



This item was submitted to Loughborough's Institutional Repository (<https://dspace.lboro.ac.uk/>) by the author and is made available under the following Creative Commons Licence conditions.

 **creative commons**
C O M M O N S D E E D

Attribution-NonCommercial-NoDerivs 2.5

You are free:

- to copy, distribute, display, and perform the work

Under the following conditions:

 **Attribution.** You must attribute the work in the manner specified by the author or licensor.

 **Noncommercial.** You may not use this work for commercial purposes.

 **No Derivative Works.** You may not alter, transform, or build upon this work.

- For any reuse or distribution, you must make clear to others the license terms of this work.
- Any of these conditions can be waived if you get permission from the copyright holder.

Your fair use and other rights are in no way affected by the above.

This is a human-readable summary of the [Legal Code \(the full license\)](#).

[Disclaimer](#) 

For the full text of this licence, please go to:
<http://creativecommons.org/licenses/by-nc-nd/2.5/>

AUTHOR(s): **Sharadbala Joshi, PhD**
19 Dev Kutir Bungalows I
Ambli-Bopal Road
Ahmedabad 380058
India
E-mail: Sharadbala.Joshi@gmail.com

Professor M. Sohail
BEng, MSc, PhD Loughborough, Fellow ASCE (USA)
Professor of Sustainable Infrastructure
Director Research and Enterprise Programmes (WEDC)
School of Civil and Building Engineering
Loughborough University, UK
E-mail: M. Sohail@lboro.ac.uk

Abstract:

Affordable Housing in Ahmedabad

In 2012, the estimated housing shortage in India was 18.78 million units. 88% of this shortage pertains to households with annual incomes of about Rs100,000 (USD 1,724) and another 11% for those with annual incomes of less than Rs200,000 (USD 3,450). Government of India has played a supporting role to house the poor through special programmes, targeted subsidy, and creation of an enabling environment for private sector initiatives. Post 1990, several reforms were introduced, and there was a gradual shift in the role of the Government from a 'provider' to a 'facilitator'. The facilitating approach aims at fostering public-private partnerships through incentives for the private sector, promotion of housing finance institutions, use of alternative and environment-friendly building materials and technologies, and support to NGOs, CBOs and cooperatives.

In this context, Ahmedabad - the fifth largest city in India with a population of 5,570,585 and seventh largest urban agglomeration with a population of 6,352,254 (Census 2011), offers an interesting perspective on affordable housing. Private developers implementing housing schemes for low income groups have learnt from experience that although initially there is a higher demand for two-room units, a majority of potential customers' can afford only one-room units. Further, housing finance institutions have come-up with new products and have identified alternative means for assessing incomes and affordability of people in the informal sector. The strategies, processes and tools that private developers have introduced in Ahmedabad are contributing to increasing the stock of affordable housing.

KEYWORDS

Affordable Housing, Partnerships, Slum-Upgrading, Slum-networking

Affordable Housing/ Low cost housing – definitions

In 2012, the estimated housing shortage in India was 18.78 million and heavily skewed towards the bottom of the pyramid, that is, the largest but poorest socio-economic group. 56.18 percent of the shortage pertains to households with annual incomes of about Rs100,000 (USD 1,724) and 39.44 percent is for those with annual incomes of less than Rs200,000 (USD 3,450). Thus, only 4.38 percent of the estimated shortage pertains to middle and higher income groups. The estimated housing shortage in Gujarat, which is one of the most economically developed States in India, is 990,000 or 5.26 percent of the total (MoHUPA 2012b).

The housing needs of the poor can only be met by increasing the supply of affordable housing, that is, housing that a consumer can purchase without incurring financial difficulties or without risk of undesirable consequences. Thus, affordable housing refers to a consumer's capacity to purchase a house in accordance with her/ his resources and long term requirements (Collins Dictionary 2013). In the US, affordable housing is defined in socioeconomic terms, that is, in terms of the percentage of a household's income required to obtain and maintain housing, and affordability refers a household paying no more than 30 percent of its annual income on housing (HUD, 2013). Affordability therefore has different meanings based on differences in income levels. The National Affordable Housing Summit Group in Australia defines affordable housing as housing that is, "...reasonably adequate in standard and location for lower or middle income households and does not cost so much that a household is unlikely to be able to meet other basic needs on a sustainable basis" (NAHC, 2006). This definition incorporates issues of adequacy, location as well as economic sustainability.

Affordable housing and low-cost housing are often interchangeably used. In India, low-cost housing generally refers to housing meant for households under the category of Economically Weaker Section (EWS) or Low Income (LIG). EWS households are those with incomes of less than Rs.5000 (USD 86) (see Table below) per month or Rs100,000 (USD 1,724) per annum while LIG households are those with incomes of Rs.5001 to 10,000 (USD 86 to 172) per month or Rs.100,001 to 200,000 (USD 1,724 to 3,449). Housing for the EWS comprises of subsidised housing that is largely constructed by housing or development boards while housing for low and middle income groups is constructed by public organisations and the private sector.

Income categories of households

Category	Monthly Income limit (up to November 2012)	MoHUPA revised household income effective 14-11-2012	
		per month	per annum ¹
Economically Weaker Section (EWS)	Up to Rs.3,300 (USD 57)	Rs.5000 (USD 86)	Rs.100,000 (USD 1,724)
Low Income Group (LIG)	Rs.3,301 to 7,300 (USD 57 to 126)	Rs.5001 to 10,000 (USD 86 to 172)	Rs.100,001 to 200,000 (USD 1,724 to 3,449)
Middle Income Group (MIG)	Rs.7,301 to 14,500 (USD 126 to 1,724)	Not revised/ specified	
High Income Group (HIG)	More than Rs.14,500 (More than USD 1,724)	Not revised/ specified	

Source: MoHUPA, 2011b

Context

Government of India (GoI) influences urban development and housing through national policies and programmes, allocation of resources through centrally sponsored schemes, finance through national financial institutions, and support for external assistance programmes. The Ministry of Housing and Urban Poverty Alleviation (MoHUPA), the apex authority of the GoI, formulates urban housing policy and programmes, sponsors and supports programmes, coordinates the activities of various Central Ministries, State Governments and other nodal authorities. The primary role of State Governments for housing and urban development was strengthened in 1992 through the 74th Constitutional Amendment Act, which delegated urban development, housing and poverty alleviation related functions to urban local bodies.

¹ To be revised by the Government annually based on cost index

Housing scenario

The national development policies and programme contents in India are decided during formulation of Five Year Plans, which influence the pattern of urbanisation as well as real estate investments. Post-independence, the emphasis of the first seven Plans was on the public sector with massive investments in basic and heavy industries. Urban development and housing policies were addressed as welfare issues that did not require major investments. At the same time, both the national and State level governments funded several housing programmes for industrial workers, the police, post and telegraph departments, and other government employees.

During the late 1960s, as informal settlements came-up in urban areas, there was international acknowledgement of the need for addressing the shelter problems of the poor through support for sites and services schemes (Turner 2002) and in-situ slum upgrading initiatives (Hamdi 1997; 1985) rather than slum clearance. In India, the Government launched the Scheme for Environmental Improvement of Urban Slums in 1972 to support provision of basic services in slums. State Governments enacted Slum Areas (Improvement and Clearance) Acts that provided the legal framework for providing services to slums on privately owned land. This also resulted in a general acceptance that the poor were located in slums. Subsequently, GoI has supported several schemes and poverty alleviation, skills development, employment opportunities etc. Some of the programmes complemented or subsumed earlier initiatives.

