

# New industrialised housing model for young starters in Malaysia: Identifying problems for the formulation of a new business model for the housing industry

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## Abstract

Young people are currently facing a considerable risk when it comes to increasing house prices and interest rates as a substantial portion of their monthly income. This is due to the fact that they now have a responsibility in making monthly repayments of their housing loans. The current housing market in any part of the world does not allow the price to be affordable and at the same time, it does not give the freedom for buyers to customise their current and future needs for their house. To achieve this freedom, a new business model for young starters needs to be created to allow flexibility. This should not only cover the physical elements of the house such as the unit-envelope wall, structural components, services, but must also take into account the flexibility in terms of tenure contracts associated with finance and repayment by the inhabitants. This paper specifically investigates the current issues faced by young starters in Malaysia in terms of the affordability towards current housing ownership, quality of conventional housing and customisation options of existing dwellings. Subsequently, based on the literature and secondary data, this study proposes a new business model that would be imperatively able to close the gap in the housing industry in Malaysia for young starters to own homes. This study illustrates the first part of the bigger research that looks into the current problems and proposes a conceptual business model before testing it in the Malaysian housing market by using focus group studies.

Keywords : Industrialized housing, business model, young starters, housing industry, flexible housing

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## I. Introduction

### 1. Background and Aims of the Study

A decent home is a basic need of every human being. Owning a home has always been a 'dream come true for most people as it provides security in life as well as physical protection for its inhabitant(s). Throughout this paper, we define the young starters as first time home buyers with age ranging between 24 and 35 years old and sometimes they are also defined as Gen Y (Tanton, Nepal, & Harding, 2008). Furthermore, young people are at a higher risk than before when it comes to owning a house due to its increasing prices, climbing interest rates and that causing a sizeable portion of their monthly income has to go being contributed to the monthly repayment of the housing loan. Most of the young people of this generation have just embarked on their careers and can hardly earn good pay. Therefore, the dream of

owning a decent house would only be realised if it is affordable to them. The term affordable here simply means that the housing price should not become a financial burden in their monthly commitments. The reality in Malaysia nowadays is that, hefty property prices and the tightening of housing loans have made it practically impossible for young starters to buy their first home without any assistance from their parents. Thus, the only recourse left for this group is to forsake their privacy and stay with their parents or become a generation of renters.

Besides that, this paper also highlights that in terms of the physical elements as mentioned earlier, the current housing market in any part of the world does not allow the price to be affordable and restricts the market to 'grow' and 'shrink' along with its inhabitants. For instance, housing is an inflexible product at least under current circumstances. It is often difficult to physically adapt housing and physical modifications of existing dwellings, which often lead to unnecessary wastage and environmental burden (Wong, 2010). Understandably, certain space in a house may become obsolete over time due to the changing needs of its inhabitants. While the latest technology already allows flexible dwelling to become a reality, one possible way to increase accessibility for starting households is to make a flexible growth available in housing usage. In physical terms,

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this implies that dwellings can be relatively small and thus become less costly when young starters first occupy the dwelling. However, as soon as their financial means allow it and their preferences change, housing could be expanded. Ideally, in contributing towards reducing the risk of ownership, the dwellings should be able to shrink when financial resources are low or when preferences change (again) by choice or due to demographic reasons.

## II. Issues & Problems

### 2. Problems faced by the housing industry in Malaysia

Currently, the housing industry, which has grown rapidly since 1980's, is facing several issues. Even after 50 years of establishment since independence (1957), the housing industry has been constantly challenged by the issues of bureaucracy, red tape, having requirements by local authorities, flip-flop policies, and guidelines, which are not in line with the current technology. These issues have plagued the industry and continued to affect its industry key players until today (Berhad, 2013). Moreover, problems associated with the industry are aplenty, on the demand as well as the supply side. From the demand side, the major issues have always been associated with the affordability gap and high demands from young starters. Meanwhile, issues on the supply side have always been concerned with the duration of development and the sub-standard quality of workmanship by housing developers. In due course, this paper discusses the possibility of introducing an industrialised flexibility in housing to match the needs of having a flexible house for young starters in Malaysia.

