HOUSING FOR ALL IN INDIA
(An Empirical Study on the Housing Scheme and it Challenges)

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ABSTRACT *A roof over one's head is a dream that every human being aspires for. While the rich people create palaces for themselves, the poor try to satisfy themselves with a shelter which may be even a plastic tent. Housing is an important sector for the Indian economy and cities are engines for economic growth. Over the past years it has been realised that sustainable housing and urban development are crucial for economic and social well-being of the people. Affordable housing has thus become one of biggest challenges of the present times and with the increasing gap between the demand and supply of housing the government regulations have become a game changer. In the view of above, the paper aims to discuss the scenario and challenges of housing from five different aspects. The first being the current scenario of housing, second being the policies of the government, third being the land use patterns, acquisitions and rehabilitations, fourth segment being the emergence of green technologies in urban housing and fifth being the infrastructural requirement under affordable housing for all.*

Key words: *Sustainable housing, Green Technologies, LARR ACT (Land Acquisition, Rehabilitation and Resettlement), HFA (Housing for All), CLSS (Credit Linked Subsidy Scheme), BLCH (Beneficiary Led Housing Construction), PMAY -U*

INTRODUCTION

Cities are the engines of economic growth and urban Indians who form more than one-third of the population, produce more than three-fifths of the country's GDP [1]. Housing which is one of the most important sector of the Indian economy has also been placed at the centre of New Urban Agenda of Habitat III, 2016.[2] Increasing population along with rapid urbanisation has led to a significant shortfall of housing in the country. The housing shortage for 2012-2017 is estimated to be 18.78 million units in the urban areas and 43.90 million units in the rural areas.[3]. While TG report highlights the housing deficit of 18.78 million units, the data of Census of India indicates that approximately 11.07 million houses were vacant in 2011 in Urban India. This brings us to the problem of mis-match between the demand and supply of housing market. Also, the surplus of housing in higher income groups in comparison to the deficit in the EWS and LIG categories is a major issue. Adding to this the, further reports indicate that India's Urban population which had an annual growth rate of 2.6 in 2011[4] is estimated to grow to 814 million people by the year 2050[5] which may lead to a drastic growth in number of homeless population as well as short term migrants. The scarcity of developed land, increased cost of construction, several encumbrances in land deals, absence of viable rental market lack of accessibility of homes to the poor, lack of availability of finance and lack of technological developments pose a serious challenge to affordable housing not only for the landless people in rural area but also for the people who lack infrastructure and basic minimum facilities in urban areas. This paper aims to highlight the affordable housing policies of the government from various aspects in terms of Land settlement, availability of finance, technological innovations, availability of infrastructure. The paper aims to bring out a clear picture of the present scenario of housing sector in the Indian economy in the light of affordable housing for all.

OBJECTIVES AND RESEARCH METHODOLOGY

Affordable housing has been of paramount importance to the policy makers of the country.[6]The paper aims to briefly discus the major policies implemented by the central and state government in the light of reducing the gap between the demand and supply of housing .With a closer look at four different aspects briefly which are the present scenario of Urban Housing in the economy , the land settlement and rehabilitation, the finance needs and pattern for urban housing , the move towards green technology as an alternate to development of new technology in the housing sector and finally a look at the infrastructural and

transportation requirement in the housing sector the paper shall try to give a clear picture of the opportunities and challenges for further research.

With the help of secondary data available through the central and state ministry and available literature in the journals, the paper tries to give a fair view of the present structure, scenario and challenges to affordable housing which has been the paramount of research in the past few years.

THE PRESENT SECNARIO OF HOUSING IN INDIAN ECONOMY

Since independence, the government of India has adopted number of policies and programmes to house people like Integrated Subsidised Housing Scheme (1952), Low Income Group Housing Scheme (1956), Slum improvement Scheme (1956), National Slum Development Programme (1996), Scheme for Housing and Shelter Upgradation (1989), Night Shelter (1988-1989), Valmiki Ambedkar Awas yojana (2001-2001) VAMBAY, Rajiv Awas Yojana, latest being Pradhan Mantri Awas YOJANA – Urban (PMAY-U).[7]

Recognising the need for greater private participation the government has also drafted a Public Private Partnership Policy. Also looking towards the ned for rental housing, a National Urban Rental Housing Policy along with Model Tenancy Act has been drafted so as to catalyse the market for formal rental accommodations.

