

Affordable Housing System: A Review on Issue of Housing Affordability

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Abstract: Residential property is the issues that should be concerned by the government to their citizen. One of the foremost important needs is to provide the house for the large population especially for the low and middle income group earner. The aim of this study is to overview the summary of literature review on the national housing needs and housing provision that obtained in several journals and reports. Major constraint about providing the affordable house to low and middle income earner. Moreover, the study discusses the overview based on literature review on previous study about defining housing affordability. Most of the previous study defined the housing affordability as purchasing home with >30% of their household income. Housing policy worldwide attempt to have the efficiency in housing management and provide the adequate houses. This informative study explores the affordable house in worldwide and found that the issues and challenges in housing provision is affected by many factors. Results from the literature review show that the issues and challenges in providing of the affordable housing evidently depends on high population in urban centers, housing prices increased rapidly, inadequate demand and supply of affordable land and the cost of construction materials and technologies. Income factors are the issues and challenges as people nowadays facing the financial constraints and difficult to obtain the housing loan.

Key words: Affordable house, housing issue, affordability, technologies, informative

INTRODUCTION

Low and medium income group earner has suffered from the inability to meet the household's housing demand and the housing supply shortages. A spiraling of house prices over the last decade has caused the inaccessibility to housing market among the low and middle income earners. In the growing urban sectors, the issue of housing affordability among citizen has become a critical concern. All over the world, the housing industry became a vital sector. State and federal governments has exerted pressures in providing the affordable house for the targeted groups. Governments in all around the world were dominated to construct new stocks of house to provide the adequate and affordable houses to the low income group. Many ways and means in providing access to housing were discussed by the governments as housing recognized as a basic need for their citizenry (Gopalan and Venkataraman, 2015).

Osmadi *et al.* (2015) indicated that the growing of the housing prices and the unaffordability in purchasing a home has currently become the critical issue in Malaysia.

The house requirement and demand are more pressing in the huge urban centres. This is caused by the rapid population growth and the migrant's entrance from the countryside which they want to enhance their quality of life.

Menshawy and Shafik (2016) state the housing sector plays an important role for income growth and family stability. In developing countries, more attention should be driven towards the development of the house. To ensure the price of the house is proportionate to overall income levels, the government should plays a role in this matter. Several housing programs were launched in order to provide Malaysians people to own a house. First home scheme (SRP) the 1Malaysia people's housing project (PRIMA) and the 1Malaysia people-friendly homes (RMRIM) are among the program implemented.

According to eleventh Malaysia Plan (RMK 11), government is focusing on to provide an adequate and a quality low-cost housing to poor, low and medium-income households for their citizen. Malaysian government takes measures in increasing the accessibility to affordable house for the targeted group, strengthen the planning and

Table 1: Development of the public housing programs in Malaysia

Programmes	Monthly household income (RM)	Ministries/Agencies
Program Bantuan Rumah (PBR)	Below poverty line income	Ministry of rural and regional development
Program Perumahan Rakyat (PPR)	<2,500	Ministry of urban wellbeing, housing and local government
Rumah Mesra Rakyat 1Malaysia (RMRIM)	750-3,000	Syarikat Perumahan Negara Berhad
Perumahan Rakyat 1Malaysia (PR1MA)	2,500-10,000	Perbadanan PR1MA Malaysia
1Malaysia civil servants housing (PPA1M)	2,500-10,000	Prime Minister's Department
Rumah Wilayah Persekutuan (RUMAWIP)	<6,000	Ministry of federal territories

Table 2: Public affordable housing programs developed during the Tenth Malaysia Plan (RMK 10)

Programs	No. of housing units	
	Completed	Under construction
Program Bantuan Rumah (PBR)	56,668	8,298
Program Perumahan Rakyat (PPR)	12,025	27,087
Rumah Mesra Rakyat 1Malaysia (RMRIM)	32,948	2,803
Perumahan Rakyat 1Malaysia (PR1MA)	560	18,400
1Malaysia civil servants housing (PPA1M)	-	13,539
Rumah Wilayah Persekutuan (RUMAWIP)	-	9,309

implementation to manage a better provision of public housing and encourage the environmental friendly facilities. Development of the public affordable housing programs in Malaysia is shown in Table 1.

During the Tenth Malaysia Plan, several public housing that are affordable are developed. The 102,200 units of affordable houses were completed for poor, unaffordable household's income in Malaysia. Table 2 shows the development of public affordable housing programs in the Tenth Malaysia Plan (RMK 10).

