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Affordable housing:  
Chimera or oxymoron?

Babar Mumtaz

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Caren Levy and Barbara Lipietz  
London, June 2014

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## Affordable housing: Chimera or oxymoron?

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### **Abstract**

“If there is one problem in the world to which no satisfactory answer exists it is housing in the developing countries,” (Agarwal, 1981) a conclusion that unfortunately, still remains true, some 33 years later.

A “satisfactory answer”, would be one that was affordable, acceptable and sustainable, not just to the household (which goes without saying) but also to the society, economy and environment – at a rate and scale that was commensurate with the need. The real irony is that no answer has yet been found that satisfies even one of the above – and that despite years of trying<sup>1</sup>. It leads one to wonder whether “Affordable Housing” is really possible,

or is it merely a chimera, an artificial construct, that does not exist, or perhaps an oxymoron: if it is affordable then it can not be (acceptable) housing, and if it is housing it can not be affordable?

This paper reviews some of the attempts to develop affordable housing for developing countries, especially for lower-income households, and analyses the reasons why acceptable solutions are so hard to come by. It concludes that the reason affordable housing remains so elusive is because of the way it has been approached and suggests ways to successfully develop affordable housing.

**1.** For example ,Moore (2013) wrote: “The British dream of property ownership (articulated in her first speech as Conservative Leader by Margaret Thatcher in 1975)

has turned into a nightmare, with many unable to afford a mortgage and others struggling to find any sort of shelter”.



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# 1. Introduction

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“Affordable Housing” is a complex issue. There is no universal definition<sup>2</sup>. Of late, Affordable Housing has become a noun in the West, especially in the UK and the United States, and has developed its own array of supporters and policy responses, and is currently a subject for political debate, much as “Council Housing” used to be<sup>3</sup>. For the rest of the world, Affordable Housing remains an adjective, applied across the housing spectrum. This paper is primarily concerned with developing countries and therefore looks at affordability as an attribute of all housing, but especially of concern to lower-income households. Affordability is therefore a relative and not an absolute quality of housing.

One of the central objectives of housing policy in developing countries has been to identify ways and means to enhance and increase access to housing, especially for lower-income households since they are the ones most likely to be restricted in the housing options available to them under the prevailing housing markets.

For developing countries, housing policy has largely been a Post-Independence activity, often triggered by the influx of rural-urban migration and rapid urbanisation that saw the formation of slums and squatter settlements. In many countries it was a relatively new phenomena, but one that had a low priority as being a temporary aberration that the market forces of supply and demand would soon rectify.

When this did not happen as fast or as efficaciously as was expected, questions were raised and “solutions” sought.

Initially, the prime obstacle to housing access was presumed to be its cost, and therefore there was a focus on the search for “low cost housing”. The presumption was that costs could be lowered either through the use of cheaper materials or by ingenious manipulation of size and space or through the use of mass-production and efficiencies of construction. Many of those who were engaged in housing production, especially architects and engineers, experimented with designs and materials, looking for innovative and inventive ways to produce low cost housing.

Interestingly, this led to explorations of and experimentation with traditional and conventional, as well as new and innovative materials and methods. There has been a continued interest in looking to mud and earth construction, for example, to provide the solution, or to straw-bale and other similar technologies, but regardless of their

strengths on paper, a successful solution with anything like widespread appeal has yet to emerge.

Despite the lack of any meaningful successes, this effort continues. Indeed it has seen renewed interest as a result of the large-scale disasters of recent decades that have highlighted, among other things, the need for not just low-cost housing, but one that was also quick and easy to assemble. To an extent, this enquiry can be personified by the challenge to design the \$1K house. This over-simplification of the affordable housing problem, “the 1K House concept was initiated by Tony Ciocchetti, the Thomas G. Eastman Chairman at MIT's Center for Real Estate, after seeing a family of four emerge from a tiny mud hut while he was travelling through rural India”(Borgobello, 2011).

Despite the enthusiastic response to the challenge, it was not till 2011 that “Ying chee Chui's "Pinwheel House" (became) the first prototype to be constructed and is located in Mianyang, in the Sichuan Province, China. The design incorporates a modular layout with hollow brick walls, steel bars for reinforcement, wooden box beams, a central courtyard space and it's also built to withstand a magnitude 8.0 earthquake”(ibid.).

The house cost \$5,925 rather than the \$1K targeted because the size was larger than the initial concept design. “A larger building than was originally designed was a factor in the cost - the whole house came to about 800 square feet, rather than 500 square feet. Chui is confident that the smaller module could easily be built for US\$4000 or even cheaper if a large number of houses were built at the same time” (ibid.).

Similar considerations have also been driving parallel efforts by business. With much fanfare in world's media, as Mike Hanlon reported in July 2011, “There is absolutely no doubt that the human condition thrives on challenge. Fresh from creating the world's cheapest car, the US\$2500 Tata Nano, Tata Corporation is now intending to create the world's cheapest house. The flat-roofed 20 sq meter house will cost Rs 32,000 (EUR500 - GBP440 - US\$715), can be built in a week and came about from an aim to deliver a viable package for beneficiaries of the Indira Awaas Yojana shelter rehabilitation scheme in Tata's native India. The scheme provides Rs 40,000 per house for people below the poverty line, scheduled castes and tribes, freed bonded laborers and ex-servicemen”(Hanlon, 2011).

