



Affordable Housing

Policy and
Practice in India

By

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Executive Summary

India, being developing country, has transformed from agrarian to industrial country after new industrial policy came into existence. This industrialization has led to growing employment opportunities in urban areas causing rural-urban migration. This, in turn, put a pressure on resources available in the urban areas, specifically land for residential construction. Hence there is rising demand for residential housing in urban India. However, there is not enough to accommodate rising population. This shortage in housing supply led to skyrocketing prices of houses in urban areas making it unaffordable for economically weaker sections as well lower-income groups. Therefore, this research analysed the affordable housing market in India. Through primary and secondary analysis of data, it is concluded that the government has taken measures such as Pradhan Mantri Awas yojana- urban. From the different schemes under PMAY-U, the Credit Linked Subsidy Scheme (CLSS) has found to be effective in providing affordable houses to EWS, LIG and MIG. However, primary analysis showed that the benefits of the scheme have still not reached the 80 percent of the sample who are planning to invest in affordable housing units. Therefore, it can be recommended that the government should make provisions for adequate housing finance as well as for increasing financial and housing literacy so that the benefits reach the maximum eligible population.

Chapter 1: Affordable Housing in India

1.1. Introduction

Housing is one of the most basic human necessities, thus it is critical to have adequate housing circumstances for the benefit of society. Therefore, affordable housing is a worldwide phenomenon because it is one of the primary issues confronting the global population. Housing shortages in developed nations are caused by growing migration to obtain better work prospects (migration to the United States in MI-year 2020 was 50.6 million),¹ but housing shortages in developing countries are mostly caused by rising population pressures. Developing countries such as India, Nigeria, and others do not have enough resources to grow housing supply to meet rising population demands. As a result, housing scarcity is one of the primary issues confronting virtually all countries across the world.

Over the years, India is progressively transforming from an agrarian to an industrial and service-oriented economy. This rapid industrialisation has increased the number of people shifting from rural to urban regions, putting a strain on the resources available in cities. Around 31.2 percent of the country's population reside in urban areas. In India, megacities like Delhi, Greater Mumbai, Kolkata accommodate population of more than 20 million (Census 2011). Due to the availability of greater career possibilities, educational and health care facilities these cities have attracted a massive population. However, the amount of land available for residential construction is limited. This scarcity of land in urban areas has resulted in demand-supply disequilibrium in housing market. Since demand is exceeding supply, the prices in these cities are continuously rising making them unaffordable for Lower Income Groups (LIGs) and Economically Weaker Sections of the society (EWS).² This necessitates the investigation into the causes of and solutions to the problem of housing unaffordability.

¹ United States has the largest number of migrants till 2020 mainly due to the better employment opportunities and better education as well as health facilities. Source: ("International Data" 2021).

² The law of supply and demand is an economic theory that describes how supply and demand interact and how this influences the pricing of products and services. When supply exceeds demand for a commodity or service, prices fall. This is a basic economic premise. Prices tend to rise when demand exceeds supply. See: Kramer, L., & Boyle, M. (2021). How Does the Law of Supply and Demand Affect Prices?

1.2. Affordable Housing: Meaning & Experiences

The term "affordable housing" is imprecise. Since it lacks a comprehensive connotation. Numerous organisations and industrial associations have attempted to describe it based on different socioeconomic variables such as household income, location, price, dwelling unit size, work opportunities, and government incentives, etc. However, according to a study by RBI, affordable housing is defined as the capacity to acquire a house with a certain salary, as well as minimal housing expenditure for low-income groups. If housing costs surpass the low-income group's income, it will be unaffordable for them. Housing expenditure comprises all expenditures associated with housing, such as rent, mortgage payments, utilities, and maintenance fees; housing income is the net income earned, including income from additional family members. Housing units are considered inexpensive if the ratio is less than a certain threshold.³ Demographic International, a quasi-organisation that undertakes affordable housing studies in many countries, deems a price-to-income ratio of less than three to be acceptable. Governments and academicians use these housing affordability indicators to determine the capacity of economically underprivileged groups to purchase a home. In general, affordable housing is aimed at a segment of society with an income that is lower than the median income. The monthly instalment should ideally not exceed 30%-40% of gross monthly income for any individual, and the property price to yearly income ratio should be between 2 and 4.

1.2.1. International Experiences

As mentioned previously, affordable housing is a universal phenomenon, and it is one of major challenges faced by developed as well as developing nations.

United States:

In US, the department of Housing and Urban Development is responsible for execution of schemes or programmes aimed at providing housing to the Lower-Income-Groups. Under this Department the government has taken measure such as Affordable Rental Housing, Housing Choice Voucher Programme, Covid 19 Rental Assistance and Eviction Moratorium, etc. for promoting affordable housing for lower-income groups.⁴ These programmes are sponsored by the federal and the state government. The Department of

³ This definition is given in the research article published by the Department of Economic and Policy Research, RBI on affordable housing.

⁴ Department of Housing and Urban Development: The Department of Housing and Urban Development oversees programmes that help people find housing and improve their communities. The Department also strives to guarantee that everyone has access to affordable housing. See: ("U.S. Department of Housing and Urban Development | USA Gov", 2021).

Housing and Urban Development (HUD) provides funds to Public Housing Agencies that distribute Housing Choice Vouchers (HCV) to qualified households. Another significant endeavour undertaken by the United States -The Low-Income Housing Tax Credit (LIHTC) is a federal programme. These programmes are designed to provide low-income people with affordable housing.⁵

Europe:

The studies from the European countries like Germany, Austria, France, Spain, etc. showed that the housing ownership is one of the critical issues in European countries and the governments are implementing measures to promote affordable housing for LIGs. In Germany, De facto social housing has a considerable tradition with the term describing a variety of low priced housing managed by housing cooperatives (11% of the stock) and municipal housing companies (50% of the stock). These municipal corporations often rent their units for far less than market value to offer housing in accordance with welfare regulations, such as for low-income, vulnerable, or refugee demographics.⁶ In Austria, 80% of population rent, 20% of social housing which indicated the lack of housing ownership. Therefore, the government has taken actions such as supply-side housing subsidies, effective Limited-Profit Housing Associations (LPHA). These policies showed significant impact on providing housing to LIGs in Vienna, Austria. Municipal social housing and LPHA's result in over 50% of Vienna's housing stock being social rented, which caters primarily for low-income residents, however 80-90% of the population are technically eligible. Social units are charged at cost-rent, but additional subsidies can reduce rent to 20-25% of family income.⁷ Public- Private Special Purpose Vehicle are being intelligently used in France to maximise the benefit from land acquisition and land use.⁸

Australia:

The federal and the state government in Australia implemented affordable housing schemes to tackle the problem of housing stress. The Commonwealth Rent Assistance (CRA) and National Rental Affordability Scheme (NRAS) in Australia are intended to make rental housing more affordable, and the Housing Authority provides both rental and home ownership

⁵ Low-Income Housing Tax Credit: This programme was established under Tax Reform Act, 1986 that provides tax credits to State and local LIHTC-allocating agencies for the acquisition, rehabilitation, or new construction of rental housing for low-income people. ("Low-Income Housing Tax Credit (LIHTC) | HUD USER", 2021).

⁶ Source: ("Learning from International Examples of Affordable Housing- Germany", 2018).

⁷ Source: ("Learning from International Examples of Affordable Housing- Austria", 2018).

⁸ Source: ("Learning from International Examples of Affordable Housing- France", 2018).

alternatives. NRAS is a supply-side intervention that provides annual financial incentives to housing providers and developers for up to ten years, allowing them to provide affordable rental housing to the public. CRA, on the other hand, is a demand-side intervention that offers rental assistance to qualified households in the form of non-taxable income transfers.⁹

1.2.2. Developing Countries

In Brazil, rural to urban migration from 1950 to 2000, because of the unequal distribution of rural land and the lack of successful policies to incentivize small farmers forced rural dwellers to migrate to cities in search of better opportunities increasing population pressures in urban areas. This led to an increase in formation of informal dwelling units. Thus, affordable housing is an important phenomenon in Brazil. To tackle these issues, various measure was adopted such as Low- Income Housing Foundation Programmes (1960s), Housing National banks and Housing Financial System, etc.¹⁰ Major challenges in affordable housing sector in Nigeria include high of building materials, dearth of indigenous technology and skilled manpower, the lofty and expensive designs that are done by building professionals without due consideration to Nigeria's economic situations and cultural background, acceptability syndrome of houses made with traditional materials such as brick and mud by the Nigerian populace, etc. Therefore, the Nigerian government has taken measures such as The National Housing Programme (1975 – 1980), The National Housing Policy (NHP 1991), Site and Services Scheme, and so on. In China, there are three primary programmes that provide inexpensive public rentals: the Economic and Comfortable Housing (ECH) Program, the Housing Provident Fund Scheme, and the Cheap Rental Housing Scheme. Thus, affordable housing is one of key challenges faced by developed as well as developing countries around the globe.

⁹ Commonwealth Rent Assistance Scheme: Under this scheme, rent assistance provided is a non-taxable income supplement that is paid to qualified renters in the private rental market or in communal housing. Rent Assistance may be available to pensioners, allowees, and those receiving more than the base amount of Family Tax Benefit Part A. See: ("Commonwealth Rent Assistance | Department of Social Services, Australian The government", 2021). The National Rental Affordability Scheme (NRAS or the Scheme), which began in 2008, intends to boost the availability of new and affordable rental housing by offering a yearly cash incentive for up to ten years. This incentive is given to housing providers (referred to as "authorised participants") that provide rental accommodation that is at least 20% less expensive than the market rate. See: ("National Rental Affordability Scheme | Department of Social Services, Australian The government", 2021).

¹⁰Source: ("Journal of Comparative Urban Law and Policy", 2020).

1.2.3. Affordable Housing Market in India

In India, prior researchers indicated that the affordable housing sector specifically caters to the Economically Weaker Section (EWS) and Lower-Income Group (LIG) who find it difficult to purchase a property in cities where they live to generate income for living. According to government estimates, there was a shortfall of more than 18.78 million houses in metropolitan areas at the start of 2012, with 96 percent of them falling into the EWS and LIG categories.

According to the Metropolitan Affairs Ministry, the housing shortfall in urban areas was predicted to be 11 million in 2018, with the figure expected to rise to 19 million by 2022. The ever-increasing scarcity of affordable housing is forcing people to live in slums and informal settlements. While the government attempted to entice private participants by providing tax deductions and access to low-cost finance, they initially shown limited interest in the affordable housing sector due to narrow margins, high land costs, and project clearance delays. However, in the face of increasing demand in the Indian residential real estate market and the government's increased emphasis on “Housing for All” by 2022, private companies were forced to boost their engagement in the affordable housing category.

Since the affordable housing sector was approved infrastructure status and financial benefits in the form of interest subsidisation and lower GST rates, the situation appears to have changed in recent years as the positive externalities ¹¹ of affordable housing – an under consumed and underproduced merit good – have been increasingly recognised, including better public health due to better living conditions that in turn increases labour productivity, and reduction in social problems. However, there is still a scope to improve affordable housing conditions in the country. Therefore, this research aims at reviewing the government schemes aimed at providing affordable housing to LIGs and addressing the challenges faced by affordable housing sectors.

