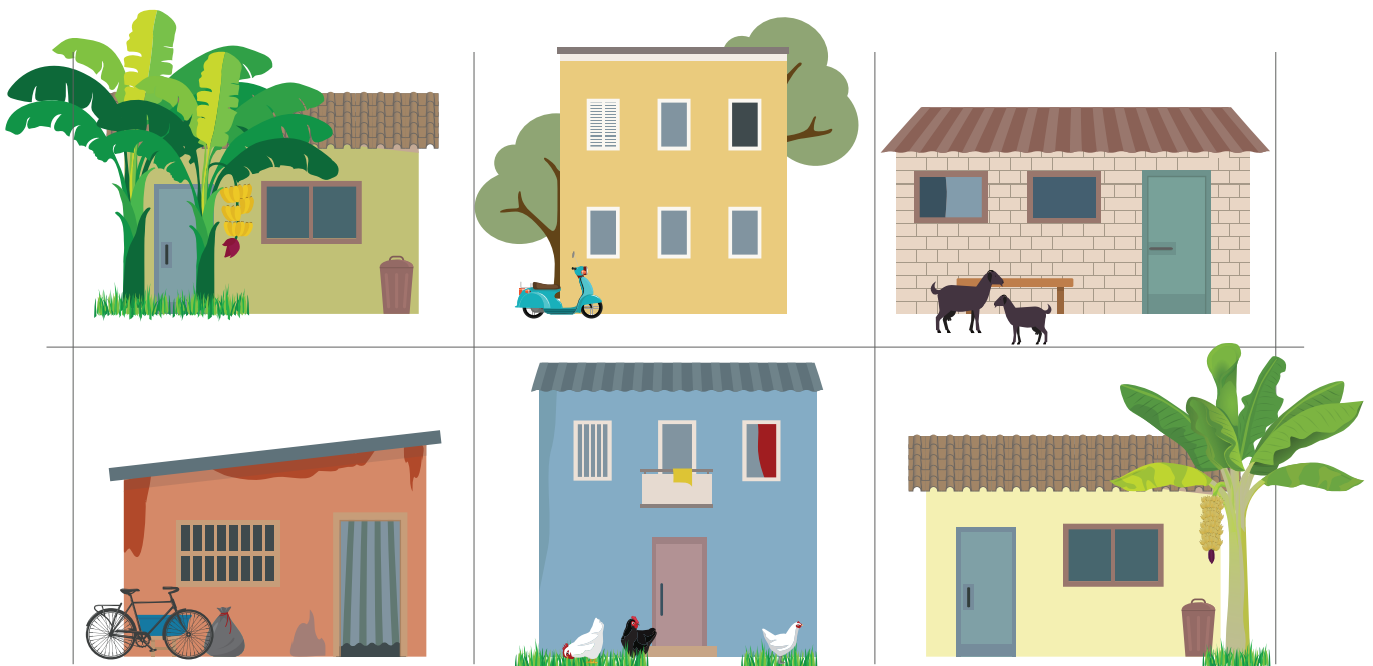# ADDRESSING
PRODUCT DIVERSIFICATION
IN
PUBLIC HOUSING SUPPLY

By

Shubhagato Dasgupta | Anindita Mukherjee

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1 | INTRODUCTION

Indian cities face acute housing shortages, especially for the urban poor. According to the Technical group for Housing shortage, India needed 18.8 million houses in the period 2012-17. 95% of the estimated housing shortage is for EWS and LIG sections. In response to the housing shortage, the Government of India (GoI) proposed ambitious target to provide Housing for All by 2022. To fulfill this objective, it launched Pradhan Mantri Awas Yojana (PMAY). Under the scheme, till date close to 6 million housing units have already been completed, adding more than 800,000 homes every year since inception[1].

Despite the government's efforts on augmenting the supply of houses, especially for the EWS, recent data suggest that the housing shortage might have increased. According to the data from NSSO 76th round, which is the latest nationwide survey on housing in India, the number of households which have at least one married couple without a separate room has increased from 18.8 million in 2012 to 19.1 million in 2017 (NSS, 2018). Independent studies by Tiwari (2016) and ICRIER (2019) have also estimated that the housing shortage in India has increased over the past few years.

Increase in housing shortage despite massive increase in housing supply for EWS housing, presents an interesting puzzle. One of the reasons behind it could be increase in demand outstripping the supply of housing. According to NSSO, between 2012 and 2017, the total number of urban households increased from 80 million to 92 million, adding a total of 12 million households to the urban areas. In the same period the number of new houses built were only 3 million. It is not clear if all the new households contribute to housing demand, but given the number of homeless is very low, it is likely that the additional 9 million households were accommodated in the existing housing stock. As a result, congestion increases, and consequently the housing shortage. But the quantitative gap between supply and demand of housing is not the only issue. 80% of all households who are living in houses built between 2012 and 2017 are from the EWS section. This might give the impression that

there is a lot of focus on EWS housing but if we closely look at the kind of housing a different story emerges. Only 50% of EWS households who live in owned houses built within the last 5 years, are permanent structures. 20% of such EWS households have at least one married couple who do not have a separate room and 13% of them live in houses where per capita floor area is less than 60 sq. ft[2]. The new EWS housing which has come up in the period 2012-17, for which housing shortage was estimated, added to the housing shortage.

The failure of housing policy to address housing shortage, especially among the EWS section, is a result of demand exceeding the supply as well as lack of housing supply suited for urban poor. The right kind of housing supply goes beyond only the dwelling space and considers various other crucial aspects like space, privacy, accessibility, ventilation, lighting and access to basic amenities to provide adequate shelter (Parekh, 2008). The main challenge that confronts the Indian housing policy is to improve the physical quality of housing along with improving the housing condition of the urban poor, both often leading to conflicting priorities (Gilbert, 2007). Focusing only on improving physical space can prove counterproductive as priorities of urban poor lie beyond the dwelling and they might be willing to compromise on it for a location with more economic opportunities. The challenge before housing policy is to incentivize housing suppliers to provide housing that addresses issues related to physical dwelling, basic services and amenities, location etc. as well as affordability. Formal private sector as well as informal private sector have failed to do so. The public sector housing can address concerns with both, affordability as well as location, connectivity, amenities etc. that are essential for urban poor, but it has thus far not been able to do so because it prioritizes affordability and ownership housing at the peril of location, amenities that are equally important for urban poor.

Housing policy in India has gradually shifted from public sector led housing system to private sector led housing system based on market-

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[1] Data from https://pmaymis.gov.in/,Accessed on 06/07/2022

[2] Assuming average household size of 5 and affordability criteria of 300 sq.ft, per capita sq. ft.area for affordable housing is 60 sq. ft.

based mechanisms driven by formal private developers and housing finance companies. The role of the government has also changed from provider of housing to enabler of housing market. The Pradhan Mantri Awaas Yojana (PMAY), the flagship housing program of GoI, also positions private developers as one of the main stakeholders in housing sector. CLSS and BLC, two verticals under which maximum housing is created, is driven by private sector.

The greater role of the private sector means that the focus of housing policy shifted from providing 'housing' to providing 'houses. This shift means that housing policy focused more on provision of physical space and the built area rather than provide 'housing' that entails various aspects like location, employment, services, and a slowly consolidated wage & asset base (Bhan, 2018). The vision of 'Housing for all' require addressing all these different aspects constituting housing. A more pronounced focus on housing by public sector need diversification to address different aspects of housing like access to livelihood, access to amenities and basic services, security of tenure, the physical space of dwelling.

This study argues for public sector housing to diversify their housing to cater to households with diverse income and housing needs. The study uses data from NSS 76th round, conducted in 2017-18, to identify the household groups whose housing needs are unmet by existing housing supply and understand their housing choices. We use the case of public sector housing for urban poor in Chennai to highlight major issues with the approach of public sector housing in Chennai. We also discuss policy recommendation that can steer the public sector housing to diversify their housing products.