After the 1980s, two significant actions in the urban sector are the setting-up of the National Commission on Urbanisation (1985), which brought greater focus to developmental issues in urban areas, and the launch of the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) in December 2005. Under JNNURM, the Government supports reform-linked investments and fast track planned development in urban infrastructure and service delivery in identified cities. This included support for housing for the poor under a sub-mission of Basic Services to the Urban Poor (BSUP) in Mission towns and the Integrated Housing and Slum Development Programme for the urban areas that were not covered under JNNURM. The JNNURM and BSUP are now complemented by a housing scheme - the *Rajiv Awas Yojana*, which was launched in June 2011 with the goal of achieving a 'slum-free India'. Under the scheme, GoI provides financial assistance to States² for slum redevelopment and construction of affordable housing conditional to a set of reforms necessary for inclusive urban development. Currently, with the objective of providing affordable homes for all by 2016-17, the focus of the Twelfth Plan (2012-2017) is on strategic urban planning, provision of basic urban services, affordable housing, public transport and strengthening of urban governance and human resources capacity. The Plan stresses the need for coordinated action for making cities environmentally sustainable through a shift to public transport, improvements in energy efficient buildings, and management of solid waste.

Housing Policies

Following legislation on rent control, land acquisition, slum improvement, decentralisation etc., the first National Housing Policy in India was formulated in 1988 with the long term goal of eradicating homelessness, improving housing conditions of the inadequately housed and providing a minimum level of basic services and amenities to all. The role of Government was conceived as a provider for the poorest and as a facilitator for other income groups and private sector by the removal of constraints and through increased supply of land and services. This changed with a new National Housing Policy (August 1994), which stressed the key role of the Government as facilitator of housing services, and the importance of both rural and urban housing. The National Housing and Habitat Policy (July 1998) suggested several interventions for governmental agencies to promote affordable housing, including availability of sites, housing loans at below-market rates, low-cost building materials and civic services. The Policy included recommendations for removing legal, financial and administrative barriers for facilitating access to land, finance and technology, repeal of Urban Land Ceiling Act, permitting Foreign Direct Investment in housing and real estate sector, etc. It also emphasised the need for increased use of renewable energy sources and strong partnerships between private, public and cooperative sectors.

In December 2007, GoI announced the first specific National Urban Housing and Habitat Policy, which seeks to promote various types of public-private partnerships for realizing the goal of affordable housing for the urban poor. The Policy envisages specific roles for the Central Government, State Governments, local bodies, banks, housing finance companies and public/ parastatal agencies. The State governments are to prepare a State Urban Housing and Habitat Action Plan for realizing the policy objectives through

² 50% of the cost of provision of basic civic and social infrastructure and amenities and of housing in slums is borne by GoI

legal and regulatory reforms, fiscal concessions, financial sector reforms and introduction of innovative instruments for mobilizing resources for housing and related infrastructure development.

Housing Finance

Before 1970, the government was the only provider of finances for house construction through various social schemes for public housing. These schemes were implemented through state housing boards which were responsible for allocating serviced land and houses to individuals based on social equity principles. Housing finance underwent substantial changes with the establishing of Housing and Urban Development Corporation in 1970 and of the Housing Development Finance Company in 1977 – the latter being the first specialised housing finance institution in the country. The situation changed once again with the setting-up of the National Housing Bank (NHB) in 1987 as a regulatory body and promoter for housing finance institutions (HFIs) that provides refinancing to financial institutions that provide loans for low-income housing (CMF, 2007).

In terms of the poor, informal sources such as family, local money lenders, savings and credit groups etc. were the key providers of loan and housing finance. Access to loan and shelter finance for low-income households improved through micro finance initiatives of development oriented organisations. After 2000, entrepreneurs with mainstream corporate experience started promoting finance institutions and are catering to the untapped market segment (Intellectap, 2007). These include Micro Housing Finance Corporation (MHFC), Home First Finance Company etc., which find financing of affordable housing for the informal sector a viable and profitable business option. They stress that besides a supportive policy and development environment that provides incentives for affordable housing supply, it is essential to remove existing legal, financial and administrative hurdles, have a different set of skills for understanding potential informal sector customers, determine their incomes and assess them. The HFIs have identified proxy indicators to choose customers, and to weed-out the risks upfront through due-diligence, and introduced processes to minimise costs and have partnership arrangements with real-estate developers. MHFC, which now has over 3000 customers - 90% of whom are from the informal sector, has minimised its costs by using mobile and electronic fund transfer facility for collecting Equated Monthly Instalments (EMIs) from customers and by managing its capital. It has zero non-performing assets (DBS, 2013).

Affordable Housing

From 2007, following reforms mandated under JNNURM, more real estate developers have got involved in the construction of affordable housing. In addition, since 2008, there have been a number of studies and reports on affordable housing in India. Further, State level³ affordable housing policies have guidelines for affordable housing for different income categories.

The High Level Task Force Report on “Affordable Housing for All” (2008) proposed affordable housing for EWS/ LIG categories as “a unit with a carpet area between 300 and 600 sq.ft, (27.87 to 55.74 sqm) with (i) the cost not exceeding four times the household gross annual income (ii) EMI/ rent not exceeding 30% of the household's gross monthly income”. Affordable housing for the Middle Income Group (MIG) was defined as “A unit with a carpet area not exceeding 1,200sq.ft. with (i) the cost not exceeding five times the household gross annual income (ii) EMI/ rent not exceeding 40% of the household's gross monthly income.

McKinsey Global Institute (2010) suggests that affordable housing should provide a range of options catering to the needs of households of different sizes and incomes, a basic unit size of 25.55sqm. carpet area and maximum affordability of between 25 to 35% of a household's income.

The rationale behind limiting the unit size is that smaller units would cost less and would be attractive primarily to low income households. In 2010, KPMG and the Confederation of Real Estate Developers' Associations of India (CREDAI)⁴ broadly defined affordable housing for Tier I, II and III cities in terms of income level, size of dwelling unit and affordability, which is correlated to income and property prices as given in the Table below. If the monthly carrying costs of a home exceed 30–35% of household income, the housing is considered unaffordable for that household.

³ Rajasthan, West Bengal (Kolkata), Madhya Pradesh, Mumbai Metropolitan Region, Uttar Pradesh and Haryana.

⁴ CREDAI is the apex body for private real estate developers in India which links private real estate developers to the government and customers through numerous initiatives and activities.

In December 2011, the JNNURM Mission Directorate of MoHUPA defined affordable housing in its amended Guidelines for Affordable Housing in Partnership (2011) as houses with super built up area ranging from about 27.87sqm. for EWS, 46.45sqm. for LIG and 55.74 to 111.48sqm. for MIG, at costs that permit repayment of home loans in monthly instalments not exceeding 30 to 40% of the monthly income of the buyer. It also specifies that the minimum carpet area for an EWS category house would be taken as 25 sqm, and the maximum carpet area for an LIG category house would be limited to 48 square metres and for a MIG house it would be limited to a maximum of 80 sqm.

Income categories and affordability

Category	KPMG & Confederation of Real Estate Developers' Association of India		
	Annual Income limit	Size of DU	Affordability
EWS	<INR 150,000 per annum	Up to 300 sq. ft.	EMI to monthly income - 30 to 40%
LIG	Rs.150,001 to 300,000 per annum	300 to 600 sq. ft.	EMI to monthly income - 30 to 40%
MIG	Rs.300,001 to 1,000,000 per annum	600 to 1200 sq. ft.	

Source: KPMG, 2010.