¹¹ Positive externalities: A positive externality is a benefit that is enjoyed by a third-party as a result of an economic transaction. While individuals who benefit from positive externalities without paying are considered to be free-riders, it may be in the interests of society to encourage free-riders to consume goods which generate substantial external benefits. See: ("Positive externalities | Economics Online | Economics Online", 2021)

1.3. Review of Literature

Affordable housing is a global issue and therefore various studies have been conducted around the globe. Developed as well as developing countries focused on improving affordable housing conditions.

Fisher (1970) addressed the housing problem of non-white citizens in the United States. The researchers observed that various privately as well as federally funded research have been conducted in the pursuit of low-cost construction material and system, but this research found that there have been no technological advancements in housing markets for reducing the cost of production. This research is a descriptive analysis that focused on most promising low-cost housing construction systems, modification of land use controls. CHOICE (Cost Effective Home Ownership in an Improved Contemporary Environment) project, etc. The study revealed that the zoning laws and local building codes have imposed both unnecessary as well as undesirable constraints upon the developers. This discourages public private partnership in constructing affordable houses.

This is also applicable to developing countries like India. For instance, Coastal Regulations Zones (CRZ) in Mumbai put limitations on land available for construction of residential buildings. This suggests that affordable housing problems of Lower Income groups can be resolved through removal of restrictions on land occupation.

Samuel (1989), investigated the association between rent-income ratios and a set of household characteristics using a sample of 2,582 homes from low-, middle-, and upper-income districts in Rio de Janeiro, Brazil. The traditional approach to the affordability issue is that a household may legitimately expect to pay 25% of its income on housing. Historically established rules-of-thumb are insufficient. The findings of this study show that employing a single ratio to forecast housing consumption for diverse economic and demographic groupings in different parts of a city is ineffective. In Brazil, the range of ratios provided should have significant consequences for strategic planning and successful housing project design. This implies that various techniques for measuring housing affordability and their execution will increase the probability of success of building more housing units in developing countries.

Karuppannan (2002), reviewed the role of the state, the market, and the non-governmental organisations (NGOs) in provision of housing for lower income groups. According to the descriptive study, formal housing organisations in both the public and private sectors are neither building quickly enough to satisfy demand, nor are they building affordably enough to

serve the poor. Therefore, the informal housing sector like slum development has risen in nearly all Indian cities. The study concludes that inefficient the government policies and poor implementation of measures taken by the government for providing housing to lower sections of the society have resulted into the practice of unauthorized occupation of land for shelter (In Mumbai, 50% of buildings do not have occupation certificate)¹². This research implies that even though the the government has strengthened the housing finance sector over time, the beneficiaries are mostly the middle and higher-income groups; the poor continue to struggle with access to affordable and formal home financing. The public sector has now realized that private agencies should be encouraged to augment their efforts.

Sirmans & Macpherson (2003), studied the state of affordable housing. According to this research, the term "affordable housing" refers to a large corpus of research on a variety of topics including housing policy, affordable housing supply, obstacles to house ownership, assessing affordability, and housing goals. The study suggests that: (1) housing programmes should be tailored to local housing conditions; (2) even after controlling for income, minorities and immigrants are less likely to be homeowners; and (3) the most pressing housing issue is the lack of affordable housing for extremely low-income households. (4) A lack of home buying and credit knowledge is a major impediment to homeownership; (5) housing cost burden (the proportion of income spent on housing) is a major affordability indicator; (6) pension investors reject affordable housing due to low rates of return and a lack of projects; and (7) survey respondents are willing to live in housing built on cleaned-up brownfields. It was also mentioned in the research that schemes like Low-Income Housing Tax Credit (LIHTC) are the most powerful tool in development of affordable housing.

Mukhija (2004), scrutinised the policy suggestion of empowering markets and market-based players to offer affordable housing in developing nations through the case study. It was found in this case that the private developer stopped building housing for low-income groups after obtaining government assistance. This implies that enabling methods focusing on market players might yield extremely unpredictable outcomes. Therefore, the study recommends for a more cautious, circumspect, and diverse approach. It also highlights the need of policymakers having a better insight of how the informal and formal sectors interact. Enabling informal developers is much more difficult since government assistance might limit their flexibility and incentives, as well as affect homebuyers' expectations and opportunities. Therefore, it is

¹² Source: 50% buildings have no OC, but BMC can't do much. (2021)

recommended that the policymakers should not hasten the implementation of enabling policies, but rather take their time and prioritise a cautious approach. Policymakers must develop enabling policies based on evidence and experience. A circumspect approach that includes a review of previous policies, a pilot project, "learning by doing," and thorough research may assist to increase the probability of success. From this research, it can be concluded that government should adopt pragmatic approach in incentivizing private developers for building affordable houses.

Buckley (2005), examined recent research findings in light of previous claims for the benefits of more market-oriented approaches to housing policy in emerging nations. It also looked at whether suggestions from prior research had been rejected or expanded upon in future studies and policy initiatives. Study revealed that there is no hidden, clear capitalism cure that can solve all low-income households' housing difficulties in emerging nations. Circumstances vary widely, and policies must be tailored to take advantage of local characteristics. Thus, a consensus on the proper shelter policy appears to have emerged in recent years, and it is consistent with modern research findings, which support most (but certainly not all) of the predictions stated concerning the adoption of market-friendly policies. Researcher recommended that with a better understanding of how housing markets function and a more general willingness to reliance on private markets, governments should be able to develop legislation that better meets the shelter requirements of the urban poor.

Graddy (2010), examined the effects of growing dependence on private actors in the formulation and implementation of affordable housing. Researchers outlined the rules and procedures used to make decisions on affordable housing in the United States, including how many and what kind of units are constructed, as well as where they are built. This empirical research focuses on how alternative governance systems affect public authority and responsibility, accountability, and policy effectiveness in Massachusetts and New Jersey. According to the findings of this study, agents respond to housing policy incentives, and their responses vary depending on the institutional framework in place, easing worries about a loss of public control in this policy arena.

Allen & Barth (2014) highlighted the interaction of financial technology in housing market through evaluation of financial crises like global financial crisis where innovation of mortgage-based securities contributed to forming housing bubble and by investigating the financial innovations evolved as a solution to the crisis. Researchers considered five major innovations

relevant to housing finance which are (i) mortgages; (ii) specialised housing finance institutions; (iii) government interventions in housing finance in the US during the Great Depression; (iv) covered bonds; and (v) securitised mortgages. The history of these innovations and their positive and negative aspects are discussed. From examining the role of financial technology in housing market, it is concluded that for sustainable housing markets to thrive, financial innovation is essential. Housing market structure and performance are shaped by changes in the rising structural demand for capital, which is driven by demographics. From the very first mortgages through covered bonds, guarantees, and insurance, urbanisation and household formation have fuelled financial innovation in housing markets throughout history. Incorporating financial innovation into housing market can also encourage building houses at lower costs.

Gopalan & Venkatarman (2015), defined affordable housing as any housing that meets some form of affordability criterion, which could be income level of the family, size of the dwelling unit or affordability in terms of EMI size or ratio of house price to annual income. This research paper discussed policy imperative to promote innovation along the value chain for housing for improving affordability, transparency, sustainability & growth. From the discussions, it can be concluded that not only urban area, but rural areas also face issues related to affordable housing due to rising population. The major issues in housing unaffordability are lack of knowledge about housing finance, land unavailability and higher pricing, lower Floor Space Index (FSI). Innovative measures like higher FSI, use of technology to reduce cost of production, housing finance for LIGs and EWS were also discussed.

Grazia Napoli (2016), addressed the problem of housing affordability through the case study of the territorial system of the Province of Syracuse (Italy) and discovered that the local features of housing problems can be addressed by utilising traditional planning methods or novel social housing techniques involving private stakeholders and the government agencies. The data on wealth distribution in terms of income and real estate market price, income threshold based on Housing Affordability Index¹³ was analysed. In this research, it was observed that household incomes are too low to meet housing market prices. However, households can afford public houses and still they are not getting access to it because of various reasons like lack of awareness about the government schemes or credit facilities available to them. Therefore, the researchers suggested that fiscal and administrative housing policies such as loan facilitation,

¹³ Housing Affordability Index (HAI): In this research paper, the index for calculating housing affordability is used which is comprised of patterns of local income, patterns of local wealth and income threshold.

tax reduction, co-financing, cubage expansion, land use modification, national fund, etc can be effective tools in offering affordable housing.

Olanrewaju (2016), provided the framework for affordable housing governance¹⁴ for the Nigerian property market and categorised the elements that contribute to housing shortages. Researchers investigated that housing deficit caused a crisis resulting in lower standards, unaffordable housing prices, excessive mortgage payments, etc. These concerns were addressed through proposing improvements in housing governance. To combat difficulties relating to affordable housing, researchers recommended that the government should alter functioning of housing markets, and mortgage and loan distribution rules should be examined. Thus, affordable housing issues can be resolved through improvements in the functioning of the housing market by achieving equilibrium between demand and supply for affordable houses.

Gangani (2016), studied the urban housing problems in India and examined the advantages and disadvantages of low-cost housing¹⁵. Researchers analysed the secondary data and found that low-cost housing provides economic and social advantages. One of the best things about affordable housing is that it accommodates people with a variety of professions who contribute to the community. Construction workers, bus drivers, cleaners, shop assistants, teachers, and nurses, for example, can be well-served by inexpensive housing, allowing them to continue to deliver vital services to the community. It also promotes social and economic integration since lower costs of housing enable lower income families to spend more on health and education costs. Another important fact is that affordable houses near workplace reduce the stress of travelling long distance to reach workplace. This leads to a stronger labour force. Researchers have also noted few disadvantages of low-cost housing such as simple layouts, inadequate living area, no choice, or no control of public type to reside near or adjoin as neighbours, etc. It is concluded from the study that the magnitude of housing problem in India is too large for any single entity to make an impact and that it requires collective efforts and efficient co-ordination among different entities to build sustainable and affordable houses.

¹⁴ Housing Governance: In this research paper, housing governance is described as the planning and execution of the government policies and programmes aimed at facilitating affordable housing.

¹⁵ Low-cost housing: Low-Cost Housing is a new concept which deals with effective budgeting and following of techniques which help in reducing the cost construction using locally available materials along with improved skills and technology without sacrificing the strength, performance and life of the structure. See: ("Low-Cost Housing - Civil Engineering Portal - Biggest Civil Engineering Information Sharing Website", 2021)

Rana (2016), examined core issues and challenges of affordable housing in India. Researchers classified housing problems in four types which are land related, governance related, finance related, developer and construction related problems. Land related problems include availability and cost of land, land monetisation¹⁶, etc. Governance related issues include delay in approvals or clearances, corruption, lack of clarity, Rent Control Act ¹⁷ is deterrent for rental housing and so on. Financial problems such as high cost of capital for builders, formal sector not very comfortable in lending to private sector, high NPA and credit risk, availability of home loans for EWS/LIG also contribute to housing problems in India. Developer & Construction related issues are comprised of lack of transparency and credibility of builder, lack of skilled manpower, standardization of building components/ materials, delays in project delivery, etc. Researchers also found that certain restriction imposed by Ministry of Environment and Forests Limit the use of land in urban areas for housing purposes, resulting in lack of supply and thus higher pricing. These problems can be resolved by constructing models comprising of a myriad of agencies from public and private sectors to work together for the development of affordable housing.

