Overview of Affordable Housing from Supply and Demand Context in Malaysia

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Abstract. The increase in the number of rural populations migrated to the city has increased over the years. This led to the widespread of urbanisation in cities. As a developing country, this is also happening in major cities in Malaysia. In this regard, this also contributes to the needs of the residents to have affordable homes, especially in urban areas. Malaysia government is very serious in ensuring all its citizens towards owning their own homes. This can be seen clearly through the evolution of Malaysia's housing policy since the era of independence to the present. Therefore, this paper seeks to build theoretical understanding on affordable housing issues from supply and demand context. This was done based on findings by reviewing a thorough review of literature from local and global context pertaining to this issue. The findings from literature reveal that housing supply in Malaysia is leading by landed property development compare to high rise building. Most developers who developed the land with mixed development approach are having landed property housing for middle class and high-class income, while the high rise housing building is to cater the low income group. This could possibly become the main reasons for mismatch housing supply and demand in certain location. The conclusion from the literature help looking the issue of supply and demand mismatch from a broader view to help understand the underlying reason of housing supply by private sector as well as from the government sector. Furthermore, understanding Malaysian culture would also give an understanding on what are the factors that cause the buyer to buy a home.

Keywords: affordable housing, urban area, supply and demand.

1. Introduction
Housing is the most important and basic need that its provision has globally become one of the main challenges of urbanisation, which is estimated to increase to 75% by the year 2020 [1]. In fact, an increase in the middle-income group in the urban area has resulted from urbanisation which eventually leads to more demands for affordable housing [2]. In Malaysia private sector or developers, is becoming the main housing provider in Malaysia, therefore the provision of affordable housing has becoming more critical and crucial [1]. This paper investigates the main challenges related to the affordable housing from the context of supply and demand mismatch, as well as discusses the potential solutions in order to solve or mitigate this issue.

2. Literature Review
2.1 Urbanisation in Malaysia

Urbanisation generally refers to the development of the population and cities, a high number of people live in urban areas compared to those live in rural ones [3]. In other words, it means concentrated population within urban areas which result in more consumption demand for land as well as commercial, residential, industrial, and transportation transformations [4]. Land resources, energy resources, water resources, and biological resources are of the main issues that follow this phenomenon. The most concomitant problem of urbanisation is the urban sprawl, which means occupying more land for different purposes [5]. In fact, according to [6] the increasing and concentration of population in cities place high demand for housing, services and infrastructure. However, not only are these resources affected and probably face future deficiency, but also the way in which people live, the quality of their life, and quality of urban environment are also affected.

In Malaysia, urbanisation is an increasing issue since the country has transformed from a agriculture-based economy into modern services and manufacture-based economy [7]. In fact, urbanisation growth in Malaysia has increased around 1.8 percent from 1971 until 2015 [7]. According to the World Bank 2019, Malaysia is facing urbanisation and is considered as urbanized nation since the GDP growth of Malaysia has grown around 3.4 percent from 1975 till 2018. More specifically, during the last few decades, Malaysia has been facing significant growth of urban population that increased from 27 percent lived in urban area in 1970 to 71 percent in 2010 (Siwar et. al., 2016). According to the Malaysian National Plan 2020, the target of Malaysia is to be a high-income country and to achieve a GDP growth of 6 percent annually. All these figures and statistics show the real trend of development currently take place on the ground. As a result, the unplanned urbanisation led to unsafe and inconvenience environment for living owing to its own problems that it created and added to the unpleasant urban environment. This issue has some negative impact on the city physical form which is discussing below and other problem regarding to the environment as; climate changes, freshwater scarcity, deforestation, fresh water pollution, flash flood, and population growth [8].