The Task force on Promoting Affordable Housing (November 2012) defined affordable housing: as "individual dwelling units with a carpet area of not more than 60sqm. and recommended that the desirable goal of a house price to income ratio for Affordable Housing projects should be 5:1 as against 3 to 4. It went further to define affordable housing projects as projects where: i) at least 60% of the Floor Area Ratio/ Floor Space Index (FAR/ FSI) is used for dwelling units of carpet area of not more than 60 sqm, and ii) where 15% of the total FAR/ FSI or 35% of the total number of dwelling units are reserved for EWS households.

The various reports also highlight the potential of reducing the cost of housing through reduction in approval related costs, stamp duty and reduction in cost of capital borrowing. The Report of the Task Force on Promoting Affordable Housing (2012) and Guidelines for Affordable Housing in Partnership (2011) are the most recent reference points for discussions and debate on affordable housing in India.

Housing in Ahmedabad

Ahmedabad - the fifth largest city and seventh largest metropolitan area in India, covers an area of 466sq.km. and has a population of 6,063,047 (2011 Census of India). The city lies 23°00' north and 72°40' east along River Sabarmati. The city has a hot semi-arid climate with three main seasons - summer, monsoon and winter, and is a strategic centre in the State. The city, which is divided into 6 zones constituting 64 wards that are represented by 192 elected councillors, is administered by Ahmedabad Municipal Corporation (AMC).

Due to its location in the cotton growing belt, Ahmedabad has been a manufacturing centre of cotton textiles. In the 1990s, there was increased investment in industry, trade and construction, followed by the growth of information technology and information technology enabled services. Since 2008, the city and areas around it have emerged as a hub for automobile manufacturing industry.

Housing in Ahmedabad includes *havelis* (mansions with courtyards), bungalows, traditional 'pol' housing in the walled city, chawls or dormitory housing for industrial workers, tenements, apartments and slums. As per Census 2001, the total housing stock in the Ahmedabad was 1,050,000. Of these 67% was used for residential purposes. The city has about 12.5% houses were lying vacant.

Pols

Ahmedabad has numerous traditional neighbourhoods called *pols*⁵⁵, which are self-contained neighbourhoods varying in size from very small ones with six houses to large pols having about 3,000 houses. Ahmedabad has about 60,000 houses in 596 pols. The pols are characterized by a main street that has narrow labyrinthine streets branching on either side and usually terminating in squares (known as a *chowk*). The rest of the zones are built around the lanes branching from the square. The individual houses have a living/ interactive space, a kitchen and service areas on the ground floor and individual rooms connected by a balcony on the first floor, which is accessed by narrow, steep stairways. The

⁵⁵ The word *pol* is derived from the Sanskrit word *pratoli* meaning entrance to an enclosed area.

terrace too can be accessed from the first floor. The pols were self-sustaining units with each house having its own underground water storage tank and store for food grains.

Chawls

The mill owners of Ahmedabad constructed chawls, which are sets of single room units in high density walk-ups for industrial/ textile mill workers. Over time, due to the rent control act, the rent levels remained extremely low so some owners stopped maintaining the chawls while others stopped collecting the rents thereby making the occupants de facto owners. In some instances, the owners sold the chawls at nominal prices. The lack of maintenance, inadequate services and area degradation has made living conditions in most chawls slum-like (Bhatt, 2003).

Cooperative Housing Societies

With the increase in population density in the walled city, some city leaders got together to build the first cooperative housing society in Ahmedabad in 1925. The success of this pioneering cooperative housing society led to over 3,800 cooperative housing societies coming-up in the city by the 1970s (Amdavadma, 1982). The shifting of families out of the 'pols' into flats, apartments, tenements and bungalows in the western part of the city dramatically changed the city's development,

Low-Cost Housing: Tenements and Apartments

Post 1960, houses for people with low incomes were primarily built by the Gujarat Housing Board, AUDA, AMC and others. This includes housing for employees. Gujarat Housing Board has constructed 176,830 houses for people of various income categories as per norms set by the State Government. In addition, it has constructed shopping complexes, school buildings, dispensaries, hospitals etc. The Gujarat Housing Board has been revamped to play an active role in the provision of affordable housing. It has prepared detailed proposals for construction of 1 bedroom and 2 bedroom units for the LIG and HIG categories in schemes in Rajkot, Surat and Vadodara.

Slums

Following the launch of the scheme for Environmental Improvement of Urban Slums, the State enacted the Gujarat Slum Areas Act in 1973. AMC got the Ahmedabad Study Action Group to conduct a census of slums, which identified different types of slum areas in the city as: i) chawls, ii) subsidised housing, and iii) slum areas. Subsequently, AMC implemented several initiatives, including the scheme for Environmental Improvement of Urban Slums and the Slum Networking Project (SNP) for improving the environmental conditions in slums and chawls. After providing public stand posts, public toilets, street lighting and paved roads in most slum areas, AMC launched the SNP in 1995 with the objective of overall development of slums that could be connected with the city infrastructure. From its inception, SNP was designed to have a partnership arrangement between AMC and NGOs, which were responsible for mobilising the community, facilitating formation of community groups, liaise with the AMC and directly provide or enable access to health and education services. SNP was undertaken in 50 slums and AMC received the Dubai International Award in 2005 in recognition of SNP as a best practice for environmental improvement. By early 2006, after AMC provided slum dwellers with the option of getting individual water connections and was finalising plans for construction of houses under the BSUP scheme for relocation of slum dwellers, the SNP approach lost momentum. The significant outcome of SNP is that AMC works closely with NGOs for implementing programmes for the poor. However, after almost thirty years of interventions for extending basic services in slums, there is increasing pressure on land as well as on providing adequate shelter for all.

Affordable Housing in Gujarat and Ahmedabad

The Government of Gujarat has promised voters in its assembly polls manifesto that it would build 120,000 homes during 2013-14. It has enacted the Residential Townships Act, 2009 under which private developers of residential townships on at least 40 or 20 hectares of land are required to reserve at least 10% of the area for EWS housing. Further, it has mandated that Town planning schemes are to reserve 10 per cent of the land for Affordable Housing. The State has also repealed the Urban Land Ceiling and Regulation Act and taken actions for and transfer of surplus land to urban local bodies at nominal rates for projects focused on EWS/LIG housing.

The Ahmedabad Urban Development Authority (AUDA), which was established in 1976, administers the city's suburban areas. Following the launch of JNNURM, AMC and AUDA prepared with technical assistance of the Centre for Environmental Planning and Technology, a City Development Plan (2006-

2012) as required for getting development funds under JNNURM. AUDA and AMC articulated the aim of making Ahmedabad a slum-free city by 2013, and sought funding for construction of affordable housing and infrastructure facilities. The process benefitted from stakeholder consultations that had been organised previously for preparing a City Development Strategy (1999-2000) and for a state level slum policy (2003).

In February 2013, AUDA announced its 2nd Revised City Draft Development Plan 2021 (AUDA, 2013) and unlocked about 100sq.km. of land as affordable housing zone for 150,000 units of between 36 to 80 sqm. This includes 218ha of land of 38 closed mills and a 1 km wide strip of land encircling the 76-km Sardar Patel Ring Road. As per the new General Development Control Regulations, those constructing houses of 36 to 80 sqm. will be offered highly concessional rates for purchase of extra 2.2 FSI (above FSI of 1.8) etc. AUDA has also raised the FSI by 30% which will enable construction of buildings up to 70m height as against the existing 40m height. It has made rain water harvesting mandatory for new buildings, installation of solar water heaters compulsory for hotels, hostels, hospitals and public buildings, and prohibited the use of reflective material on high-rise buildings. It also requires developers to disclose details like carpet area, built-up area, super built-up area and allotted parking space, which will be put up on websites of AMC and AUDA for transparency.

