The Natural, Social Environment and Urban Residents' Intention to Remain: A Conceptual Framework

Alan Wee-Khang Keh[1(✉)], William Wee-Lim Hew[1,2], Sook Fern Yeo[1], and Cheng Ling Tan[2]

[1] Faculty of Business, Multimedia University, Melaka, Malaysia
1161303420@student.mmu.edu.my
[2] Graduate School of Business, University Sains Malaysia, Penang, Malaysia

Abstract. To date, many urban centers are plagued with a variety of environmental and social issues which weakens the quality of life of its residents. As a result, there is a trend of outmigration, where urban residents are moving away from these urban centers, contributing to the decline of these traditional economic centers. Maintaining a strong residential presence in the urban centers is important to sustain the place, therefore residents should be encouraged to remain in the urban vicinity rather than to leave. Using Malaysia as a case for the research, this paper explores the determinants to urban residents' intention to remain. It is suggested that the residents' intention to remain is affected by both the natural environment, which covers biodiversity and greenery in the neighborhood, as well as the social environment, which covers safety and the sense of community in the neighborhood. The research will be of primary interest to local planning authorities as well as housing developers.

Keywords: Intention to Remain · Housing sustainability · Residential environment

1 Introduction

Urban centers have long been the focus of national development plans of many countries owing to their contribution to their respective economies. For decades, it appeared that the urban population has grown rapidly due to immigration. It is generally agreed that a strong and thriving urban population is crucial for the local economy, as they supply manpower to run the cities' commercial activities. Bearing testimony to the importance of urban populations are developed Western nations which are almost always supported by a significantly large urban populations [1, 2]. Given the importance of the urban population in stabilizing the economy, it is undeniable that it also has immediate implications on urban sustainability. This explains why local authorities have always sought to improve the well-being of residents in urban states and encourage them to remain and continue supporting the economy.

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Nonetheless the growth in urban population is a double-edged sword. As countries continued to urbanize and develop, their urban centers have become increasingly unliveable. With that, there were increasing concerns over the natural environment, such as the gradual destruction of urban green spaces as well as diminishing biodiversity. Residential environments in urban centers today lack most of these natural features, making them increasingly unsuitable location for human dwelling. Moreover, the social environment in urban centers are usually poor, and characterized by low sociability and cohesion among residents, while high in crime and other social incivilities [3–5]. Urban residents are noted to be increasingly dissatisfied with these conditions and many have demonstrated greater intentions to leave these localities [4, 6, 7]. This would have serious implications on urban sustainability. There will be lesser resources to feed the local economic industries, as well as lesser participation in local commercial activity from urban flight.

Taking a newly industrialized nation, Malaysia as an example, a dramatic increase in the urban population was noted, from 35.8 percent in 1980 to 77.2 percent in 2020 [8]. The federal government has consistently raised concerns over the depreciating quality of life in the urban centers from such rapid urbanization. Since 1990, many of these natural and social environment issues have been highlighted in the nation's national development plans, also known as the five-year plans, better known as *Malaysia Plans* [9]. These development blueprints, which are also aligned to the Target 11.1 of the United Nations Sustainable Development Goals (SDG) was meant to promote good quality of urban life through a stable urban population. The government has also established the National Physical Plan (NPP), which serves as an overall national planning framework for local and regional planning in order to achieve the set Malaysia Plan goals [10]. These efforts were meant to improve the quality of life of residents, preventing reverse migration and urban sprawl.

Despite the efforts, national statistics still recorded an increasing trend of urban outmigration While migration from rural-to-urban centers have generally increased, deeper investigation have shown the increase to be at a declining rate, from 35% in 1995 to 26% in 2005 [11]. At the same time, it was also noted that people are increasingly moving out of urban centers. The nation has documented an increase of outmigration from 4.2 percent in 2016 to 19.5 percent in 2018 [12–15]. This is a distressing trend that must be reversed. The trend appears to suggest that these urban centers could not satisfy the quality of life needs of urban residents which prompted them to fulfil this need beyond the urban periphery.

Furthermore, the government has also taken various affirmative action policies to stabilize the urban population, by involving private developers and industry associations. Many social housing projects were initiated, resulting in 14,000 new affordable homes built in 2020 at these urban centers [16]. While the offerings of affordably priced houses were aimed at stimulating the housing market and preventing sprawl, the vast majority of these affordable units remained unsold. Approximately one-third of all overhung residential properties in the country were accounted by these affordable units, and this is most prevalent in the urban regions [17].