2.2 Housing in Real Estate Sector in Malaysia

Real estate is a property consisting of land and the buildings on it, along with its natural resources such as crops, minerals or water and immovable property of this nature. All forms of activities carried out on a piece of land with a building or without a building may be considered that the land has an interest. This can be considered as a component that encapsulate the business of real estate profession which covers buying, selling, or renting land, buildings or housing [9]. Adding to this, [10] emphasised that the various type of real estate includes residential (for sale and rental housing), retails, offices, industrial building, hotels and a combination of these types.

The property landscape in Malaysia has changed slightly when it comes to the announcement of the 2019 budget where real property gains tax rates for homes below RM200,000 is exempted on property prices for low cost housing, as well as affordable housing scheme [11]. Although, the Malaysian property market is characterised by unevenness across its sub-segments in recent times, with the demand outstrips the supply in the housing market, while the office and retail markets are experiencing an oversupply. The rapid increase in house prices, particularly in the major urban centres, has been attributable partly to a shortfall in supply. The shortage is particularly evident in the supply of affordable housing. However, this latest policy is one of the government's efforts to help low-income groups help reduce the initial payment burden of their home purchase. This has increasingly priced out more urban Malaysian households from the housing market. The Malaysia government is very serious in ensuring all its citizens towards woning their own homes. This can be seen clearly through the evolution of Malaysia's housing policy since the era of independence to the present.

| Period      | Focus                           |
|-------------|---------------------------------|
| 1957-1970   | Early stage of independence     |
| 1970-1985   | housing to overcome poverty     |
Although the development pattern for high rise housing is now increased, however looking at the graph it can be understand that many housing developments still offering a landed property housing. This showing the demand for landed property are still exist in the market.

2.3 Landed Property vs High rise property
Property in general means exclusive control vested in some person or legal entity, private or public. The main property is categorized to residential, commercial or industrial [14]. Landed property is a building developed on a piece of land based on the ownership on the land. The landed property market information management was done through the land registration, which guarantees accessibility to loans from financial institutions for investment and wealth creation in developing economies [15]. In comparison with high rise buildings that have multiple ownership based on the occupied space of the high rise building, known as ‘Strata’. The strata title is a form of ownership devised for multi-level apartment blocks and horizontal subdivisions with shared areas. In Malaysia Strata Titles Act 1985 (AHS) have come into force on June 1, 1985 for all states in Peninsular Malaysia to allow the alienated land (alienated land) have titles to separate into layers (multi-layer ownership).

2.4 High rise Housing in the City
Most of the old housing stocks in the city of Kuala Lumpur are in bad condition. Abandoned conditions, poor maintenance and poor construction contributed to the downturn in some parts of the City. The
upgrading and redevelopment program which are mostly relating to a high-rise residential will be initiated to improve the standards and quality of the existing private and public housing stock environment [16] in Kuala Lumpur Structure Plan 2020 report (KLSP 2020). The growing number of people in a city will contribute to the number of labor which leads to the demand for basic human needs which also increased. A home can no longer accommodate a growing family member or who has built a home, so a new home is indispensable. This situation related to the land control by the authorities and government which contributes to a massive blocks of high-rise residential. In Kuala Lumpur, residential area been decreased from 523 hectares in 1980 to 288 hectares in 2000 (KLSP, 2020) One of the consequences to reduction of residential land use in the Kuala Lumpur is because a redevelopment in some old residential areas to office and other commercial use. Usually for some old housing areas, a low-density residential areas located on the ground with high potential commercial value. Other than the land use, land prices and infrastructures costs are the cause of developer are prefer to build a multi-stories apartment or condominium rather that a landed house. He mentioned that a condominium an apartment also a steps to resolve an affordable housing for low grade income people in align to achieve what the government been planned to tackle the affordability issues.