#### 2.1 Problem 1: Affordability in current housing

According to the Department of Statistics of Malaysia (2013), approximately 10 million people reside in urban areas in Malaysia such as Kuala Lumpur, Penang, Selangor and Johor Bahru. As a result, land prices in these urban areas are increasing, and in turn have caused sky-rocketing house prices. The current higher prices of construction materials and land development costs have also provided additional reasons for private housing developers to increase the price, thus making it financially unreachable to many. Other than that, the statistics also looks into rising household debt, which has increased from 46% in 2000 to 140% in 2012. It was reported that the portion of the income, which goes to financing a house is about 50% of the total household loan in 2012 making it more than 30% affordable rate. Given that the affordability rate has been around three to four times, it was also reported that the price has since increased sharply in certain areas by five to tenfold (Berhad, 2013).

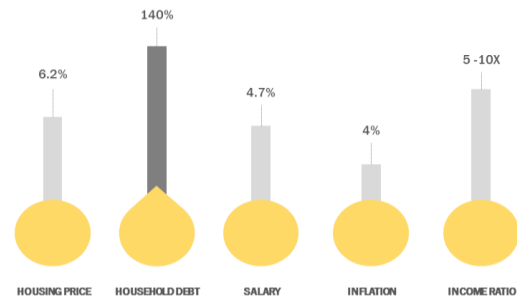


Fig.1. Housing price over household debt growth, salary, inflation and income ratio (Source: Berhad (2013)).

The affordability level of homeownership in Malaysia is largely determined by the household income and the price of the housing market. For instance, the property market report for the first quarter of 2011 based on statistics from the (Department of Statistics, 2013) noted that it was almost impossible to find a minimum house price for terrace type houses lower than RM400,000 (current exchange rate USD1=RM3.4), especially in the Klang Valley area and Selangor. Based on the amount stated, we can conclude that on the basis of a 30% household income, to make it affordable to buy a house in the Klang Valley the basic household income would require young people to earn at least RM6,000 or they would need more than 100% of their current household income to purchase one at this particular time. To make matters worse, young starters who draw a monthly salary of RM3,000 can barely afford a single dwelling and the only option for them is opting for the social housing, which is currently pegged at RM50,000 to RM 80,000. However, the middle-income group or the young starters are not entitled for this privilege (social housing) and the only solution for them is opting for the housing in the open market that is sold by the private developers. This phenomenon is happening in all states in Malaysia, although some states still have relatively lower prices (outskirts and rural) compared to those in the urban area such as Klang Valley and Selangor area.

Table 1. Housing affordability as a ratio of price to annual income. Source: (Berhad, 2013)

Category	Property price as multiple of annual household income x price / income
Severely unaffordable	5.1 and over
Seriously unaffordable	4.1 to 5.0
Moderately unaffordable	3.1 to 4.0
Affordable	3.0 or less

For instance, we are looking into potential financial solutions for the new business model. The new business model aims to address the affordability issues as well as the potential of the rental market to replace or provide an alternative for the current housing woes. We noticed that the demand for housing is increasing and this problem can be solved through creative financial innovation. The general objective of the research is to look into the flexibility of the housing tenures and financial solutions that will allow users to 'add' or 'reduce' their monthly commitments associated with their financial capability. Furthermore, the new business model should be able to separate the need for mortgage with the housing ownership. If we can keep the idea of changing housing components with no liability, the business model will provide more freedom for the young starters to fulfil their current and future needs for housing and reduce their monthly commitments.