However, since the above reports were published, nothing further seems to have been heard regarding the outcome of these design solutions. Tata Housing did build some “nano homes” but not at the originally quoted prices, and not one has been sold and the scheme had to be scrapped. That is fairly typical of most of such schemes, which have hit the architectural press, holding out much promise but then sink without trace before they can be implemented. This is particularly true of design solutions that place their faith and cost-cutting on “mass housing” especially when there is very little actual data or evidence for the cost assumptions.

It is the process of designing a building first and then having someone else calculate what it will cost that has been responsible for the end result almost always costing three or four times the originally intended cost, and that is even before the costs of providing land, infrastructure and site works are included.

In an attempt to get housing designers to take a more nuanced cost-conscious approach to housing design, tools were sought that would make it easier for those not normally concerned with costs to include them in their design as parameters to be incorporated from the outset, rather than after the end of the design process.

## NOTES TO CHAPTER 1

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2. See, for example, Bar-Hillel (2013).

3. “Affordable housing [in the UK] is social rented, affordable rented and intermediate housing, provided to eligible households

whose needs are not met by the market. Eligibility is determined with regard to local incomes and local house prices”. (Department for Communities and Local Government, 2012).



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## 2. Models for establishing affordability parameters

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Over the years a number of models have been developed to compute the affordability of housing projects. Most of these were a series of rather cumbersome sets of equations that made the calculations very complex. Until the advent of programmable calculators, the only alternative was to use nomograms that permitted the equations to be solved graphically. Two such nomograms had been widely used, one developed by Nils Jorgensen (1977) (modified later by Martin Evans) and the other by Ducio Turin (modified by the DPU) (Wakely *et al.*, 1976). Jorgensen's nomogram was interesting in that it incorporated the option of progressive interest rate calculations to take into account variable repayment systems and/or inflation. The Turin nomogram introduced the concept of fixed and variable housing costs and relating these to size of building. Both of these models were, however, limited in their ability to deal with all the variables, and treated capital costs as one lump sum rather than allowing for an exploration of the implications of changing the physical design parameters.

### 2.1 The Bertaud model

The first breakthrough came about with the development of the Bertaud Model in 1978. The basic Bertaud Model is composed of two sub-models. The first, known as the Affordability and Differential Pricing Sub-model was designed originally for use on programmable calculators, the HP 67 and the TI 59. In 1984, the affordability programme was translated for use on the IBM PC with the Lotus 1-2-3 spreadsheet programme and on the Apple II Using VisiCalc. This sub-model could be used to analyse the relationship between project characteristics and total cost, the affordability of the project to target groups, and its affordability to the executing agency.

The second part of the Bertaud Model, the Detailed Land Use and Infrastructure Costing and Design submodel used the inputs from the affordability model to produce a site layout. The Model was built on four inter-related equations describing the cost of housing, monthly repayment fraction, plot size and densities. The resulting equation incorporated some 22 inter-dependent variables, ranging from financial terms, costs of infrastructure and construction to plot sizes and ratios and widths of streets and block lengths. The user was asked to select the dependent variable and to provide values for

the other 21 variables. The computer then worked out the value for the dependent variable that would make the project variable.

The model assumed that any lay-out is made up of repeating blocks of houses (varied to suit site conditions), and derived separate equations for some 12 different basic block layouts. The later versions of the models not only calculated affordable housing projects but also calculated and printed out an appropriate lay-out on the basis of a digitised site plan being provided.

### 2.2 The Hudco model

Working on similar lines and at about the same time as Bertaud, India's Housing and Urban Development Corporation (HUDCO), with assistance provided under US-AID, also produced a computer programme and a set of tables using print-outs from its main-frame computer. These tables provided a set of solutions for the range of values most likely to be encountered in India for housing programmes financed by HUDCO (the main channel for India's public sector housing).

The tables were based on basic planning modules which establish the physical planning framework, including street widths, community facility space etc. For each module there were three options available regarding the amount of social facility space per capita (1.0, 3.0 and 4.5 sq.m) and for each option there are three choices of cluster ratio (length/depth of the module : 1.0, 1.5 and 2.0) For each set of options selected, the tables give information such as module width and length, % saleable area, % open space, % circulation space, number of plots etc. It also provided the cost per plot for three different prices of land and three levels of infrastructure provision.

### 2.3 The Shelter model

As part of the Global Shelter Strategy Programme, the Government of Finland developed a spreadsheet-based computer model. This model, which was designed to support and supplement the process for developing a shelter strategy (UNCHS Habitat, 1988), allowed the user

to calculate affordable housing on the basis of inputs regarding the basic variables. Interestingly, it also allowed the user to choose different mortgage options, and to allow for inflation. The model divides the population into different income groups, and housing into types, distinguishing between rental and owner occupied as well as form of construction. By calculating inputs of materials, labour, land required for each type of housing and making population projections, the model goes on to develop affordable housing programmes, and asks the user to equate the projected requirements of land, materials, manpower and finance to that expected to be available in order to test whether the proposed housing programmes are viable.