In June 2015, Hon'ble Prime Minister launched the Pradhan Mantri Awas Yojana – Urban (PMAY-U) to provide housing for all by 2022. The scheme provides central assistance to Urban Local Bodies and other implementing bodies through state governments and union territories. The programme has four pillars namely Credit Linked Subsidy Scheme (CLSS) and the other three centrally sponsored schemes namely, in-situ rehabilitation of existing slum dwellers using land as a resource through private participations, affordable housing in partnership and subsidy for beneficiary led individual house construction/enhancement. The PMAY-U has introduced built in flexibility, demand driven approach and a comprehensive Housing for All Plan.

Under in-situ slum redevelopment (ISSSR), the private developers are given land and incentive to monetize the part of the demarcated land to build housing stock for the low-income household especially the slum dwellers. Along with the resettlement and rehabilitation, interim accommodation is also provided. The states receive a grant of Rs 1 Lakh per house on an average, for providing houses to eligible slum dwellers.[8]

Under Credit Linked Subsidy Scheme (CLSS), initially the weaker sections were given subsidy on home loans which was extended to the MIG in the year 2017.The nodal agencies like Housing and Urban Development Corporation (HUDCO) and National Housing Bank (NHB) at the central level are responsible for channelizing the subsidies to lending institutions and monitoring the progress.

For housing provided under the Affordable Housing in Partnership (AHP), financial assistance is provided at the rate of Rs 1.5 Lakh per EWS house. For Beneficiary Led Housing Construction (BLCH), central assistance of Rs 1.5 lakhs is provided for the construction or upgradation of new houses to families belonging to EWS categories.[9]

Like this, the integration of urban schemes helps the cities to upgrade themselves faster in terms of infrastructure, technology and meet the necessary demand. In order to converge the schemes together to provide an integrated framework may smart city proposals have included housing under area based development and converged it with PMAY-U.

Atal Mission for Rejuvenation and Urban Transformation (AMRUT) aims to provide water connection, sewage connection, reduce pollution and improve open spaces thereby meeting the basic infrastructural needs for housing.

Swachh Bharat Mission (Urban) aims to eliminate open defecation, eradicate manual scavenging and incorporate modern and scientific Municipal Solid Waste Management thus providing basic sanitation facilities to all.

The Scheme of Shelter for Urban Homeless under the Deen Dyal Upadhyay Antodyay Yojana

– National Urban Livelihood Mission, ensures permanent shelters equipped with infrastructural facilities to urban homeless population, also catering to the needs of vulnerable segments of urban homeless.

LAND ACQUISITION, REHABILITATION AND RESETTLEMENT

The link between land acquisition, rehabilitation and resettlement and affordable housing can be established with the matter of fact that there is scarcity of land development and the extensive shortage of adequate and affordable housing in India. According to estimates India has a shortage of 19 million housing units in urban areas.[10] out of which 80 percent of this shortage relates to inadequacy rather than absence of housing in response to which Pradhan Mantri Awas Yojana aims to build 20 million new units by 2022.[11]

The question arises that how should one assess the considerable policy attention now directed at affordable housing in urban areas. Three parameters stand out as an answer to this – Adequacy and Affordability which relate to the size, cost and an appropriate definition of "low

– income" households. The third parameter which is "Viability "has remained unaddressed till now. Viability refers to the ability of meaningfully making a life in housing created or enabled by a policy action which thus exceeds the scope of costs and benefits in policy making.

"Viability "for low- income groups can be defined in three ways – i) linking employment and livelihood (that is people should live where the jobs are) ii) connectivity (access to public and transport) and iii) access to physical and social infrastructure (which are community schools, hospitals and so on).[12] If these aspects are not considered, especially the connection to jobs and livelihoods, no affordable housing policy will reach its intended results. Ignoring location or geographical contiguity means ignoring the actual nature of what makes a "house" into "housing "and not merely a "unit". The critical question hence therefore, is not just how to use the LARR ACT to ensure redevelopment for affordable housing in urban areas but rather, using land acquisition or pooling (as feasible) on one hand, but also multiple other strategies such as in – situ upgradation, credit linked subsidies, enabling beneficiary led housing enhancement and so on.