The Study

The Academy for Sustainable Habitat Research and Management (ASHRAM), a non-profit company set-up by DBS Affordable Home Strategy Ltd. (DBS), aims to contribute to the growth and development of the 'Affordable Housing Eco-system' through research and training activities. In early 2013, ASHRAM started with a study of secondary data on affordable housing in India, including the legal and policy environment, housing finance options, and affordable housing schemes identified by the Monitor Inclusive Markets. The research team short-listed 10 developers and 18 schemes based on the following criteria:

- a) Schemes within the boundaries of Ahmedabad Urban Agglomeration
- b) Schemes offering 1 or 2 room apartments, and
- c) Schemes where the house cost is below Rs.1,000,000 (USD 11,598), that is, about 5 times the annual income of the MIG as per the revised income categories (MoHUPA, 2012). However, since several schemes listed by MIM came within the price range of Rs.1,000,000 to Rs. 1,200,000 (USD 21,087), the team decided on taking the upper cost limit of affordable housing projects at 6 times the annual income of a LIG category household,

The research team undertook analysis of an existing database of potential and actual customers of affordable housing provided by Griha Pravesh— a housing facilitation centre set-up in 2010 by DBS and its partner Saath⁶. Griha Pravesh provides an interface between potential home buyers from the informal sector and developers, housing finance companies and community development organizations. Thus, Griha Pravesh helps bridge the information and support gap between the potential first-time home buyers and developers and housing-finance companies that specifically are targeting clients with low-incomes.

As of 30 April 2013, Griha Pravesh had 824 members of whom 65 were from Surat and 759 were from the Bapunagar (227) and Isanpur (532) areas of Ahmedabad. The Griha Pravesh database provided information on the following:

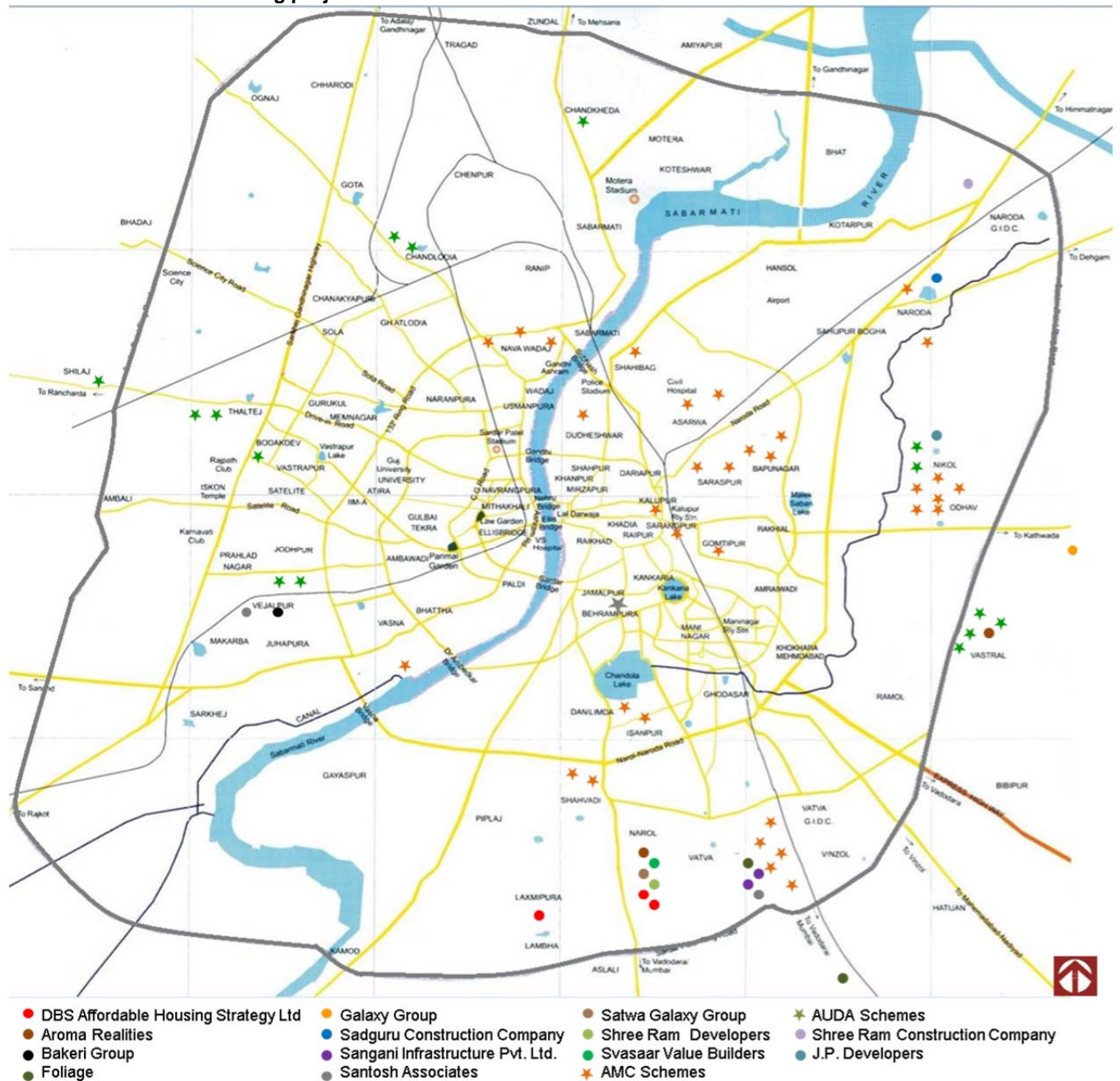
- Member's and her/ his family details, including education, type of employment, monthly income of the member and household, seasonal income, monthly household expenses, savings, assets and loan repayments if any. Data on type of employment/ occupation was available for 721 members.
- House purchase details of 110 members, including the scheme where house was bought, the house type, initial amount paid by the member, the housing finance company from which a house loan was taken and details of the loan amount, interest rate, EMI and loan status.
- A study of the database as well as discussions with Griha Pravesh representatives revealed that since people are not willing to provide all personal information, the data on monthly and household incomes, and household expenses and savings was not fully reliable. Thus, this study has only utilised data on types of occupation of all members, house types bought, loan amounts taken and EMIs of those who have already purchased or are completing formalities for the purchase of

⁶ Saath Charitable Trust is an Ahmedabad based NGO, established in 1989 and introduced its Integrated Slum Development Programme for empowering slum residents through community organisation, and by enabling their access to basic infrastructure, health services from the public and private sectors, and related information.

affordable houses. Excluding members who purchased resale properties, this process resulted in a shortlist of 164 members.

The map below shows the spread of the schemes across the city.

Location of affordable housing projects in Ahmedabad



Note: Map is not to scale

The ‘affordable’ housing projects listed below will have added 40,689 dwelling units to the affordable housing stock in the city. These schemes are located primarily in the southern and eastern parts of the city with a few in the western part, that is, in the suburban areas where the land is relatively less expensive. AMC and AUDA have managed to substantially increase the supply of (subsidized) housing across the city, primarily because the projects are on land owned by them and because cost of land is not included in the cost of the dwelling units. The projects are located in already inhabited areas so there is easy access to the area and to other services.

A summary of the schemes, house types and number of schemes/ dwelling units is given below.