Rewatkar (2016), investigates the ways in which one can accomplish objectives of low-cost affordable quality housing while making it user responsive, co-friendly and sustainable which enables improvements in quality of life, saves energy for sustainability and reduces environmental hazard. Researchers have studied different aspects of affordable housing such as cost reduction and user responsive design. From the cost reduction perspectives, architects should design these houses in a way to reduce cost through optimization of building services, optimization of space design, devising a technology and inventing new material to substitute conventional materials. User responsive design approach focused on user satisfaction by providing adequate space for different activities, good conditions of light and ventilation, conducive private open space for family and so on. According to the research, considering the aforementioned criteria would enhance user satisfaction since their physical and psychological demands would be met, and dwelling for the EWS group would be more acceptable and habitable.

¹⁶ Land monetization means generating revenue through utilizing the non-revenue generating land. Monetisation of land is one of the most viable options for government or local bodies for generating the much-needed funds for upgradation or development of required infrastructure without burdening the state or the Central government in the form of grants, etc. See: Monetization of land owned by government bodies – Future and implications. (2021).

¹⁷ Rent Control Act: Rent Control Act was a method by the Government of India to eradicate the abuse of tenants by landlords. Rent legislature tends in providing fair rents to the landlords and protection of tenants against eviction. But the tenants are paying fixed rates as rents since 1947. (Basics and Analysis of Rental Laws, 2021)

Thus, it can be concluded from this study that demand for affordable houses for economically weaker sections of the society can be enhanced through understanding the psychological and physical needs along with financial constraints.

Sethi (2017), analysed the various initiatives taken by the government to boost affordable housing sector and examined the impact of government policies on affordable housing segments. Researchers also examined the views of developers and buyers on the government policies. Results of primary as well as secondary data analysis showed that the countries total urban housing shortage is projected to be about 30 million by 2022. Therefore, to achieve its campaign pledge of 'Housing for All by 2022,' the Indian government confronts an arduous challenge of delivering more than 2 crore homes by 2022, which translates to about 3 million units each year. To meet this lofty goal, the government has taken several steps to make the affordable housing market profitable for both private developers and house purchasers. This study analysed the influence of government initiatives on both sides, i.e., private developers and house purchasers, and to capture their perspectives on government policies to improve the housing market. The research concludes that existing government policy on affordable housing does not provide the developer with adequate breathing margins to effectively build and deliver a project. According to the study, if governments successfully implement measures like single-window clearance¹⁸, pre-approved building permission and layout approval system, increased Floor Area Ratio (FAR)¹⁹, and higher density, developers will have a desired margin and will be able to deliver affordable housing without unnecessary delays.

Francis (2018), conducted research to study challenges and prospects of sustainable and affordable housing in India. The researchers investigated the various challenges and opportunities involved in designing a system that meets housing needs of larger communities by providing better social conditions and reducing the environmental costs. According to the results, the largest roadblocks to incorporating sustainability and affordability in India's

¹⁸ Single-window clearance: Single Window Clearance system at Maharashtra Industrial Development Corporation (MIDC) is a facility provided to industries and entrepreneurs with a commitment to promote Ease of Doing Business in Maharashtra by streamlining different processes and approvals required to establish and operate a business. System acts as a single point of contact for requesting various services, submitting supporting documents and make necessary payments through online mode. It also provides the department, a system to process the applications online. See: ("Single Window Clearance", 2021)

¹⁹ Floor Area Ratio (FAR): One of the most common land-use regulations cities enforce is restriction on the Floor Space Index (FSI), also known as the Floor Area Ratio (FAR). FSI rules are implemented to limit the amount of floor area that can be built on a given plot of land. See: (India Infrastructure Report, IDFC, 2018).

housing industry are deficiencies in the present regulatory framework and the perception that including sustainability aspect in affordable housing entails higher expenses. Therefore, it is recommended that additional funds should be included in government programmes in India to ensure sustainable practises in affordable housing developments. Third-party investors who would lease these facilities in exchange for periodic long-term payments or subsidies and tax benefits from the government should be encouraged to develop innovative business models that promote sustainable procedures that require significant initial expenditures.

Priyaranjan (2018), presented broad views on affordable housing in India. Researchers used expenditure method or housing cost burden method²⁰, Median Multiple Indicator²¹, and Housing and Transport²² method to measure housing affordability. This study also explored the available schemes or measures taken for affordable housing in other countries like USA, Australia, China. In United States of America, Department of Housing and Urban Development (HUD)²³ provides fund to Public Housing Agencies that distributes Housing Choice Vouchers (HCV) to provide rental subsidies to the eligible families. Another major initiative taken by the US The government is the Low-Income Housing Tax Credit (LIHTC)²⁴. These programmes are aimed at providing affordable housing to the lower sections of the society. In Australia, The Commonwealth Rent Assistance (CRA)²⁵ and National Rental Affordability Scheme (NRAS)²⁶ are designed to make rental housing more affordable, and the Housing Authority

²⁰ Expenditure method or housing cost burden method: In this method, the ratio of housing expenditure to household income is used to measure housing affordability. Housing expenditure covers all the costs related to housing including rentals, mortgage repayments, utilities and maintenance costs. See: Priyaranjan, S. A. (2018). Affordable Housing in India.

²¹ Median Multiple Indicator: Under this approach, the median house price is divided by median household annual income to derive housing affordability. See: Priyaranjan, S. A. (2018). Affordable Housing in India

²² Housing and Transport method: In this method, transport costs are also included with housing costs to measure affordability. See: Priyaranjan, S. A. (2018). Affordable Housing in India.

²³ Department of Housing and Urban Development: The Department of Housing and Urban Development oversees programmes that help people find housing and improve their communities. The Department also strives to guarantee that everyone has access to affordable housing. See: ("U.S. Department of Housing and Urban Development | USA Gov", 2021).

²⁴ Low-Income Housing Tax Credit: This programme was established under Tax Reform Act, 1986 that provides tax credits to State and local LIHTC-allocating agencies for the acquisition, rehabilitation, or new construction of rental housing for low-income people. ("Low-Income Housing Tax Credit (LIHTC) | HUD USER", 2021).

²⁵ Commonwealth Rent Assistance Scheme: Under this scheme, rent assistance provided is a non-taxable income supplement that is paid to qualified renters in the private rental market or in communal housing. Rent Assistance may be available to pensioners, allowees, and those receiving more than the base amount of Family Tax Benefit Part A. See: ("Commonwealth Rent Assistance | Department of Social Services, Australian The government", 2021)

²⁶ The National Rental Affordability Scheme (NRAS or the Scheme), which began in 2008, intends to boost the availability of new and affordable rental housing by offering a yearly cash incentive for up to ten years. This incentive is given to housing providers (referred to as "authorised participants") that provide rental accommodation that is at least 20% less expensive than the market rate. See: ("National Rental Affordability Scheme | Department of Social Services, Australian The government", 2021).

offers both rental and home ownership options. In China, affordable public rentals are offered under three major programmes viz. Economic and Comfortable Housing (ECH)²⁷ Program, Housing Provident Fund Scheme, Cheap Rental Housing Scheme. These experiences suggested that the common thread in promoting affordable housing across the countries is simulating the market participants and the government policies can be classified as supply side and demand side interventions. Supply side considers developers and investors which undertake affordable housing projects whereas demand side measures incentives for households to purchase houses at affordable prices.

This research paper also contributed to evaluating India's experience about need for affordable housing and initiative to promote affordable housing. Schemes like National Housing Policy (1994), Rajiv Awas Yojana (2013), Pradhan Mantri Awas Yojana (2015) are urban housing schemes aimed at addressing the problem of housing shortages. Researchers also addressed the issue of rising non-performing assets of housing loans. It is suggested from the study that joint efforts of the government and private sector can help in achieving the target "Housing for All".

1.4. Research Gap

The above literature indicates that the studies in India and across the globe has emphasized the need, advantages, and challenges in constructing affordable houses. According to the Department of Economic Policy Research (DEPR, RBI), affordable housing can be measured based on capacity of the households to spend the appropriate proportion of income on housing expenditure. Affordable housing is a need of an hour since urbanization has increased the shortages of affordable houses for lower income groups affecting their living standards. Studies revealed that providing affordable houses to economically weaker sections as well as lower income groups promotes socio-economic integration, and it also strengthens the labour force through allocation of affordable housing to employees near the workplace. This, in turn, increases labour productivity contributing to overall increase in output. Thus, affordable housing to LIGs would enhance economic growth and development of the nation. However, there are several challenges in executing affordable housing projects in developing countries like India. These are comprised of shortage of land causing rise in housing prices, delay in approvals or clearances by the government, poor governance and inappropriate laws like Rent Control Act, high cost of capital for private developers due to higher taxes, lack of

²⁷ Economic and Comfortable Housing (ECH) Program: Under this program, the local the government supplies land to developers at subsidized rates so that the later can sell the housing units to eligible low and middle-income families at discounted prices. See: Priyaranjan, S. A. (2018). Affordable Housing in India.

knowledge about home loans to LIGs, lack skilled of skilled manpower, delays in delivery of housing units further leading to increasing costs due to longer gestation period and so on.

Researchers also recommended the possible solutions to tackle above mentioned challenged in constructing affordable houses. One of the significant recommendations is public private partnership. Indian government can incentivize private developers for building affordable housing units through reducing usurious taxes, removing zonal laws like Control Regulation Zones (CRZ), etc. However, while incentivizing private developers, government should adopt circumspect and pragmatic approach to discourage private entities from misusing assistance provided by the government. Other solutions to affordable housing problems include designing housing units by understanding physical and psychological needs along financial needs to encourage LIGs to purchase houses and higher Floor Area Ratio to accommodate the rising demand for affordable houses so that the living space in megacities like Mumbai can be increased. It is also recommended from the studies that incorporating financial innovation in housing market will enable construction of low-cost housing through replacement of conventional material with new material. This can also improve the pace of delivering the housing units increasing the likelihood of success in implementing affordable housing projects.

1.5. Objectives, Data & Methodology

1.5.1. Objectives

- To review the government schemes aimed at providing affordable housing, specifically
- To analyse the growth and performance of the scheme: Pradhan Mantri Awas Yojana-Urban (PMAY-U) (Secondary Data).
- To evaluate the benefits received by people eligible under PMAY-U scheme (Primary Data from Runwal).

1.5.2. Data

This study is based on the primary data collected through survey method. Convenient as well as purposive sampling methods are used in collecting the sample of 400 (n= 400) respondents from different parts of Mumbai and Mumbai Suburban area using cluster sampling. The primary data is collected for Jan 2021 to July 2021. The researcher also considers the secondary data obtained from Government websites and RBI research papers for analysis.

1.5.3. Methodology

Primary data collected through questionnaire method– people from Mumbai were surveyed - set of 10 questions (see: annexure I). Primary data is analysed using percentage method and visualised with the help of pie charts, bar graphs. Secondary data is analysed using Principle component Analysis (PCA), Multiple Linear Regression (MLR). MLR is used to find the regression between one dependent variable and multiple independent variables. Variables– dependent- Housing Demand, independent variables – PCI, Interest rate, etc. Based on analysis, the challenges and opportunities are analysed, and recommendations are provided.

