DEVELOPING AN AFFORDABLE HOUSING LIVABILITY INDEX

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ABSTRACT

This research developed and empirically tested a model that leads to better understanding of the AHL dimension as well as delivers better prediction of the research model. Notwithstanding, there is very little research in the area of AHL. Thus, this study has determined and identified AHL dimension. This study has drawn upon the AHL structural model which has been extensively validated in the Malaysian housing context. This has led to the conceptualisation of the research model used in this research. Three objectives of this research were (1) To determine the attributes and sub-attributes of livable-affordable-homes (2) To measure housing livability attributes and (3) To develop a housing livability index for affordable housing in Malaysia using Structural Equation Modeling techniques. This three-phase, multiphase mixed method study utilised within the constructivist and positivist paradigm. The combination of qualitative and quantitative data provided a more complete picture by noting trends and generalization as well as in-depth knowledge of participants' perspectives, hence, enhance the reliability and validity of the research data. The first phase was a qualitative exploration of AHL by collecting interview data from a sample of 12 experts consisting of government bodies, Public and Private Universities and NGOs. The analyses show that, affordable housing livability is conceptualized as a composite of seven dimensions such as physical aspects, community and neighbourhood, public amenities, economic development, residence wellbeing, safety and security, and psychology impact. Survey method has been adopted to collect data for testing the conceptual model. A self-administered questionnaire approach was chosen to measure the affordable housing livability dimensions. A total sample of 297 was used for data analysis and were analysed through two statistical software tools (i.e., SPSS and SmartPLS 3.2.7). The hypotheses H1-H7, were accepted, because they were statistically significant. Further analysis with Important-Performance Map Analysis (IPMA) was conducted for prioritizing constructs and to provide information on the relative importance of constructs to develop the AHLI. Lastly, FGD 2 was conducted to evaluate and validate the affordable housing livability model and AHLI with the sample off 20 participants. In general, the analyses signify that the participant largely agree on the importance of AHLI.

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1.0   INTRODUCTION

Housing forms one of the basic needs of human; Maslow's Theory Hierarchy of Needs (1943) describes that housing forms the foremost important need. Oberlink (2008) specifies housing is such a fundamental necessity that people often question about where to live largely on the basis of what kind of housing options are available and whether these options meet their current budget and requirement. Hence housing is a major concern for all people in every corner of the world as the wellbeing of a country is reflected in its people enjoying a certain standard of living. Residential and neighborhood satisfaction is an important indicator of housing quality and condition, which affects individual quality of life.

Today, housing affordability is a sore point for many worldwide with house price spiraling out of control. Most governments throughout the world strive to come up with solutions to solve housing woes by developing affordable housing as fast as possible. For instance in Malaysia, the government through the 10th Malaysia Plan (10MP) , has targeted 78,000 units of affordable houses to be built, consisting of 38,950 units under the People's Housing Programme (PHP) and 39,050 units under programmes related to the Ministry of Rural and Regional Development to meet the needs of the low- income groups and squatters. Although the National Housing Policy Malaysia 2013 (NHP), does emphasise on essentials such as quality construction and provision of public amenities , there is fear that in trying to meet such targeted affordable housing numbers, the livability aspect can be somewhat compromised. This is especially so in light of high land and building construction cost.

1.1   PROBLEM STATEMENT

There is often confusion among people about the term "affordable housing", and "livable home". Affordable housing is housing unit for those with median

household income. Affordable housing is a housing that provides a wide range of needs for low and middle income households and the affordability of affordable housing and can cover their basic cost of living (Milligan et al., 2007). Affordable housing is generally defined as a housing that can be provided at a reasonable cost i.e., at an affordable price and not more than 30 percent of the gross household income for the low to medium income group.

Working households need to bear the burden of either significant costs such transportation costs if renting or buying housing that have good access to their workplace (Wan et al., 2011). Inaccessibility for housing by the middle income group is the result of rising house prices, especially in major urban areas has worsened the situation. Their ability to become homeowners, and also the size and type of housing they can buy is subjected to affordability of housing (Wan et al., 2011).

According to Tan (2012), to ensure that this noble idea has the right footing, affordable housing provisions should be designed on a long-term and holistic approach. Affordable property prices and no compromise on housing quality are the main goals of affordable housing schemes. These projects should ensure that low-income groups that rely heavily on public amenities and public transport to have good accessibility to these facilities.

Here arises the issue of how livable are these affordable homes. According to Earl (2014), livable house is one that provides all individual needs, in term of having more transportation choices, promote equitable, affordable housing, enhance economic competitiveness, reinvest in existing communities, and coordinate and leverage federal policies and investment. Likewise, Lowe et al. (2013) described a livable housing are unit that are safe, attractive, socially inclusive and environmentally sustainable; with affordable and varied housing linked to employment, education, public spaces, local shops, health and community services, and recreational and cultural opportunities; via easy public transport, walking and cycling infrastructure.

Tan (2012) stated that most of the public low-cost housing schemes that were launched by the government over the past 20 years have failed to improve the quality of life of their residents. He (Tan) added, in fact, many housing areas developed under these schemes have turned into slums that do not provide a wholesome environment for families. Low-cost housing is priced between RM35, 000 and RM42, 000, therefore, many of these units are small whereby the built-up area is approximately 650 square feet. As a result, children tend to spend their time in corridors, on fire-escape landings or in the car parks, due to lack of space and privacy.