Selected Affordable Housing Schemes in Ahmedabad

House Type		Apts	1 RK unit area in sqm.		2 RK unit area in sqm.		1 RK Price Range		2 RK Price Range	
Builder	Scheme		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
Santosh Associates	1 Om Shanti Nagar(2003)	320	None	None	58	None	None	None	230,000	275,000
Bakeri Group	2 Shri Ramnagar (2000)	256	32.55	None	47.78	None	155,000	165,000	None	None
AUDA	3 BSUP-AUDA (2011)	13,664	22.83	None	None	None	210,000	250,000	None	None
AMC	4 BSUP-AMC (2011)	20,160	None	None	50.11	None	None	None	255,000	315,000
Galaxy Group	5 Gokul Galaxy (2010)	109	32.55	None	47.78	None	381,000	551,000	551,000	721,000
DBS	6 Umang Lambha (2010)	792	23.09	25.38	35.72	42.28	330,000	468,000	540,000	760,000
Foliage	7 Navjivan Flats (2010)	464	36.26	38.14	62.36	67.76	281,000	410,000	450,000	500,000
Svasaar Value Builders	8 Svasaar Pravesh 1 (2011)	286	None	None	43.44	None	None	None	651,000	750,000
DBS	9 Umang Narol 3 to 8 (2013)	1,496	28.61	32.29	40.53	45.13	499,000	675,000	780,000	1,050,000
	10 Umang Narol 1 & 2 (2011)	885	23.76	25.29	35.40	None	399,000	540,000	661,000	823,000
Aroma Realities Ltd.	11 Aakruti Apartments (2011)	192	21.65	22.36	36.84	45.77	310,000	427,000	528,000	875,000
	12 Aakruti Township (2010)	830	None	None	40.72	42.94	None	None	584,000	821,000
Foliage	13 Navjivan Vihar (2012)	360	28.70	None	38.18	49.63	520,000	677,000	727,000	946,000
Sangani Infrastructure India Pvt. Ltd.	14 Samruddhi Residency (2010)	533	None	None	37.30	41.78	None	None	575,000	632,500
	15 Sangani Residency (2010)	235	22.82	37.46	32.94	36.38	408,000	472,000	590,000	717,000
Galaxy Group	16 Satva Galaxy (2010)	70	None	None	23.29	36.38	None	None	1,085,000	1,300,000
Shree Ram Construction Company	17 Shree Ram Vatika	150	44.33	None	80.30	None	680,000	720,000	1,000,000	1,300,000

Based on information provided at project sites for new projects. Dates refer to launch dates⁷.

Subsidized Schemes

The construction of affordable housing in Ahmedabad took off from 2007 with implementation of schemes by AMC and AUDA under the BSUP component of JNNURM, for which the central government provided 50% of the construction cost as grant, while state government contributed 20 percent. The remaining 30% of the cost is shared by AMC/ AUDA and the beneficiaries. The AMC has built 20,160 (18,976 + 1184) two-room apartments of 26.77 square meters carpet area and AUDA had built 13,664 (5664 + 8000) one-room apartments of 17.5 square meters – making it the largest shelter programme in the city. Both agencies have built the projects on land owned by them, with AMC having purchase land of textile mills in the city. Thus, AMC and AUDA have increased the supply of affordable housing across the city.

⁷ Notes:

- All unit sizes were given in terms of super-built-up areas, most often in sq.yds.
- Unit costs were given as a range between maximum and minimum prices of units. In a few cases, the price per sq.yd. was also given.

The estimated cost of the AMC constructed units was Rs.178,578, which increased to Rs.225,000 and later increased to Rs.315,000 per unit (excluding cost of land) per unit due to escalation of prices. The beneficiary contribution was fixed at a maximum of 12% of the cost, which is about Rs.60,900⁸. AMC has relocated residents displaced because of development projects under JNNURM and a riverfront development project. Importantly, AMC has partnered with the two NGOs involved in implementation of SNP to provide development and organisation support in the housing schemes developed under BSUP.

AUDA schemes comprise of two types of houses - one room units of 22sqm. and two room units of 31.5 sqm. Excluding the cost of land, the houses cost Rs.210,000 (earlier 125,000) and Rs.250,000 (earlier 135,000) respectively. Under AUDA more than six thousand houses have been allotted to applicants through draws. The beneficiaries under the AUDA scheme were required to pay Rs.105,000 in 3 to 8 instalments. The houses were allotted only after the beneficiary contribution was received.

The agencies have constructed the housing projects using the Mascon Construction System, which is used for cast-in-place concrete monolithic structures using aluminium formwork. This enables construction at the rate of 4 days per floor using unskilled labourers for erecting and dismantling the Mascon formwork⁹. The structures are earthquake resistant and the aluminium alloy shuttering results in good finishing that reduces maintenance costs in the long term (NIUA, 2010). After construction, the dwelling units were allotted to the registered and identified slum dwellers.

Private Sector Affordable Housing Initiatives

Ahmedabad is one of the cities where the private sector is experimenting with the construction of affordable housing. According to the Monitor Inclusive Markets (MIM, 2010), developers who had been hurt by the 2008 credit crunch and locked land markets looked at affordable housing as a way of getting out of the economic slump. Consequently, in cities such as Ahmedabad, Chennai, and Mumbai where developers were implementing low income housing schemes in 2006-2007, the number of developers more than doubled by the end of 2012. According to MIM (2010), the internal rate of returns for developers in Ahmedabad “can be as high as 40%-50%, with gross margins in the 20% - 30% range”.

Although several developers have implemented housing schemes for low-income families, literature on affordable housing in Ahmedabad identified Om Shantinagar (2003) launched by city-based real estate developers - Santosh Associates as a precedent of sorts. The scheme, which comprised of 320 apartments of 1 Bedroom-Hall-Kitchen (1 BHK) was launched next to Shri Ramnagar¹⁰. Prior to the project launch, several stakeholders, including the developer were uncertain about the response from potential customers¹¹. However, the demand for small and affordable housing was confirmed at the project launch. Santosh Associates followed this with the launch of Om Shantinagar 2 in May 2009. The project was launched in two phases, with Phase I comprising of 136 two room units (costing Rs.388,000 and above) and 284 3-room units (costing Rs.575,000 and above).

In October 2009, Foliage Developers launched Navjivan Housing, with a mix of house sizes, including 1 RK, 1 BHK and 2 BHK. The house prices ranged from Rs.300,000 to 700,000, with the smallest flat priced at Rs.280,000 (MIM, 2009). By mid-2010, MIM listed four more projects in the city, including Umang Lambha by DBS Affordable Home Strategy Ltd. (DBS) (MIM, 2010).

DBS was set up in 2009 to create viable enterprise model for making housing accessible for people at the bottom of the economic pyramid in urban India, focuses exclusively on affordable housing. DBS aims to build housing projects, and assist people wanting to purchase houses in the process of getting housing finance, and provide them with developmental opportunities after they move into their new homes. To achieve its objectives, DBS has interesting partnership arrangements with landowners and NGOs such as Saath, which provides the linkage with the potential customers, including activities for informing potential customers about project launches. DBS has not only launched three projects, but has also partnered with several landowners who have agreed to process development rights of around 418,218 sqm. of land in favour of DBS. At conservative estimates, DBS will be constructing over 25,000 affordable houses on 13 plots over the next five years.

⁸ Based on interview with A Patel and B. Patel at AMC on 28 May 2013.

⁹ <http://www.masconsystem.com/>

¹⁰ Shri Ramnagar is a 1 Room-Kitchen (1 RK) project implemented in 2000 by real estate developers - the Bakeri Group that has subsequently not implemented any housing schemes for the lower income group per se.