The LAAR Act include its definition of "public purpose "acquisition for the following purposes:

a) Project for housing for such income groups as may be specified from time to time by appropriate government [S. 2(1) (d)]
b) Project for planned development or improvement of village sites or any site in urban areas or provision of land for the residential purposes for weaker sections in rural and urban areas [S. 2(1) (e)
c) Project for residential purposes for the poor or landless or for the persons residing in areas affected by natural calamities or for persons displaced or affected by the reason of implementation of any scheme by the government etc [S.2(1) (f)][13]

There are two challenges which need to be overcome. One that we should be pragmatic about the difficulty in using LARR instruments of urban housing till now and thereby need to create such policies which try to reduce this gap between the needy and the detailed process and definitions listed in the act. Two. it is necessary to challenge the historical reluctance to use LARR's provisions for affordable housing.

It is against these challenges that we must understand what measure does PMAY promote and what not. PMAY focuses on the four areas a) redevelopment using private developers using land as a resource, where extra TDR/FAR can be provided to the private sector to make such projects financially viable: b) credit linked subsidy for weaker sections as a way of promoting affordable housing: c) affordable housing in PPP mode, with Central Assistance where 35 percent of constructed houses are for EWS category: d) subsidy for beneficiary led individual house construction.[14]

This means that while the public purpose provisions of the LARR Act can theoretically be used for affordable housing, these must fulfil requirements of consent, R&R, compensation, social impact etc, that pertain to displaced / affected families.

FINANCING AFFORDABLE HOUSING

The housing sector has interred – linkages with nearly 270 industries and thus has a direct impact on GDP, employment generation and growth and consumption pattern in the country. To develop housing, we need to have a well developed financial market which is still at its nascent stage in India as compared to other countries. The outstanding amount of housing finance accounts for around 8 percent of GDP in India. The housing finance market is thus expected to increase with increasing urbanisation. The Urbanisation, in India is progressing rapidly and is expected to increase from 31 percent in 2011 to nearly 41 percent in 2030 which makes a major policy concern in India to reduce this widening gap between demand and supply of these housing units and consequent need of housing finance solution. Affordable housing is thus critical for the country for a balanced and sustainable funding model.

The existing model caters to high income segments. In contrast, for the EWS group as well as slum dwellers the source of finance are almost lacking.

The government, both at the centre and states, is a facilitator, and is assisted by two regulators, Reserve Bank of India (RBI) and National Housing Bank (NHB). The housing finance market is dominated by commercial banks, both domestic and foreign. In addition, there are cooperative banks and housing finance companies, self-help groups, micro finance institutions and NGO's.

The role of government has changed from that of provider of housing units to more of a market facilitator. Five Year Plans starting from 1951 has assigned housing sector a permanent place in the economy. Therefore, the National Buildings Organisation (NBO) was established in 1954 and Housing and Urban Development Corporation (HUDCO) in 1970 to comprehensively deal with the problems of housing shortages. The central and state governments have also been providing tax concessions for housing sector. Several state governments have passed legislations to safeguard the interest of lessors, encouraging construction of properties for rent. The government has also opened up real estate sector to Foreign Direct Investment (FDI0', wherein 100 percent of townships, built up infrastructure, construction development projects and real estate through automatic route has been permitted.

The RBI has initiated several measures in housing sector and requires commercial banks to lend a stipulated amount of deposits to housing sector under priority sector which includes financing individuals and others. It also reckons investments made by banks issued by specific housing companies under priority sector lending. Other measure like investments made by banks in Mortgage Backed Securities (MBS) since 2004 as flow of credit to housing, assigning lower risk weight to housing, and LOW interest rate environment has contributed to increasing housing loans. International agencies are also supporting the cause of Housing for All.UNDP is committed to work closely with government on affordable housing. World Bank has also channelled resources through National Housing Bank to expand access to sustainable housing finance for LIG.

GREEN TECHNOLOGIES IN AFFORDABLE HOUSING

In 2001, India introduced the Energy Conservation Act which led to the development of a first-generation Energy Conservation Building Code (ECBC) for the building sector. Recently ECBC code has been revised to incorporate additional stringency in the requirements.[15]. Recognising the importance and need of the day, bureau of Indian Standards (BIS) has also added Part 11 Approach to National Building Code (NBC).[16]

Ministry of New and Renewable Energy (MNRE) offered capital subsidy incentives for purchase and installation of solar water heating and solar lightning equipment in houses. While the existing green rating programs encourage voluntary certifications of the housing complexes, concerted policy efforts are required to promote the use of energy efficient and green technologies for affordable housing.