2.5 Affordable housing
Housing affordability has widely been discussed in recent years. Complex is its definition as numerous attempts have been made in order to understand what it means. Nevertheless, a definition of affordable housing can be extracted from the frequency of referred literature. The word ‘Housing’ can describe or term the process, end product or activity [1]. In other words, it refers to a group of houses as an end product as well as to the providing, managing and maintaining processes and activities. The socioeconomic stability of any nation has always been assessed on the housing affordability of the country [17]. The affordable housing concept is generally used to addresses low and medium-income group of housing. Thus, it can be defined as households allocate no more than 30 percent of their gross monthly income for purchasing a house [17]. This definition means that families who expend more than 30% of their gross monthly income for housing are in difficulty of affording basic life services, e.g., food, clothing, transportation, education, and health care [2].

2.6 Housing Supply and Demand Mismatch
Perhaps the main issue related to affordable housing is the mismatch between the supply and demand [18]. A report by Bank Negara Malaysia in 2017 stated that there was an increase in activities in the housing market. However; this increase was accompanied by an increase in unsold housing properties, most of which were priced more than RM250,000. This indicates that it might be considered unaffordable for the Malaysian people. REHDA Institute trustee Tan Sri Eddy Chen stated that one of the biggest challenges for developers is “putting the right product in the right location with the right pricing to match market demand” [19]. The rapid increase in unaffordable units was also accompanied with a slow increase in median income. A lot of these properties were also located far away from the economic centers as well public transport facilities [20]. Adding to this, there must be a single body that is responsible for all matters related to public housing in order for all issues to be properly coordinated [21].

3. The lead causes of supply and demand mismatch

3.1 Overcrowded population
The increasing number of urban population in Malaysia is growing, however the supply of affordable housing is slow due to the poor coordination of various laws, regulations and procedures from relevant government agencies from federal level to the state and local level related to the housing development. Resulted from that, many people that work in the urban area are residing at the urban outer ring. This is aligned with [22] idea about people will move to another area where houses are built, but houses are not necessarily built in the area where people would want to live. In Malaysia, lack of reasonable choices to
possess property forces several Malaysians into the rental market and informal settlement that is drastically increasing because of increment of population and urbanisation. In the real economy, there might lots of additional factors that have an effect on housing costs, however, the growing population identified as the main factor [23].

3.2 Land
Land is a scarce resource and non-renewable of its very limited resources in nature. Due to the limited space (land resources) the land prices become more expensive which reflected in the cost of the house prices, particularly in the major urban centres. This make a developer utilized the limited land sources to maximize their profit and force them to limit the supply of affordable housing in their development plan. Adding to this, the increase in the construction of office buildings and retail malls, particularly in major cities, has raised the potential of overbuilding of commercial properties that could adversely impact the real estate market. This will cause the housing price to increase because the cost of building a unit increase.

3.3 Construction approach
Building Information Modelling (BIM) is an intelligent technology consists of data-rich tool with object-based software through 3D virtual design platform. This BIM approach could significantly change the construction environment, working culture, and project delivery process as well as construction workflow. It is known as parametric model for sharing knowledge as a basis for decision making during procurement, design, construction and operation stages. This could be achieved by enhancing the coordination, communication and integration among the multidisciplinary construction players [24][25][26]. This will definitely help cutting the relevant cost in construction.

While the other high technology approach in construction is Industrialised Building System (IBS) in Malaysia it is used for a technique of construction where by components are manufactured in a controlled environment either at site or off site, placed and assembled into construction works. However, in global context IBS is also known as Pre-fabricated/Pre-fab Construction, Modern Method of Construction (MMC) and Off-site Construction [27]. Particularly in Malaysia, Malaysian Construction Industry Development Board (CIDB) is the government agency who looks into the IBS application and responsible to give awareness and educate developers & construction industry. Developer still look at these two approaches as cost incurred that might hinder the construction players to the software training and development in their undertaking project.