The next section discusses the research design and methodology for the study. In the third section we discuss the housing pillars and in the fourth section we discuss the challenges faced by different housing suppliers. In the fourth section, we broadly categorize the households based on ability to pay, life stage of the household and type of employment. In the fifth section we identify the household groups whose housing needs are unmet by the current housing products available in the market. The next section describes the logit models to identify which housing aspects are valued by which kind of household. After that we discuss the case study of urban poor housing in Chennai and the challenges faced by them in providing housing for urban poor.

2 RESEARCH DESIGN AND METHODOLOGY

The study is divided in two parts. In the first part, we focus on understanding the diverse housing needs and factors affecting it. In the second part, we discuss the supply of public sector housing and the issues associate with it. We analyse NSS data from the 76th round to identify the groups that do not have adequate housing and identify the factors that affect their distinct housing needs. For this, we categorize the households based on their ability to pay, type of employment, and the life stage of the household and then analyse their living condition to identify the groups that have poorest living condition. For each of the groups identified as disadvantaged, we also run logistic regression to analyse their housing preferences for these household groups. In the second part of the study, we discuss the public sector housing for urban poor provided by Government of Tamil Nadu (GoTN) in Chennai. We use secondary literature and government documents to analyse the different kind of EWS housing provided by GoTN.

The study is constrained by lack of data on the type of housing provided by public sector at national level. It constrains us from comparing the nature of demand and supply of public sector housing at the national level. It is a major gap in the housing data available in India. Detailed and periodic data on housing supply can be very useful in understanding the nature of housing supply. Housing and living condition data collected by NSS is useful in analysis of housing demand but lack of panel data on housing demand also restricts the analysis as it is not possible to understand the changing nature of housing demand over life cycle of a household.

3 | UNDERSTANDING HOUSING PRODUCT DIVERSIFICATION

Housing needs of a household, including tenure, depend on the nature of employment, stage of life, household size, and other considerations. For example, casual wage workers need flexibility in their residential choices, especially location and tenure, to maximize their livelihood opportunities. Similarly young households and recent migrants also cannot participate in formal housing markets because of their inability to pay and uncertainty about their future employment prospects. To further our understanding of the diverse housing needs we divide households based on their ability to pay, type of livelihood, and life stage of the household. We then use household level data from NSS 2018 to understand the factors affecting the housing needs of the urban poor.

3.1 CATEGORISING HOUSEHOLDS BASED ON ABILITY TO PAY

Ability to pay affects the living condition of a household. It determines the size, location, and amenities that a household can afford. Most household surveys in India do not collect data on both incomes. Hence, the consumption profile of the households is used to ascertain the ability to pay. Based on the per capita monthly consumption level, households are divided in five categories- Below Poverty line (BPL), Economically Weaker Section (EWS), Lower Income Group (LIG), Middle Income Group (MIG) and High Income Group (HIG). Table below shows the consumption level of these different categories.

Table 1: Household categories based on per capita monthly expenditure

Household Group	Range of Monthly Per Capita Expenditure (MPCE)
BPL	Less than Rupee 1407
EWS	Between 1407-5000
LIG	Between 5000-10000
MIG	Between 10000 - 50000
HIG	More than 50000

3.2 CATEGORISING HOUSEHOLDS BASED ON TYPE OF EMPLOYMENT

The nature of employment affects the residential choices of the household. Those with irregular sources of income want more flexibility in terms of tenure, location, and payment while those with more regular source of income like a salaried job will need stability in tenure and prefer location closer to their source of employment. Based on the kind of employment, all households are grouped in three categories – casual wage workers, self-employed workers, and regular salaried/wage workers. The table below describes the three groups based on employment type:

Table 2: Households based on kind of economic activity

Household Group based on Economic Activity	Description
Casual Wage workers	Households where majority of working members are engaged in casual wage worker and no working member has a regular wage/salaried
Self-Employed	Households where majority of working members are self-employed, and no working member has a regular wage/ salaried
Regular Wage/ Salaried	Households where at least one working member has a regular wage/salaried

3.3 CATEGORISING HOUSEHOLDS BASED ON AGE OF HOUSEHOLD

The median age of the first home ownership in India is around 36, whereas the average age of entering the labor force is around 18. The housing needs of this young and

mobile population is different from the older households. They do not have the initial capital to enter the formal housing market and are also at a formative stage of their work-life and are not sure of their professional trajectory. Hence, average age of the household influences the housing preferences. For this study, we categorise households in four groups – child, young, adult, and aged. Table below describes all the four groups –:

Table 3: Household groups based on average age of the household members

Household group (Life Stage)	Average age group of the household
Child	<18
Young	18 to 35 years
Adult	35 to 60 years
Aged	More than 60 years

4

WHO IS EXCLUDED FROM THE HOUSING MARKET?

4.1 BASED ON ABILITY TO PAY

The consumption level of households is closely related to the kind of housing choices they can afford. Households with low per capita expenditure will have different housing preferences than those with higher per capita expenditure based on the kind of housing they can afford. **Figure 1(a) to 1(e)** shows the housing preferences of households based on their ability to pay.

All households are divided into five groups, based on the per capita monthly expenditure of the household as described in table 2. Figure 2(a) to 2(e) compares different households, based on their monthly per capita expenditure, on different aspects of housing like – per capita floor area, amenities (water), type of tenure, commute time, and neighbourhood. The data shows that that the living conditions of BPL and EWS households are worse than to MIG and HIG groups. A higher percentage of BPL and EWS households live in informal rental

(a) Per capita floor area

	BPL	EWS	LIG	MIG	HIG
<60 sq. ft.	46.6	21.5	5	1.2	
>60 sq. ft.	53.4	78.5	95	98.8	100

■ >60 sq. ft.   ■ <60 sq. ft.

(b) Type of tenure

	BPL	EWS	LIG	MIG	HIG
Ownership	78.6	66.7	55.7	46.8	100.0
Others	9.6	3.6	1.5	0.7	
Informal Rental	9.5	22.4	26.9	28.2	
Formal Rental	2.3	7.3	16.0	24.3	