Design Philosophy

Better housing enhances the quality of life of residents and leads to higher productivity as well income generating capabilities. Hence, affordable housing design should aim to provide a healthy and comfortable environment to the residents. The design philosophy of affordable housing should incorporate key performance metrics such as indoor air quality, thermal comfort and energy performance index. Affordability should be determined based on the entire life- cycle costs which allows for a holistic approach in designing and selecting the appropriate technologies for long term benefits of the residents in

the affordable houses. The housing design should also incorporate climate responsive design and encourage use of local building materials.

Design Approach

Energy efficient building are typically designed using two approaches – prescriptive driven or performance driven. Prescriptive approach specifies requirements for each building components. Whereas, in performance approach, a detailed energy simulation of the building using simulation models is performed to assess whether the building meets or exceeds the overall performance criteria for the building. The prescriptive approach is more suitable approach.

Definition of Thermal comfort for India

Predominantly, the buildings in India are designed for tight or fixed operating conditions to achieve thermal comfort. A comprehensive study, India Model for Adaptive Comfort (IMAC), indicates that Indians can be comfortable at higher temperatures bands than those prescribed by international standards.[17]Recently, NBC and ECBC 2016 have also incorporated IMAC as a design method of the new buildings. IMAC provides an opportunity to design houses with broader temperature bands and design suitable active and passive technologies to achieve the same.

EFFICIENT ENVELOPE

The envelope of the affordable housing should be designed to minimise the heat gain inside the building. High reflectance roof is one of the cost-effective technologies to reject solar radiation falling on the building. The Higher Thermal capacity of the roof and wall materials, commonly known as the thermal mass , further dampens and delays heat gain inside the building. The most important property for the fenestration (such as windows) is solar heat gain coefficient, commonly known as SHGC. SHGC quantifies the fraction of incident solar radiation admitted through the fenestration. Fenestration with lower SHGC leads to lower heat gain inside the building. Reduction in the heat gain improves thermal comfort of the residents inside the building and reduces the need to operate active cooling systems. Phase Change Materials (PCM) is also an effective approach to increase comfortable hours inside naturally ventilated buildings.[18]While the research on PCM is at the initial stage, this innovative technology may become an integral component of affordable housing.

VENTILATIVE COOLING

The primary purpose of the ventilation is to maintain indoor air quality in the buildings. However, the well – designed ventilation can also use outdoor air to provide space cooling whenever the environment conditions are favourable. Ventilative cooling can be especially effective for the affordable housing where predominant occupancy period is during the night hours. Several strategies such as cross- ventilation using well designed openings have been found to provide 15-20 percent comfort and energy benefits in the Indian houses.[19]

HOUSING THE POOR IN URBAN CITIES AND INFRASTRUCTURAL REQUIREMENTS

The 2011 Census indicates that about 1.37 crore (17.4 per cent) urban households live in slums. The urban housing shortage, according to a technical Group (2012) was 18.78 million units of which 96 percent was in the EWS (56 percent) and LIG category (40 percent). This category that is the main target group of the "Housing for All" 'scheme. Class I cities (with 100,000 plus population) continue to be attractive places for the migrants. Most migrants cannot afford proper housing and, therefore, live in slums /shanties and in dwelling units that are cramped and lack basic amenities

The Smart Cities Mission guidelines state that its objective is to promote cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment" with the application of smart solutions. The Smart Cities focus on "sustainable and inclusive development" and on creating replicable models that will inspire other cities to transform. The Smart Cities Plan (SCP) consist of an area based plan (ABD) and a pan city plan. The ABD aims at transforming a specific are within the city by improving its design, infrastructure and mobility, environment etc; and the pan city plans focus on improving city governance /management mainly through the use of smart technology solutions. However, housing has not been a major focus area in the Smart Cities Mission or in AMRUT, though the former does have affordable housing for poor as one of its core elements.

The Smart Cities mission along with Housing for All provides great opportunity for cities to provide innovative housing for the poor. The new houses can be designed for energy efficiency – providing houses with good light and ventilation you reduce energy needs. An example of innovative materials for rapid affordable mass housing is GLAA FIBRE REINFORCED GYPSUM (GFRG PANELS). A demonstration building made of GFRG panels have come up in IIT Madras. Housing for the poor can also be designed innovatively to not only provide adequate light and ventilation, but also allow them to carry on with their livelihood in vertical buildings. An example of this is the Karimadom Colony designed by the Costford (Laurie Baker Centre for Habitat Studies), Thiruvananthapuram, where open space is provided on each floor for carrying economic activities.