1.6. Organisation of the Study

Chapter 1: Affordable Housing in India, consists of the background of the affordable housing research paper, meaning and need for affordable housing, international experiences of affordable housing, affordable housing scenario in India, objectives of the research paper, data and methodology used in collection and analysis of data. Chapter 2: Current Housing Market in India, explains the demand and supply in the Indian housing market, government initiatives in providing affordable houses specifically Pradhan Mantri Awas Yojana (PMAY), Analysis of PMAY scheme and its performance, Analysis of primary data. Chapter 3: Impact of Affordable Housing, comprises of the impact of urbanization on affordable housing and impact of affordable housing on social and environmental developments in India. Chapter 4: Critical Issues in the Affordable Housing Sector, explains major challenges in affordable housing sector are addressed. Chapter 5 focuses on the road ahead: challenges and potential in India.

Chapter 2: Housing Market in India

2.1. Introduction

Real Estate is one of the most recognized sectors around the globe since it consists of four sub-sections such as housing, hospitality, retail and commercial. Construction sector ranks third among top 14 sectors in the economic growth. The major reason behind the growth of real estate sector, specifically residential housing, in India is rural-urban migration (as per census 2011, 36 million migrated to urban areas). Rural- urban migration is mainly due to availability of health care and educational facilities in urban areas as well as increased employment opportunities because of increased urbanisation.

As mentioned previously, increased migration results into increased population pressure on resources available in urban areas especially land available for residential construction further causing disequilibrium in supply and demand in housing market. The shortage of supply in housing market leads to rise in housing prices. Therefore, the housing prices in India are skyrocketed. All-India Housing Price Index HPI increased (y-o-y) by 2.7 per cent in Q4:2020-21.²⁸ This shows that housing prices are increasing and are predicted to increase rapidly in future. According to India Brand Equity Foundation (IBEF), the real estate demand is expected to increase 15-18 million square ft in 2025.²⁹ To accommodate the rising demand in housing market, Indian government has taken measures such as National Housing Policy (1991), Jawaharlal Nehru National Urban Renewal Mission (2005), Pradhan Mantri Awas Yojana (2014), etc. that focus majorly on redevelopment of slums and other informal dwelling units, increasing construction of affordable housing units for EWS, LIGs, MIGs. Thus, affordable housing segment in Indian housing market is crucial in current scenario.

²⁸ The Reserve Bank of India publishes research reports on Housing Price Index every quarter. It considers Housing Price Index (HPI). Aggregate House Price Index is a weighted average price index using Laspeyres' method with 2010-11 as the base year. First, the simple average of price (per square meter) of houses in each category, classified by small, medium, and large for each ward/administrative zone in each quarter based on floor space area (FSA) is calculated. Second, the proportion of number of houses transacted in the three categories of FSA within a ward/zone during the period April 2010 – March 2011 is taken as the weights. Then, based on an average per square meter price for three FSA category houses in each ward/zone, price-relatives are calculated for each quarter. The price relative is nothing but a ratio of current period price to the base period price. The quarterly ward/zone weighted average price relatives are calculated next. These weighted relative prices are again averaged, using the proportion of number of houses transacted in each ward to the total number of houses transacted in the city during the period April 2010 – March 2011 as the weights. The city-wise price indices are averaged using the population proportion (based on 2011 census) of the ten cities to its total to obtain the all-India index.

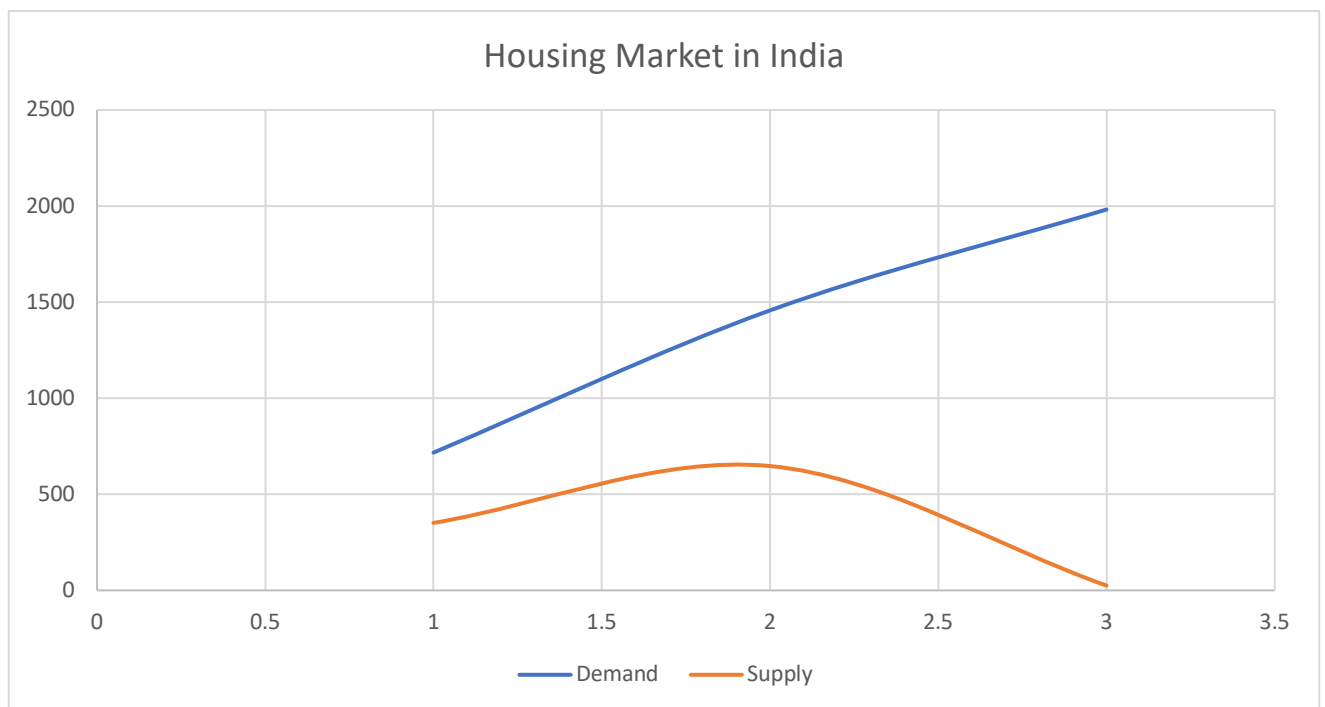
See: ("Reserve Bank Of India - RBI Bulletin" 2021).

²⁹ Source: (India and Industry 2021).

2.2. Demand & Supply of Housing:

From 2016 to 2020, the cumulative demand for residential housing among the low-income group of the eight biggest cities of India was 1.98 million housing units, whereas the supply was only 25,000 units. Thereby, there existed a significant gap between demand and supply in this income group. The gap is much smaller in the middle and high- income groups. In the latter group, a demand of 717,000 units faces a supply of 351,000 units.³⁰

Fig 2.1: Demand and supply in housing market in India (in MSF)



Source: ("India: Housing Demand and Supply in Major Cities 2020 | Statista" 2021)

In the above diagram, the divergence in the demand and supply curve shows the disparity in demand for and supply of housing units in India. The demand curve is upward sloping indicating the rising demand whereas as supply curve showed initial rise and then falling downward which indicates the decline in supply of housing units in India. This implies that the divergence between demand and supply must be reduced to find demand-supply equilibrium in housing market. This can be done by increasing the supply of housing units. Thus, the major reason of disequilibrium in housing market in India is shortage of supply of housing unit. According to Indian Council for Research on International Economic Relations (ICRIER), the number of physically inadequately housed households in India's urban housing

³⁰ Source: ("India: Housing Demand and Supply in Major Cities 2020 | Statista" 2021)

increased by 54 percent to 29 million in 2018 from 18.78 million in 2012. There are various reasons for housing shortages in urban areas such as Control Regulations Zones (CRZ) in Mumbai that restricts the urban land available for residential construction in MMR.

2.3. Financing Indian Housing Market

Housing market in India is majorly financed by banks as well as non-banking financial companies (NBFCs) like Housing Finance Companies. These banks and Housing Finance Companies are regulated by Reserve Bank of India (RBI). Other lenders include private finance companies and co-operative credit societies that issue home loans to the citizens of India. Banks are the major source of availing housing finance for majority of borrowers since they lend at lower interest rate than other lending institutions. Banks are further classified into private and public sector banks (PSBs) in India. Public Sector Banks and private banks lend money based on Marginal Cost of Funds based Lending Rate (MCLR) ³¹ whereas Housing Finance Companies and other NBFCs lend money to the borrowers based on Prime Lending Rates (PLRs). ³² Therefore, NBFCs lend money at a higher interest than banking institutions. In India, majority of population prefer to take home loan from Banking Institutions and NBFCs due to lower interest rates. Private Sector Banks like HDFC, ICICI, etc. are preferred over Public Sector Banks (PSBs) like State Bank of India, Punjab National Banks.

2.4. Institutional Framework: Role of the Indian Government in Affordable Housing sector

As a part of the strategy to overcome the colossal housing shortage, the government of India adopted various policies that focused on providing financial assistance to housing sector. Since the launch of New Economic Policy (NEP) in 1991, the Indian government adopted LPG Model of growth ³³ which resulted into rapid urbanisation causing housing shortages in urban areas. Since then, Government has been taking necessary measures to solve the housing problems of urban poor.

³¹ Marginal Cost of Funds based Lending Rate (MCLR) is the minimum lending rate below which a bank is not permitted to lend. See: ("Reserve Bank of India" 2021).

³² RBI introduced the Base Rate system with effect from July 1, 2010, which replaced the Benchmark Prime Lending Rate (BPLR) system. The Base Rate includes all those elements of the lending rate that are common across all categories of borrowers. Since the Base Rate is the minimum rate for all loans, banks are not permitted to resort to any lending below the Base Rate. Banks are required to review the Base Rate at least once in a quarter. See: ("Reserve Bank of India" 2021).

³³ The LPG model of growth focused on three strategies viz. liberalisation, privatization, and globalisation. See: ("LPG Policy of India and its effects", 2021)

2.4.1. Policy Implementation by Government of India

The Government of India has implemented the following schemes to provide affordable homes to low-income groups.

1. National Housing Policy

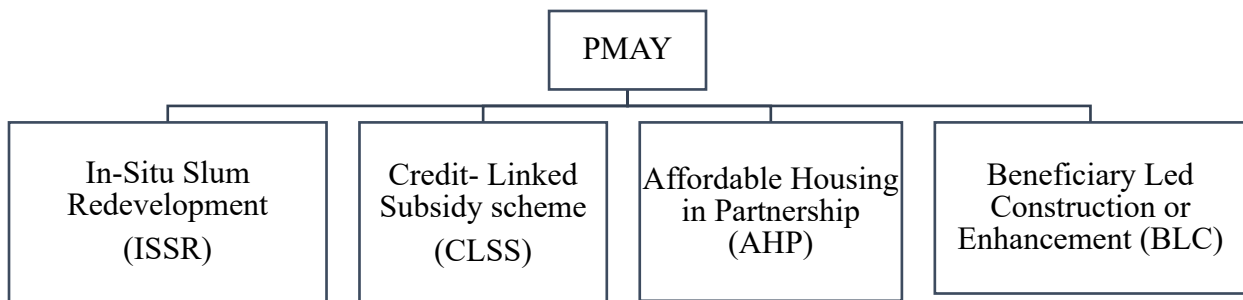
Under the National Housing Policy (NHP) announced in 1994, building centres were developed with central aid through the Housing and Urban Development Corporation (HUDC). This strategy sought to build low-cost housing for scheduled casts, scheduled tribes, and free bonded labourers below poverty line. A total of Rs.1144 crore was given as support for the development of affordable housing projects in 1997-98.