This review carried out to find out the definition of housing affordability especially for low and medium income group. Further, this study reviews the housing policy by several countries in providing the affordable houses to a large section growing population. The objective of this study is to review the issue and challenges to provide the affordable houses worldwide.

MATERIALS AND METHODS

Defining housing affordability: Gan and Hill (2009) viewed the household's capability to purchase a home in three different ways which in the view of purchase affordability, repayment affordability and income affordability. In purchasing a house, either a household is afforded to borrow enough funds can be described as the purchase affordability. Repayment affordability refers to the repaying the mortgage and household's burdened while income affordability refers to the ratio of housing prices to income.

Whereas Abed (2012) define the affordable housing as the relationship between people and housing. All housing is affordable for some people, no matter how expensive the house it is. But for others, no house is affordable unless it is free. The affordability is measured

by the relationship between the housing cost and household income. According to a study by Cai and Lu (2015) when the expenditures of houses takes >30% of the household income, a housing affordability problem arises.

In defining and measuring the house affordability, the common way is to comparing the relationship between household incomes and housing expenditure. In UK and many other countries across the globe, the major challenges faced are to provide the affordable housing and the sustainable development (Mulliner *et al.*, 2013).

Ariffin *et al.* (2015) stated that if the house cost is relative to income, the house is affordable. It is considered as cost-burdened if the families pay for housing >30% of their income. Housing affordability conundrum in major cities is due to the rapid increase in house price.

Bakhtyar *et al.* (2013) argued that the affordability become an issue when the house and land costs was too high for the 4% who live below the poverty level of the population. Many families are not reachable through the programs of public housing scheme developed by the state and federal government in Malaysia.

The price of the house is related to the affordability of the buyers to own a house. Lower and medium class income unaffordability to own a house has created by the growing in housing prices. It's become harder to continue supporting their livings if they buy a house, since the increasing cost of living and the income stagnancy. The housing programs prices sometimes were speculated by the developer for their bigger margin. For those with a low salary still cannot afford to have their own house. The housing price also arises by the increasing in building materials prices. The relationship between income and household expenditure describes the affordability. Affordability related to incomes, housing availability and cost, employment and patterns of new construction. Shortage of affordable housing unit becomes more acute when the population was increased in the urban centres.

Reported that Housing Opportunity Index (HOI) is one of the best way to measure the affordability. For a certain area, percentage of homes sold would have been affordable by simplifying the HOI to a household with the median income of the buyers. In study, affordability is defined as payment of the house should >28% of gross household income.