INFRASTURUCTURE

As per the 2011 Census, the urban population has increased to 377 million thereby registering a growth of around 32 percent. The housing shortage in rural India is estimated to be 47.4 million units, in 2012.As per the estimates, nearly 590 million people will live in Indian cities by 2030. With this population, India has an estimated urban housing shortage of 18.8 million units. This will be a significant population for which mobility services need to be thought through. The demand for urban transport in newly growing areas and now smaller cities will also need significant attention so that urban transport in these locations don't reach crisis proportions before they are addressed. The approach to small and medium towns in large and rural areas cannot be the same as for the metropolitan cities while their demands and problems are also significant, urban planners should not look at them with the peculiar lens out of their understanding of mega cities alone.

The Prime Minister Envisioned Housing for All by 2022 when the nation completes 75 years of its independence. In order to achieve this objective, Government has launched a comprehensive mission "Housing for All by 2022". The scheme comes with the aim of constructing more than two crore houses across the length and breadth of the nation within a span of next seven years (2015-2022). The scheme known as Pradhan Mantri Awas Yojana (PMAY) will be implemented as centrally sponsored scheme (CSS).

The Budget 2017 has proposed infrastructure status for affordable housing, a long – standing demand of developers, and also increased the allocation for the PMAY from Rs 15000 crore to Rs 23000 crore, bringing the country closer to realising the mission. Granting infrastructure status to affordable housing is significant as it will provide cheaper sources of finance to developers and also open up additional avenues for developers to raise funds.

The major challenges which the market faces on the demand and supply side of infrastructure are : a) complex and lengthy processes which include land conversions , building plan scrutiny and approvals , obtaining construction permits and other long lists of NOCs ; b) lack of adequate external infrastructure and connectivity of which some governments have taken a note and have taken steps to simplify and streamline policies and processes – for instance the land pooling scheme and re- densication scheme in Madhya Pradesh , GPS based Physical progress Monitoring System in Karnataka and so on ; c) Water , Sanitation and Health problems which include inadequate coverage , low pressure , poor quality are some of the most important feature which pose as severe challenges with rapid increase in urban population and extension beyond the city limits.

Urban Transport is another important name for a broad sector which covers variety of modes of intra – city transport for people and goods, including walking, bicycling, non – motorised transport, public transport and private- public transports. UT is important as it could be a facilitator or pose a burden on the urban contribution to city productivity and the national economy. The defining trait of the urban transportation is the ability to support higher densities in the urban areas and efficiently, affordably move people and goods through the city. Agglomeration economies rely on the provision of basic urban infrastructure services in general and UT infrastructure in particular as it connects people and residential areas to education and employment locations, expanding opportunities and choices for people to access alternate education and employment.

CONCLUSION

Capacity building for all players at different levels is an important pre – requisite to achieve the national resolve to provide housing for all by 2022. States have an important role to play in this "housing and urban

development" is a state subject under the constitution. Through their policies states must prepare a comprehensive housing plan clearly articulating the right institutional and legal structures for enabling the ecosystem to achieve this ambitious task. Innovations in the housing sector needs focussed attention. More significant could be the policies like Affordable Housing Zones. Rajasthan, has, for example in Kota and Jodhpur, implemented under Affordable Housing Policy (2015), a model where the private developer constructs the affordable housing units in 75 percent of unused or vacant land in return of 25 percent of land for free sale. The Ranchi Master Plan 2037 has notified proportionate portions of land for affordable housing zones.

Also, Practices in low cost housing is a must in this context role of Micro finance institutions could be examined further. Housing finance is an important issue for the national economy and there is a need to strengthen the institutions like HUDCO, NHB, and NBO so as to encourage them to undertake extensive research on housing developments in India. Similarly, the state and central governments need to prepare plans for housing fiancé as a booming housing sector can ensure a strong national economy while a bust lead to recession, unemployment and disaster.

Also, a set of plethora of cost effective approaches to incorporate energy efficient and green technologies through housing layouts, incorporating key design parameters, construction components and green technology options could lead to suitable development of urban housing, also providing an opportunity to scale while minimising the cost of housing design. The smart Cities Mission along with Housing for All provides great opportunity for cities to provide innovative housing for the poor. The new houses could be designed for energy efficiency – providing houses with good light and ventilation to reduce energy needs. This will ensure that the vision of affordable housing shall be realised with string commitments from all stakeholders including the governments and private sector.

Securing the livelihoods of the poor and improving their health can be achieved only if the housing for the poor does not remain a target meeting exercise.

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