¹¹ Based on interviews with stakeholders

The unit areas of 1RK units range from 21.65 to 44.44 sqm of super built-up areas and for 2RK units between 23.29 to 80.30 sqm. while the costs vary between Rs.255,000 to 1,085,000 for 1RK units and between Rs.500,000 to 1,300,00.

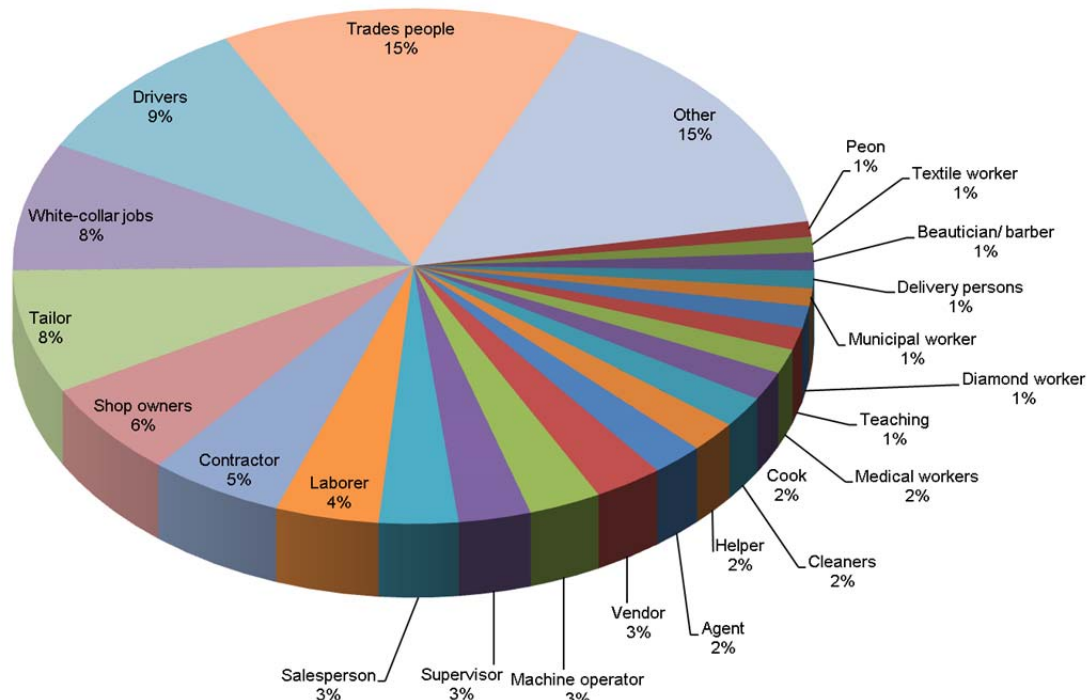
The affordable housing schemes in Ahmedabad are primarily RCC frame structures and have similar finishes. The key differences are in terms of the room/ unit layouts, provision of storage niches or shelves above the lintel level and in the quality of finishing. In schemes where the entrance to the kitchen, bathroom and toilet opened directly into the multi-purpose room, the house-owners were critical of the design and delays.

Specification	Om Shanti Nagar	Sri Ram Nagar	Gokul Galaxy	Umang Lambha	Navjivan Flats	Umang Narol	Akruti Appartment	Akruti Township	Svasaar Pravesh 1	Navjivan vihar	Samruddhi Residency	Sangani Residency	Satva 2	Shree Ram Vatika	Aditya Oasis
Construction : RCC frame structure, earth quake preventive	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Plaster : Inside single coat whitewash finish. External surface: Sand faced plaster with double coat of acrylic emulsion	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Plaster :Putty finish on inner side.	x	x	√	√	x	x	x	√	√	x	x	√	x	√	√
Flooring : In main room - vitrified tiles.	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Flooring : In other areas - vitrified tiles.	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Kitchen : Granite platform, steel sink, ceramic tile dado up to 2 feet.	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Store : Overhead storage shelves	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Doors : Steel frames and wooden shutters	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Window :Alluminium Frame.	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Electrical : Concealed	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Electrical : Open external	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Plumbing : Concealed	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
General : A separate bore-well, garden, road, main gate.	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Community Hall :	x	x	x	√	x	√	x	x	√	√	√	√	√	√	√
Open Air Theater	x	x	x	x	x	x	x	x	x	x	√	x	x	√	x
Shops :	√	x	x	x	√	√	x	x	x	√	√	x	√	x	√
Interventions for addressing environmental issues	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

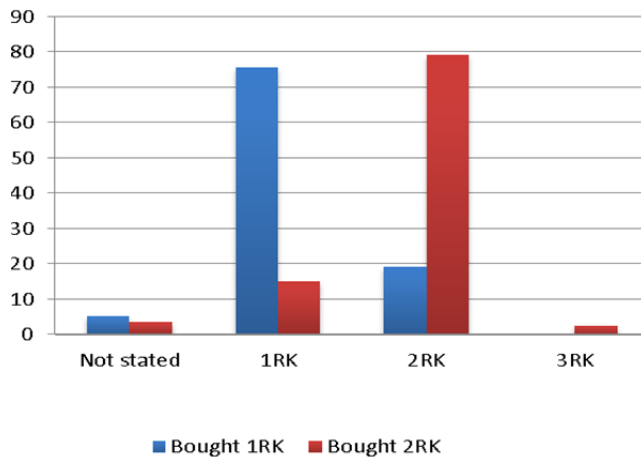
Profile of affordable housing customers

An analysis of the occupation of 721 members of Griha Pravesh revealed that only 10.72% are employed with salary slip, 52.71 are employed without salary slip and 35.69 are self-employed in the informal sector. This reveals the type of clientele for affordable housing in Ahmedabad.

Occupation of 721 Griha Pravesh members



Of the total of 164 Griha Pravesh members who have already purchased a house, 49% percent have bought a 1RK unit and 51% have bought a 2RK unit. Prior to this purchase, 19% of the customers who bought a 1RK unit had expressed interest in purchasing a 2RK unit while of the customers who bought a 2RK units, 15% had expressed desire to purchase a 1RK unit and 2% had expressed to purchase a 3RK unit.



Financing for affordable housing

The affordable housing initiatives in Ahmedabad are complemented by the efforts and products offered by HFIs. The HFIs and real-estate developers have tie-ups before the launch of projects, and they are present at project launches to explain their product range to customers etc. For example, based on the experiences and observations at the launch of DBS’s Umang Lambha project, MHFC decided to support DBS and Saath in organising a Credit Camp where potential customers could have detailed interaction with housing finance companies that needed to understand the financial positions of potential clients and collect essential documents for loan processing. This further led to a decision for setting-up Griha Pravesh.