## 2.4 Other models

As well as these models, a number of other models have been developed for calculating housing affordability, either explicitly or as a by-product of making other housing-related calculations. For example, the USAID developed a model for estimating Housing Need that was similar to the SHELTER model in that it relates housing costs to total housing units needed over a given period of time by different groups in the country (USAID, 1987). On the other hand, the ADB model deals with affordability in passing in their model for developing appropriate and affordable site and services options (Kinhill Engineers, 1991). Other examples made use of tables or spreadsheets rather than computer models or nomograms, and ranged from those dealing with a finite or limited range<sup>4</sup>.

## 2.5 The Mumtaz model

The Bertaud and SHELTER models provided useful tools for computing and testing affordability. Their limitations lay in the fact that despite the rapid spread of personal computers, not everyone had ready access to one. It was in recognition of this that the Tables of the HUDCO model were developed, but they were limited to Indian values,

and not only were they not necessarily transferable to other contexts, they needed modification even in India over time as prices and other figures changed.

In order to provide a readily available tool that would provide reasonably accurate computations, a nomogram was devised in 1983, drawing upon developments of the Jorgensen and Turin models. The nomogram consists of six inter-related log-graphs. By plotting given or assumed values for the variables, the values of the dependent variables are arrived at. Since the graphs are inter-related, it is possible to start at any point or points and work round the graphs in any sequence. Where the results are (socially or otherwise) unacceptable, a process of iteration has to be initiated till an acceptable result is arrived at. As the calculations are done graphically, it is relatively straightforward to see the direction in which values have to be moved in order to arrive at acceptable results. The model also makes explicit the relationship between the various variables and thus assists in understanding better the ramifications of different decisions that the designer policy maker might be contemplating.

The terminology and parameters used in establishing the principal trade-offs have been kept largely similar to those used by the Bertaud model, thus making it also useful as an explanatory tool for the workings of the Bertaud model and allowing for an easier shift from one to the other.

Since they were originally conceived, a generation of students and practitioners have used the nomograms, and a number of minor modifications have been made as a result of the feed-back from this experience. They demonstrated their usefulness in providing not just a quick and easy way of establishing affordability parameters, but also in demonstrating the relationships and relative impact of each parameter to students and policy makers and decision takers.

Though the models were extensively used during the heyday of the sites and services era, with their demise, the affordability models too have languished. This is a pity, since the need for which they were designed, Affordable Housing, continues to be unattainable.

## NOTES TO CHAPTER 2

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4. For example, Ken Wren in Tuner (1988) and Davidson and Payne (1983).

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## 3. Why does affordability remain so elusive?

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Housing hasn't become affordable because designers and policy-makers have been unable to achieve one or both of the two basic components: a cheap, acceptable, house; housing finance.

### 3.1 A cheap, acceptable house

There are 3 fundamental components that go to make up a house: the house itself, the land upon which it stands and the infrastructure required to service it. We have seen above that architects and engineers who have approached the housing cost issue from a purely design or production perspective focus mainly on the first, have not even been able to get the costs of the house down to a level that was low enough. Perhaps the major obstacle has been the training and experience that has been used to guide their considerations of the house as an object. The obvious "solution" therefore has been to reduce the size of the object or to construct it out of the cheapest materials. In doing so, a number of "interesting", even surprising or "clever" products have been designed, including those that suggest innovative and multiple use of limited spaces. Yet, when the costs of these designs have been calculated, they remain "expensive". The modelling tools of the 1980s that were meant to channel the design process so that the end-product was affordable, never quite reached those for whom it was intended: architects, engineers and planners continued to design first and cost later. Rather than being an input, cost remained an external, post-design outcome.

The World Bank, who explicitly took on the affordability problem and recognised its vital importance, never quite managed to get round its own institutional constraints. Despite the fact that it was responsible for the production of tens, perhaps hundreds of "low-cost housing" schemes that provided housing for hundreds of thousands of households, they never really managed to mainstream their approach to the extent whereby national governments felt able to continue with the approach or use the methods and techniques that these projects were demonstrating and advocating.

There were a number of problems with the World Bank approach<sup>5</sup> but from an affordability perspective, their approach was largely unsuccessful because everything about the project remained unchanged except for the design of

the end product, the "house". The scale, the location, the tendering and contracting and the construction processes were each modelled on the needs and practice of the World Bank in other sectors, and each tended to reinforce the other into moving the project further away from the needs of the very people it was intended to assist.

The logical application of its own affordability models led to the World Bank designing small, housing units. However, from the start, it became clear that these houses were going to have to be too small – perhaps even to be a house. Thus was born the "core" or "starter" house – a one-room unit that could be expanded, but even this was often not cheap enough, and led to the notion of a "utility wall" – which was just a wall with water and drainage fixtures. However, the World Bank very quickly moved on to the ultimate solution – the Sites and Services. There was no house at all. While this was a cheaper solution, and perhaps all that *could* be built for what the household could afford, it was not "affordable housing". There was never any explanation of how the household was expected to finance the actual house, given that all of its available financial resources were already committed to paying for the sites and services.

### 3.2 Land and Infrastructure

Land and Infrastructure usually account for 30 to 50% of the total cost of a house, and therefore, any cost reductions in provision or access will have a significant impact on housing affordability. However, even more than the costs, the availability of suitable land is itself a considerable problem for many low-income households. In many countries, the planning regulations prohibit plots smaller than 200 sq.m, and few allow plots smaller than 100 sq.m. While not big, the size of plots has an immediate bearing on their cost.

