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A Study: Housing Finance Mechanism and Level of Assistance for Ews in Surat Urban Area (India)

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Abstract: Housing shortage in India is increasing rapidly, manly because supply is much less than the housing demands. In urban area, the problem is more complex and complicated as the pressure for houses and services due to both natural increase and migration. The most important resources required to purchase House is finance. Housing plays an important role in a country's economy, typically accounting for 10 to 20 per cent of total economic activity. [1] In this present paper investigations have been made on all the Housing finance Institutes in India and their mechanism in system. Present paper is a classical example for affordable shelter economical weaker section for metropolitan city like Surat.

Key words: Housing % Finance % Affordability % Economical Weaker Section

INTRODUCTION

Housing is often an individual's biggest asset. In the housing sector, the problem further compounded by the mobility of the families, both the poor and the rich, to spend enough for the basic services, which also requires finance. The availability of housing finance is, therefore, crucial for overall economic development as well as for a household's welfare and its quality of life.

On the housing front, despite the substantial increase in the housing stocks in the urban areas, the housing situations continues to be daunting and even more complex by the diverse nature of its population and its geographical space. The mind-boggling forecast is that is that nearly 36% of India's population will be leaving in urban centre by the year 2025 [1]. This forecast falls into perspective when we realize that even at this present moment, urban India is 24.71 million dwelling units sort as relieve in the draft 11th plan [2] working group report on urban housing which states that the housing requirement over the 11th plan period (2007-2012) is estimated to be at 26.53 million units including the housing shortage as on 2007. Over 97% of the total housing shortages are for EWS and LIG categories. Investment requirement for the same for the 11th plan period is estimated at Rs. 361318.10 crores. To encourage and make it easy for people to own their homes is clearly the challenge of the hour [3].

Any attempt to solve the magnitude of housing shortage has to deal with issue of the urban households belongs to EWS & LIG. As much as 70% of urban population belongs to this two income groups (as per NCEAR study). And as mentioned above, out of total housing needs of 26.53million units in urban areas by 2012, as many as 97% will be required by the EWS & LIG people [4].

Study area: Surat is one of the fastest growing cities between Mumbai and Ahmedabad corridor. The city of Surat is situated on the bank of river Tapi having coastline of Arabian Sea on its west. Surat is the main center of business and commerce in South, at present Surat municipal corporation (SMC) area is about 334 sq. km which was 112 sq. km before the recent city limit extension before July 2006 as shown in Map.1. [5,6].

Scope and objectives of the study: To understand the affordability question more deeply, affordability was analyzed to indicate the levels of affordability at each income level. Since all the housing finance institutes in India have been created with a mandate to serve the EWS and the LIG sections of the society, they were included in the study on affordability. The HIG group is however excluded from the study. The opinion of the respondents to the questionnaire on the effectiveness of institutional

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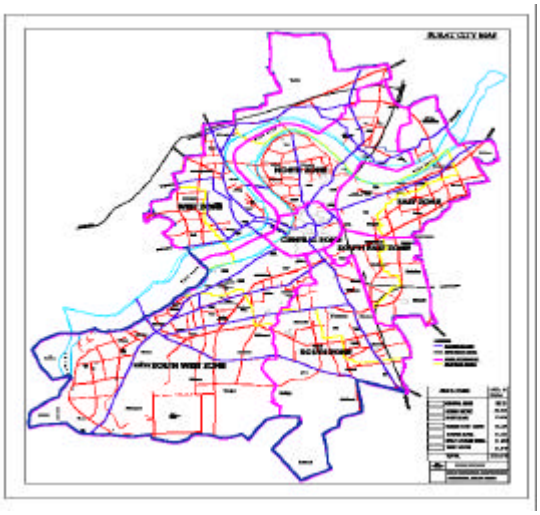

Map:1 SMC area

Table 1:

	Investment in Hosing		
Plan No.	Public	Private	TotalRs. Crores*
1st	250	900	1.150
2nd	300	1.000	1.300
3rd	425	1.125	1.550
4th	625	2.175	2.800
5th	1.044	3.636	4.680
6th	1.491	11.500	12.991
7th	2.858	29.000	31.858
8th	7.750	69.476	77.226
9th	10.430	1.26.170	136600
10th	1.26.694	2.36.447	3.63.141
11th	2.54.500*	5.22.000*	7.76.500*

*Estimated figures as per plan documents.

finance system vis-à-vis informal finance system depicted a less than the desired level of effectiveness of the institutional finance system.

