This leads to isolated development which **lack connectivity to city infrastructure**

Source : Google earth satellite image

License Received (14.59375 Acres)
License Applied (3.33225 Acres)

Development License application drawing

Source : Author

Case study introduction – Market oriented model

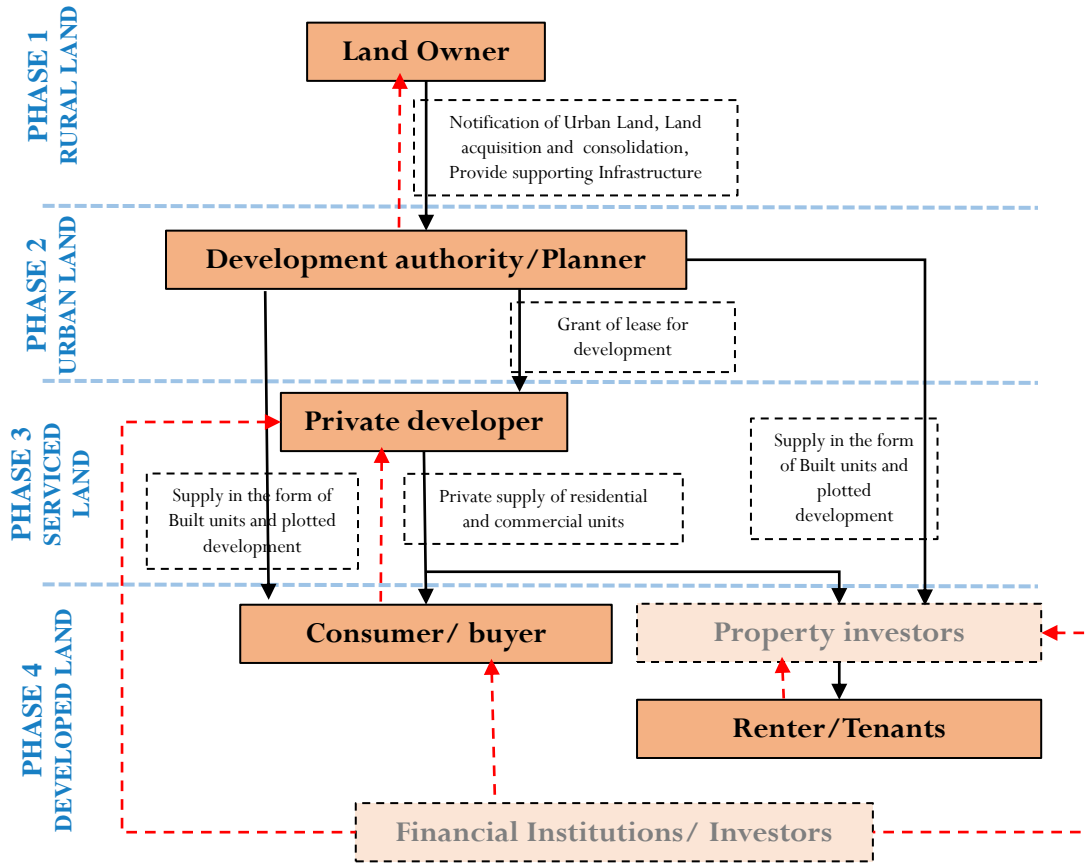|	#4 Vatika INXT City	#5 Sobha International City	#6 Pyramid Urban Homes
Segment/ Developer	Mixed development with plots, attached housing, apartments in multiple segments spread in six sectors	High-end ultra luxury attached villas	Affordable Segment by private developer to be constructed and sold in open market based on pre condition basis
Site area	222 Hac. approx	60 Hac in Phase I – II, Phase III and IV not developed	4.04 Hac.
Completion date	Launched in 2010, Partially completed	To be completed in 2015, project construction on hold	Launched in 2019, Under construction
No. of Units	9000 units and 2010 plots	206 villas phase I and 135 villas phase II	1330 Units 2BHK Cast In situ technique of construction
Occupancy	Less than 40%	Less than 5%	N A
Remarks	It is mega township but spartially occupied due to lack of connectivity and basic amenities. The sector roads are under construction and development is discontinuous due to infill agricultural land that developer was unable to acquire	This project was meant to bring in ultra luxury segment in NCR-Delhi but failed to attract population for possession due to lack of basic infra structure and no connectivity with core city. The project stand in isolated neighborhood near Delhi- Gurugram Border	Launched under Affordable housing policy by Govt of Haryana , this is one of few small scale developments by private sector in this segment, but is away from the core city of Gurugram and as standalone project

MIXED Model

PHASE 1 RURAL LAND

Land Owner

Notification of Urban Land, Land acquisition and consolidation, Provide supporting Infrastructure