Relatively speaking, it is more profitable to subdivide land into larger plots, reducing the percentage required for access and common uses, and sell to higher income households than it is to create smaller plots for the lower-income. The lack of plots is therefore as great an obstacle as their price.

Traditionally, there have been two ways of reducing the cost of land: making them smaller is an obvious way, but often the more-preferred has been to go for multi-storey

construction. In reality, unless more than 4 stories are planned, the savings in land are not as much as might be imagined. On the other hand, for most households, multi-story construction is not culturally acceptable, reduces user-control and is generally alienating.

Much of the more-exciting work in low-income housing has come about through facilitating the development of areas of housing through the development of community-based housing projects. This has helped households gain access to land, and consequently finance for housing. The last two decades have been marked by a number of national, international and regional programmes that facilitate the creation of community-based initiatives through loan guarantee funds, community-based infrastructure facilities and mutual and cooperative organisations (Mitlin 2008). These allow poor households to participate in housing and housing-improvement in a way that would be impossible without the necessary organisation and scale required.

Schemes such as CODI and CLIFF (see Satterthwaite 2004 and Ian and Jack 2007) have been proved to be successful for upgrading informal settlements since they work through communities, but methodologies for applying the lessons to the planning of new housing has yet to be demonstrated.

### 3.3 Housing Finance

The third component, affordable housing finance, has largely remained out of reach for the poor. For some time now, the different needs and capabilities of poorer households has been recognised, but mainstream housing finance institutions have remained unable or unwilling to modify their products and processes sufficiently to meet them.

The Conventional view is based not just on “sound financial considerations” but fine-tuned by the financiers’ own experience and expectations as well as that of the clients they did business with. This has resulted in a self-perpetuating view of what housing finance is and should be. Merely chipping away at the edges by a percentage point or two is unlikely to produce the radically different solutions that the reality of lower income households. To take two examples: Housing finance assumes that the land and house are being bought as a single unit or that the borrower already owns the land and has proper legal title to it. It is almost impossible to get a loan to buy land for housing, so the majority of lower-income households are deterred if not barred from acquiring housing. (See Table 1).

The basis for insisting on the borrower owning the land is so that the lender can hold it as collateral. In practice, of course, the lender does not physically hold the land – merely the title deeds. In practice, therefore, the lender would still be able to hold the title deeds as long as the loan

remains outstanding. The ability to re-possess is a different issue altogether. The lender’s hand might be strengthened if the title was initially in the name of the lender rather than of the borrower, and transferred once the loan had been paid off. The paperwork required would, of course, be different but not necessarily any more expensive or cumbersome.

Secondly, mortgage-based loans assume that the borrower is on a well-defined career and salary track, that would best correspond to a fixed repayment schedule. Certainly, for the lender, that would also minimise tracking and accounting. However, many low-income borrowers are neither in regular employment nor able to predict its future trajectory. A flexible arrangement where repayments could be made as and when the borrower had funds (but not later or less than agreed) would be more suitable, and with electronic accounting systems, place no greater burden on the lender. Though faster loan repayments would reduce profits – but those would be offset with faster re-circulation of loan funds.

### 3.4 Tweaking Housing Finance

Over the years, a number of innovations and interventions have been suggested and introduced in order to extend housing finance and make it more effective. Most of these are focussed on the supply side and are designed to provide greater comfort to lenders in the expectation that that would provide the necessary incentive for lenders. The central strategy focuses on the presumption that there is a shortage of funds and therefore not enough housing finance. Secondly, it is argued that the shortage of funds is further due to the perceived risks and pitfalls in lending for housing finance, especially to the lower-income households.

Perhaps the most common strategy advocated to increase the supply of funds to housing finance has been to push for the establishment of a “secondary mortgage” market. Rather than limiting the source of funds to households or the government it was suggested that investors, especially long-term institutional investors such as pension funds, would be more willing to provide funds if they could deal with housing in the same way as other sectors. This could be achieved by having an intermediary market to which housing lenders could come with consolidated housing loans, thereby keeping all the messiness of household lending at arms length, and institutional lenders would not have to deal directly with the households. This would avoid not having to deal with the whetting and assessment of hundreds of small borrowers or getting involved with their defaults and delinquencies.

The other measures introduced also helped reduce the risk for lenders by strengthening legal titles to land, making it easier to repossess, providing subsidised government funds, and generally making housing finance lending more attractive.