2. Jawaharlal Nehru National Urban Renewal Mission (2005)

As the Ministry's first major initiative, the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) was inaugurated in 2005. Basic Services for the Urban Poor (BSUP) and the Integrated Housing and Slum Development Programme (IHS DP) attempted to integrate slum development through programmes that offered housing, basic services, and other associated civic amenities with the objective of delivering utilitarian services to the urban poor. The two components of JNNURM were tasked with pursuing three important pro-poor reforms: (a) devoting a quarter of the municipal budget to the urban poor for the provision of essential services, such as affordable housing; (b) timely implementation of the 7-Point Charter, which includes providing land tenure, affordable housing, water, sanitation, education, health, and social security to the poor while ensuring convergence with other programmes; and (c) reservation of 25% of developed land in all housing projects, public or private, critical for slum improvement.³⁴

³⁴ Source of Information: ("Jawaharlal Nehru National Urban Renewal Mission: Ministry of Housing and Urban Affairs, The government of India", 2021)

3. Pradhan Mantri Awas Yojana



The Pradhan Mantri Awas Yojana (PMAY) is a Central Government programme to provide affordable housing to the country's Economically Weaker Sections (EWS) or Lower-Income Groups (LIGs). This programme was launched to accomplish the objective of "Housing for All" by 2020. This programme was aimed at providing affordable housing solutions to economically weaker sections, lower income groups as well as middle income groups in rural as well as urban India. Another important objective of this scheme is to provide financial assistance to EWS, LIG and MIGs so that they can construct or buy new houses or can expand existing housed. This programme is split into two parts: PMAY-U and PMAY-R. On June 25, 2015, the government of India launched the Pradhan Mantri Awas Yojana-Urban (PMAY-U), a flagship initiative aimed at providing housing settlements for low-income people living in cities like Mumbai, Kolkata. This mission addressed the issue of housing market disequilibrium, which was exacerbating housing shortages in urban areas. PMAY (U) used a demand-based strategy to provide affordable housing, and the federal system was used to carry out the programme.

I. In-Situ Slum Redevelopment (ISSR)

This PMAY component focuses on the rehabilitation of existing slums on private or public property. Using existing land as a resource, this project attempts to create houses for the economically underprivileged parts of society. The central government offers aid of Rs. 1 lakh per house, which is applicable to all dwellings built by slum dwellers who are eligible under the ISSR component. According to the rules, the State/UT administration should de-notify slums after rehabilitation.

II. Credit Linked Subsidy Scheme (CLSS)

The CLSS component of PMAY provides easy institutional financing for the purchase of houses, with interest subsidies given immediately to the borrower's account via primary lending institutions (PLIs), thereby decreasing housing loan and equivalent monthly payments. Under this plan, the government offers interest subsidies of 6.5 percent, 4 percent, and 3 percent on loan amounts up to Rs. 6 lakh, 9 lakh, and 12 lakhs to economically weaker sections (EWS), lower or middle-income groups, respectively.

III. Affordable Housing in Partnership (AHP)

This component of PMAY intends to build inexpensive dwellings through a public-private partnership, with support provided at a cost of Rs. 1.5 Lakh each EWS housing. Private developers will build up to 35% of the dwellings for the EWS with the support of this assistance. The states/UTs impose an upper limit on sales price for EWS dwellings to make them affordable and accessible to the intended beneficiaries. Other benefits provided by the state and cities include state-share, low-cost land, stamp duty exemption, and so on.

IV. Beneficiary Led Construction or Enhancement (BLC)

This plan provides EWS/LIG households with central support of Rs. 1.5 lakh for the building or improvement of their homes. The Urban Local Bodies evaluate the beneficiary's information and building design to establish land ownership and other variables such as economic status and eligibility. States/UTs disburse Central Assistance, together with any State/UT/ULB share, to recipients' bank accounts via Direct Benefit Transfer (DBT).

2.4.2. State-wise Performance of PMAY-U

The following table shows the data collected from government website on state-wise progress of PMAY-U. The progress rate of state in PMAY-U scheme is taken as the proportion of delivered housing units from the number housing units sanctioned under PMAY-U scheme.

Table 2.1: State-wise Performance of PMAY-U (2020)

State	Sanctioned	Delivered	Progress Rate (Proportion of delivered houses out of total sanctioned houses)
Andhra Pradesh	20,36,892	4,61,107	22.64
Bihar	3,63,640	93,458	25.70
Chhattisgarh	2,97,461	1,39,554	46.92

Goa	4,042	3,984	98.57
Gujarat	8,13,338	5,71,491	70.26
Haryana	2,84,037	43,615	15.36
Himachal Pradesh	12,478	5,675	45.48
Jharkhand	2,34,351	1,02,045	43.54
Karnataka	6,88,906	2,45,074	35.57
Kerala	1,28,739	99,205	77.06
Madhya Pradesh	8,53,075	4,51,334	52.91
Maharashtra	13,13,417	4,86,039	37.01
Odisha	1,77,018	94,621	53.45
Punjab	1,07,861	43,271	40.12
Rajasthan	2,11,195	1,28,118	60.66
Tamil Nadu	7,13,156	4,38,957	61.55
Telangana	2,23,214	2,04,124	91.45
Uttar Pradesh	17,26,781	8,62,532	49.95
Uttarakhand	44,364	20,665	46.58
West Bengal	5,27,838	2,72,795	51.68
Arunachal Pradesh	7,427	3,410	45.91
Assam	1,37,678	29,638	21.53
Manipur	53,534	5,571	10.41
Meghalaya	5,327	1,666	31.27
Mizoram	39,865	4,686	11.75
Nagaland	34,228	6,053	17.68
Sikkim	625	33	5.28
Tripura	91,926	52,701	57.33

Source: ("PMAY (U)", 2021)

The top three states having progress rate of more than 70% are Goa (98.57%), Telangana (91.45%), Kerala (77.06%), Gujarat (70.26%), Tamil Nadu (61.55%). Bottom five states in progress rate are Himachal Pradesh (15.36%), Manipur (10.41%), Mizoram (11.75%), Nagaland (17.68%), Sikkim (5.28%). This divergence in progress rates indicate that state governments play a vital role in implementing PMAY-U Scheme. Therefore, it is necessary to examine the reasons behind the divergence of progress rate in states.

2.4.3. Analysis of execution strategies of top performing states:

- **Goa:** According to the reports published by Ministry of Housing and Urban Affairs, the government in Goa employs innovative technology for successful implementation of strategies aimed at developing affordable housing projects. Various software are used to increase awareness about PMAY schemes in different parts of the state which helps in improving the number of people receiving benefits of the scheme.
- **Telangana:** It can also be observed from the report that strategies adopted by Telangana government include selection of beneficiary only at the time of allotment which increase the pace of delivering affordable housing units under PMAY-U scheme. Another major reason is that the government spends more on social overhead capital³⁵, that is, infrastructure which contributes to increased efficiency of building houses since transportation, communication and other facilities speed up the execution of affordable housing projects.
- **Gujarat:** Government of Gujarat focused more on AHP than BLC since the cost per housing unit under AHP scheme is less (Rs. 2.88 Lakh) than cost per housing unit under BLC (Rs. 4.0- 4.9 Lakh). This implies that Government of Gujarat adopted cost-effective strategy in implementation of PMAY scheme.

2.4.4. Analysis of execution strategies of States with lowest progress rate:

- **Sikkim:** According to the Ministry of Housing and Urban Affairs report, delays in approval for affordable housing projects by the state government are causing delays in delivering affordable housing units.
- Manipur and Mizoram lack the infrastructure necessary for boosting affordable housing projects. The state government spending is inadequate to satisfy the requirements of affordable housing projects. Poor transportation is one of the major obstacles in successful implementation of PMAY-U scheme.

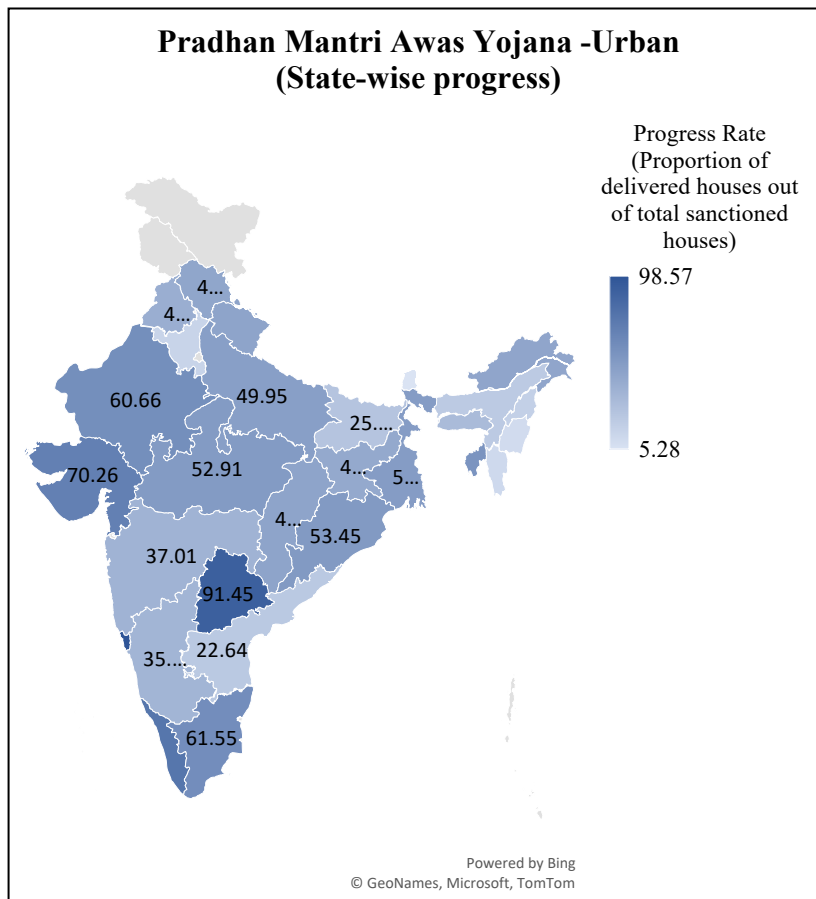
2.4.5. Comparative Analysis:

From the above analysis, it can be concluded that State governments play a vital role in implementation of PMAY-U scheme. The states like Goa, Telangana, Gujarat are making use of innovative technology as well adopting cost-effective strategies to reduce the cost of constructing and increasing the pace of delivery the projects. On the other hand, State like

³⁵ Social Overhead Capital includes the government expenditure on infrastructural development such as transportation, telecommunication, etc.

Sikkim, Manipur, Mizoram lag behind due to poor governance such as delays in approvals for construction of affordable housing projects, delays in approval for clearance of land, lack of adequate transportation facility that increases the cost of construction and so on. Thus, there is divergence in execution of PMAY-U scheme which needs be considered while making future provisions by the central government.