PHASE 2 URBAN LAND

Development authority/Planner

Grant of lease for development

PHASE 3 SERVICED LAND

Private developer

Supply in the form of Built units and plotted development

Private supply of residential and commercial units

Supply in the form of Built units and plotted development

PHASE 4 DEVELOPED LAND

Consumer/ buyer

Property investors

Renter/Tenants

Financial Institutions/ Investors

Primary decision making actor	Secondary decision making actor	⟶ Property Transaction
		⇢ Monetary Transaction

Residential Development in Greater Noida sector Tech Zone IV

Source : Google earth satellite image (2018) with illustration

Source : Author

Regular plot sizes available for development by private developers but **Land owner agitations** due to low land value against acquisition and **proliferation of Unauthorized development** also an important outcome

# Case study introduction – Mixed model

	#7 Gaur City	*#8 G. NOIDA Plots*	*#9 Jaypee Wish Town*
Segment/ Developer	Affordable and Mid segment by private developer	Affordable plots by G Noida development authority leased in public auction	Mixed development in the form of mega township spread over five sectors in NOIDA
Site area	95.9 hectares	84.4 hectares	430 hectares
Completion date	2010 Launch, partial possession 2019	2010 launch	2008 launch , less than 2000 units finished
No. of Units	20,000 apartments of 2BHK and 3BHKL mix	1116 units of plot size 200 sqm and 668 units of plot size 120 sqm	36000 units planned
Occupancy	Over 90 %	Less than 5%	Less than 10 %
Remarks	One of the rare case studies of mega townships in G Noida which could complete the project and have high occupancies due to timely delivery and locational advantages	The constructed units are unoccupied and in dilapidated condition. The site lacks sector level roads and public transport facility. No neighborhood facility. The development authority constructed few units in order to attract development	Unoccupied project, The developer declared bankruptcy in 2020. This project was considered as a land mark development but could not maintain the sales due to internal and external factors
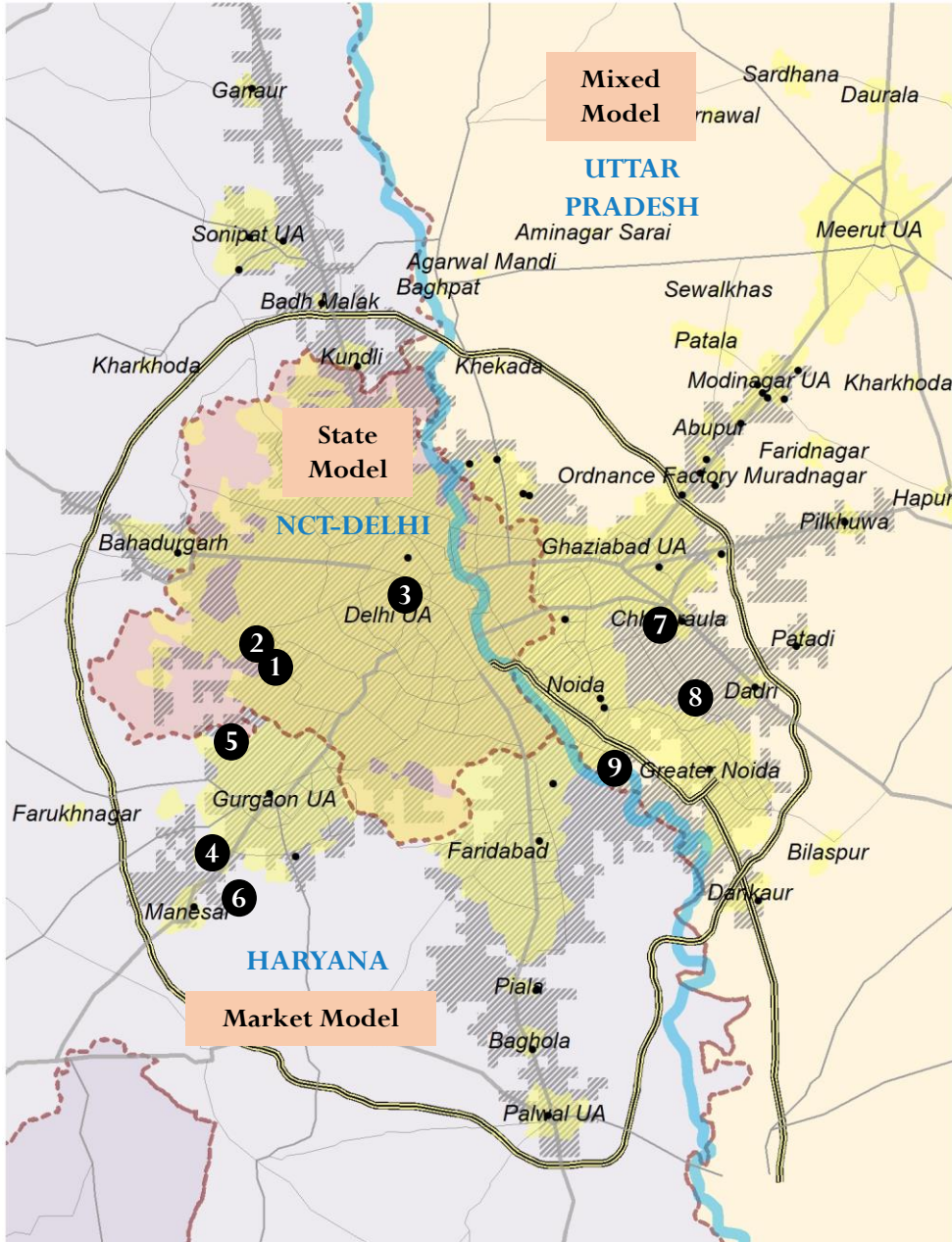
List of Detailed project level case studies and their location the study area:-