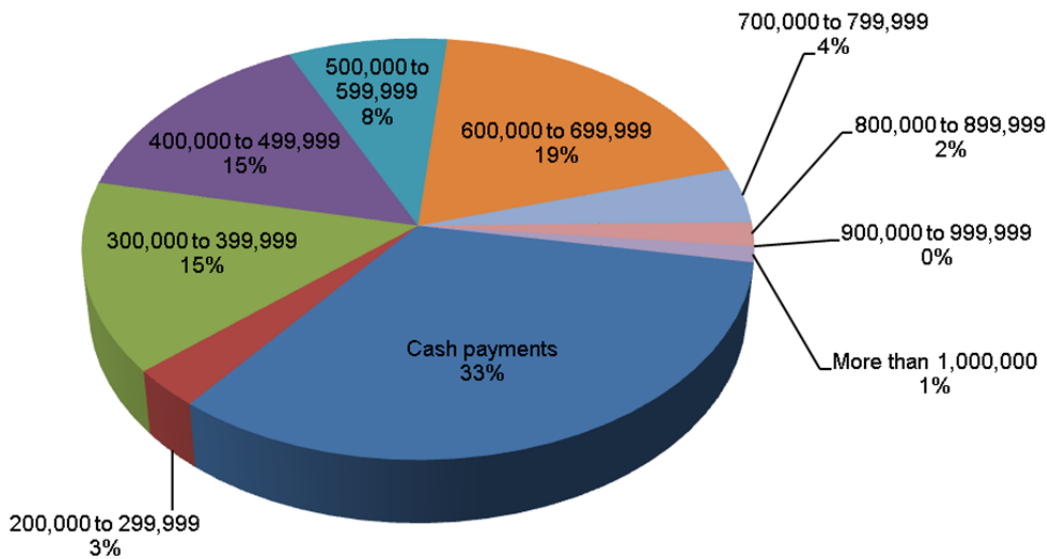
While the larger housing finance providers offer loans at lower rates of interest, the HFIs targeting the lower income groups offer loans of Rs.250,000 to 600,000 to 1,000,000 with the rate of interest varying

between is between 12 to 14% with cheapest loans at 11% being offered to customers where the woman is a co-owner of the property.

From the developer's perspective, there are more cancellations of bookings and the time-lag between a customer deciding to purchase a house and the sanction of loan is longer. This brings in uncertainties and affects the cash-flow.

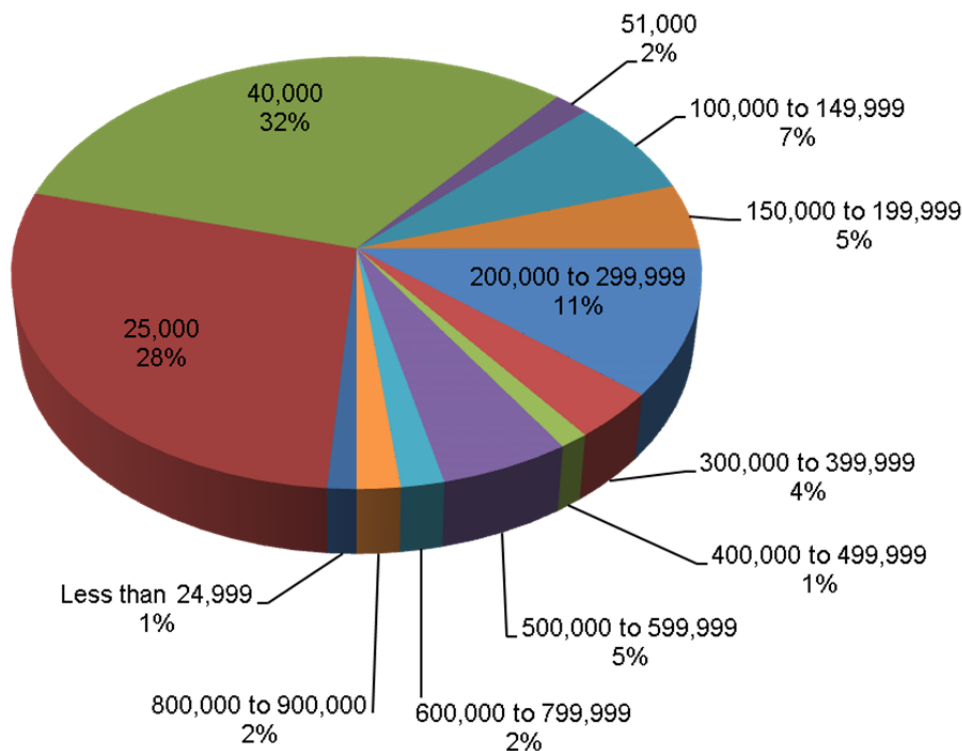
Of the 164 members who have purchased a house, 110 (67%) have taken home-loans while 54 members (33%) have paid for the house with cash. 33% have taken loans of between Rs.200,000 and 499,999, primarily for 1 room units, while another 27% have taken loans of between Rs.600,000 and 699,999, primarily for 2 room units, while 17% have taken loans of between Rs.500,000 and 699,999. 1% of the customers have taken loans of more than Rs.1,000,000 (USD11,598).

Loan amount range for GP customers



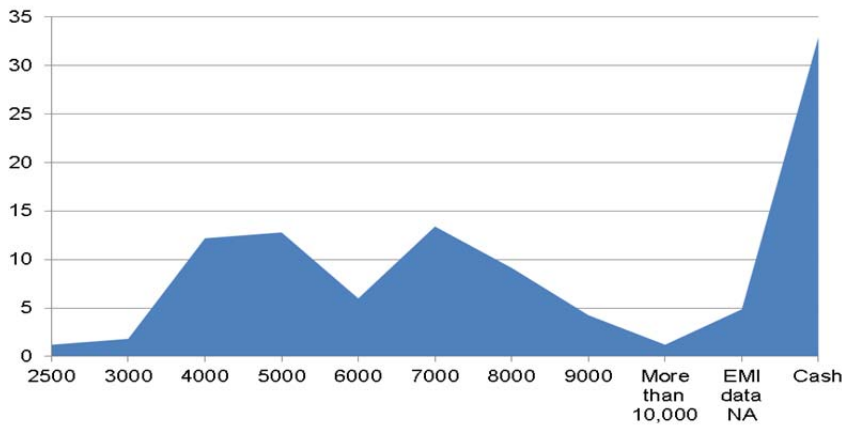
The Griha Pravesh members have paid varied amounts of margin money/ down payments for the house purchase. 29% have paid less than Rs.25,000; 32% have paid Rs.40,000, and 14% have paid Rs.50,001 to Rs.199,999. 10% have paid over 400,000.

Margin money/ Down-payments made by GP customers



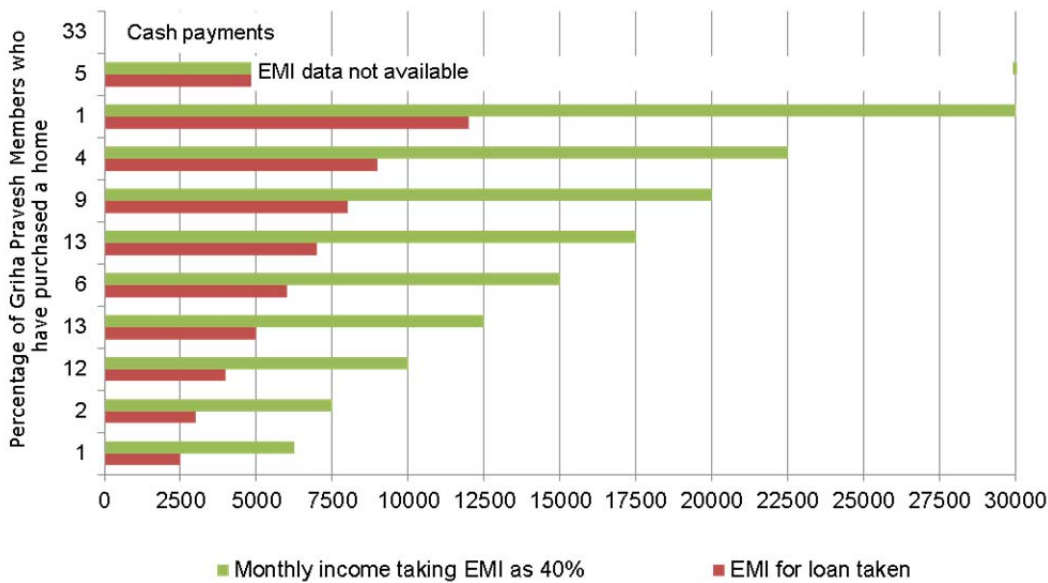
3% of the Griha Pravesh members pay EMIs of between Rs.2,500 to 3,999; 25% pay EMIs of Rs.4,000 to 5,999, 6% pay EMIs of Rs.6,000 to 6,999, 14% pay EMIs of between Rs.7,000 to 7,999 and 9% pay EMIs of Rs.8,000 to 8,999. Only 5% members pay EMIs of over Rs.9,000.