To investigate the effectiveness of existing institutional housing finance mechanism. [7,8].

Planned investment: The rate of construction of housing in India is less than five houses per thousand populations per year, while the desired rate according to the United Nations is ten houses per thousand populations per year to eliminate housing shortage by the year 2007.

Table-1 gives an overview of the investment pattern in the housing sector over the successive plan period and reflects the relative role of public and private in the creation of housing stock.

The total investment proposed in housing has increased from Rs. 11.5 billion under the first plan to Rs. 7.26 trillion in the tenth plan. However, the absolute investment in housing as a percentage of the total plan investment has declined due to the shift in the government's emphasis from provider to facilitator

Structure of Housing Finance Institutes: The study estimate the share of formal sector in the total housing assistance through financial agencies like Life Insurance Corporation of India (LIC), General Insurance Corporation (GIC), Unit Trust of India (UTI), Commercial Banks, Provident Fund and Housing Finance Institutes (HFI) like Housing Development Finance Corporation (HDFC). Whereas the informal sector includes the households arrange finance for themselves, through personal savings, borrowing and other informal sources and public and private sector employers extending housing loans to their employees.

Housing is a state subject. More states have set up Housing Boards and Slum Clearance/Development Boards at the state level, Prior to the First Five Year Plan, housing was mainly dealt by the private sector and some budgetary allocations were made for the housing of government employees. Figure 3.1 shows a schematic representation of the formal housing finance system [9].

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Figure 1 shows a schematic representation of the formal housing finance system.

Indian Housing Finance Sector: The Indian housing finance industry has grown by leaps and bounds in the past few years. Total home loan disbursement by banks and housing finance companies (HFCs) has risen from

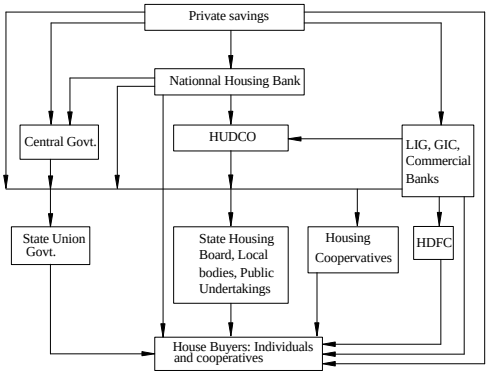

Fig. 1: A network of Formal housing Finance System

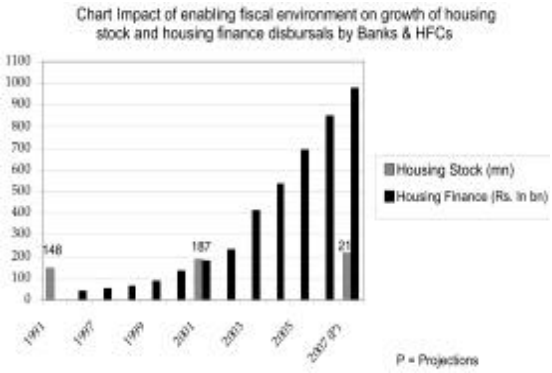

Fig. 2: Housing Stock and finance distribution

Rs. 29359.29 crores in 2001-02 to Rs. 51672.7 crores in 2002-03 witnessing a phenomenal growth of 76 % during this period as shown in Fig. 2.

The urban households 66.30 Mn and total housing stock is 58.83 Mn and the total shortage of dwelling unit during the year 2007 will be 24.71 Mn. And shortage at the end of 11th plan period i.e. 2012 will be 26.53 Mn.

The government in taking new initiatives to tackle the problem of housing finance. The creation of several Housing Finance Corporation is one such step. The Finance Institution has a mandate to allocate a substantial part of their resources to meet the needs of the poor people. As stated earlier income groups for this purpose are categorized into Economically Weaker Section (EWS), Lower Income Groups (LIG), Middle Income Groups (MIG) and Higher Income Groups (HIG).

Aspects of affordable housing: The government in taking new initiatives to tackle the problem of housing finance. The creation of several Housing Finance Corporation is one such step. The Finance Institution has a mandate to allocate a substantial part of their resources to meet the needs of the poor people.