The case studies were selected based on the typologies of available options in the sub-markets analysed from the property listing data

S. No.		Project name	Segment
NCT-Delhi	1	Platinum Heights CGHS	Mid Segment
	2	DDA EWS colonies, Dwarka	Low Income , Affordable
	3	DLF Capital Greens , Moti Nagar, Delhi	Luxury segment redevelopment project,
Haryana	4	Vatika INXT City Gurugram	Mid segment, Luxury, Mixed township
	5	Sobha International City	Luxury Segment
	6	Pyramid Urban Homes Affordable Housing	Affordable Segment
Uttar Pradesh	7	Gaur City	Affordable segment, High Density Mega Township
	8	Greater Noida Development Authority Plots, Sector 3	Mid segment plotted development
	9	Jaypee Wish Town	Mid Segment, Luxury segment , Mega Township

# Risk Analysis Methodology of case studies

The developers of the individual case studies were asked to rank the following risks against the stages of project development and again give cross weightage to the risk in each stage

Risks	Explanation
External Non Economic Factor (ENE)	Development Policy change, socio-cultural change, political change, delay in acquiring the development license, etc.
Internal Organizational Factor Risk (IO)	Management, Design change, Material procurement etc.
Economic Factors (ECO)	Change in tax, interest rates, Cost of construction material, Currency rate, etc.

Stages of project development	Abb.
Land identification	LI
Land procurement/ Land purchase	LP
Project conceptualization	PC
Project Planning and Designing	PPD
Construction/ implementation	CI
Marketing and Sales	MS
Project delivery and Maintenance	PDM

Risk Analysis Result

- The risk analysis clearly indicates that the **state oriented model as well as mixed development model, is the least risky preposition**

- But we have seen the policy shift across the national and state level towards the Market oriented development, thus a balance needs to be established to reduce the risk due to External Non Economic factors and Economic factors