## 2.2 Problem 2: Quality and delivery issues

The quality and workmanship of some of the constructed houses have always been a disheartening issue for the homeowners. Based on previous literature, the quality and workmanship issues are attributed to the nature of conventional construction, which rely fully on human skills as opposed to manufacturing products ((Kendall, 2004; Sufian, 2008; Zairul & Rahinah, 2011). Furthermore, the country is currently facing a shortage of skilled workers (Malaysia, 2005). For instance, training workers especially foreign workers to deliver expected results require huge investments. However, these efforts have not had an adverse effect on the industry despite being encumbered with high taxes (Berhad, 2013).

It is common for the company to have foreign workers upon completion of the project leave with the knowledge and skills they have acquired at the company's expense. In seeking solutions for skilled workers to improve the quality of building projects, the country is promoting IBS (Industrialized Building System) to replace the conventional construction industry. Nonetheless, it can be seen that there is still lack of commitment among the industry key players to change the way they do things (Nawi, Anuar, & Lee, 2013). Therefore, this study looks into identifying an alternative(s) in the current situation, which can transform how the public perceives the industry by way of exploiting the manufacturing possibilities of the housing industry.

In addition, this study posits that the manufacturing strategy should also simplify the delivery of products to potential customers. Housing delivery in Malaysia is well known for having several rules pertaining to housing development. For instance, conventional housing development is arguably, governed by more than 50 laws,

regulations and guidelines. As the market is maturing, laws and regulations continue to change in response. However, instead of assisting the industry, they have become harsh and punitive (Berhad, 2013). This reason has indirectly caused law-abiding industry players to become demotivated as a result of dealing with compliance related issues.

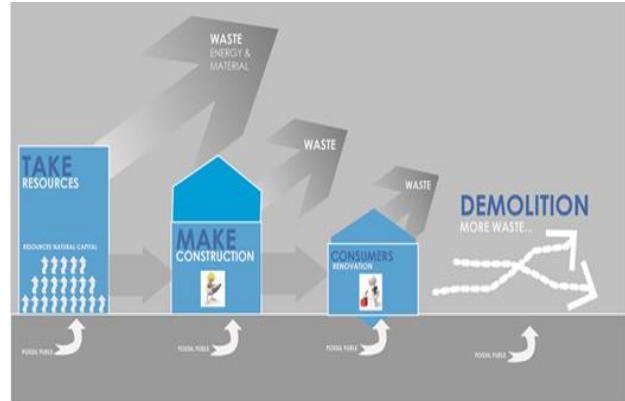


Fig. 2. Linear economy of housing industry in Malaysia (Source: Zairul, 2015 Adapted from: circular economy)

The construction industry, especially housing, must also transform its modus operandi in making sustainability of its overarching element in planning. With the current problems of global warming, resources depletion and the excessive destruction of the ecology and biodiversity, this issue has garnered some attention from industry players worldwide. However, in practice, the housing industry in Malaysia still consumes a huge amount of resources from raw materials, which is converted into construction materials such as cement, aggregates, steel, plastic and timber. According to a study by Zainul Abidin (2009), it was revealed that the concept of sustainability is not widely accepted among the key players in the industry and this is partly because of no strict regulations from the government.

In response to this issue, the new business model promotes a closed-loop economy and adopts manufacturing processes to ensure the continuity of resources and minimise waste from the construction process. The housing industry has already emerged from its infancy and therefore, it is time for it to transform into a more efficient industry that promotes self-regulation with minimal government intervention. Moreover, housing will also be able to grow as a market-driven industry governed only by transparent and consistent policies. As mentioned earlier, the conventional way of producing houses has been sifted with issues of sub-standard quality involving a lengthy and tedious process before completion. It often denies the right of the current housing purchasers to enjoy their biggest investment and have peace of mind of ownership. Hence, are we producing the same scheme for potential house buyers or do we provide them with more choices in future? The new business model

seeks to reduce delivery time to its customers, assure quality in its products and enhance customer relationship with its manufacturers for a long-term alliance.