**Table 1.** Limitations of conventional financial institutions. Source, UNDP, 1982.

a. High eligibility criteria	Constraints inherent for low income groups
<ul style="list-style-type: none"> <li>• An “adequate” income at a specified minimum, e.g., \$6,000</li> </ul>	An income usually below \$2000
<ul style="list-style-type: none"> <li>• Regular savings at a specified minimal rate</li> </ul>	Intermittent savings, at a very low rate and often not deposited
<ul style="list-style-type: none"> <li>• Regular employment and place of residence</li> </ul>	Intermittent employment, frequent changes in residence
<ul style="list-style-type: none"> <li>• Collateral in the form of conventional marketable assets</li> </ul>	Small assets of a form rarely acceptable to conventional institutions
b. Restrictive loan terms	Needs of lower income groups
<ul style="list-style-type: none"> <li>• Minimum loan size is large</li> </ul>	<ul style="list-style-type: none"> <li>• Small but frequent loans</li> </ul>
<ul style="list-style-type: none"> <li>• Loans for completed dwellings only</li> </ul>	<ul style="list-style-type: none"> <li>• Loans for gradual purchase and/or improvement of dwelling</li> </ul>
<ul style="list-style-type: none"> <li>• High down payments and ratios of down payments to total house price</li> </ul>	<ul style="list-style-type: none"> <li>• Very small down payments</li> </ul>
<ul style="list-style-type: none"> <li>• Maturity of 25 years</li> </ul>	<ul style="list-style-type: none"> <li>• Very short maturities</li> </ul>
<ul style="list-style-type: none"> <li>• Interest at the market rate</li> </ul>	<ul style="list-style-type: none"> <li>• Interest at below-market or subsidized rates</li> </ul>
<ul style="list-style-type: none"> <li>• Regular amortization payments through banking</li> </ul>	<ul style="list-style-type: none"> <li>• Flexible loan schedules, convenient premises and business hours for cash payments</li> </ul>
<ul style="list-style-type: none"> <li>• A total cost of housing finance that frequently amounts to 20-25 per cent to income</li> </ul>	<ul style="list-style-type: none"> <li>• Allocations of only 8-10 per cent of their household income to housing expenses</li> </ul>
<ul style="list-style-type: none"> <li>• Loans with terms and conditions that require considerable sophistication to understand and comply with</li> </ul>	<ul style="list-style-type: none"> <li>• Loan terms and schedules that are easily understood by people with low level of formal education or literacy</li> </ul>
From UNDP, <i>Non Conventional Financing of Housing for Low-income Households</i> (ST/ESA/83)(New York UNDP, 1982)	

While such measures did help divert more funds to housing finance, their impact overall was limited in that the overall situation remained as before: lower-income households were unable to ease or improve their access to housing finance. Perhaps the exception was the flow of funds into housing as speculation as lenders took greater liberties and reduced levels of diligence. The speculative funds increased house-prices and the increased flow of funds created a bubble that led directly to the sub-prime loans and crisis in banking that came close to upsetting the system as a whole. For low-income households in developing countries, there was little direct impact on housing finance but considerable impact on economies as a whole that left them even further away from being able to access housing.

### 3.5 Micro Finance

Given the lack of success over the years of conventional housing finance, a number of other modifications have

been made. Most of these have been designed to address the different realities and needs of low-income households indicated above, but there has been no radical re-design of the basics and the outcome has not had a major impact on extending housing finance lower down the income ladder.

However, an approach that has gained a lot of traction and has now become the new orthodoxy, at least for those outside the housing finance and perhaps even the housing sector, is “micro finance”. Micro finance was developed, as a way to meet the needs of the poorest households for finance to meet their everyday needs, in particular for income-generation activities. It was designed from the ground up as small-scale learning-by-doing initiatives and gradually consolidated and systemised, building upon successful practice. Despite the fact that it was contra-intuitive to prevailing perceptions and practice, its demonstrated effectiveness quickly gained it wide-scale support amongst policy-makers and practitioners, not least amongst the aid and NGO communities.

In essence, microfinance is based on the provision of very small, short-term loans supported by group solidarity. Members enter at the lowest level and prove their credit-worthiness and ability to take on larger loans, over time. Much of the expensive and time-consuming activities of lending (collections, tracking, validating and whetting etc) are taken on by the borrowers themselves through the formation of local groups, organised by levels so that much of the interfacing with external (financial) institutions is done by the higher levels, consolidated to scales that correspond to the standard practices of financial institutions.

More than the transactional success itself was the demonstration of the multiplier effect of small savings and loans and the potential and scale of the impact, and not least, in confirming the “bankability” of the poor. Amongst the few “good news” stories of material development, it quickly became the “go to” model for a wide variety of situations and needs including for housing.

While microfinance has had some success, mainly in instances where housing loans have been made available to established borrowers, it has not been as effective as a “stand-alone” mechanism. Even where it has been successful, it has mainly been as a source of funds to improve or extend existing housing rather than to acquire or access new housing. This is because there are fundamental differences in the needs, possibilities and practice of microfinance that are different to those of housing finance.

The chief amongst these differences is the fact that while a typical microfinance loans is intended to have an immediate and positive impact on the borrowers impact and

therefore their ability to repay the loan, housing finance does not. Indeed, in the short term, it is likely to require additional inputs and expenditures that further reduce disposable income<sup>6</sup>. Secondly, in practice, microfinance lenders go to great lengths to support borrowers both in evaluating their business plans and their ability to repay as well as providing group support.

Thirdly, because of the relatively smaller size of microfinance loans (typically a tenth of housing finance loans), the loans can be repaid relatively quickly, allowing households to be more in control over repayments than with the longer-term commitment required by housing loans. Fourthly, microfinance help borrowers build up their credit history, gradually increasing loan size to reflect successful repayment history. Housing finance, is usually a one-off experience, and ironically, most lenders will not allow a subsequent loan, even after successful performance – in order to allow more households to benefit. Please see Table 2.