■ Formal Rental   ■ Informal Rental   ■ Others   ■ Ownership

(c)
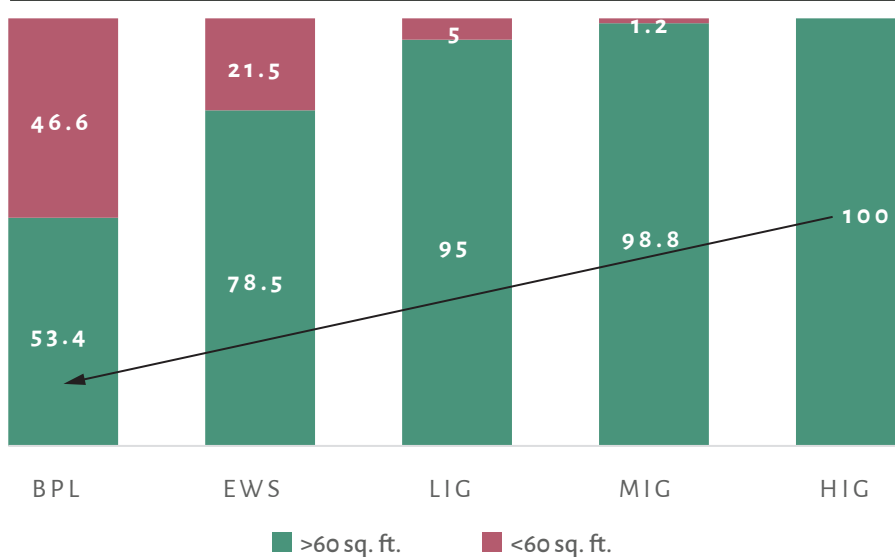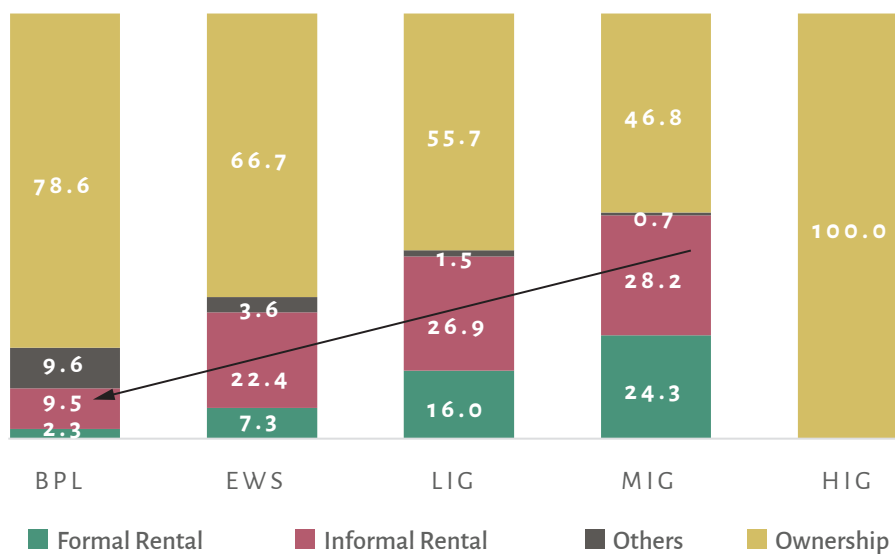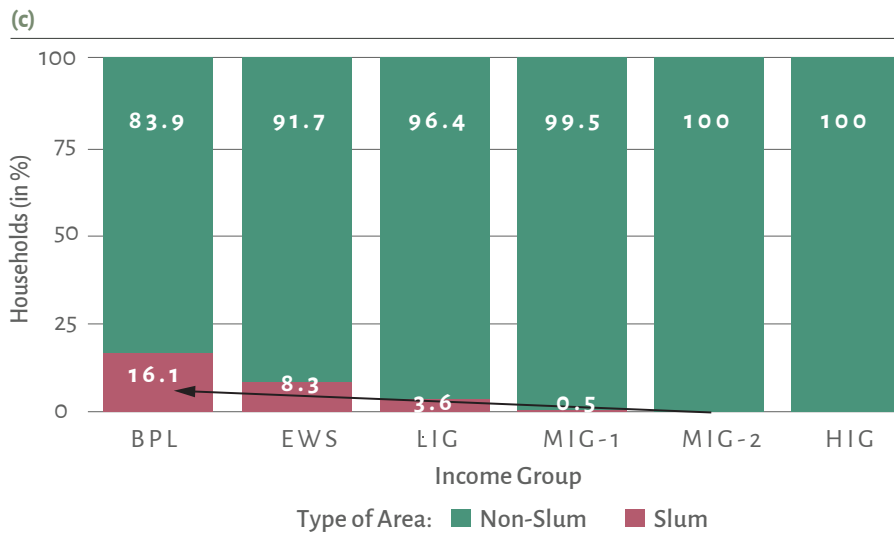
(d) Type of water access
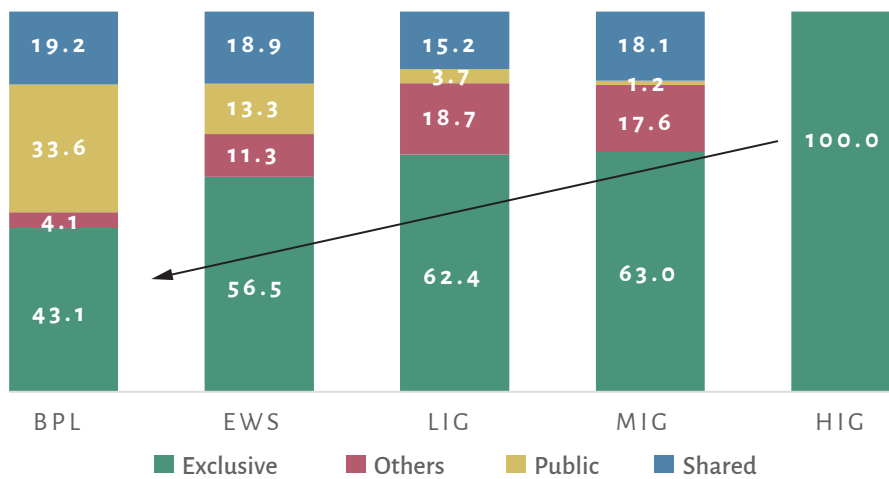
(e) Commute distance

Figure 1: Housing condition based on household's ability to pay (a): Size of households (Small: per capita floor area < 60 sq. ft.; Adequate: per capita floor area < 60 sq. ft.), (b): Tenure of the household, (c) Type of Area, (d): Type of water connection, (e) Work place commute[3]

[3] This does not include student households (Single member households where principal economic activity of the household is education).

houses with smaller per-capita areas in slums and share water and sanitation amenities. The graphs also show that a higher proportion of BPL and EWS households live in areas close to their workplace. It might mean that urban poor household (BPL and EWS) compromise on living conditions and access to amenities to decrease commute cost. The higher cost of housing in areas closer to economic opportunities means that they cannot afford it, forcing them to live in slums and squatter settlements. The data shows that housing conditions of BPL and EWS is worst among all the income groups.

4.2 BASED ON LIFE STAGE OF THE HOUSEHOLD

Housing choice of households are related to the life stage of the households. The housing choices of the younger households (18 to 35 years) will be different than those who are a little older because younger households prefer housing which provides flexible tenure like rental housing and does not need a large initial capital. **Figure 2(a) to 2(e)** shows the housing choices of households at different life stages. The households are categorized in four groups – child (average age of household less than 18 years), young (average age of household between 18 to 35 years), adult (35 to 50 years) and aged (average age of household more than 50 years). Housing conditions of child households and young households are worse than 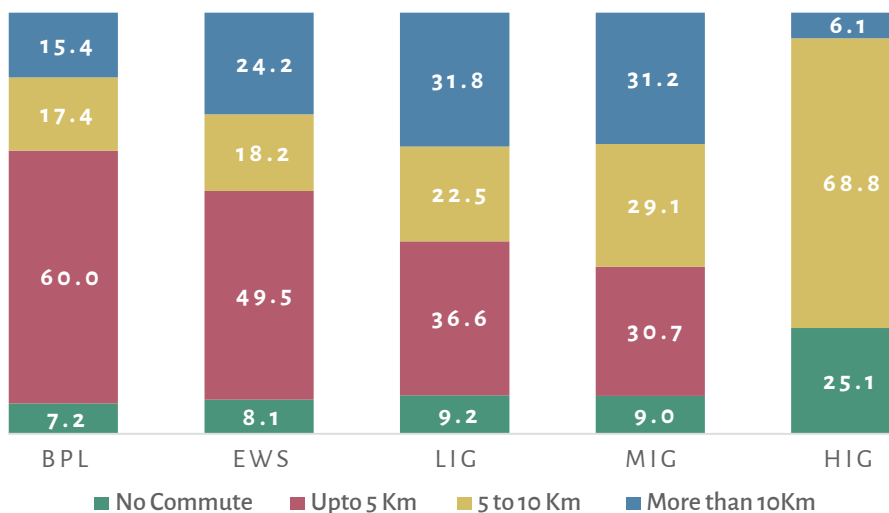adult and aged households. While higher proportion of adult and aged households live in bigger houses with better amenities than child and young households. They are also more likely to own a house and have exclusive amenities. The proportion of households with different commute choices is similar across age groups. The graph suggests that housing condition of households at the earlier life stages is poorer than those at advanced life stages.

(a) Percapita floor area

Child	Young	Adult	Aged
40.8	20.2	9.5	2.1
59.2	79.8	90.5	97.9

■ >60 Sq. ft.   ■ <60 Sq. ft.