Affordable housing has three major aspects. a)Financial, (Government and public sector, public private partnership, financing through composite credit mechanism, self-help groups and tapping international capital); b)Technical, (cost of material, cost of construction technology and land and infrastructure development cost); c) Policy, (reorientation of central, state and local bodies, strengthening of building center, new approach to construction management) [10].

Wakely Diagrams and The Economics of Housing: According to Wakely *et al*. , the three most important parameters in housing economics are:

Initial capital cost of housing:	C
Total annual household income:	I
Annual economic rent:	R

The capital cost (C) is the initial; cost of housing; this includes the buildings cost, land cost, service cost and all relevant fees. The authors state that C is related to a notion of standards. According to them, in a given socioeconomics set up, C is related to the number of members in household i.e. number of persons per habitable room.

The annual household income (I) consists of the collective income of a family, including subsidies, family allowance and other social benefits where application and excluding direct taxation. Wakely *et al*. pointed out the general inequality in the distribution of household incomes where a small proportion of the households account for a disproportionately large amount of the income. To make any analysis, it is necessary to ascertain the percentage distribution of household of a given size in different income brackets. This relationship between the household incomes is normally represented in a 'Lorenz Curve', where the households are first ranked in ascending order of income and the cumulative percentage of households is plotted against the cumulative percentage of their income.

The third parameter of economic rent (R) is defined as the total sum of recurrent payments on a monthly or annual basis which is necessary to meet up the initial cost plus the maintenance cost of the dwelling unit possessed. It has therefore four components:

I. The amortization of the capital cost,
II. Interest on capital,
III. Maintenance cost and
IV. Management cost.

The parameters, C, I and R can be brought together in the form of 'three-two-by-two ratios' as shown in Fig. . Wakely *et al*. have stated that by definition the ratios are non-dimensional and comparisons are possible between countries without entering into the complexities of rates of exchange between national currencies.

Where, c is the initial cost of asset in years of annual income of households,

r is the annual economics rent as a percentage of capital cost and

p is the share of annual income devoted to rent. Then according to Wakely *et al*.

$$p = c \times r$$

From the above parameters it is seen that the economics viability of a housing programmed is a function of the values assigned to c, r and p. if p is fixed as a part of the overall social policy and market forces govern r, the ratio of cost of dwelling to annual income in limited. If this ratio is exceeded households cannot afford economic rent. If c is determined as per current cost of construction, r is, as before, determined by market forces, p may become more than what the households are willing to pay. Again if p and c are fixed at a relatively low point the corresponding r may not yield the minimum rate of return on the capital cost .

An effective housing policy, therefore, should consider the amounts of money residents are willing to pay for an accommodation and the standard of accommodation they expect [12]. In most societies there is a mismatch between the two and some income groups may require assistance from the public authorities to bridge this gap. Consequently, the housing finance institutes are expected to frame their policies according to the needs of the society. How effective they really are, is of course, a different question altogether. To look into the effectiveness of the housing finance institutes in India, the study below is carried out adopting the methodology framed by Wakely *et al*.

The affordability study: To understand the affordability question more deeply, affordability was analyzed using Wakely diagrams to indicate the levels of affordability at EWS.

Table 2: Interest Rates and duration of Loan Repayment for Different Income Categories

Category	Max. Annual Income (Rs.)	Interest Rate	Loan Duration	Percentage of Income on rent
EWS	39,600/-	5.68 %	15 yrs.	20

Source: 11th plan 2007-12, HDFC.

Income Parameter: The selection criteria for housing areas, those, in which the residents had been staying for at least eight to ten years were selected, so that the residents could develop familiarity with the housing areas. The analysis of the questionnaire showed that a majority of the households interviewed had moved into their housing area in the 90's. Keeping that in mind the corresponding norms laid down by 11th plan (2007-12) and HDFC in 2006 Table 2 were adopted for the affordability study [2].

Capital Cost, Households and Dwelling Size: The minimum cost of construction according to the 2007 prices was considered to be as follows:

EWS housing: Rs. 4841/square meter

The household size was taken as 4.4 (NSS report No. 505, January- Jun, 2004)

In the following section, the effectiveness of the level of assistance for EWS is analyzed using Wakely charts.