Finally, with microfinance, lenders usually set up an extensive programme of training and support to ensure borrowers understand and use the loans prudently. Most often, lenders also establish groups of borrowers to provide peer-support, and because of the sequential nature of the loans, the rapport amongst group members builds up useful bonds based on mutuality. A clear link can easily be demonstrated between repayments and future borrowing capacity of group members, and that adds to the strength of group membership. With housing finance, once a member has obtained a loan and built a house, there is little interest or incentive to engage in group-solidarity or support activities, and even less so once the loan has been paid off.

**Table 2.** The difference between micro-finances and housing finance. Source, the author

	Micro Finance	Housing Finance
Income	Loan increases income	Loan has no impact
Loan size	Under 1 x Annual income	Over 10 x Annual income
Viability of borrowing	Lender advises	No lender advice
Borrowing expectation	Continuous series	One Loan
Credit rating	Built up over time	No
Legal status of borrower	Not important	Very Important
Group support	Useful	Not so useful

*NOTES TO CHAPTER 3*

**6.** Though that in itself can act as an incentive to look for other and additional ways of increasing income, and

in the longer term housing is likely to have a positive income impact, and not just for borrowers.

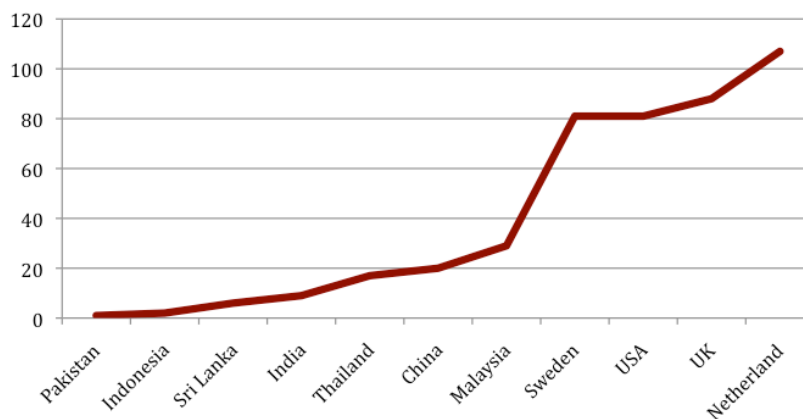
## 4. Can Affordable Housing be developed?

Given the long and relatively unsuccessful search, the obvious question is whether it is possible to develop affordable housing, or is it one of those mythical constructs that does not, perhaps can not, exist in reality. We are convinced that regardless of past experience it is indeed possible, and we base it on observations and experience with housing in the real world.

In the discussion above, the inability of formal housing finance to meet the needs of the majority of the popula-

tions of the developing countries was pointed out. As a result, almost none of the households rely exclusively on formal-sector finance to fund their housing, and only a few of the households have any mortgages at all. With a very few exceptions, in most countries, less than 30% of the houses have any mortgages at all, and given that the loan-to-value (LTV) is usually below 50%, it is not surprising that in most countries mortgages make up a much smaller percentage of GDP than in the richer countries, as can be seen in the figure 1.

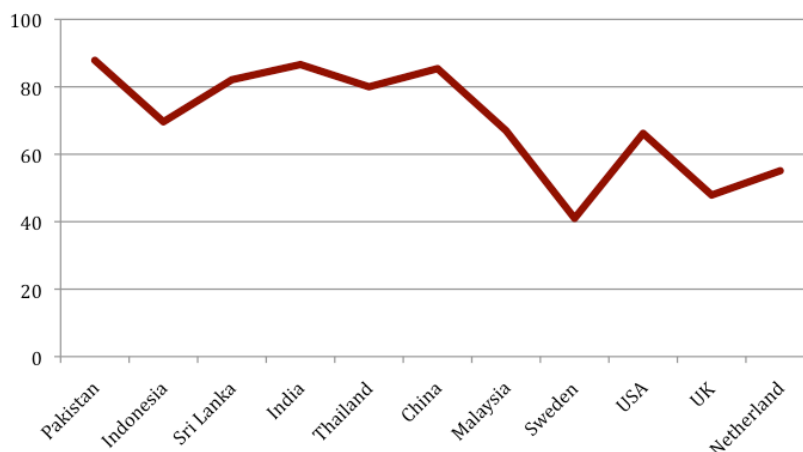
**Figure 1.** Mortgage debts as % of GDP. Source, <http://www.hofinet.org/>



On the other hand, what is interesting is that despite the relatively low prevalence of mortgages, home-ownership

is not low, and is often higher than in many western countries, as can be seen in the figure 2

**Figure 2.** Owner Occupied %. Source, Rizvi 2012



So how do households in these countries manage such a high rate of home-ownership? To an extent of course, it is because of the lack of alternatives: unlike the UK, for example, there may not be the option to rent or have access to social housing, forcing households to build or buy their own housing. Nevertheless,

how do so many of the households manage to acquire their housing?

First of all, the lower-income households save by making do with less. As a result they get a house of smaller size and lesser quality and comfort, but for about half the cost, as shown in the table 3.