### 2.3 Problem 3: Individuation restrictions in the current housing stock

The need for individuation in the current conventional housing is a result of the changing needs among consumers. In Japan, the need for housing individuation started as early as 1970 when customers avoided standardised, dull mass-produced designs (Yashiro, 2014). In Malaysia, the conventional housing market delivers standardised products and often leads to future modifications and alterations to meet the new needs as exemplified in figures 2 & 3. According to a study by Daud, Hamzah, & Adnan (2012), the most number of reasons found for purchasing a house is to have the freedom to change and modify according to one's needs and future spatial requirements. In contrast, the current renting options do not allow much freedom for tenants to have the flexibility of space customisation.

For instance, customisation is arguably, associated with the ability to choose, which inevitably involves additional costs for housing owners. This presents a significant challenge, as when the need for future spatial requirements increases, the costs also rises significantly. Due to this, the Japanese case raised an important issue with regards to target markets for the customised houses such as Sekisui House and Sekisui Heim. Both companies, to name a few, invested a lot of money on resources and technology. This has resulted in huge investments in the manufacturing technology. It is also clear that the cost of production for this kind of house is relatively expensive and could contribute to steep housing prices for young starters.



Fig. 3. The typical standardised design housing estate in Malaysia

(Source: Zairul 2015)



Fig. 4. The renovation has involved a frontal makeover on the façade and changing of windows

(Source: Zairul 2015)



Fig. 5. The renovation has involved a frontal extension and changing of the roof structure to accommodate bigger master bedroom

(Source: Zairul 2015)

Based on the given figures, it is obvious that the trend for renovation and modification is universal (Figures 4 and 5). This perhaps does not come as a surprise as most Malaysians tend to spend more money on renovation to suit their own desires. However, they have not many choices, as currently, the developers in Malaysia are not responsive towards a buyer-centric approach. Given the efforts to avoid wastage as well as to encourage promotion of building sustainability, it is time for housing developers in Malaysia to transform their offerings.

Therefore, offerings for customisation could provide added values to the current housing solution. Demographically, it will support the growing household and reduce wastage when it becomes unnecessary in the future. Economically, it will help young starters to customise their financial capability to manage housing components in a timely manner. The paper asserts that industrialising the housing sector will also provide potential solutions for this problem besides raising the



potential of industrialised mobile housing in the Malaysian context. Since the mobile housing industry is relatively new among Malaysians, in the general part of the research, it highlights several case studies from other countries.

### III. The way forward for the housing industry

This study has addressed issues on **financial flexibility, quality and workmanship** and the **growing need for individuation** among house owners in the current housing industry. Arguably, the current model of housing does not provide fair choices for homeowners to address these problems. Currently, the potential house owners have no choice than to accept the reality of expensive housing in this country. This paper concludes by highlighting several potential solutions for the issues mentioned. This research posits that the country is in dire need of an alternative business model as opposed to the current housing business model.

Firstly, we need to look into the potential financial solutions. The new business model would address affordability issues and the presence of rental markets to replace or provide alternatives to the current housing scenario. As the demand for housing is increasing, creative financial innovation is required. The main aim in the general part of the research is to look into the flexibility of housing tenures and financial solutions that will enable users to ‘add’ or ‘reduce’ their monthly commitment in proportion to their financial capability.

liabilities, we can allow more options for the young starters to fulfil their current and future needs in housing and reduce their monthly commitments at the same time.

Secondly, the new business model would promote a closed-loop (figure 6) economy and adopt manufacturing processes that will ensure the continuity of resources and minimise construction waste from the process. The housing industry has emerged from its infancy and it is time for it to transform into a more efficient industry in which promotes self-regulation with minimal government intervention. In conjunction with the new intervention, housing should be allowed to grow as a market-driven industry governed only by transparent and consistent policies. As noted, the conventional way of producing houses has been affected with issues such as sub-standard quality, and a lengthy tedious unsystematic process before completion. Furthermore, it often denies the right of the current housing purchasers to enjoy their biggest investment and have peace of mind of ownership. Hence, are we producing the same scheme for potential house buyers or can we provide alternatives for the potential house buyers to have more choices in the future? The new business model aims to reduce delivery time to customers, assure quality of products and improve the customer relationship with manufacturers for a long-term alliance.