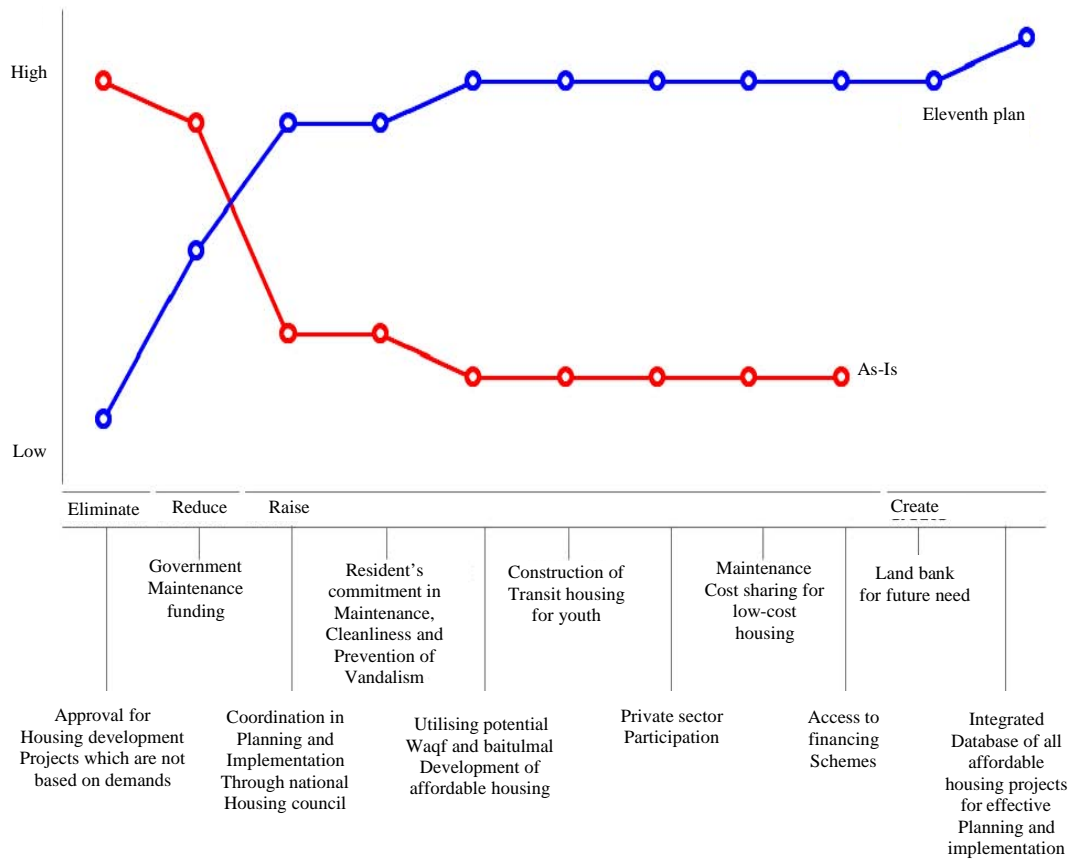


Fig. 1: A strategy canvas in providing adequate and quality affordable house

Housing policy: There are several policy initiated and introduced to solve the problem of affordable house but stated that housing policies caused number of complex issues. Housing policy not following a coherent course and often contradictory and in conflict. In most countries, housing is firmly embedded in the social, economic and political fabrics. Once simply to build more house is the main aim of housing policy in the most countries worldwide.

For poor and low income group earner, there are different policies were attempt in solving the housing problems. For the development of the housing sector, housing policy has groups the general factors. Housing production to meet demand and enable the economic growth was affected directly. Housing policy must consider the importance of public investment in providing the house to vulnerable and low-income groups. This is also for the growth of the housing sector and must address all the social groups in the state which include the provision of the houses in the urban areas, per-urban areas and the rural areas of the country. Therefore, the efficiency in housing management and production should be realized by the housing policies (Hassan, 2011).

Bakhtyar *et al.* (2013) in their study stated that world's housing policy documents confirms that governments and planners have to promoting the full housing accessibility to their citizen.

In Eleventh Malaysia Plan (RMK 11) reported that Malaysian government has put an efforts on their strategic initiatives to provide the shelter for all. There are three main strategies implemented which are to increase the access of the targeted group to house purchasing to strengthen the plan and implementation for better management in supplying the affordable housing and to encourage green and environment-friendly in construction to enhanced livability. Figure 1 shows the eleven factors that will be incorporated.

RESULTS AND DISCUSSION

Issues and challenges in providing affordable house: Since independence, housing shortage has always been a major problem over the years. It is importance to the government to fulfil the people housing needs. In household portfolios and budget, housing is identified as

one of the critical elements. Housing identified as the important components in urban economy and as a basic needs (Musa *et al.*, 2011). Developing countries faced the challenges to provide the adequate shelter for all people. There are so much issues and challenges in making the housing affordable for all.

High population in urban centers: Karim (2012) stated that many people migrated from the rural hinterland to urban centers due to advent of industrialization and urbanization. They aim to gain a better life for their families and a better employment in the urban centers. Urbanization was one of the country's areas of concern and was related to the development of economic. Due to the surge of urban population, squatter settlements were sprouted around these cities. Therefore, the government had to provide the low-cost housing for their citizen to demolish the squatter settlements. To accommodate all people in India, there is a big demand for buildings due to the tremendous increase in population (Deepak and Shanmugavelu, 2014). Size of the growing urban population increased as the rate of urbanization increased over a given period of time. Urban population can be described as the total population's percentage that lives in urban areas.

Urban cities and towns have gone up with the number of people in India because of the economic condition in their rural areas. This leads to migration of population and the number of homeless also increased. The growing population in urban cities has resulted in tremendous pressure on the government to provide the low-cost housing. Increasing poverty is due to the urbanization factor, low income earner from rural move to the urban areas and the increasing foreign workers. In Malaysia, problem in housing sector which is problem in supplying the low-cost and affordable house was still unable to match the demand of the growing urban population (Ramlan and Zahari, 2016).

In Nigeria, the rate of urbanization has showed the tremendous growth. Slum dwellers and the urban poor in the country was high significantly. The natural population increase because of the influx of people into urban areas. This caused to the worse housing situation in the country (Ugochukwu and Chioma, 2015).

Based on a study done by Jasvi and Bera (2015), India face a shortage of 17.6 mln. houses because of the urban population. The 40-45% slum population is growing day by day in India and the population is below the poverty line. India needs a low cost and easily available materials and technologies for affordable house provision. Gopalan and Venkataraman (2015) also agreed that India having the problems of housing shortage in their study. India is facing a growing urban population which from 109 mln. in 1971 increased to 600 mln. by 2030.