The investigation appears to suggest that people are not interested in residing in the urban centers despite the availability of affordable dwellings there. It implies that people

do not value a home based on their price tag, but on the quality of life the place provides, such as pleasant natural and social environments. On the contrary, poor environment have been noted for increasing chances of leaving [4, 6, 7, 18].

To date, many research on urban residents' choice of residential location have been in the domain of social psychology; evaluating behavior based on attitudes, normative influences and individual control factors [19–21]. However these traditional determinants are not adequate to measure the intention to remain. It is important to note that the choice of residence is determined not only by individual attitudinal and normative factors, but shaped rather strongly by the physical environment and the community at the location in question.

This paper argues that providing a favorable natural and social environment in urban residential projects is the way to improve individuals' intention to remain and achieve a stable urban population. Therefore the intention to remain must address both the natural environment (measured by *greenery* and *biodiversity*) and the social environment (measured by *community and safety*).

2 Literature Review

2.1 The Residential Environment and Intention to Remain Among Urban Residents

The residential environment is referred to the physical surroundings of the housing unit which can be classified into two sub-dimensions, natural and social environment. This paper proposes that the natural environment is constituted by *greenery* and *biodiversity*, while the social environment is comprised of *community* and *safety*. As these are among the most relatable factors to a person's quality of life, contributing to physical and mental health, as well as providing for safety, belongingness, and esteem needs of person, it is believed that these factors will have a direct impact on urban residents' intention to remain in the locality.

2.2 Intention to Remain

The intention to remain refers to residents' desire to continue staying at current residences [22]. In this paper, it relates to an individual's desire to continue residing at the urban regions of the state as opposed to migrating to areas beyond the urban periphery. As the intention to remain at a given location is a long-term decision with far-reaching consequences, it is often laced with both rational and subjective influences.

Most housing research looks at the *rational* but neglects the *subjective* aspect of tenure decisions. The increasing number of overhung affordable units in urban areas is a testimony that the intention to remain is more due to subjective rather than rational influences. While the decision to purchase a home is often regarded a rational decision, the decision to reside at a given location must account for all external influences, which is often subjectively perceived [23].

As the discussions in the following sub-sections show, these subjective influences are mostly due to the better quality of life afforded by the presence of greenery, biodiversity,

sense of community and safety in the neighborhood. These factors are relatable to the quality of life due to their ability to make individuals happy, comfortable, and safe. Environmental factors have long been associated with emotions and satisfaction towards a place, and this have noted implications to individuals' wishes to remain, and even grow old at a given place [22].

2.3 Greenery

Greenery refers to the availability of green spaces, tree covers, roadside planting of ornamental plants, grasses, trees and other vegetation in the residential area [23, 24]. Natural landscape which composed of lush vegetation is one of the common yet effective way to beautify the environment and provide a communal space for the local community, and this is particularly important for elderly residents [25]. Today, there are numerous housing developers who has incorporated greening initiatives in their residential projects, as it increases the attractiveness of these homes, and simultaneously fetching higher prices [26]. This is testimony to the importance of greenery in attracting residents.

However, urban greenery serves a greater function than just superficial beautification of the residential area. Natural greenery has long been noted for its therapeutic effect and ability to reduce stress in the beholder. Green spaces are able to calm the mind and promote pleasant exchanges with others [27, 28]. And this will also in turn have been found to enhance residents' intention to remain [29]. Therefore it is hypothesized that:

H_1:Greenery has a significant impact towards the intention to remain.

2.4 Biodiversity

In general parlance, biodiversity refers to the variety of floras and faunas, in terms of their populations, genes and species [30, 31]. In this paper, biodiversity is defined in context of an urban landscape, and the urban ecosystem is made up of plants and small animals such as birds and insects. In a much narrower definition, say within the context of a residential environment, biodiversity would be linked to the availability and diversity of plants.

To date, eco-housing development projects are on the rise, particularly for premium and gated community projects [32]. The incorporation of ecological aspects into housing projects is a testament to the importance of biodiversity in attracting homebuyers. In recent years, urban dwellers have increasingly turned to home gardening to make up for the lack of biodiversity in their natural environments, and most residents want to have variety of plants in their home compound [33, 34]. It implies that plant biodiversity is highly valued by most urban dwellers. Besides, the population growth and immigration into an area is coregulated with biodiversity [35]. Therefore it is hypothesized that:

H_2:Biodiversity has a significant impact towards the intention to remain.

2.5 Community

A community generally refers to a group of people sharing a set of common interests with one another, residing at a shared location, also known as a neighborhood [36]. In

the context of this paper, community refers to the sense of social relatedness, or bonding between members of the same neighborhood. A good community is one defined by residents who are friendly, trustworthy, helpful, respectful, acts with decorum, and easy to connect with one another [37, 38].