Monthly EMI of Griha Pravesh customers



Taking the EMI as 40% of the home-buyers' monthly income, 15% have incomes of less than Rs.10,000 per month; 41% have incomes of Rs.12,500 to 20,000 per month and 10% have incomes of Rs.22,500 to 37,500.

Monthly incomes based on EMI of home buyers



Conclusion

Despite the absence or very limited incentives for those catering exclusively for the 'affordable housing' clientele, affordable housing is a profitable option for both – HFIs as well as real-estate developers,. This is documented by MIM and is amply demonstrated by the increase in affordable housing projects as well as HFIs offering products specifically for lower income groups. This was also acknowledged at a Seminar on affordable housing in Ahmedabad (DBS 2013).

In Ahmedabad, the new City Development Plan and revised development controls will further catalyse the affordable housing supply. The experiences of DBS and MHFC in Ahmedabad highlight the fact that developers and HFIs require different skills for understanding of potential customers, followed by introduction of processes that contribute to minimising costs, and building partnerships amongst

developers and HFIs. The incentives being offered by the central and State government are contributing to more stakeholders getting involved in affordable housing supply.

In terms of the customers of affordable housing projects, as indicated by Griha Pravesh's data, a significant number of customers are from the informal sector and have succeeded in purchasing a house to meet their needs and affordability. Although a large quantity of the houses are being purchased with cash by higher income households, over 50% of the houses are bought by people from the targeted groups. The data also reveals that the range of incomes and capacity to pay the margin money is wide.

The limitations of the large affordable housing schemes are primarily the lack of interventions for incorporating localised environmentally appropriate solutions such as rain-water harvesting, etc. and in the use of alternative technologies or building materials.

Abbreviations

AMC	Ahmedabad Municipal Corporation
ASHRAM	Academy for Sustainable Habitat Research and Management
AUDA	Ahmedabad Urban Development Authority
BSUP	Basic Services to the Urban Poor
CBOs	Community Based Organizations
DBS	DBS Affordable Home Strategy Ltd.
EMI	Equated Monthly Instalment
EWS	Economically Weaker Section
FAR/ FSI	Floor Area Ratio/ Floor Space Index
GoI	Government of India
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
LIG	Low Income Group
MHFC	Micro Housing Finance Corporation
MIG	Middle Income Group
MoHUPA	The Ministry of Housing and Urban Poverty Alleviation
NGOs	Non-Governmental Organisations
NPA	Non-Performing Assets
SNP	Slum Networking Project

Exchange Rates 17-06-2013	INR
Euro	77.35
US Dollar	57.99
British Pound	91.09

References

- AMC, 2006. City Development Plan Ahmedabad 2006-2012. Jawaharlal Nehru National Urban Renewal Mission. Ahmedabad Municipal Corporation, Ahmedabad Urban Development Authority and CEPT University.
- AUDA, 2013. Second Revised City Draft Development Plan 2021. Ahmedabad Urban Development Authority.
- Bhatt, M., 2003. Understanding Slums: The case of Ahmedabad, India for Case Studies for the Global Report on Human Settlements 2003.
- CEMS, 2012. New Frontiers in Affordable Housing: Notes from the Field, CEMS Report April 2012, Indian School of Business (ISB)
- Census of India, 2011. Government of India.
- CMF, 2007. A Report on Low Income Housing in India: Challenges and Opportunities for Microfinance for Habitat for Humanity India. Centre for Micro Finance at the Institute for Financial Management and Research, Chennai.
- Collins English Dictionary, 2009. Complete & Unabridged 10th Edition 2009, HarperCollins
- DBS, Ashoka & ASHRAM, 2013. Seminar on Strengthening the Affordable Housing Movement, Report on Launch Event and Seminar, 16 March 2013.
- Gol, 1988. Report of the National Commission on Urbanisation, Volume 1, Government of India.
- Gol, 2010. National Sample Survey Report on Housing Condition and Amenities in India, 2008-09, Ministry of Statistics and Programme Inspection
- Hamdi, N. and Goethert, R., 1985. Implementation: Theories, strategies and practice. Habitat International, 9(1), pp. 33-44.
- High Level Task Force, 2008. Affordable Housing for All, Ministry of Housing and Poverty Alleviation, Government of India, December 2008
- HUD, 2013. Office of Affordable Housing Preservation, U.S. Department of Housing and Urban Development.
- Intellectcap, 2007. Inverting the Pyramid: The changing Face of Indian Microfinance, supported by International Finance Corporation
- KPMG & NAREDCO, 2012. Bridging the Urban Housing Shortage in India.
- KPMG, 2010. Affordable Housing - A Key Growth Driver in the Real Estate Sector
- Lakhia, R., 1982. The First: Cooperative Housing Society. VIKSAT-NFD.
- MGI, 2010. India's Urban Awakening: Building Inclusive Cities, Sustaining Economic Growth, McKinsey Global Institute.
- MIM, 2010. Building Houses, Financing Homes: A Study Report of India's Rapidly Growing Housing and Housing Finance Markets for the Low-Income Customer, Monitor Inclusive Markets.
- MoHUPA, 2005. Guidelines for Basic Services to the Urban Poor.
- MoHUPA, 2006. Report of the Technical Group on Estimation of Urban Housing Shortage, the Eleventh Five Year Plan (2007-12).
- MoHUPA, 2006. Report of the Working Group on Urban Housing with Focus on Slums, the Eleventh Five Year Plan (2007-12).
- MoHUPA, 2007. National Urban Housing and Habitat Policy, 2007
- MoHUPA, 2009. Guidelines for Affordable Housing in Partnership, JNNURM Mission Directorate.
- MoHUPA, 2009. Standing Committee on Urban Development 2008-2009, Urban Housing, Fortieth Report.
- MoHUPA, 2011a. Rajiv Awas Yojana – Guidelines for Slum-free City Planning
- MoHUPA, 2011b. Amendments to the Guideline for the Affordable Housing in Partnership Scheme.
- MoHUPA, 2012a. Task Force Report. Task force on Promoting Affordable Housing, Government of India, Ministry of Housing & Urban Poverty Alleviation, November 2012.
- MoHUPA, 2012b. Report of the Technical Group on Urban Housing Shortage (TG-12) (2012-17), Government of India., Ministry of Housing and Urban Poverty Alleviation, National Buildings Organization.
- NAHC, 2006. National Affordable Housing Consortium. National Affordable Housing Consortium.
- NHB, 2012. Report on Trend & Progress on Housing in India, National Housing Bank.
- NIUA, 2010. Cost effective housing: BSUP scheme for Economically Weaker Sections, Best Practice - under JNNURM, Peer Experience and Reflective Learning.
- Parekh, D., A. Bhatt, R. Jhabvala et al., (2008), Report of the High Level Taskforce on Affordable Housing for All.
- Turner, J.F.C., 2002. Reflections on Scale and Subsidiarity in Urban Development and Poverty Alleviation: A Personal View of Development by People, A keynote address for the Urban Forum 2002: Tools, Nuts & Bolts at the World Bank, Washington DC April 2-3 2002.