Level of Assistance for EWS: Wakely charts are primarily of two types. In the first type of Wakely charts, one can determine the capital cost for housing as a multiple of annual household income, given (1) The borrowing rate of interest, (2) The duration of loan and (3) The household income devoted to rent. The second type of Wakely charts is a combination of four types of charts expressed in the form of a monogram. By using these charts in tandem one can determine the percentage of households who can afford housing of a given standard. The given parameters are: (1) The housing standard in terms area, (2) The capital cost involved. (3) The capital cost as a multiple of annual household income and (4) The percentage distribution of annual household income.

For the analysis of the affordability of the EWS category, first the capital cost of housing as a multiple of annual household income was determined.

The duration of loan is assumed to be for 15 years at 5.68% effective rate of interest according to the prevailing benefit. The household income devoted to rent in assumed to be 20%. As shown in figure: no. 4 the point of intersection of an interest rate of 5.68% and duration of

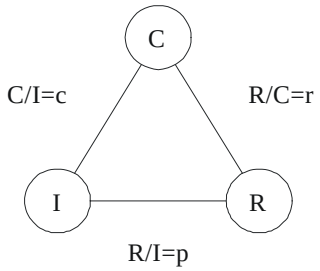

Fig. 3: Relations of C, I and R

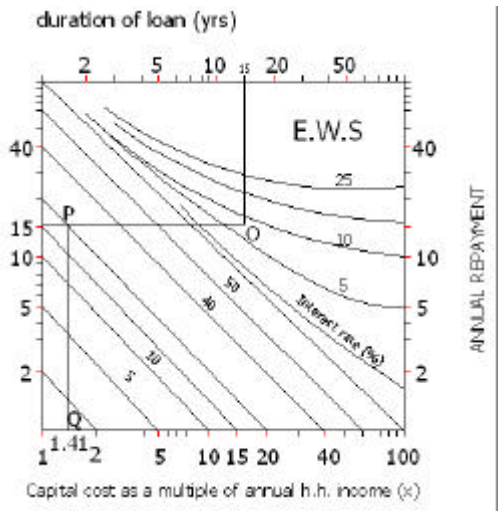

Fig. 4: Ability to pay for housing

loan of 20 years in the point O. this point is then projected horizontally to the left to meet the corresponding to 20% of the household income devoted to rent to get the point P and the line is projected further to the left to meet the scale of annual repayments R. The point P is then dropped perpendicular to get the point Q on the scale of capital cost as a multiple of annual household income. In this case C has a value 1. 71 Using the equation p = c x r (given in section) one can get a value of p = 1. 71 x 20. This means that the maximum cost of a house a person in this income category can afford is 1. 71 times his annual household income [7].

In the monogram shown in Fig.5 housing standards in terms of area are plotted in the Y-axis of the corresponding chart, while the related capital cost is plotted in the X-axis. In the case of EWS category the capital cost as multiple of annual household income is 1.41. as shown in Fig.4. This means that the maximum capital cost of a house in this category could be only Rs. 55,836/- (39,600 x 1.41). At Rs.4841/square meter cost of construction; this income category could afford a

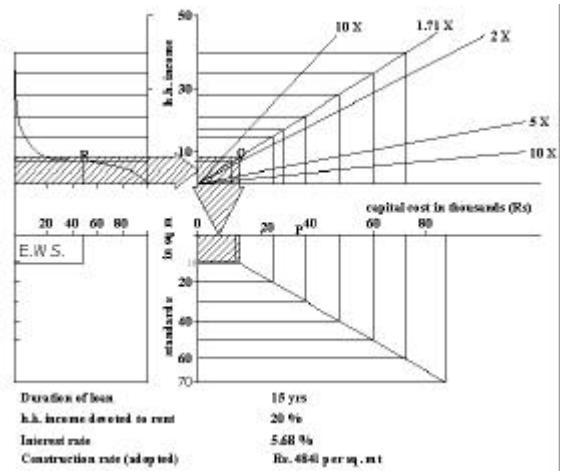

Fig. 5: Housing Finance for E.W.S

maximum of 11.53 square meters, represented in the corresponding scale by point P. The point P is then projected on the chart of capital cost as a multiple of annual household income to meet the line corresponding to 1.41 at Q. Q is then projected horizontally on the curve depicting percentage distribution of household incomes to meet point R. Next, R is projected on the chart below which is showing affordability of percentage of household in the income category [8].