(b) Type of Tenure

	Child	Young	Adult	Aged
Ownership	53.5	65.4	78.1	86.2
Others	3.0	1.4	0.8	0.6
Informal Rental	34.9	23.1	13.4	9.3
Formal Rental	8.5	10.1	7.7	3.8

Formal Rental **Informal Rental** **Others** **Ownership**

(c) Type of Neighbourhood

Households (in %)

	Child	Young	Adult	Aged
Non-Slum	89.8	92.2	94.5	94.5
Slum	10.2	7.8	5.5	5.5

Age Groups

Type of Area: **Slum** **Non-Slum**

(d) Type of Water access

	Child	Young	Adult	Aged
Shared	41	18	11.4	11.8
Public	13.5	11.4	10.8	11.8
Others	13.7	14.2	10.5	10
Exclusive	31.9	56.4	67.3	66.4

Exclusive **Others** **Public** **Shared**

	Child	Young	Adult	Aged
More than 10Km	24.8	25.2	28.9	18.6
5 to 10 Km	19.1	19.8	20.3	14.9
Upto 5 Km	49.4	48.1	43.5	40.2
No Commute	6.7	6.9	7.3	26.3

■ No Commute　■ Upto 5 Km　■ 5 to 10 Km　■ More than 10Km

Figure 2: Housing condition based on age of the household members

4.3 BASED ON EMPLOYMENT STATUS OF THE HOUSEHOLD

Employment status of the household also affects the housing choices as it not only has bearing on the income but also the capacity of the household to plan their financial future and their ability to mortgage, both of which play a crucial part in the kind of housing choices they can make. **Figure 3(a) to 3(e)** shows the proportional distribution of households, based on their housing choices, with different employment types.

The graphs suggest that casual wage workers have the most precarious living conditions in comparison to households who are self-employed to regular salaried. Higher share of Casual wage households lives in owned houses but a higher percentage of them also live-in informal rental housing which lacks any kind of tenure security. A higher proportion of casual wage workers also live in slums and have shared water and sanitation amenities. Higher share of casual wage workers either do not commute or if they commute then they commute for less than 5 km.

(a) Per capita floor area

	Self Employed	Casual wage	Regular Salaried
<60 sq. ft.	16.2	30.6	17.6
>60 sq. ft.	83.8	69.4	82.4

■ >60 sq. ft.　■ <60 sq. ft.

b) Type of Tenure

Stacked bar chart showing Type of Tenure by employment category.

Self Employed: Ownership 79, Others 1.1, Informal Rental 15.7, Formal Rental 4.3
Casual wage: Ownership 69, Others 2.8, Informal Rental 24.3, Formal Rental 3.9
Regular Salaried: Ownership 57, Others 1.8, Informal Rental 25.8, Formal Rental 15.4

Legend: ■ Formal Rental ■ Informal Rental ■ Others ■ Ownership

(c) Type of neighbourhood

Stacked bar chart. Y-axis: Households (in %), 0 to 100.

No Working: 95.6 / 4.4
Self Employed: 93.9 / 6.1
Casual Wage: 88.6 / 11.4
Regular Salaried: 92.3 / 7.7

(d) Type of Water Connection

Stacked bar chart showing Type of Water Connection by employment category.

Self Employed: Shared 13.6, Public 10.4, Others 9.6, Exclusive 66.4
Casual wage: Shared 19.5, Public 25, Others 8.4, Exclusive 47
Regular Salaried: Shared 15.5, Public 9.8, Others 16.4, Exclusive 58.2

Legend: ■ Exclusive ■ Others ■ Public ■ Shared

(e) Commute Distance

Self Employed — Casual wage — Regular Salaried

■ No Commute ■ Upto 5 Km ■ 5 to 10 Km ■ More than 10Km

Figure 3: Housing condition based on the type of economic activity

5 | WHAT FACTORS AFFECT HOUSING CHOICES?

In this section we run a logistic regression to identify the housing preferences of the following type of households – urban poor, child and young households, and casual wage households. These households are identified based on the poor living conditions as discussed in the last section. We have considered fiver aspects of housing while comparing different group of households – livelihood, amenities, area of house, tenure, and commute time. The independent variable for each logit model will be urban poor (BPL and EWS households), young households (young and child households) and casual wage worker household. **Table 4** below shows the details of the independent and dependent variables used in the logit model:

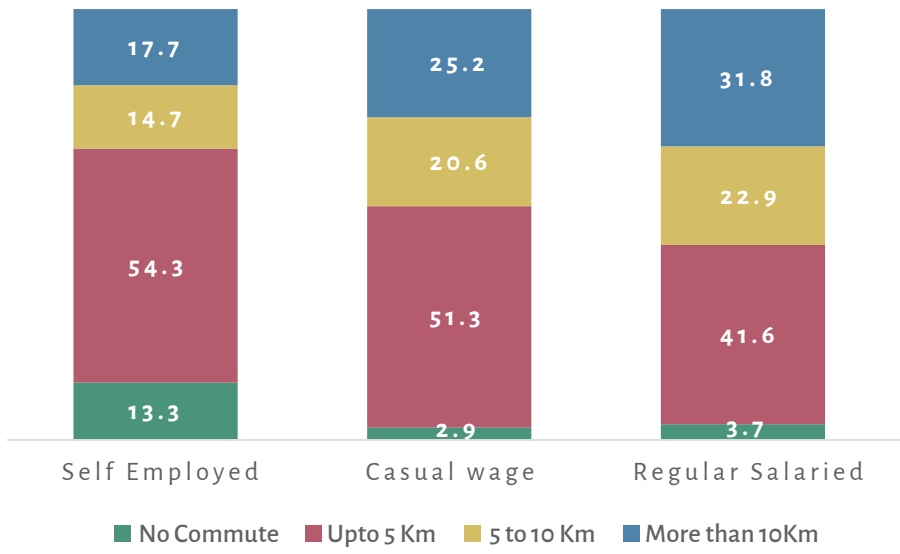Total six logit regressions were run. **Table 5** summarizes the results for each of the regression. The table shows the odds ratio of the three kinds of households to prefer a particular aspect of housing. For example, urban poor are 1.47 times more likely to choose house at a location which requires him to commute for less than 5 Km while casual wage workers are 1.23 times less likely to choose a house with a shorter (<5 Km) commute. Similarly results of other logit regression can be interpreted based on the information in Table 4.

The results show that urban poor households make a tradeoff between accesses to livelihood and other aspects of housing. They are more likely to choose a house closer to their workplace but which lacks basic amenities and services and do not have adequate space or security of tenure. For the young households, commute distance does not matter but they are more likely live in small houses in slums and share water and sanitation amenities in comparison to households which are at later stage of their lives. Housing condition of the Casual wage workers is worst among all the household groups identified as excluded from the housing market. Not only are they more likely to live in informally rented houses which are smaller, have shared amenities but they are also less likely to have shorter commute than those who are self-employed or have regular wage/salaried employment.

Table 4: Dependent and Independent variables

Housing Pillar	Dependent Variables	
Access to livelihood	Location	Commute to Work<5 Km
		Commute to Work>5 Km
Security of Tenure	Tenure	Informal Rental
		Ownership, formal rental
Amenities and services	Neighborhood	Slum (Notified slum, De-notified slum, Squatter settlement)
		Non-Slum
Physical Home	Size	Small (Per capita area<60 Sq. Ft.)
		Adequate (Per capita area > 60 sq. ft.)
Amenities and services	Water and Sanitation	Shared (Shared and Public)
		Exclusive
Physical Home	Privacy	At least one couple does not have a room
		All couples have separate room
Household Characteristic	**Independent Variables**	
Ability to pay	Urban Poor	Bottom two consumption quintiles
Life Stage of the households	Young households	All households with age of the household head between 18 to 35 years
Employment type	Casual Wage worker	If majority of the working members are engaged in casual wage worker

Table 5: Summary of the results for each regression

Housing Preference	Households		
	Urban poor	Young Households	Casual Wage Worker
Commute	1.47 times more likely to commute shorter distance (<5 km)	Not significant	1.23 times less likely to commute shorter distance (<5 km)
Neighborhood	1.66 times more likely to live in a slum	1.14 times more likely to live in slums	1.52 times more likely to live in a slum
Tenure	1.84 times more likely to not live in informal rental housing	1.64 times more likely to live in informal rental housing	1.3 times more likely to live in informal rental housing
Space	3.14 times more likely to live in small houses (per capita area<60 sq. ft.)	1.38 times more likely to live in small houses (per capita area<60 sq. ft.)	1.74 times more likely to live in small houses (per capita area<60 sq. ft.)
Water and Sanitation	1.89 times more likely to have a shared water or sanitation facility.	1.07 times more likely to have a shared water or sanitation facility.	1.85 times more likely to have a shared water or sanitation facility.
Privacy	1.94 times more likely to have a couple without a separate room	1.35 times more likely to have a couple without a separate room	1.51 times more likely to have a couple without a separate room.