**Table 3.** Making housing affordable. Source, the author

	Designed Housing	Developed Housing
Plot size	125-50 sq.m	75-100 sq.m
Land cost	20-30	0-10
Infrastructure	House connections	Shared connections
Infrastructure cost	10-20	0
House size	100 sq.m	60 sq.m
House cost	70	40
Total Cost	100	50

Clearly this is an unfair comparison, and not “like-for-like”. However, lower-income households do not see the acquisition of a house as a one-off one-shot affair, but as the start of a process, which they hope, will one day give them a “more complete” house, more comparable to the designed housing.

However, not all households are willing to go through or are accepting of the informal housing route, and look to other ways to acquire housing. Depending on their starting point and their circumstances, they may opt for one or other of the following:

**Households’ Strategies to access housing<sup>7</sup>**

1. Invest in land and wait. This usually entails buying land on the periphery of the built-up area while it is still cheap. If possible, the household will buy more than one plot – or at least land enough for more than one house. They will wait while the area starts to develop and land prices increase, and this may take 10 to 20 years. At that point, they will sell off half the land (at 3 or 4 times the price) and use the funds to construct their own house.

2. Invest in land and develop. Similar to the above, but continue “saving/accumulating” funds so that when the time is right, they can build a house, sell that and then build their own house with the profits.

3. Invest in land, borrow and develop. Similar to the above, but by taking out a short-term loan (1 or 2 years) to build two flats on half the land. These can then be sold to pay off the loan, and use the profits to build 2 more units, one for their own use and the other to rent out for an income till such time as their own off-spring needs a house.

4. Where there is already a house (perhaps built as above), build a second unit above.

5. Where there is already a house (or perhaps even just land) go into partnership with a developer who will undertake the construction in return for the land. 6 or 8 units may be constructed, 2 of which are given to the land-owner, 2 are sold to recover the costs and the other 2 to 4 are the developer’s profits.

6. Buy from a developer (perhaps of 5 above) using phased payments over a 2-year period. The developer gets interest-free funds to finance the development without tying up any of his own capital. With tax-efficient payments, there may be further savings for all.

These and other variations on these themes, means that even where funds are borrowed, they are not mortgages but short-term loans, often from their own businesses or against them. With formal mortgages, even if they were available, charging interest of 10-15% or more, this is a considerable saving.

**NOTES TO CHAPTER 4**

**7.** Based on personal observations and information from a variety of sources, including Mumtaz (1999; 2012).



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## 5. Why aren't effective affordable housing strategies being developed?

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There are a number of reasons why effective affordable housing are not being developed, ranging from political to technical. The political reasons relate to the perceptions, prejudices and practices of politicians and policy makers.

Perhaps the most critical reason being the reluctance of politicians to face realities and to see their own role as that of “benefactors” rather than facilitators. Politicians would rather implement a housing project that they know cannot be replicated (they do not have the resources) on anything like the scale required, but they would rather not “lower standards” or encourage self-reliance. Even in the run-up to an election, a politician would rather announce or launch a scheme of policy that will only benefit a few hundred households. They might win their votes if the scheme is successful, but will certainly lose the support of all those who are unable to benefit.

Where politicians have made the link between housing and development and committed themselves to the provision of housing, there has been a clear and visible impact – as was the case with Sri Lanka’s Million Houses Programme of the late 1980s or the more recent “economically affordable housing” based on targets for urban authorities to provide land, and using Housing Provident Fund to channel compulsory savings to housing.

Moreover, it is the technical advisors that are responsible for refusing to see the ground realities. In the case of affordable housing, the greatest obstacle is the sharp divide between the housing professionals and the housing finance professionals. It is rare, indeed, to have someone able and willing to take the time and effort to see affordable housing from the other perspective.

Unfortunately, Bertrand Renaud's (1984) observation, still holds:

*“It is still a common occurrence to read a “housing finance sector review” which details the financial institutions operating in a country but provides little or no indication of the types of households being served nor of the exact role of institutional financing in the total housing supply in the country. Conversely, many LDC “Housing sector reviews” deal with the structure and behavior of the housing market and tend to treat the problems of financial institutions in a limited and superficial way, if at all.”*

Thus, for example, the 2000 International Housing Finance Yearbook of the International Union for Housing Finance, has some 300 pages of detailed information on housing finance systems in most of the countries around the world. However, not once does it mention the fact that housing finance is a marginal activity in the acquisition of housing in almost all countries. Of course it also does not mention how the majority do finance their housing – or how they might be helped.

Similarly, the web site of the Housing Finance Information Network (HOFINET, n.d.), which lists updated information for 2012 on 125 countries rarely, if ever, gives any indication of how few households use mortgage-based housing finance systems, and has nothing to say how the majority finance their housing.

This is part and parcel of “the traditional approach adopted by the majority of housing- finance practitioners. Their intention is to examine and understand finance institutions, with a view to removing bottlenecks, improving their operations, making them efficient and enabling them to reach a large number of households. (See Table 4)

**Table 4.** Six main analytical steps in developing a housing-finance strategy. Source, Ray Struyk and Margery Turner, 1984.

1. Assess the maturity and competitiveness of the financial markets at large.
2. Assess the relation of the housing-finance system to the rest of financial markets and the vitality of the system.
3. Determine the possibilities of mobilizing additional resources.
4. Develop several "packages" of possible combinations for increasing the volume of finance in the sector.
5. Analyse the impacts of implementing each package.
6. For the recommended course of action, detail the institutional changes needed immediately and over the long term.