The affordability bar shows that about 80% of the EWS category could afford the bare minimum of 11.53 square meters, as shown in the monogram Fig: 5. which one is better than prescribed by the National Building Code. The maximum affordable size of 22.45 square meters, by the EWS, was, considered by SMC authority [5]. A household size of 4.4. This means that there would be a very medium occupancy ratio in the rooms, which would affect the satisfaction level.

Level of Assistance by SMC Ceiling Cost: The affordability bar shows that 14 % of the EWS as shown in Fig. 6 could not afford a core house with the SMC assistance. 22.45 square meters. The total built-up area of single Dwelling Unit (D U) is 22.45 Sq. m. (i.e. 241. 00 Sq ft.). The unit has single living room kitchen, W.C., washing place and balcony. This shows that SMC levels of assistance was adequate and for the majority of the EWS people a minimum housing was affordable. The actual unit cost after earth quake is 63,000/- due to Government subsidy benefit and the total monthly installment is Rs 482/- as shown in Table 3 which one can save easily for monthly income.

Table 3: The salient points at this level of assistance were as follows

Scheme	Income Ceiling In Rs per month	Built up Area per Unit (sq.mt.)	Unit cost	Contributions: Beneficiary	Contributions: Govt. Subsidy	Contributions: Loan component	Installment
EWS	Up to 2500	22.45	In case allotment done through draw				
	From 2006-07		58,000 Before E.Q.	18,000	5,000	35,000	332 up to15years
	Up to 3300		68,000 After E.Q.	28,000			
			In case hutments are shifted				
			58,000 Before E.Q.	1,000	5,000	35,000	332 up to 15 years
						17,000 SMC's without interest loan	94 up to 15 years
			68,000 After E.Q.	1,000	5,000	35,000	332 up to15 years
						27,000 SMC's without interest loan	150 up to 15 years

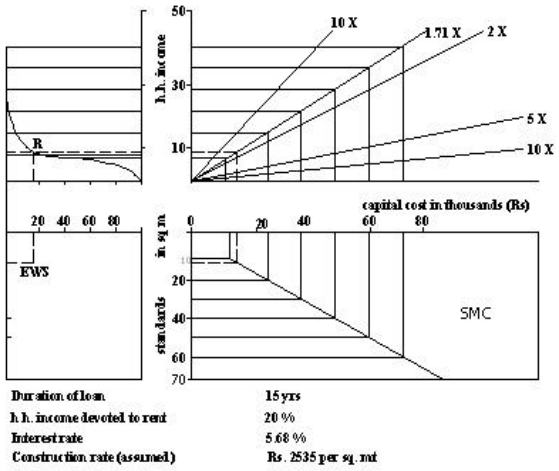

Fig. 6: Housing Finance for SMC ceiling cos

Major finding of the study: Majority low affordability often results in a "filtration" process in which the housing does not reach the actual target groups and is often occupied by people from a higher income level. It is emphasized that given a better affordability the satisfaction level also raises, a fact hitherto over looked.

The major findings from the study revealed the following:

- A minimum standard house is affordable by the majority of the EWS of Surat urban area.
- Looking to the prevailing construction rate and all infrastructural facility provision in EWS project SMC authority have been providing best level of assistance.
- More No of units are required to construct as per demand supply ratio in Surat which one observed during invitation of application form for EWS dwelling unit housing scheme by SMC authority.
- It appears that the EWS are in a better position compared to the LIG. The persons at the highest level of the EWS are in a more favorable position than their immediate higher incomes categories, as they enjoy loans at lower interest rates and have the benefit of higher repayment periods.
- At all levels of EWS assistance, the affordability in significant which satisfaction level of the residents in SMC area.
- There is general mismatch between the laid down standards on the one hand and the level of assistance on the other. The Government's policy needs to consider the fact that under the present set of condition
- The need for an extensive and wide spread institutional networking with accent on the housing finance system. Institutional building in the housing finance sector has now assumed critical importance not only in the context of 'affordability', but also for better integration of the housing finance system with the macro finance system.
- The emerging policy intervention of government of India and the changing role of Government from 'Provider' to 'Facilitator' has generated a host of
- Opportunities and challenges for the key stakeholders.

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