6 WHO SUPPLIES, AND FOR WHOM?

Housing market in India is highly segmented and different market segments lay emphasis on different pillars of adequate housing while neglecting others. The three main housing providers in India are the - public sector led by government, formal private sector led by private developers, and the informal private sector led by small households. In this section we will discuss each of them and the challenges they face in providing housing for all sections of the society.

Public Sector Housing: Public sector housing has restricted its role to provide housing for EWS. For other income groups, the government incentivizes the formal private sector to invest in providing housing for the poor. GoI has started several central and state level housing schemes like Indira Awas Yojana, Rajiv Awas Yojana and the PMAY, public sector housing, focused on providing housing for EWS either through direct allocation or provision of subsidies. Public sector housing provides basic amenities and services along with better public infrastructure and living conditions at affordable price. Despite of this public sector housing has achieved limited success in addressing the housing shortage of weaker economic sections. Failure to provide housing at locations near to the economic opportunities is one of the major reasons behind it. Moreover, public sector housing focuses on providing ownership housing, consequently leaving out but many urban poor households who neither want nor afford ownership housing. Younger households, temporary migrants, casual wage workers and poor households either can't afford ownership housing even at subsidized rates or do not want it because of the type of employment or their life stage.

Formal Private Sector Housing: Traditionally formal private sector housing led by big real estate developers have focused on the needs of MIG and HIG households. They provide well located and connected houses with all basic amenities and services suited for MIG and HIG groups. EWS households are excluded from the housing provided by formal private sector dueto their inability to pay higher prices. Government has been encouraging the formal private sector to invest in housing for the poor by providing them monetary and non-monetary incentives. In response the private sector has expanded its scope to provide cheaper housing but still it is outside the reach of urban poor. According to an estimate, the size of the affordable housing market is more than 200 billion dollars (Woetzel, 2014). In India the market size of housing for low-income households is approximately 9 lakh crore (Agarwal, Jain, and Karamchandani, 2013) which is a huge opportunity for the private sector, but this does not include housing for EWS sections. Moreover, the private sector mostly provides ownership housing thus they are not able to cater to a wide range of households who need rental housing.

Informal Private sector Housing: Higher cost, focus on ownership housing and far away location of the houses provided by government and private formal sectors excludes a large section of population, forcing them to rely on the informal housing market. It is the largest market segment, providing different kinds of housing products suited to different needs and affordability. Informal housing market includes housing available in slums, squatter, and informal settlements. It also provides ownership as well as rental housing which are largely informal in nature. Although the informal housing market provides a range of housing products, living conditions are not always satisfactory and household's compromise on other aspects of housing for the sake of affordability. Lack of public infrastructure and amenities in these areas further contributes to the degraded living conditions.

To summarize, all the three market segments, formal private, public sector, and informal private provide different kinds of housing products. All the three housing providers have their strengths and weaknesses. Formal private housing market is out of reach of the EWS but it is increasingly expanding its reach to cater to lower segments of the market. Public sector housing supply is affordable but location is a big concern whereas the informal private housing market provides affordable and well-located houses but often compromise on living conditions and access to amenities.

6.1 HOUSING FOR URBAN POOR IN TAMIL NADU

The study uses the case of Chennai to understand the different kinds of housing supplied for urban poor. Over the last 4 decades Tamil Nadu has been at the forefront of providing housing for urban poor. The **"Vision Tamil Nadu-2023"** declares that it *"will provide the best infrastructure Services in India in terms of Universal access to Housing, Water and Sanitation, Energy, Transportation, Irrigation, Connectivity, Health Care and Education"*. The Housing and Urban Development Department's overarching ambition by 2030 was to ensure access for all, to adequate, safe, and affordable housing and basic services and upgrade slums.

Pugh (1991) categorized the housing system of Chennai in three categories. The first category was the spontaneous sector which is squatter settlement which came up on government, private or temple lands. These were the cheapest form of housing and were affordable for EWS and LIG sections. They provided houses built from Thatch, mud and tin sheets which were up to the size of 20 sq. meter and usually had one room.

The second category was the private sector which provided two forms of housing - rental and ownership. Rental housing was occupied by people with moderate income and did not want to live in squatter settlements. These houses were affordable, but the living conditions were crowded and unhygienic. The ownership housing provided by private market was permanent construction targeted at high- and middle-income earners. The third category was government provided housing and TNHB, started in 1961, and Tamil Nadu Urban Habitat Board (Formerly known as Tamil Nadu Slum Clearance Board), started in 1970, and were the main public housing agencies.

6.2 HOUSING PRODUCTS IN PUBLIC SECTOR HOUSING IN CHENNAI:

Out of the three housing systems recognized by Pugh (1991), we focus on public sector housing for urban poor as private and informal housing market in Chennai is beyond the scope of this study. Until last few years Chennai was the focal point for housing policy in Tamil Nadu. Chennai has a long history of dealing with housing for urban poor. Considering the poor living conditions in Chennai, Madras City Improvement trust was created in 1945 to tackle the issue of slums. The initial approach was to clear the slums but after the independence it started constructing tenements in slum areas as well as periphery. These efforts did not redressed the issue of slum as the number of households living in slums kept on increasing.

In 1971, Tamil Nadu Urban Habitat Development Board (Formerly known as Tamil Nadu Slum Clearance Board) was
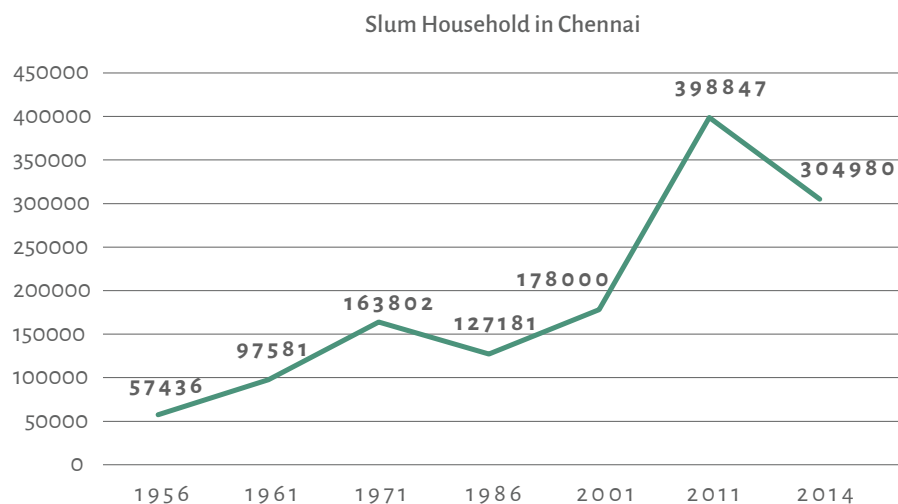
Slum Household in Chennai

Figure 4: Growth of slum households in Chennai (Sahu and Kundu, 2015)

established as the primary agency responsible for implementing various Housing, Slum Development, and Rehabilitation and Resettlement programs to ameliorate the living conditions of the slum families in Tamil Nadu. It marked a shift in housing policy of Tamil Nadu from slum clearance to in-situ slum redevelopment (Pugh, 1991). In the initial years, TNUHB concentrated on construction of storey tenements with all basic amenities. Under the MUDP-1(Madras Urban Development Project) and MUDP-2 projects, funded by World Bank, it provided land plots slum dwellers. (Pugh, 1991). The scheme was moderately successful in improving the living conditions of the slum dwellers and created an institutional structure for urban poor housing in Chennai (Raman, 2011).