Having a good community is an important consideration in selecting a place of residence as a good neighbor can make or break a decision to continue residing at an area. A good community of helpful and friendly neighbors would fulfil the social and belonginess need of residents, giving them the assurance that help is readily available when needed [4, 39]. Hence this is believed to affect their decision to remain. Therefore it is hypothesized that:

H_3:Community has a significant impact towards the intention to remain.

2.6 Safety

Safety has a diverse definition which encompasses many aspects such as security, risk, comfort [36]. In the context of a residential environment, safety is defined as an individual's feeling and belief that he or she is free from the threats of incivilities and crime in the neighborhood. Safety is often measured by the degree of threats felt when they are situated in a particular residential area [40].

Safety is one of the important considerations in deciding whether to remain or leave an area plagued with crime. An environment which is unsafe is a threat towards an individual's perceived quality of life, as the individual would have lived in constant fear for his or her wellbeing. Rampant crime in the residential area makes people fearful of leaving their home and restricts their freedom to move around within their residential area [4, 32]. Thus when the place has poor safety aspects, ones would not feel comfortable remaining at an area. Therefore it is hypothesized that:

H_4:Safety has a significant impact towards the intention to remain.

3 Methodology

3.1 Measurement

The following are the sources for the measurements used in this research: *intention to remain* [41], and the natural and social environment *greenery* [29], *biodiversity* [35], *community and safety* [36]. Intention to remain is measured based on the level of tendency for the individual to continue staying in current residences in future or after retirement [22]. The natural environment variable, *greenery* is measured by the availability of street trees, local parks, gardens, vegetation, and lawns in the residential areas [22], while *biodiversity* is measured by the variety and density of trees in terms of sizes, volumes and species within the residential area [42]. The social environment variable, *community* is measured by the relationship, friendliness between individuals and the interactions between residents within the same residential area, while *safety* is measured by the number of illegal activities, police patrols, residential crime rate and the number of vagrant people within the residential area [36].

Each construct is recommended to have at least five to ten measurement items, and the respondents' degree of agreement to the measured statements will be evaluated using

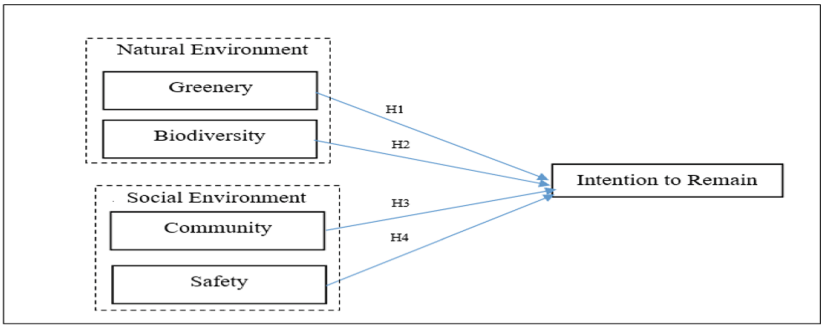

Fig. 1. Conceptual Model

a five-point Likert scale, from *strongly disagree* (lower end of the scale) to *strongly agree* (upper end of the scale).

3.2 Data Collection and Analysis

The survey for this study is recommended to be conducted in the main conurbation states of Peninsular Malaysia as stated in NPP-3, namely *central conurbation* which included Kuala Lumpur and Selangor, *northern conurbation* which located in Penang and Kedah, and *southern conurbation* at Melaka and Johor. It is recommended to select working-aged Malaysian whom are currently residing in those urban states as target respondents. The survey should aim on evaluating the existing urban residents on their experiences on staying at their current residence, and how the environment factors have influenced their living satisfaction and the degree of their intention to remain. It is advised to use purposive sampling in order to select the right respondents and yield suitable and valid information. The target sample size should be 384 at minimal [42] since larger sample size are able to improve the accuracy of mean values. It is also recommended to analyse collected data using Partial least squares structural equation modelling (PLS-SEM) using SmartPLS version 3.2.8 programme.

4 Conclusion

Based on the hypotheses developed above, a conceptual model of research framework is formulated (see Fig. 1). This research differs from many past studies as it evaluates both natural and social environment impacts towards the individual intention to remain. While many past studies investigated on housing ownership through the evaluation of attitude, subjective norms and perceived behavioral control, this study evaluates how individuals' intention to remain is affected by physical environments.

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