Fig 2.2: State wise progress of PMAY-U



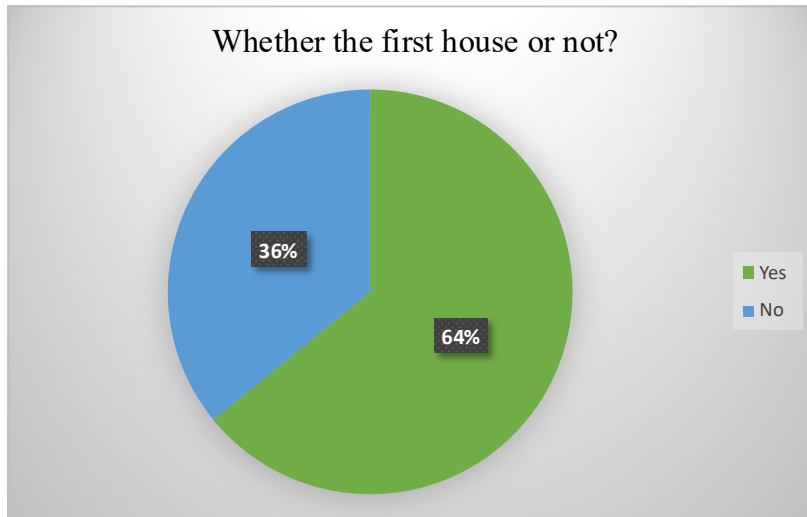
Source: ("PMAY (U)", 2021)

Fig 3.1 indicates the state-wise progress of Pradhan Mantri Awas Yojana- Urban (PMAY-U) Scheme. States with higher progress rate are depicted by darkest shade of blue whereas states with lower progress rate are represented by lightest shade of blue. Goa has the highest progress rate (98.57%) whereas Sikkim has the lowest progress rate (5.28%). This divergence, as observed previously, is mainly due to the differences in implementation of strategy by state governments. Different state government have adopted different approaches in promoting PMAY-U schemes. Few governments like Government of Goa, Government of Gujarat, etc. have successfully implemented PMAY-U scheme where states like Sikkim, Mizoram, Manipur showed poor administration in execution of PMAY-U scheme.

2.5. Primary Data Analysis

The primary data collected through survey method analysed using percentage method and visualized with the help of pie charts and bar graphs. The sample of 400 respondents is selected from different parts of Mumbai.

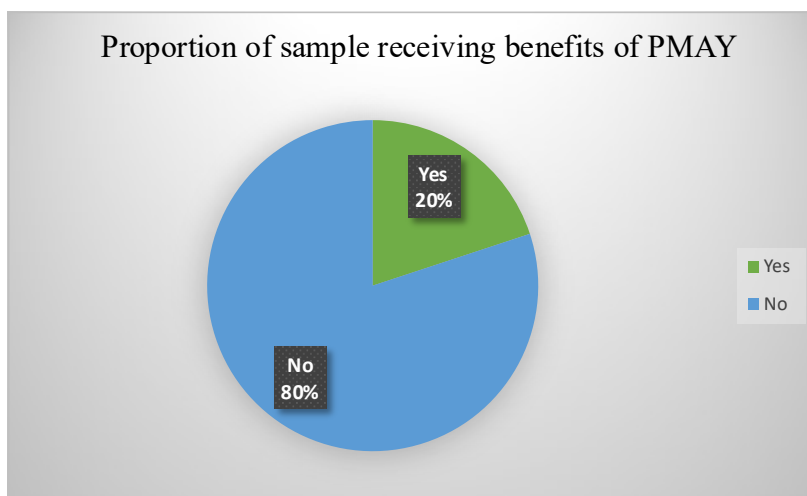
Fig 2.3: Whether the first house or not?



Source: Primary Survey, 2021.

The above figure depicts that the 64 percent of the sample will be buying their first house which means that they do not own house yet. Only 36 percent of the sample has housing ownership whereas 64 percent of them do not own their houses they either reside in rental or government provided houses (only in case of government employees).

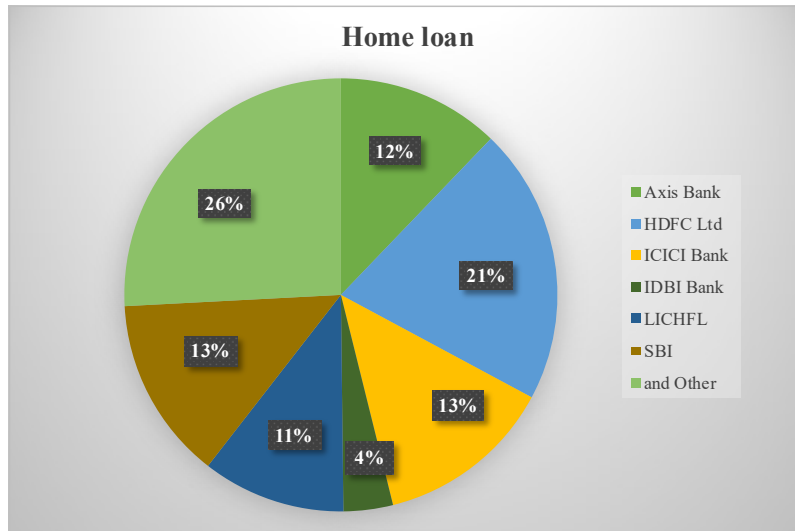
Fig 2.4: Proportion of sample receiving benefits of PMAY



Source: Primary Survey, 2021.

From the above diagram, it can be observed that though a majority of respondents are buying their first house, only 20 percent of the respondents eligible under PMAY-U scheme have received benefits whereas 80 percent of them have not received benefits. Thus, there is huge discrepancy in the proportion of sample receiving the benefits of PMAY- U scheme.

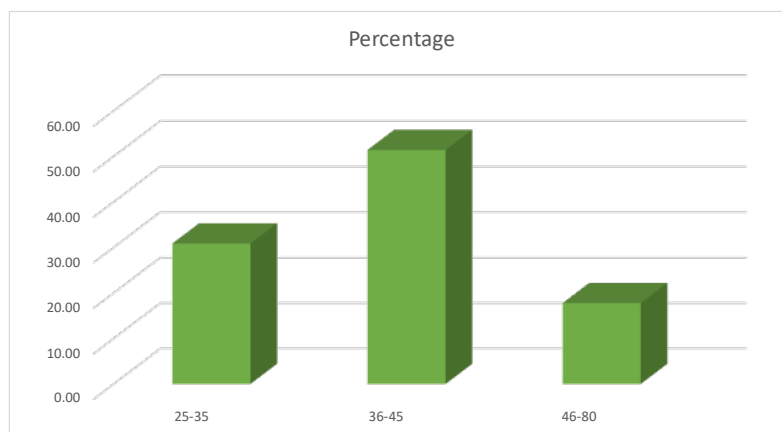
Fig 2.5: Home Loan



Source: Primary Survey, 2021.

From the above chart, it can be concluded that majority of homebuyers prefer to take home loans from Axis Bank, HDFC Bank, ICICI Bank or Non-Banking Financial Companies like Life Insurance Corporation Housing Finance Limited (LICHFL).

Fig 2.6: Age and affordable housing demand



Source: Primary Survey, 2021.

Fig 2.6 depicts that age is one of the factors that affect the affordable housing demand in India. Majority of homebuyers, as observed in above diagram, belong to the age group of 36 to 45

years of age. This means that the affordable housing demand is more from middle age-group in India. This information can further be employed in providing affordable housing as per the demand, i.e., to accommodate the rising demand, affordable housing supply can be increased.

In brief, primary data analysed showed that most of the residents eligible under Pradhan Mantri Awas Yojana- Urban (PMAY-U) scheme is not receiving the benefits due to lack of awareness about the scheme. As large as 80% of the sample from lower income category responded that they are not receiving the benefits of PMAY-U. Another major issue in affordable housing sector, as analysed in the above data, is housing finance. It was observed that majority of respondents prefer to take home loans from private banks like Axis bank, HDFC bank, ICICI bank, etc. rather than public sector banks like State Bank of India, Punjab National Bank, etc. due three major reasons viz. in-principle approval, non-applicability of Approval Project Financing (APF) code, low levels of funding (only 80% - 85 % as opposed to 90%- 95% in private banks). Few of them also prefer to avail home loans from housing finance companies like LICHFC, IIFL, etc. due to the smooth process of home loans sanctioning. It is also observed that majority of homebuyers belong to the age group of 36- 45 years in the affordable housing market. This implies that the demand from this age group is more for affordable housing market in 2021.

Chapter 3: Impact of Affordable Housing

3.1 Urbanization

In urban India, the upward trend in demand for housing units is mainly due to rapid urbanization which has increased employment opportunities causing population pressure in megacities like Greater Mumbai, Delhi, and Kolkata. From among the entire population, working population is more in India which is estimated to be at 400.7 million as of January 2021³⁶ which is approximately 64 percent of the total population in India (Economic Times Survey). This shows that there is rising demand in job market which, in turn, causes migration of working age groups from rural to urban areas in search of new employment opportunities and better working conditions as well as better standard of living. This labour migration is one of the major reasons behind upward trend in demand in housing market. It is predicted that the demand for houses will rise around 46 million housing units by 2022 in Urban India. (India Infrastructure Research, Socio Economic and Caste Census (2011), Deloitte analysis). This implies that urbanization is one of the key reasons behind rising demand for housing units. This rising demand affects the housing prices in megacities like Mumbai making them unaffordable for Lower-Income Groups and Economically Weaker Sections of the Society. Therefore, there is need for conducting research for providing recommendations on affordable housing issues in Urban India.

3.2. Social and Environmental Impacts

Housing conditions impact mental as well as physical health of the individuals. Affordable housing schemes aimed at providing better living conditions can improve physical as well as mental health of the citizens. This can lead to increased efficiency and improved employability of working population in India. Affordable housing projects like Runwal gardens can bring social change in the country. Such affordable housing projects can result in the development of infrastructure like better transportation facilities, establishment of new educational institutions, establishment of shopping malls, hospitals, etc. that can attract the corporates and small business can also be developed in such regions creating new employment opportunities. This cycle of economic development and economic growth can take place through induced investments in affordable housing market in India. Thus, affordable housing cause socio-economic changes in the country. Affordable housing has a positive impact on living standards of lower-income-groups. Better living conditions have psychological impacts.

³⁶ ("Half Of India's Working Population Of 400 Mn People Credit Active: Report" 2021).

It improves physical as well as mental health of the people which, in turn, increases their productivity at work. Through uplifting poor sections of the society, the welfare of the society improves.

Affordable housing projects can accommodate rising population from LIGs or EWS through rehabilitation or redevelopment of slums. Living conditions in slums are very poor. There are no proper health and sanitation facilities, there is no proper waste management which has adverse impact on the environment. Therefore, affordable houses can help in abolition of slums and can also improve the health and sanitation of people. Affordable housing project like Runwal Gardens use advance technology like sewage treatment plants that recycle the used water which can be utilized again. This avoids wastage of water and helps in water conservation. Along with sewage water plants, incorporating rainwater harvesting plans can help in preserving water. Thus, affordable housing projects contribute to sustainable development through employment of green energy.