1990s marked a significant shift in Tamil Nadu's approach to housing for urban poor. As the value of land in the city increased due to speculation and economic growth, the policy of in-situ slum upgrading was replaced by resettlement of slums to the periphery. Under JNUNRM, launched in 2005, 1370 tenements were built under in-situ upgrading while more than 22,000 tenements for slum dwellers were built in the periphery of the city (Sahu and Kundu, 2015). The resettlement of the slum dwellers in the outskirts of the city moves them away from their social and economic networks (HRLN, 2014). This contributes to the high rate of unoccupancy in the resettlement colonies. In 2015, Pradhan Mantri Awas Yojana (PMAY) was launched which combined different housing policy approaches under the four verticals: Affordable Housing in Partnership (AHP), Beneficiary led construction (BLC), In-situ slum rehabilitation (ISSR), and Credit-linked subsidy scheme (CLSS). Majority of houses completed under PMAY are under BLC vertical. BLC only focuses on housing improvement or building new houses, but it does not contribute to improvement in public infrastructure and services. Moreover, it only provides benefits to those who own land thus excluding recent migrants and younger households. It also puts a ceiling on the additional area that can be added to the existing house. For example, if

after modification, the housing area exceeds 30 sq. m[4] then the household will not be eligible for BLC. This excludes a lot of households who want to upgrade their houses but can't because of the limit on size. AHP vertical has not seen much progress as only 10% of the total demand under it has been fulfilled.

Table 6: Progress under PMAY Scheme

Vertical	Total Demand	Units approved	Completed
AHP	389141	163872	40692
BLC	518363	462512	221547
Total	907504	696442	262239

Analysis of Public sector housing for urban poor shows that housing provided under various government schemes and initiatives have fallen short of addressing the needs of the urban poor. Public sector housing has failed to keep pace with the changing housing needs of urban poor and other households whose needs are not adequately addressed by the private sector. To further elaborate on the suitability of the public housing we examine different kind of housing products supplied for urban poor based on the design, dwelling size, ownership, access to basic amenities and social infrastructure and cost.

6.2.1 Design and amenities under public housing

Over decades, the supply of housing products has evolved in terms of design outlay and dwelling size across different housing schemes. The table below describes the evolution of public housing design outlay and the dwelling area.

Over last 5 decades the size and the design of housing unit have changed. In the 1970s houses have only one multi-purpose room along with cooking area and a toilet. After 1978 a bedroom was also included in the design but the overall area of the dwelling increased only by 40 sq. ft. which suggests better privacy but more congested rooms. Between 2005 and 2014, additional utility area was added and

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[4] From https://pmay-urban.gov.in/blc Accessed on: 11/11/2021

Table 7: Evolution of Public housing design outlay and dwelling area

Year	Design Outlay	Dwelling Size
1970-1978	1 multipurpose hall, cooking alcove and toilet	230 sq. ft.
1978-2005	1 multipurpose hall, Bedroom, kitchen and toilet	270 sq. ft.
2005-2014	1 hall, bedroom, kitchen, toilet and utility area	375 sq. ft.
Post 2014	1 multipurpose hall, 1 lockable bedroom, kitchen, bathroom and toilet	400 sq. ft.

size of the dwelling increased by 105 sq. ft. The size of the dwelling was larger than required under PMAY guidelines. In 2014, she size was increased further to 400 sq. ft. **Figure 5** shows the floor plan of dwelling units built under PMAY. It have a single room, a hall along with toilet and kitchen.

In most cases the quality and maintenance of amenities and services is an improvement over previous kinds of housing but residents face a lot of issue due to low quality and poor maintenance. Lack of social and physical infrastructure in location of these tenements is also a major concern. Improvement in dwelling is not accompanied by improvement in access to social and physical infrastructure which play an important role in quality of housing.

6.2.2 Location and Affordability

Location of a house affects the access to economic opportunities for urban poor. Many urban poor live in slums because of their proximity to economic opportunities. Many of the urban poor are casual wage workers who have to find work every day, hence need to stay near to the places where such work is easily available. Rehabilitation of slum dwellers to city periphery moves them away from such
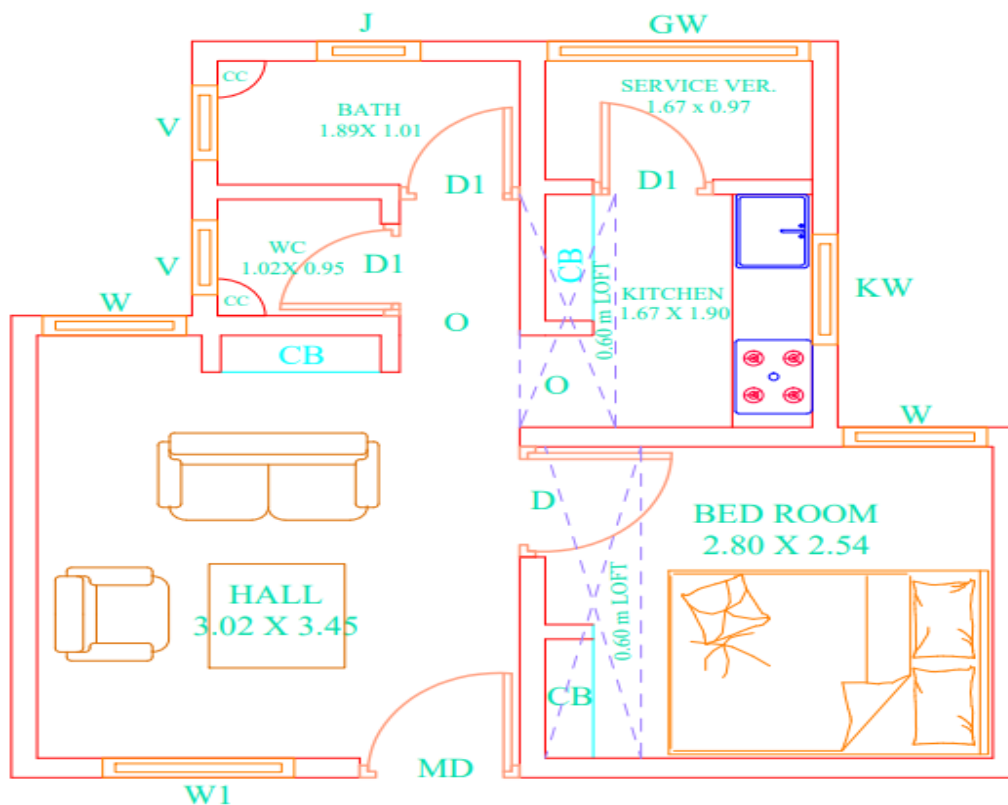
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Figure 5: Typical Dwelling unit layout for PMAY

Source: Tamil Nadu Urban Habitat Board

places and adversely impacts their livelihood. **Figure 6 & 7** shows the change in housing price within Chennai Metropolitan Area and the location of affordable housing. **Figure 6** clearly shows that cost of housing decreases as one moves towards the periphery. As a result, much of the affordable housing is also in areas with lower housing cost.

As per Chennai's definition of Affordable housing, a unit costing between ₹ 8 and 20 lakh (₹8-10.2 lakh for EWS and ₹16-20 lakh for LIG households) comes under the bracket of affordability. Whereas, in current practice, government agencies as well as the private builders responsible for the housing supply in every state define affordable housing by its size, mentioning units of 300 to 600 square feet. This approach of defining affordability with reference to the unit's size has contributed to making most "affordable" housing produced in the city unaffordable to EWS and LIG households (Karen Coelho, 2021). Affordable housing provided under public sector housing is located far away from the city and hence urban poor does not want to live there.

6.2.3 Tenure

Most public sector housing in India is provided for ownership housing while there are large number of households who want rental or other formal of tenure which is flexible and does not need a huge initial investment in form of down payment or security deposit. TNUHB is ahead of the curve in this regard although there are some areas which are neglected. TNUHB provided housing products under three tenure models and these are exhibited in the **Table 8** below.

The occupants under the Hire and Purchase model are issued an allotment letter and they get a sale deed only after 5 years of the lock in period. Under the H & P Model, the cost is borne by the Household over 5 years of installments. The eligible households, Economically Weaker Sections (EWS) raise demand for housing through petitions to Govt. and politicians.