The advantage of such approaches is that it is easy to pinpoint the initial area for analysis and, since most of the housing-finance supply institutions are similar in their makeup and operations, it is relatively easy to identify areas for improvement. The disadvantage is that, since such institutions supply no more than 20 percent of all housing-finance needs in developing countries and probably none of the needs of low income households, the impact is likely to remain marginal" (UNCHS Habitat, 1991).

Approaching Housing Finance in the conventional "supply-driven" approach is not likely to produce effective options that are going to be useful for developing countries, and especially not for lower-income households. A hugely "successful" effort that managed to double the number of takers for formal housing finance, would still only be meeting the needs of about 40 to 50% of the households, and again, most likely leave out altogether those with lower incomes.

To have some chance of making a successful impact, the conventional process needs to be turned on its head, and "demand-driven" approaches introduced.

"These approach the question of housing finance by starting with an examination of the requirements of the target households for housing finance. The demand for housing finance is differentiated according to the sub-groups at whom the strategy is being aimed. The search for ways of meeting that demand starts with an analysis of the systems currently used by households in the target groups, and proceeds by devising strategies for removing bottlenecks and inefficiencies before turning to other sources of finance. While relatively new and, therefore, presenting a challenge, these methodologies are likely to have an immediate and significant impact, particularly where the target groups are mainly low-income households. This is the basis of the approach that is used in this Manual." (*ibid*)<sup>8</sup> (See table 5)

**Table 5.** Steps in a demand-driven methodology for housing-finance. Source, the author

<p><b>1.</b> Assess demand for housing finance</p> <ul style="list-style-type: none"> <li>• <i>When does who need how much money to build what?</i></li> </ul>
<p><b>2.</b> Evaluate existing Housing-finance sources</p> <ul style="list-style-type: none"> <li>• <i>What have households in similar circumstances been doing?</i></li> <li>• <i>What prevents the continued use and/or expansion of these methods?</i></li> </ul>
<p><b>3.</b> Evaluate potential sources</p> <ul style="list-style-type: none"> <li>• <i>Could methods used elsewhere or by other households work here?</i></li> </ul>
<p><b>4.</b> Develop a preliminary strategy</p> <ul style="list-style-type: none"> <li>• <i>Identify the main components</i></li> </ul>
<p><b>5.</b> Evaluate impact of proposals</p> <ul style="list-style-type: none"> <li>• <i>What would the proposals do to the economy, to the housing sector and to households?</i></li> </ul>
<p><b>6.</b> Revise strategy</p> <ul style="list-style-type: none"> <li>• <i>Test/market proposals, check assumptions and modify to anticipate impact</i></li> </ul>
<p><b>7.</b> Revise strategy</p> <ul style="list-style-type: none"> <li>• <i>Test/market proposals, check assumptions and modify to anticipate impact</i></li> </ul>
<p><b>8.</b> Develop action plan</p> <ul style="list-style-type: none"> <li>• <i>Detail the legal, administrative, political, financial and technical actions that are required to implement the proposals: allocate resources, identify actors, programme activities</i></li> </ul>

Such an approach would start off by looking establishing the demand for housing finance – who needs how much to do what – and then examine what other households had done to meet their needs. This would include the 6 strategies to access housing outlined earlier.

These focus on the housing finance aspects, but the approach is equally valid for the design of houses.

Rather than starting with the design of the house as a product and whittling it down to size in the expectation that that would produce an affordable house, or assuming that "mass production" would, as is the case with approaches like the 1K House or the Nano BHouse, a more effective approach is, again, to start by looking at what is being done already by the households.

In many instances, the houses being currently produced are affordable, but not acceptable by society, even if they are (perforce), by the households themselves. Certainly there is considerable room for improvement, especially in the aesthetics and appearance and even the structural stability and durability of the houses that can

be improved without adding unduly to the overall costs. More importantly, there is a need to try and gain acceptability of these houses, and the processes they deploy, so that they can be made acceptable to the organisations and institutions that regulate, monitor and administer housing.

#### *NOTES TO CHAPTER 5*

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**8.** See also, Mumtaz (1992).

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## 6. Conclusion

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Despite the obvious need for affordable housing, and years of efforts, effective strategies have generally not been established. The main reason why such a state of affairs persists is largely to do with the fact that the integral components of affordable housing – the house and housing finance – are treated independently, sequentially and usually without understanding or taking into account the interdependencies of both. To a large degree this is because of the professional training and concerns of those who work in decision-making in these two areas, and is further compounded by the decision-takers, who decide, as politicians and policy-makers on what needs addressing and what gets implemented.

Housing, especially affordable housing is complex, and multi-dimensional, but while the way forward has much to learn from global experience it also has to be local, draw-

ing upon the experience and aspirations of communities and households and their efforts at housing themselves, often in the face of obstacles and obstruction by bureaucrats and professionals and the regulatory and operational frameworks created by them.

Rather than continue using supply-driven approaches, Affordable Housing needs to be developed as an integrated activity, using demand-driven approaches. This means starting off by understanding what people currently do and looking for ways to facilitate and expand their efforts. Successful, workable solutions can be developed for all situations and circumstances, provided ground realities are acknowledged and incorporated. Affordable Housing needs not remain a chimaera nor be an oxymoron.

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