3.3. Impact of CLSS on Housing Affordability

Credit Linked Subsidy Scheme is a central scheme from PMAY-U that provides interest subsidies on housing loans to EWS, LIG, MIG. The funding under scheme is done by Prime Lending Institutions (PLIs)³⁷ in India for effective reduction in home loans and equated monthly instalments (EMIs). Since this scheme provides interest subsidy, the housing costs are expected to be lower so that maximum people can take advantage of the scheme. According to the study conducted by Department of Economic and Policy Research, RBI, the housing units for which the ratio of housing cost to monthly income is below 30 are considered to be affordable under CLSS scheme. The study showed that housing affordability increases with increase in income and since CLSS provides interest benefits, the housing cost is reduced. This implies that the purchasing power of individual increase since less money will be spent on interest on home loans. Thus, CLSS scheme has found to be effective in providing affordable houses to Lower as well as Middle-income groups. According to RBI, “*with CLSS housing in 21 cities become affordable for the EWS in comparison to only 5 cities without CLSS*”. This shows the effectiveness of CLSS scheme in improving housing affordability in India.

³⁷ Primary Lending Institutions include public sector banks, regional rural banks, co-operative banks, and housing finance companies.

Chapter 4: Summary, Issues & Opportunities in Affordable Housing in India

4.1. Critical issues in Affordable Housing in India:

Following are the major challenges faced by current housing market in India.

1. Scarcity of Land in urban areas

Due to rapid urbanization, a large population migrates to urban areas in search of new employment opportunities. The number of migrants who moved from rural to urban areas stood at 52 million out of a total population of 1.02 billion, as per the 2001 Census. Thus, the 2011 number of 78 million is a jump of 51%. The share of rural-to-urban migrants in the population rose from 5.06% in 2001 to 6.5% in 2011.³⁸ This puts pressure on the available natural resources like land. Land is a relatively fixed source of a resource and therefore, increasing population cases rise in demand for housing units. It is difficult to accommodate increasing population due to disequilibrium in demand and supply in the housing market. Coastal Regulation Zones, as previously noted, contribute to the scarcity of land accessible for residential building in coast regions like Mumbai. The civic property department has identified 3.7 lakh square metres of land within the CRZ that could have generated revenue of Rs. 60 crores in the form of tax if these sites are given approval for development by the government.³⁹ These results into the loss of revenue as well as restriction on land for construction. Thus, scarcity of land is one of the critical issues in constructing affordable housing units.

2. Delays in the Government Approvals

In India, the real estate projects are mandated to go through various phases to get approval from the government. A real estate company must take approvals from central as well as state governments under different laws relating to land acquisition and property rights such as *The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act (2013)*⁴⁰, *Land Revenue Codes*⁴¹, *Real Estate Regulation and Development*

³⁸ Source: ("What the Rural to Urban Move Says About Migration" 2021)

³⁹ See: ("Areas under CRZ can earn close to 60Cr in tax, if they get clearance: Civic study | Navi Mumbai News - Times of India", 2021)

⁴⁰ The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act (2013):

⁴¹ Land Revenue Codes

*Act (RERA, 2016)*⁴², etc. According to estimates, real estate developers must obtain permits from 150 different departments of the federal and state governments, as well as local corporations. This implies that there is a long process involved in getting approval of land and clearances. Private entities are also required to pay the debt relating to the land before acquisition which further involves rising costs. The process of land acquisition follows a federal system, that is, approvals from central, state as well as local governments which are often delayed. Such delays cause delays in implementation of housing projects. Delays in project approvals may add 25-30% to the project's cost. Therefore, improved coordination among various authorities in dealing with various permissions/approvals might encourage real estate developers to participate in the affordable housing market. Currently, it takes approximately two to three years for a developer to begin construction after entering into a property acquisition agreement. This gets reflected into rising cost over a period resulting into skyrocketing prices of housing units which are unaffordable for lower income groups.

3. Higher Interest Rates on Home Loans

Higher interest rates on home loans are one of the important reasons behind housing unaffordability. (e.g., 6.75% in SBI with 0.35% processing charge, 6.75% in Bank of Baroda with processing fees of Rs. 8,500 – Rs. 25,000, 6.90% in Canara Bank with processing fees of Rs. 1,500- Rs. 10,000).⁴³ These higher amounts of interest rates paid on home loans along with enormous amounts of processing fees discourage Lower Income Groups like solid waste workers to apply for home loans. Therefore, the government should have fiscal policies targeted at providing tax exemption on interest paid on home loans.

4. Usurious Taxation

The taxability of real estate transactions in India has been a source of contention and litigation, as the Union Government, individual state governments, and municipal governments are all authorised to levy various indirect taxes on developers. Currently, there is a double taxation mechanism in place since real estate property is not clearly defined as a product or a service. As a result, the government must reconsider the lack of uniformity in stamp duties across the country. In different states, the stamp duty to be paid at the time of execution of the underlying instrument ranges from 5% to 15% of the property's value. Not only stamp duty, Goods and Service Tax on factors of production used in affordable housing projects also

⁴² RERA

⁴³ See: ("Home Loan Interest Rates - Compare Today's Lowest Rate Jul 2021", 2021)

increase the cost of construction. For instance, GST rate for sand and stone used in construction is 5%, GST on cement is 28%, GST on iron and steel used for construction is 18%, marble and granite blocks is 12% and so on.⁴⁴ These multiple layers of taxation increase the cost of final output in housing market and therefore it is necessary to remove GST on raw material used for construction.

5. Higher Costs

As mentioned previously, there are delays in approvals for the project by the government authorities that leads to delays in executing affordable housing projects. This results into the longer period of gestation causing the rise in cost of construction due to inflation. Stamp duty and GST on raw materials also increase the cost of constructing, in turn, increasing the cost of final output. Thus, rising costs of housing units make it unaffordable for LIGs. These are obstacle in the construction of affordable housing units.

6. Unskilled manpower:

India employs labour- intensive techniques of production more than capital-intensive techniques to absorb the rising population. However, the drawback of this technique is unskilled labour. Majority of population is not highly skilled or educated which affects the efficiency as well as productivity at work. Therefore, the affordable housing projects are grappled with the issue of shortage of skilled manpower. Skilled manpower can be employed in innovating new cost-effective techniques and in increasing the pace of the affordable housing projects. However, the real estate sector in India lacks skilled manpower.

7. Inadequate financing by Public Sector Banks (PSBs):

The public sectors banks like SBI have double levels of sanctioning whereas private sector banks have only one level of sanctioning and therefore, borrowers are attracted more towards public sector banks for home loans. Also, PSBs does not provide APF code which a crucial issue for homebuyer in sanctioning home loans. Another important issue with housing finance from public sector banks is inadequate funding. PSBs provide funding up to 80-80% of the housing prices in the first disbursement and 15-20 % of the self-funding is expected to be done by the homebuyer. This becomes a major challenge in affordable housing sector where homebuyers cannot afford self-funding more than 5-10%.

⁴⁴ Source: ("GST rate for building materials and construction in India", 2021)

4.2. Recommendations

1. Public-private Partnership

It has been observed through the primary data collected on affordable housing supply that though the central and state the governments have propounded schemes for providing affordable housing to Lower Income Groups under PMAY, the benefits have not reached the eligible population who continue to live in deplorable conditions. This implies that the execution of the government policies is very poor. Inefficiency in providing affordable housing can be improved through public private partnership. Thus, incentivizing private sector by providing credit facilities and tax exemption on fundraising for affordable housing projects would contribute to tackling the shortage of supply in housing market. The government can also promote schemes like the government-Land Based Subsidised Housing (GLSH)⁴⁵ which incentivize private developers in constructing houses at lower costs.

2. Abolition of In-principle sanctioning in Public Sector Banks (PSBs):

Due to the in-principle sanctioning rule, the cases might get accepted in the first disbursement but in the final sanctioning the cases get rejected due to CIBIL rating issues. These two levels of sanctioning are time-consuming and cost ineffective. This leads to rise in cancellation of housing units by the customers in affordable housing market. Therefore, two levels of sanctioning should be removed from the approval process of public sector banks like SBI, PNB, and so on. This can make the housing finance easier and time saving for the borrowers of home loans and can also the reduce the rate of cancellations in affordable housing projects.

3. Provision of Approved Project Financial Code in Public Sector Banks (PSBs):

Approved Project Financials (APF) codes are given by banks and non-banking financial companies (NBFCs). APF is provided by banks and other financial institutions to authorized builders. APF assures homebuyers of sound legal and technical credentials of the project. If APF code is not given the project, this implies that the project lacks legal and technical credentials, that is, it lacks all necessary legal approvals. In such cases, homebuyers

⁴⁵ Under The government- Land Based Subsidized Housing (GLSH) scheme, The government provides land to private developers selected on basis of lower bid submitted by interested developer. Private developer will be responsible for designing, planning, execution, funding and handover of the project and the government pay the bid amount to private developer for construction of the units. The government then allocates units to beneficiaries. See:

need to follow a longer procedure to get information about legal and technical credentials of the project. Therefore, public sector banks should also provide APF code to builders of affordable housing projects so that the sanctioning of home loans can be made easier and convenient for homebuyers in the affordable housing segment.

4. Online portal for second disbursement

It has been observed during the primary data collection on home loans that for the part disbursement, the borrowers of home need to follow the documentation process again and again, that is, they need to visit PSBs frequently to submit physical documents. This process is time-consuming and expensive and therefore, homebuyers in affordable housing market do not prefer to take home loans from PSBs. This problem can be solved through creation of online portal for fulling the documentation criterion in part disbursement of home loans in affordable housing market.

4.3. Conclusion

Rapid urbanisation has caused disequilibrium in housing market in India and therefore, there is need to improve supply of affordable housing units. This can be done through providing easy credit facilities to households like Credit- Linked Subsidy Scheme. Financial issues are the major challenges in affordable housing sector since majority of population are from EWS and LIG category. Therefore, to tackle the problem of housing unaffordability the housing finance should be given appropriate attention by the government. Since public sector banks are reliable source of housing finance for majority of population, the difficulties faced in sanctioning of home loans in PSBs should be resolved. Other private banks and housing finance companies should be incentivized to provide home loans at lower interest rate for affordable housing projects in India. This can help in uplifting the poor sections of the society through improvements in their housing conditions and overall standard of living.