Goh and Ahmad (2012) agreed with the problem and continued that there is no proper pathway from flats to garden or playground thus causing danger to children who cross the driveway to the playground.

With regards to the problems faced by the residents in low-cost public housing, Hashim et al. (2012) in reference to Construction Industry Development Board (CIDB) stated that the design of low-cost housing in Malaysia has been changed from the provision of two to three bedrooms with addition of dining area, drying area as well as a separate bathroom and toilet.

Furthermore, according to Tan (2012) who refer to Yam and Ismail, have pointed that housing developments in Malaysia has experienced significant transformation from 1985-2004 where the preferences of buyers changed from basic shelter to quality living environment such as location, environmental amenities, proximity to the workplace, symbolic characteristics and investment.

As such affordable homes should not only reflect shelter but also contribute towards quality living. Accordingly, the livable-affordable-home is the one place that has more transportation choices, safety location, and reliable and economical necessities. These can decrease the household transportation costs and reduce their dependence on petrol. In addition to that, it leads to improved air quality, reduce greenhouse gas emissions, and promote public health. Furthermore, livable home

should promote equitable, affordable housing, relay on expanding location-and energy-efficient housing choices for people of all ages, incomes, races, and ethnicities to increase mobility and lower the combined cost of housing. In addition to that, the livable-affordable-home should locate at places that enhance economic competitiveness, through easy accessing to employment centers, educational opportunities, services, markets, and other basic needs by workers.

Hence, although much research has been carried out developing and identifying the attributes and indicators for housing livability, a gap does exist, where there is no measurement on the housing livability attributes. On another note, although there exist livability index, such indexes concentrate on livability aspects of cities, towns and communities. Australia has developed a housing livability index, but it is focused towards the physical aspect and design of the house. The AARP in USA has developed livability indexes for cities, town communities and housing. Nevertheless the index is general livability and not focused on affordable housing. Therefore there is no housing livability index as such for affordable housing.

1.2   PURPOSE STATEMENT

The purpose of this three-phase, multiphase mixed methods study is to explore participant's views with the intent of using this information to develop and test an instrument with a sample of 297 stratified affordable housings' residents. The first phase will be a qualitative exploration of a AHL dimension by collecting focus group and interview data from a sample of 12 participants consisting government bodies, Public and Private Universities and NGOs. Finding from this qualitative phase will then used to test the AHL dimensions with the sample of stratified affordable housings' residents in Johor Bahru, Selangor, and Kuala Lumpur. The reason for collecting qualitative data initially is that there are inadequate instruments that need to be developed based on the qualitative views of participants. The third

phase will be qualitative evaluation of the AHL measurement and model through focus group.

1.3   RESEARCH QUESTION

The above discussion has given rise to several questions as depicted below and the aim of this study is to address the following research questions:

a. What are the attributes contributing to livable affordable homes?
b. How to measure affordable housing livability attributes?
c. How to develop an affordable housing livability index?

1.4   RESEARCH AIM

The aim of this research is to facilitate the development of a housing livability index for affordable housing in Malaysia. This index will take into account of not only physical aspects but also psychological well being of the residents.

1.5   RESEARCH OBJECTIVE

The objectives of the study are:

a. To determine the attributes and sub-attributes of livable-affordable-homes
b. To measure housing livability attributes and sub-attributes
c. To develop a housing livability index for affordable housing in Malaysia

1.6   RESEARCH SIGNIFICANCE

The benefits of the research will contribute directly to Authorities involved in Housing Development, Housing Developers, Consumer and Income Generation

a. Authorities Involved In Housing Development

   The findings of this research will assist authorities in setting the benchmark in the development of affordable housing.

b. Housing Developers

   Housing developers will be educated on the expectations of consumers. Hence they should be more careful in their sitting and development proposals for affordable housing.

c. Consumers

   Consumers of affordable homes should benefit greatly from the findings of this research. They would be occupying homes, which meet the minimum for livable affordable housing.

d. Income Generation

   The findings from this research can be used to generate income similar to the GBI.

1.7   RESEARCH SCOPE

The scope of study will cover vertical stratified affordable housing in highly urbanized areas in Malaysia. Due consideration is given to purpose built affordable housing schemes and initiatives. After much deliberation, the study will focus on Shah Alam/Petaling Jaya, WPKL and Johor Bahru. The mainstay being major cities/towns with high urbanisation.

The affordable homes will be defined and identified based on literature review and guidelines set by the Federal and State Governments of Malaysia.

2.0   LITERATURE REVIEW
2.1   INTRODUCTION

There is no clear definition of affordable housing. The existing literature tends to focus on affordability issues from the view of consumer income and affordability with little to reflect on the perimeters set for the affordable dwelling itself in terms of physical self, location, proximity to facilities and amenities, and safety and security issues.

2.2   DEFINITION OF AFFODABLE HOUSING

The definition and characteristics of affordable housing should be defined prior to understand the concept of affordable housing. The word 'afford' means *'have sufficient money, time, or means for' orbe' able to do something without risk of adverse consequences'* (Concise Oxford Dictionary, 2004). The *affordable* terminology is very subjective and guided by local factors. It is measured by the affordability of certain sections of society where their income is below the median household income. Affordable is defined as the money to be paid by the homebuyer to obtain or build a house within any particular time, without any risk or consequences.

In general, affordable housing is designed to meet the needs of medium and low-income households where they have inadequate income to access appropriate housing in the market without the assistance programmes and other essential basic