- This balance can be achieved **through policy intervention at the time of Land identification and Land procurement**.
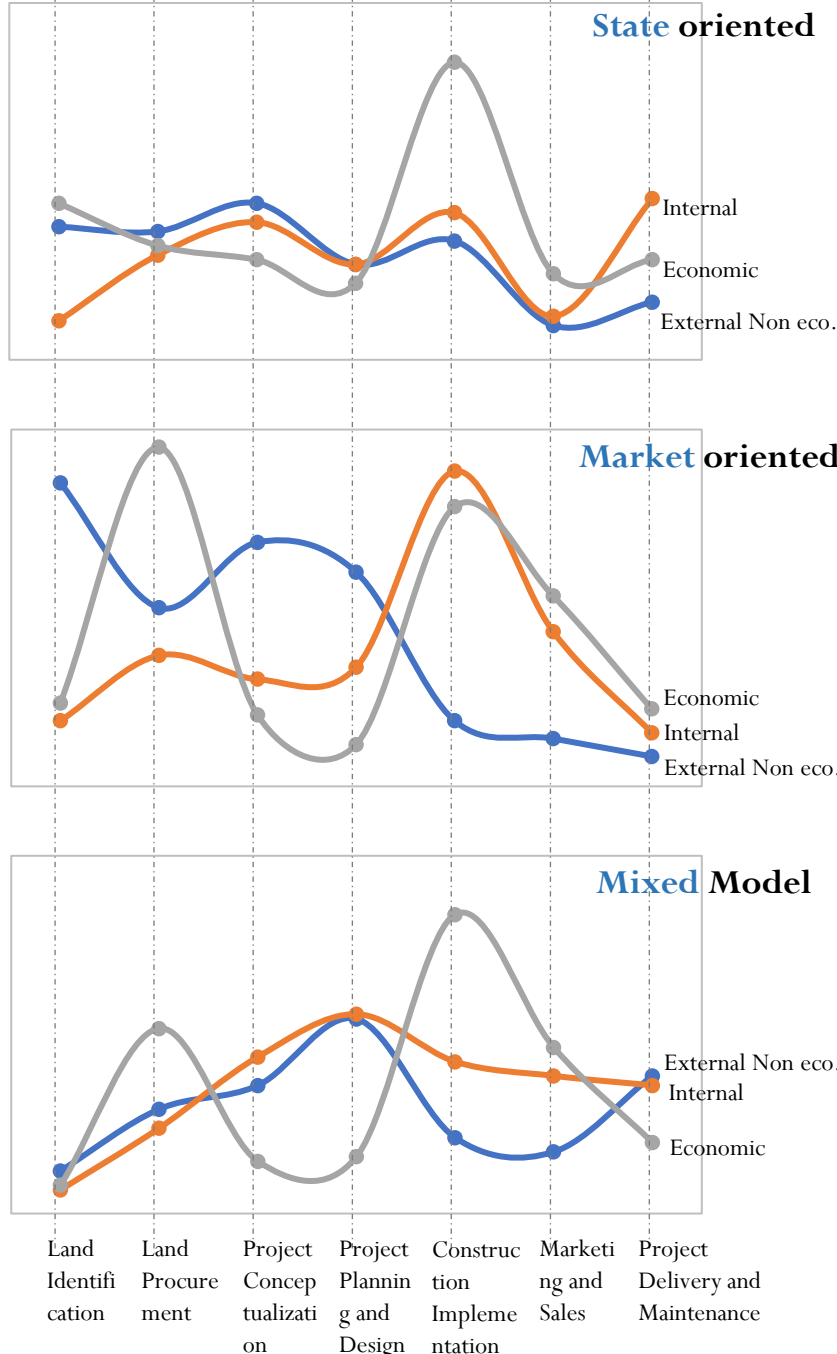
Plausible answer to the Research questions:

1. What is the **cause of demand-supply gap** and sometimes the underutilization of formal housing units at the urban periphery particularly in Delhi Urban area ?

- The demand supply gap is the direct outcome of the land procurement and delivery mechanism adopted by the authorities for urban development

- As seen in the case of Delhi , the slow pace of land development by the authority lead to huge demand- supply gap and allowed the informal sector to cater to this demand.

- Similarly in Gurugram the over supply of land through direct purchase by private sector led to over supply of housing units

Plausible answer to the Research questions:

2. How far do the **different development models within the Region** lead to difference in the formal housing supply ?

- The difference in the housing out come was a direct outcome of the difference in the relation among the actors.

- The sub market where the Private sector was directly interacting with land owners lead to supply of housing in Luxury segment in order to achieve desirable profit margins and speculation which lead to sudden increase in land prices .

- The housing supply in sub market of Delhi has been controlled through DDA thus very few options are available in the form of Housing Typology. The Mixed model encourages development in various segments of the income bracket since the Development mix is based on market assessment by private developer.

- Thus the role of actors and their relationship determined by the process of development are key components of Urban development Model.

Plausible answer to the Research questions:

3. What is the **role of actors of development** (State/Public and Market/Private) within formal institutions of Urban Land development and Housing in developing economies?

- The state and market are both an important actors of development especially in developing economies where the state may not be able to cater to the growing housing demand. The market or private sector will bring the much needed investment but it is important to monitor the irregularities and built capacity of the institutions

- The flexibility in the institutional mechanism in the form of policies and programs leads to distinct Land development model. The policies need to be made robust at the same time malleable in accordance to the local development conditions. **As per the stage of development, a balance needs to be achieved in order to incentivize both the market and state.**

Closing Statement

Much discussion has happened in the academic and policy arena around the Lower income sections and informalities of Housing in developing economies, but with the economic growth and development, the bulk of population and housing demand is derived from the middle income segment.

The research tries to highlight the issues of State and Market in urban development and formal housing supply process which when addressed, will ultimately have a trickle down effect on the lower income segments of the society.

Future Work

Our team is working towards analyzing the institutions working towards land development techniques in Tier-II cities of India, where the land and housing markets are much skewed and housing development is happening in smaller and scattered segments.

It would be interesting to understand how the institutions and models working towards land and urban development in Tier-II cities of developing counties are performing and what is the overall impact of these models on the Housing outcome and over all urban fabric.