Under the Rental to Ownership model, HH pays a fixed monthly rental to TNUHB for a minimum of 20 years and the eligible occupants of the Economically Weaker Sections (EWS)
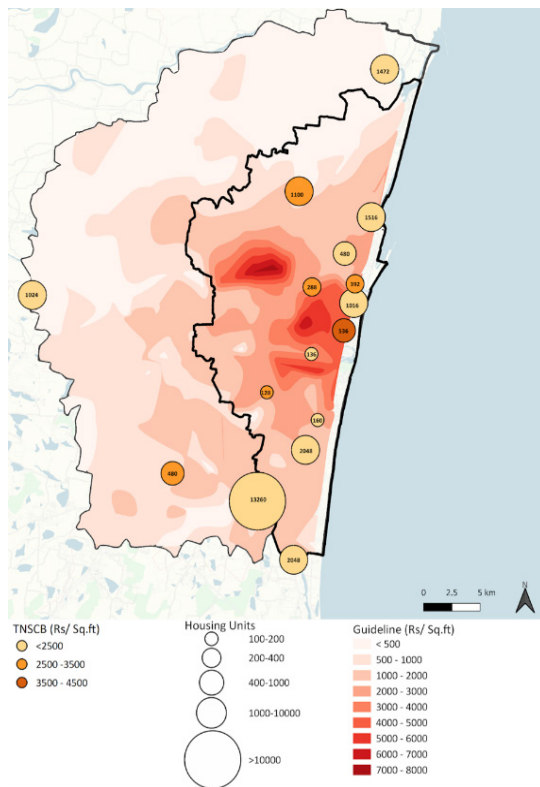
Figure 6: Price contours of CMA (Source: Coelho and Pattnam,2021)
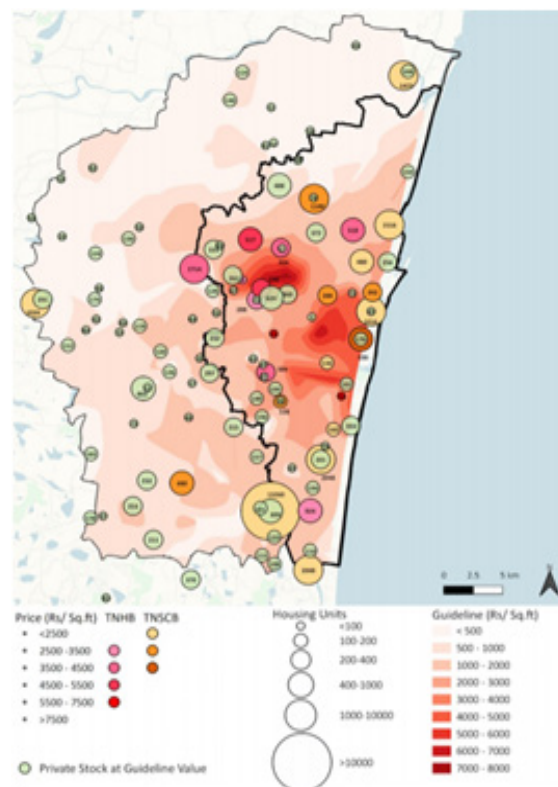

Figure 7: Location of Affordable Housing in Chennai (Source: Coelho and Pattnam,2021)

Table 8: Tenure Models as per Design outlay

	Design Outlay	Dwelling Size	Tenure	Financing	Remarks
Hire and Purchase (H &P) Model-	1 multipurpose hall, 1 lockable bedroom, kitchen, bathroom, toilet	400 sq.ft.	5 years HH is issued an allotment letter and gets a sale deed after 5 years of lock in period	Share of dwelling cost to be borne by the HH in one go or over instalment over 5 years.	Eligible HHs: Economically Weaker Sections (EWS) who raise demand for housing through petitions to Govt. and politicians. They can afford to pay a share of dwelling cost.
Rental to Ownership Model	1 multipurpose hall, 1 lockable bedroom, kitchen, bathroom, toilet	400 sq. ft.	20 years HH is issued an allotment letter and gets sale deed (ownership) after 20 years of lock in period	HH pays a fixed monthly rental to TNSCB for a minimum of 20 years.	Eligible HHs: Economically Weaker Sections (EWS) who raise demand for housing through petitions to Govt. and politicians. They can't afford to pay share of dwelling cost under H&P model and thus allocated dwelling as renters
Free Housing	1 multipurpose hall, 1 lockable bedroom, kitchen, bathroom, toilet	400 sq. ft.	20-25 years HH is issued an allotment letter and gets a sale deed after 20-25 years of lock in period.	Share of dwelling Cost is covered under different rehabilitation package	Eligible HHs: Economically Weaker Sections (EWS) who are relocated from the river and other encroachments and allotted HHs

who raise demand for housing through petitions to Govt. and politicians. Under the free housing model, it is applicable for the households of Economically Weaker Sections (EWS) who were relocated from the river and other encroachments and were allotted HHs under rehabilitation package. For this model, the share of the dwelling Cost is covered under different rehabilitation packages. Although TNUHB has different models of tenure but all of it is based on ownership, there is little emphasis on rental housing or working hostels or dormitories.

Tamil Nadu is one of the better performing states as far as housing got urban poor is concerned. The public sector housing has been moderately successful in providing improved living condition to urban poor. Despite this, the kind of housing products supplied leave out migrants, working women, young households, and similar other groups whose housing needs are not factored in while making housing policy. The location and access to physical and social infrastructure continue to be challenges before housing for urban poor. The vision of providing housing for all require recognition that different kind of households have different housing needs which can be fulfilled only by ensuring diverse housing products.

7 ANALYSIS AND POLICY IMPLICATION

Provision of housing is not limited to dwelling unit but also entails neighborhood, community, social and civic amenities, and ability to provide security for potential upward socio-economic mobility. The recent pandemic and the onset of impacts of climate change further the need to consider housing in broader terms as embedded in the social and economic relations at the level of city and neighborhood. As the housing policy shifts to market centric mechanisms and housing is disconnected from the social and economic relation in which the households are situated, more and more gaps between the demand and supply of housing, especially for urban poor, will emerge. In such a scenario, the ability of the public sector housing to address these gaps becomes critical.

The current mix of housing products supplied by public sector housing have not been able to bridge the gap between housing demand and supply. It is evident through the persistence of the housing shortage despite improved affordability[5] and efforts by the governments at various level to increase the housing supply. Housing shortage follows an upward pyramid structure, as shown in figure 9, with Economically Weaker Sections (EWS), casual wage workers and other vulnerable households forming the base of the pyramid and high-income groups form the tip of housing shortage pyramid. However, the

supply of good quality housing follows an inverted pyramid structure with bulk of the supply is for the high- and middle-income segments and small part of housing supply is for vulnerable groups. This leads to a situation where supply exceeds demand in one segment of market and shortage of housing in another segment of the market. Public sector is uniquely positioned to address the imbalance in the housing market through providing diverse housing products suited for varied housing needs and economic ability.

Further the housing supply framework and policies largely cater to those seeking to move up the housing ladder, in terms of better housing and civic and social amenities as well as improved tenure security like moving from rental to ownership housing. However, the source of additional demand for housing evolves continuously owing to downward as well as horizontal movement along the housing ladder, often resulting from socio-economic disruptions. Important life events like marriage, birth of a child, loss of job or separation of families and socio-economic disruptions like pandemic, economic transformation of cities or neighbourhood contribute to change in quantity and quality of housing demand that is often left unaddressed by housing policy.