During the last 50 years, large increase of urban population occurs in many African countries. They live informal settlements since Kenya face the shortage of low cost housing especially in the urban areas also agreed that Kenya faced the rapid pace of urbanization and increased greatly the demand for shelter. Provision of basic services cannot match with the population growth.

A study by Mohamed and Darus (2011) stated that Libya is one of the countries face the housing problems. For low-income class this problem increases with the increase in population. Libya requires the low-cost housing to control this issue.

According to Department of Statistics Malaysia in Eleventh Malaysia Plan (RMK 11) the population in Malaysia was 28.6 mln. in 2010 and expected to grow to 30.5 million in 2015. In many cities, demand for low-cost house was increased and shortage of the house occurred because of the rate of migration growing in the urban center.

Housing prices increased rapidly: From the overview by Fiscelli (2005) the housing prices are growing faster in America and the United states than their incomes. In severe cases in some areas, pricing low and medium income buyers out of the housing market. For the last few years, the real estate boom and caused the house prices to skyrocket. It makes difficulties for low and medium income earner in many areas to buy a house.

There are different ways by events affect the different sectors of society when the house price boom. Owner will occupy benefits from the capital gains when total prices of the house rise. While in contrast, renters will lose from the rising house prices. It became worse for the first-time home buyers the time of purchasing the house can be critical and they could not afford the rising prices. It can conclude that rising prices in housing sector prior to purchase are bad while rising prices after purchased will act to reduce user cost. Higher house prices give the effect on affordability over the whole population (Gan and Hill, 2009).

Ariffin *et al.* (2015) discussed that the issues of the housing facilities which unable to access by the low and middle-income group is because of the escalating increase in the housing prices. This issue is not only affecting their ability to become a homeowner but they are unable to purchase the size and type of house they want. Supply and demand of the houses determine its price in a free-market economy.

Inadequate demand and supply of affordable land: In any development for society, land has been defined as the fulcrum. According to a study by Ugochukwu and Chioma (2015), inaccessibility to the land has make reduction for the provision of affordable housing for

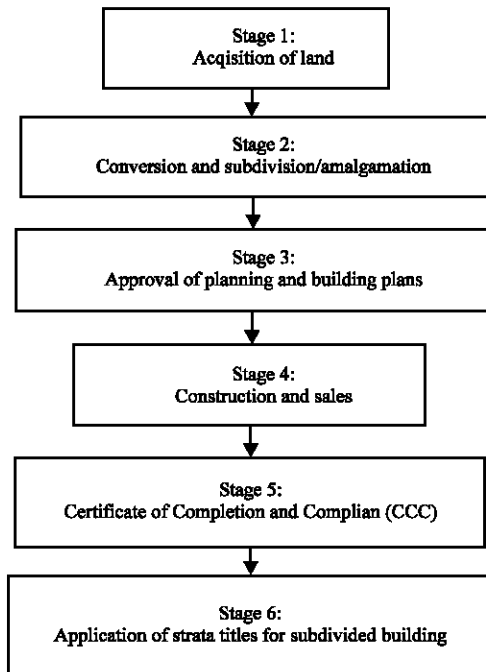


Fig. 2: Flow chart of housing development process

about 70% of low income group whom live below the poverty line. To achieve the goal in providing a shelter for all, the most important impediment is the lack of available land for the development in affordable housing. Scarcity of land may cause the increases in land prices, neighborhoods overcrowded, vacant land's illegal invasion and the squatter settlements will grow.

With the increased population rate in major urban areas, urbanization has put the stress upon housing development. Inadequate provision of the house is due to the shortage of land supply. Land use planning in the context of housing seemed to be the key player in housing development. It put stress to develop a land when the population growth increased in the urban areas as the demand for housing also keeps increasing. When it comes to land matters, the housing developers faced the difficulties in development plans and planning standards. Land used planning mechanism plays important roles in achieving provision of the houses. Figure 2 shows a flow chart of housing development process in Malaysia (Yakob *et al.*, 2012).

In the Indian context, land availability bears as the constraints to housing sector. Demand for the low-cost and affordable housing is increased when India is facing the growth in rural sector. With the urban population grow rapidly, urban land mass is under severe constraint to face the housing provision.

In solving the illegal squatter's issues in major towns and cities, Malaysian government has to provide affordable living houses. But the multi-story affordable housing are enable to be provided due to limited space of land (Hashim *et al.*, 2015).