3.4 Bank loan - Interest Rate
In effective on January 2015, the Base Landing Rate (BLR) was replaced by Base Rate (BR) where the base rate is no longer determined by the National Bank of Malaysia. On the other hand, all banks in Malaysia can determine their own BR rates based on the formula given by the National Bank. The BR is differed from one bank to another depending on the capability and efficiency of each bank in lending to their respective customers. This makes the bank more transparent in conducting their banking operations which will help customers make better financial decisions according to their requirements. Hence, interest rates would affect the availability of capital and the demand for investment. These capital flows influence the supply and demand for property and, as a result, they affect property prices [28].

3.5 Inflation Rate
From economy context inflation rate is reflected on the purchasing power of the buyer. As tangible product, houses also cannot escape from the inflation effects resulted from the economic conditions of a country. Hence, the rise in inflation front hundreds real payments on a long-run fixed-rate mortgage, and so reduces the amount of housing. It should be noted because of the worldwide state of affairs that increasing the money provide causes inflation and house costs to extend [23].

3.6 Housing Suppliers (Government and private sector developers)
From the housing supply context, suppliers are derived from two institutions; the government and private developers. The Malaysian government had initiated several affordable housing programs such as PR1MA, RUMAWIP, PPA1M, and Selangorku. These are under different levels whether Federal or State and offer a wide variety of options that are meant to suit different segments of society. On the other hand, private sector developers also offering a variety of housing schemes for local and international buyer. These private sectors should be registered under Malaysia National Housing Department (NHD), where the progress of the housing development is being monitored. The NHD is the federal government agency that is responsible for monitoring all housing developers and working closely with state and local government to ensure developers in compliance with existing rules. In addition, NHD also look after the purchaser's welfare by providing information of the developer status whether they are registered or not, as well as keeping track on the development progress whether it is completed, or under construction or even abandoned.

Furthermore, if a licensed housing developer fails to complete a housing project on the given time, therefore under section 11 (10) (ca), Act 118, the National Housing Department (NHD) is responsible for monitoring and finding a solution for abandoned housing projects, especially for low cost housing. The National Housing Department is one of the agency under the Ministry of Housing and Local Government (MHLG) was established in 1976 to replace the Malaysia Housing Trust (MHT) which has been in existence since 1950 and passed through the Act 339 (Liquidation), NHD’s responsibilities and duties are subject to the Housing Developers Act (Control and Licensing) 1966, Act 118. In summary, the purpose of the establishment of the NHD is to provide assistance to state governments in their efforts to meet the needs of low-cost housing and affordable housing schemes in their respective states. However, according to the statistical reports obtained from the National Housing Department (NHD), there are 30% of abandoned housing projects recorded in Peninsular Malaysia for housing projects between year 2009-2018. This 30% is represented by 83 development projects, while the total number of completed developments amounted to 195 projects. Out of 83 abandoned projects throughout Peninsular Malaysia, Selangor recorded the highest number of abandoned projects of 35, 10 projects in Johor and Negeri Sembilan of 5 projects.

4. Conclusion and the way forward
From a thorough review of the literature on housing supply and demand in Malaysia context, it can be concluded that main contributing factors are due to the fast pace of urbanization in Malaysia. By looking at the housing development scenario in Malaysia, the problems that arise could be identified. Hence, it can be concluded that there are several factors contributing to the supply and demand mismatch, namely overcrowded population, land as limited resources, construction approach, housing loan interest rate and inflation rate. Accordingly, the initiatives undertaken by the government shows effort are made to alleviate the affordable housing issue in the country. Adding to this, the ongoing development of high-cost housing that ends up being neglected and unsold must be directed towards low-cost and affordable housing to cater for the majority of the population. In this matter, cooperation and proper coordination between the government and private parties is essential in creating a successful affordable housing market. Almost half of the existing housing schemes are high-cost, while more than half the population of the city require low or medium cost housing. Care must be taken in the quality of these affordable housing schemes as well, since affordability is not only about pricing, but also long-term robustness liveable. Therefore, future research direction needs to come up with a strategic approach in managing housing supply and demand by looking from various aspects that contributes to fulfil the needs of affordable housing particularly in the urban area.

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