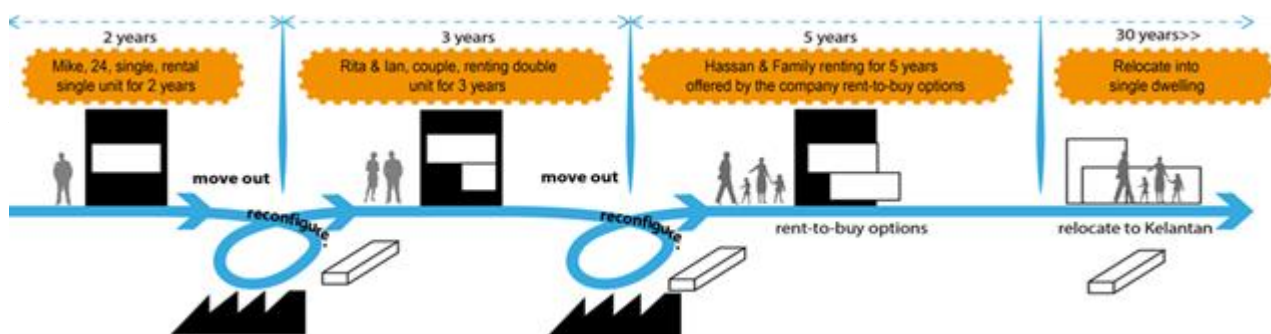


Fig. 6. The illustration lifecycle of the proposed business model  
Source: Zairul (2015)

Thirdly, customisation could provide added values to the current housing solution. Demographically, it would support the growing household and reduce usage when it becomes unnecessary in future. Economically, it would help young starters customise their financial capability to manage housing components in a timely manner. This research asserts that industrialising the housing sector would also provide potential solutions to this problem. This study has raised the potential of industrialised mobile

housing in the Malaysian context. Since the mobile housing industry is relatively new among Malaysians, this research in general has highlighted several examples taken from other countries.

In line with the problems currently faced by the industry, there must be an action plan in drafting a better business model for the housing industry in Malaysia. The new business model functions to address the issue of design flexibility and to accommodate current and future needs of

customers. Next, it provides sub-standard housing issues with a higher standard of production.

Finally, the model helps the industry to become cost effective, transparent and to continually enhance customer awareness of the choices available so that they become more knowledgeable and are well informed about their rights. In summary, the new housing business model includes the following:-

- 1) Alternative forms of mortgage finance through an innovative financial model in the housing industry to help secure financing for young starters in Malaysia;
- 2) Adoption of a new way of thinking that increases productivity, quality and provides alternatives in the current industry;
- 3) Allowing customers especially young starters to have the empowerment in terms of knowledge, choices and to grow with the housing units as well as to achieve sustainable world-class housing that

promotes cost-effective, financial solution with quality assurance and better management;

- 4) Allowing young starters to have more options in choosing the right home at the right time with the right financial package to suit their financial capability;
- 5) Seeking alternatives in the current scenario so as to transform public perception of the housing industry by exploiting manufacturing possibilities.

In the following table, we discuss further the comparison of each type in term of value propositions, liability of the product, payment model, work sequence, property rights, advantages and disadvantages towards customers, marketing strategy and also the central notion of value. We developed the following table based on the idea of circular economy by Stahel (2005) and what we perceive as the desired inputs for the new business model for the housing industry in Malaysia (table: 2)