Cost of construction materials and technologies: In most developing country cities, largest input constitute to the building construction is the building materials. About more than half of the housing construction expenditure have been established to account were building materials. To deliver a decent mass housing to citizen it is a serious challenge because of the high cost of materials. Some housing developers still insist to use the conventional building materials and technologies make the other issues and challenges with building materials arise. For build the house, high costing in materials is a serious challenge to deliver a decent mass housing (Ugochukwu and Chioma, 2015).

Sardroud (2012) also agreed that the critical elements in building construction projects were the materials itself. In cost effectiveness of the projects the building materials can make significant contributions. It plays a role to complete a construction projects within project budgets and deadlines. Compared to the other input, spend in materials is high. Thus, to reduce the house prices the construction projects have to use the suitable and low cost materials. A significant contribution to the construction projects cost effectiveness is the material and labour. This is the critical element because the materials total amount was high than other inputs. It may contribute for 50-60% from the total cost of a typical construction project.

According to study by Bhangale and Mahajan (2015) with the effective usage of locally ready available materials and construction techniques, the reduction in cost of construction may be achieved. The material and techniques used in construction should be durable, accepted by users, economical and costly maintenance are not required. Affordable housing may be provided if it is more to do with budgeting. With a better management system, appropriate use of readily available local materials, new skills and technologies it seeks to reduce construction cost. New developed construction techniques based on technical experiments and analysis must replace and analyse the conventional method used. Continuous rise in cost of construction caused the housing inadequacy among the low and medium income group people. Due to hike in cost of basic building material and labor, 50% over the nominal inflation of the cost of construction increased (Deepak and Shanmugavelu, 2014).

Income: According to a study by most of the Kenya citizens live in poor condition in both the rural and urban area can't afford to buy a house. Without some form of assistance, the poor cannot afford to buy a house themselves. Compared to high income earners, they would have their own financial resources to construct their own house.

Osmadi *et al.* (2015) stated that to describe the housing affordability, we must consider the relationship between housing price and income. This will measure the individual's affordability either to own or rent a house. The average income need to be addressed to afford the debt load to be support when owning a house. This also agreed by Musa *et al.* (2011) affordability must be correlated with household income. Based on the buyer's annual income, the affordability to own a house is measured by rent-income ratio.

With the differences in income levels, affordability could have the different meanings. It is the economic potential of an individual to buy a house. From the 30% of the gross income of the household, total cost of affordable housing should not exceed.

In Ramlan and Zahari (2016) study, it is proven by the correlation test that the respondent's monthly household income has a related significant with the type of house. Based on available stock housing units if the purchase is count the mismatch between housing prices and the income will occur.

Financial constraints and difficulties in housing loan:

Finance for the developers as well as finance for the households has been existent all along in the housing industry. It is difficult to secure the formal housing finance for the low income group and economically weaker section category. For low income group, the commercial banks and traditional means of housing finance typically do not give service in housing financial support. Housing finance institutions is difficult because housing constitutes a long-term funding. Most banks deploy these funds in long-term housing loans and use their short-term funds from deposits.

According to the findings by 82.5% respondents from his study could not afford to buy a new house. This is due to the high housing cost and there is no bank loan or support and subsidy from the Yemen government. High interest imposed and high housing price cannot be afforded by the low income group. Loans from the commercial banks cannot be obtained due to difficult mortgage conditions.

Gopalan and Venkataraman (2015) stated that because of the different construction indices and incomes across the India, financing affordable house is constrained. From the buyer's angle, it is difficult to obtain the financial support from the bank or other organization even if the

buyers have regular incomes when they are regular worker at the unorganized sector or lack of income proof as required for the loan process.

Malaysian government promises to provide the financing facilities in Eleventh Malaysia Plan (RMK 11). Facilities of finance and subsidies will continue to be provided to enable the targeted group to purchase a house. This includes expanding rental and continuing the rent-to-own program.

CONCLUSION

The concern of this study is to review the housing affordability definition worldwide and to summarize the overview of the issues and challenges in affordable house provision. It is well known every country faced the difficulty in house ownership especially for low and medium income category. Thus, this review is useful to help housing developers and government in determining the housing affordability and find the solution of the issues and challenges arise.

Planning authorities should monitor, control and solve the issues and challenges to provide the affordable house. More housing for low and middle income should be made by the governments especially for the high population in cities. Access to the affordable houses should be increased more to the low and medium income group and by providing the financing facilities can makes the dream in owning a house become a reality.

In the development of the affordable house, private sector should encourage to achieve the supply demand and not focus only on a profit margin. Housing policy should improve the planning and implementation to deliver the affordable houses to the targeted group.

Moreover, the developer and researcher have to analyses and improve on the effectiveness of construction technology. With the advance and improved construction technologies, construction time and cost will be reduced and affordable house can be constructed.

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