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Annexures

Annexure -1: Tables

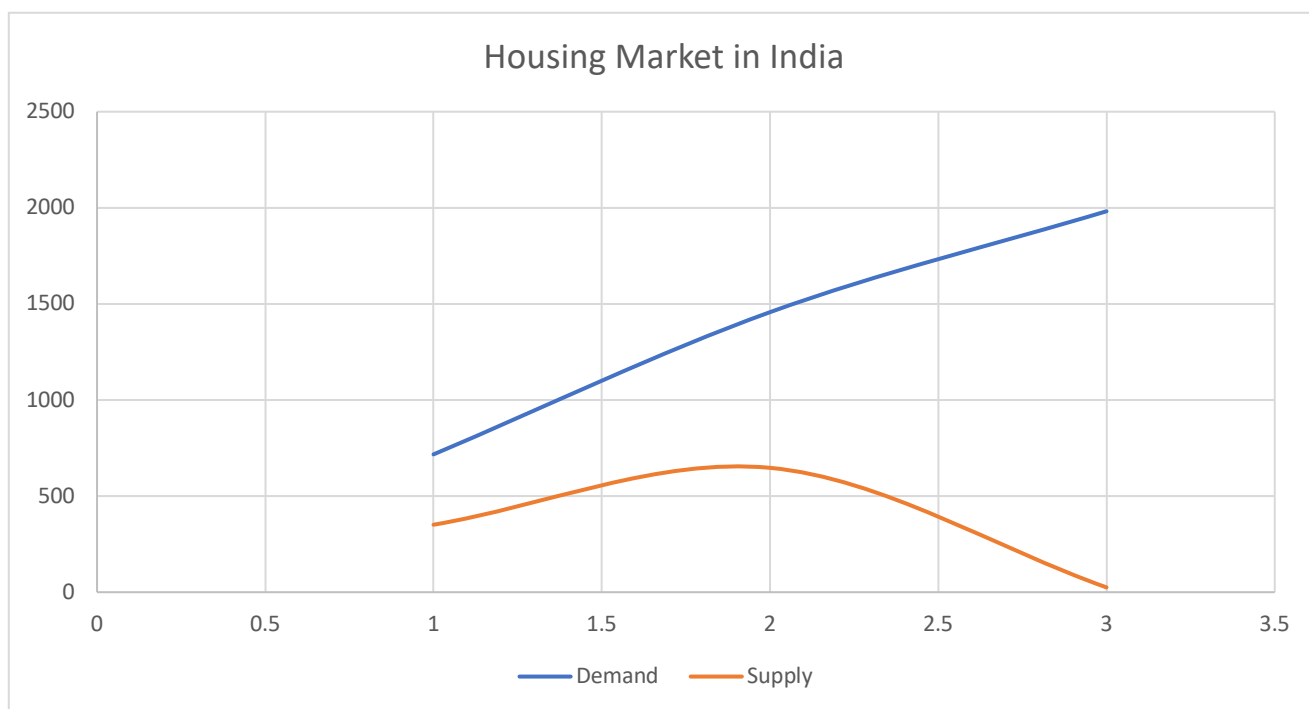
Table 2.1: State-wise Performance of PMAY-U (2020)

State	Sanctioned	Delivered	Progress Rate (Proportion of delivered houses out of total sanctioned houses)
Andhra Pradesh	20,36,892	4,61,107	22.64
Bihar	3,63,640	93,458	25.70
Chhattisgarh	2,97,461	1,39,554	46.92
Goa	4,042	3,984	98.57
Gujarat	8,13,338	5,71,491	70.26
Haryana	2,84,037	43,615	15.36
Himachal Pradesh	12,478	5,675	45.48
Jharkhand	2,34,351	1,02,045	43.54
Karnataka	6,88,906	2,45,074	35.57
Kerala	1,28,739	99,205	77.06
Madhya Pradesh	8,53,075	4,51,334	52.91
Maharashtra	13,13,417	4,86,039	37.01
Odisha	1,77,018	94,621	53.45
Punjab	1,07,861	43,271	40.12
Rajasthan	2,11,195	1,28,118	60.66
Tamil Nadu	7,13,156	4,38,957	61.55
Telangana	2,23,214	2,04,124	91.45
Uttar Pradesh	17,26,781	8,62,532	49.95
Uttarakhand	44,364	20,665	46.58
West Bengal	5,27,838	2,72,795	51.68
Arunachal Pradesh	7,427	3,410	45.91
Assam	1,37,678	29,638	21.53
Manipur	53,534	5,571	10.41
Meghalaya	5,327	1,666	31.27
Mizoram	39,865	4,686	11.75
Nagaland	34,228	6,053	17.68
Sikkim	625	33	5.28
Tripura	91,926	52,701	57.33

Source: ("PMAY (U)", 2021)

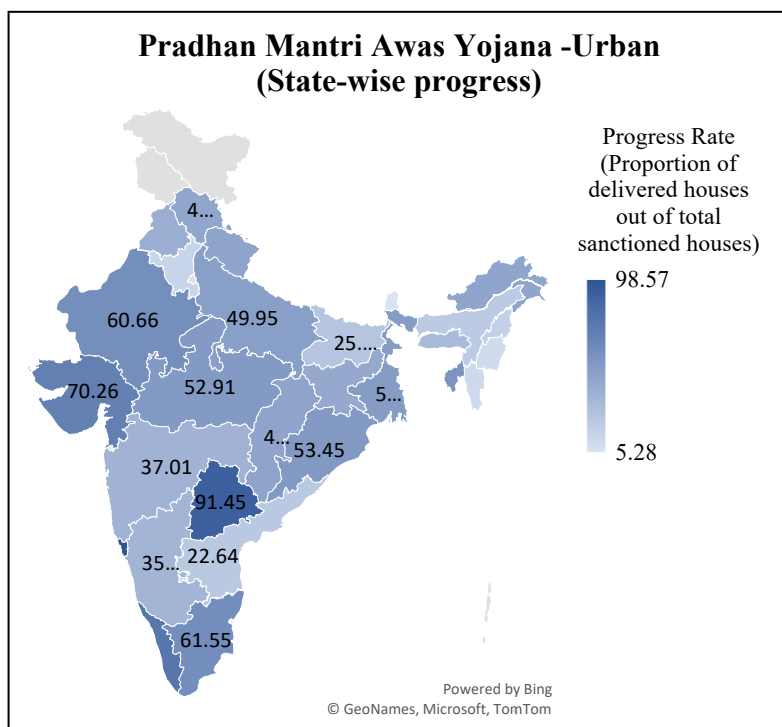
Annexure-2: Figures

Fig 2.1: Demand and supply in housing market in India (in MSF)



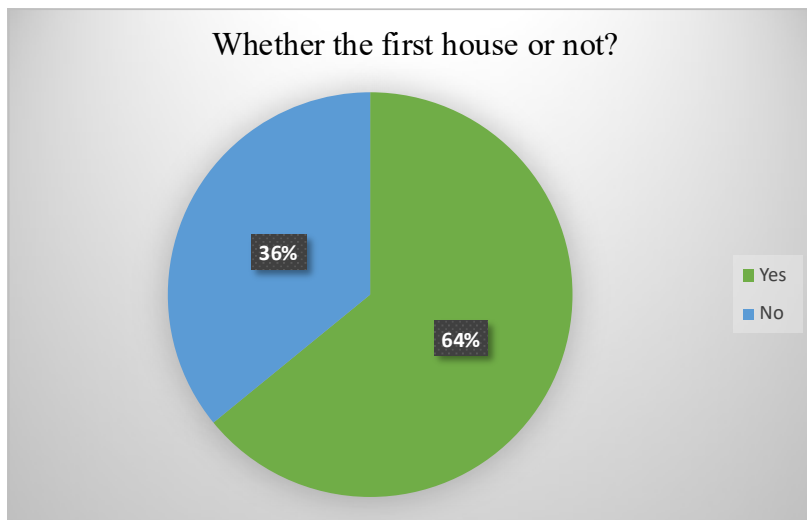
Source: ("India: Housing Demand and Supply in Major Cities 2020 | Statista" 2021)

Fig 2.2: State wise progress of PMAY-U



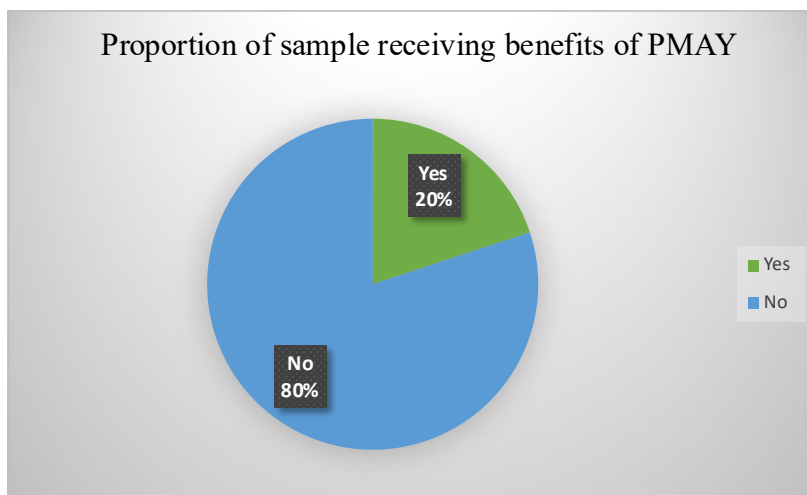
Source: ("PMAY (U)", 2021)

Fig 2.3: Whether the first house or not?



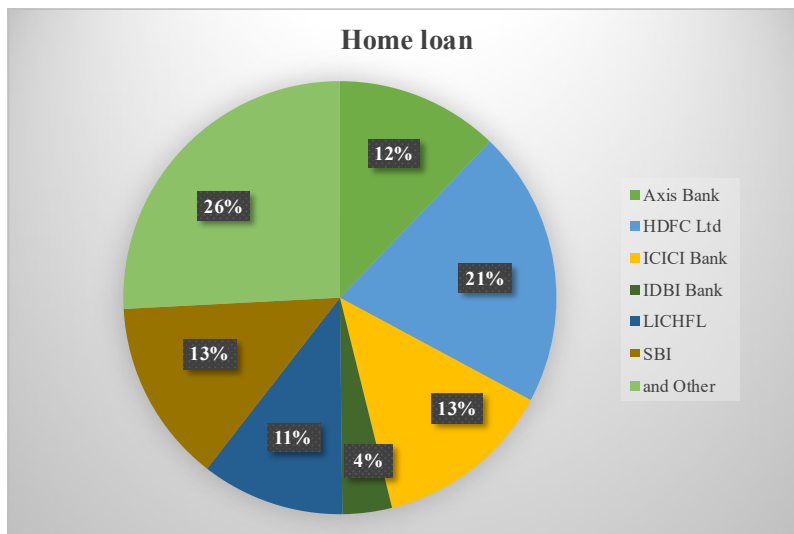
Source: Primary Survey, 2021.

Fig 2.4: Proportion of sample receiving benefits of PMAY



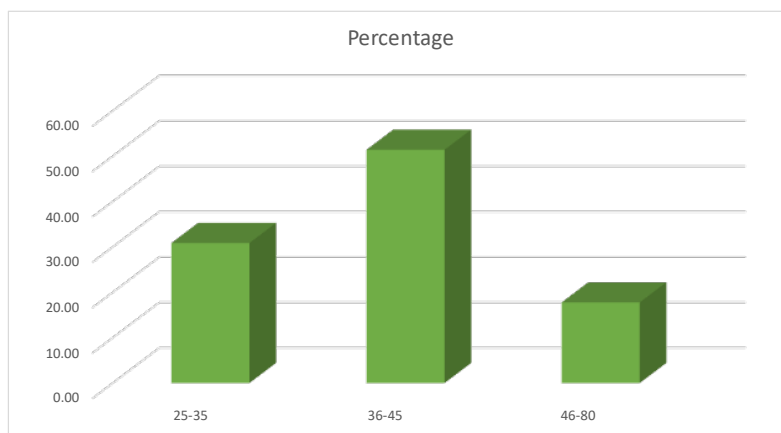
Source: Primary Survey, 2021.

Fig 2.5: Home Loan



Source: Primary Survey, 2021.

Fig 2.6: Age and affordable housing demand



Source: Primary Survey, 2021.