	<i>Ownership model</i>	<i>Rental model</i>	<i>Hybrid model</i>	<i>New business model</i>
Value propositions	Housing product	Unit, services	Housing product	Services, customer satisfaction, unit, services
Liability	Construction quality	Maintenance of the property	Construction and the maintenance of the quality	Quality of the service
Payment	Payment due at the transfer of property rights	Payment due monthly	Payment due monthly and at transfer of property rights	Payment is due pro rata and when the services is delivered
Work sequence	Long supply chain, many actors, not centralized, often sequentially produced	Not relevant	Long supply chain, many actors, not centralized, often sequentially produced	Work can be produced locally, products can be stored, re-sold, recycle, reproduce, remodelling
Property rights	Property rights and liability are transferred to the buyer	Property rights remain with the landlord	Property rights remain with the financiers until property transfer	Property rights remain with the infill suppliers and have options for ownership
Advantages for customers	Ownership Right to a possible increase of value	Able to move out when times serves; Short commitment	Financial flexibility; Ownership; Right to a possible increase of value	High flexibility in design; Little technical knowledge necessary; Able to move out when times serves; Flexibility to change terms of payment
Disadvantages for customers	Standardised design, No cost guarantee; Renovation often caused higher cost; Long commitment with mortgage	No option for modifications; No right to a possible increase in value; No rights over property	Standardised design, No cost guarantee Renovation often caused higher cost; Long commitment with mortgage	No right to a possible increase in value

Marketing strategy	Publicity, sponsoring, advertisement	Housing agency	Publicity, sponsoring, advertisement	Customer service
Central notion of value	High short-term exchange value at the point of sale	Constant utilization value over long-term utilization period	High short-term exchange value at the point of sale	Constant utilization value over long-term utilization period

Table. 2. Comparison of available tenure with the proposed business model

Source: Zairul (2015)

#### IV. Conclusion

In summary, in the first part of the paper, we described the problems faced by the young starters towards housing in Malaysia. The issues and problems have been divided into three parts, namely affordability, quality and workmanship, and customization restrictions. In the second part, we provided a conceptual framework on the proposed business model that we think would be appropriate to solve the issues that we discussed earlier. Furthermore, the formulation of the conceptual model was developed based on literature reviews on issues, problems, journal on housing issues in Malaysia and several publications related to housing in Malaysia.

Besides that this paper posits that young starters should be given more options and alternatives towards the possibility of housing in terms of financial flexibility, better quality housing and also non-standardised housing options. Hence, this research is looking for a solution in view of the new business model to solve the mentioned problems. For this new business model, a new concept of industrialised housing such as flexible housing and mobile homes would be a good alternative for housing in the future.

The prospects of prefabricated housing are still at infancy in Malaysia. Most prefabricated or pre-engineered buildings are made from concrete and dedicated to commercial and institutional buildings. For instance, the type of construction normally involves a heavy concrete structure or steel structure with very delicate process of site delivery, thus making it unpopular in Malaysia (Malaysia, 2005). Therefore, it will be a challenge towards the housing industry in Malaysia to change how it works and how the games were played.

This paper further posits the freedom of customising the house upon them, and signifies the attributes of the new direction in housing. This allows the customer to rent the housing components and to be flexible according to certain requirements imposed on them. Moreover, these new tenures will promote a long relationship with the housing

association or producer and will be considered a good business strategy for a long-term business strategy. At the same time, the housing producer will reduce their cost on the reproduction of the new components when the existing components are made possible for remanufacturing, due to early considerations of life cycle chains at the very beginning. The desire of homeownership is being confronted and a new business model needs to be discovered to continue to support this ideal future. The rise of the new needs in the new market has requested the industry to be more creative in giving alternatives towards current housing for young Malaysians.

Given the challenges mounting for the new business model, the country should be ready to embrace the new future of creative financial instruments and to shift market attitudes, in which the ownership should also consider another step towards the sustainability of the market in the future. Are we going to stop just by providing ownership for the Malaysians and what would happen next? Are the solutions sustainable by allowing the homeowners to change the physical of their house and to get into the financial trapped by refinancing the house?

This paper reports the formulation of the conceptual business model and its conceptual model tested on its acceptance by using empirical studies. The empirical works include design workshop with professional architects, focus group studies with young starters in Malaysia, housing developers, housing entrepreneurs, NGO's and government agencies dealing with housing.

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