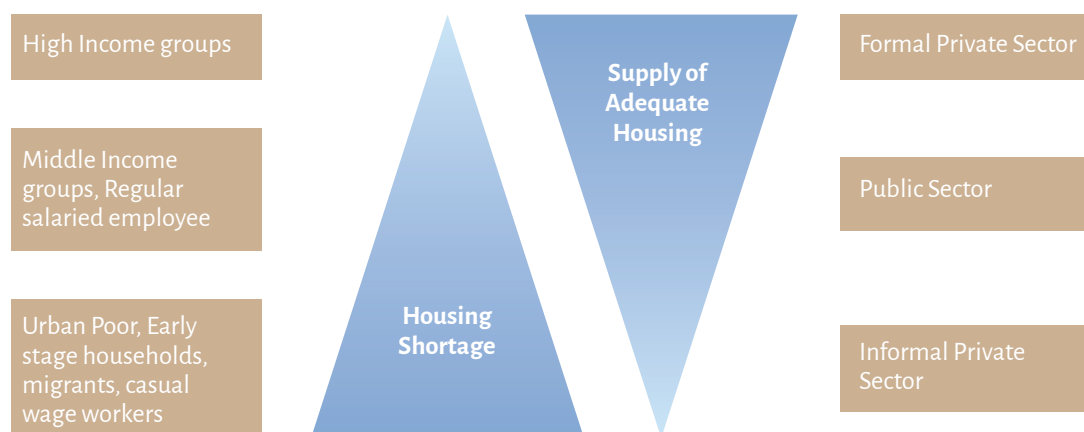Focusing on the right kind of housing supply aligned with the needs of those who live

Figure 8: Demand supply mismatch

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and work in the city can reduce the housing shortage (Bond, 2021). The right kind of public housing supply can be achieved by diversifying public affordable housing to provide a range of tenurial choices and different kind of housing units in terms of design and living arrangements, and then make it accessible through various financial modes varying in terms of loan size and repayment modalities. We propose three measures which can incentivize stakeholders in the housing market to supply right kind of housing for diverse households including urban poor.

1. Strengthen house ecosystem to reflect the needs of the urban poor:

A good housing ecosystem should have the ability to supply well located and well serviced houses that can cater to the housing needs of all sections of population including urban poor. However, centralized housing policy making, lack of participatory housing needs assessment and better in depth understanding of city economies are the main obstacle in building a strong housing ecosystem. Since liberalization, there has been a growing tendency for the union government to decide housing policies, and state and cities only act as implementation partners. It has created a dissonance between the housing policy priorities and the housing needs of the cities as most of the urban policy is built, keeping in mind the need for bigger cities (Bhide, 2018). Local governments should increasingly play a pivotal role in deciding the housing priority of a city as they are better positioned to garner the local information and preferences.

Further city economy and its growth trajectory influence the type of housing needed. An industrial city will need affordable houses for workers near the industrial centers while cities with large service sector might need working hostels, serviced apartments, rental housing. However, the current housing policy does not recognize its importance while deciding on the kind of housing required. It also does not pay adequate attention to the manner in which informal economy brings diverse kind

of people and neighbourhood together to bind the city fabric. It has led to overlooking housing needs of those working in informal sector. Urban planning needs to shift from land use planning focused approach to a more integrated planning approach which can contribute to improvement in living conditions of the urban poor and other disadvantaged households while delivering diverse range of housing products.

2. Reform the prevailing collaboration framework for private sector participation to deliver urban poor housing at scale:

The role of public private partnership in provision of public infrastructure is well recognized. The primary objective of bringing private sector in creation of public infrastructure is to mobilise large scale investments while bringing efficiency in service delivery. PPP model in housing sector is a more recent phenomenon and its feasibility and role, especially in provision of housing for urban poor, is guided by land monetization approaches to complement/compensate upfront investment requirements. GoI has proposed different PPP models for creating affordable housing stocks on public and private lands to be handed over free of cost in lieu of a variety of incentives such as additional FAR/FSI and TDR and monetization of vacant lands. Despite this, the existing data from PMAY(U) shows that AHP has not been taken up enthusiastically by the private sector. Out of 5.3 million households completed under PMAY, only 0.5 million have been completed under AHP against the target of 2.3 million.[6] More than .9 million houses in 821 projects are non-starters out of which more than one third is due to issues with developers. A significant number of houses are non-starters due to issues related to land, local administration and tendering process. Recently more than 1.3 lakh houses in Haryana, proposed to be built under AHP, had to be curtailed owing to lack of interest from private participator.[7] In this light, the existing PPP models in housing need reforms to encourage private sector participation (PSP) that goes beyond

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[6] PMAY (Urban): Accessed on 04/01/2022

[7] Minutes: 54th CSMC PMAY

conventional PPP model. The first step will be to consider broadening the definition of the private sector in the existing PPP models. The private sector is often limited to the large formal real estate developers, who participate in PPP models with the specific objective of profit maximization. Consequently, in such PPP arrangements, delivering/catering to urban poor segments becomes less lucrative due to issues related to land, long approval periods and administrative complexities that causes project delays and undercuts their profit margins. Further, the successful delivery of such private partner led housing necessitates intensive community engagement through the stages of planning, construction, and delivery, however they lack both the expertise and the motivation to do so. Instead small developer/household led PSP models have the potential to not only ensure better community consensus building through the project life cycle but can also create microeconomic centers for the local population thereby addressing the housing as well as the livelihood needs of the urban poor and other vulnerable households. The definition of private in PPP should be expanded to include smaller developers, households, and the non-profit actors. Such a PSPs will necessitate redistribution of risks and responsibilities among different stakeholders. Small developers and households are better positioned to mitigate the risks originating from lack of community participation and other such issues faced by big developers. However, they will not be able to bring the required upfront capital and public sector might have to provide support using the available instruments. This can potentially lead to involvement of diverse kind of suppliers who can provide different type of houses needed for the diverse kind of housing needs.

3. Encourage subsistence landlords to supply well serviced rental housing:

The decline of rental housing, both in terms of quantity and quality, has contributed to the housing shortage and growth of slums and informal settlements. Lack of public and private investment in rental housing is one of the main reason contributing to it. Rental yield in India is among the lowest in the world (Knight & Frank & Khaitan Co., 2019), and as a result, owners are not willing to invest in creating new rental stock or upgrading of existing rental stock. More lucrative investment opportunities like bank fixed deposits, public provident funds and other instruments such as stocks and mutual funds has made buying properties for investments less attractive (Knight & Frank & Khaitan Co., 2019). Even among those who invest in real estate are more likely to invest in ownership housing rather than rental housing. The government has also stayed away from private rental housing until the last five years when it has launched schemes like ARHC and passed the Model Tenancy Act. However, these policy initiatives have not considered the ground reality of the private rental housing market which is dominated by subsistence landlords who largely cater to households not served by the formal rental housing.

Incentivizing subsistence landlords to create and upgrade rental housing stock can prove a more efficient way of addressing the housing shortage. They understand their neighborhoods and the nature of housing demand, which is difficult for big developers or governments to understand. These subsistence landlords are also integrated into the community networks, which also plays a crucial role in how urban poor rents. Incentivizing subsistence landlords for creation and upgradation of rental stock should be complemented by public investment in slums and informal settlements where a large section of subsistence landlords are located. The public investment should focus on improving the access to WASH, electricity connection, developing open spaces, improving connectivity through public transport and creation of social infrastructure like schools and health centers. Therefore, a private rental market led by subsistence landlords and complemented by public investment can increase the diversity of housing products and

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[8] Percentage of households living in rental housing decreased from 31% in 2012(NSS 69th round) to 29% in 2018 (NSS 76th Round).

[9] Percentage of formal and informal rental households living in permanent houses, decreased from 78% and 58% in 2012(NSS 69th round) to 68% and 51% in 2018 (NSS 76th round) respectively.

supply the right housing products suited for the diversity of housing needs.

The main strength of any properly functioning market-based system is its ability to cater to consumers with different abilities to pay and different needs. They are more efficient in doing so because of the informational advantage with local suppliers than centralized providers like government or big real estate developers. Housing policy should recognize the diverse stakeholders in the housing market and incentivize them to cater to the market segment. These policy measures will contribute to a more inclusive and resilient housing system through increasing housing product diversification.

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The Scaling City Institutions for India: Land, Planning, and Housing (SCI-FI: LPH) programme, is a multidisciplinary research, outreach and policy support initiative. It aims to better understand the intersection of governance and scale in the Indian urbanising landscape with sector specific social and economic characteristics. The SCI-FI: LPH initiative envisages to inform multiple stakeholders, including the three tiers of the government, on demand-driven, sustainable, alternative, and scalable models for delivering and operationalizing housing, basic services, and property rights for the urban poor. The programme is primarily supported by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) India. The SCI-FI programme is nested at the Centre for Policy Research (CPR) since 2013.