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Neighborhood Factors Contributing to the Household Mobility: Apartments in Malaysia

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Abstract

It is fundamental for all households to have the desire to live in the beautiful neighbourhood with good quality facilities and the surrounding environment. The decline in neighbourhood quality results in neighbourhood dissatisfaction which contributes to the mobility intention among households. This study aims to investigate the mobility intention among families of low and medium income groups in Penang and to examine the potential of neighbourhood attributes in improving their lives as well as to cater for their needs and comforts by determining the main factors of location as well as social and physical characteristics. The data from the surveys are collected through the ranking by calculating the importance index. Using the Important Index (II) analysis, the study found that households preferred the safe neighbourhood with less crime rate, enough parking spaces, and good security. Meanwhile, cleanliness and being apart from family members show the higher factors affecting residential mobility in Desa Bayan Apartment. These studies shed light on the importance of considering neighbourhood attributes in residential preferences, as well as enlighten the readers on the interrelation between residential mobility and social sustainability. Overall, this study contributes some knowledge on social sustainability by proposing quality neighbourhood in the future by considering what the communities need and preferences. However, the findings of this study had been limited, as it only delves into the reasons why the renters are moving from one neighbourhood to others; the additional research is needed to provide more understanding on the neighbourhood attachment and the effect on social interaction.

.Keywords: Residential Mobility: Neighbourhood Attributes: Sustainability: Social Sustainability

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1.0 Introduction

It is fundamental for all Malaysians to have the desire to live in a beautiful neighbourhood with good quality facilities and the surrounding environment. An excellent community can provide satisfaction to the families and minimize the stress residing in the urban area. To ensure that the neighbourhood has its own attraction; the society should be free of crime and provided with useful physical structures. The households have the opportunities to choose the desired home, but they tend to ignore the elements of the neighbourhood as they still do not properly understand the importance of the items in their choices. Previous research suggested that residential satisfaction had grown from good locality, while a new study discovered that the neighbourhood contributes to the number of positive and negative outcomes. When the households move to the new area, they still do not improve the environmental quality. The location and the stress of the neighbourhood and its community are the factors most influential to the residential mobility from the recent studies. The changes of the nature of neighbourhood attributes are the issues focused by most of the researchers as they contribute to the residential move. According to Sirgy and Conwell (2002), besides having an excellent location to nearby facilities and services, they also considered good qualities of physical structures and social relations. Determining areas related to the household satisfaction and social outcomes, the households search for the better neighbourhood to increase the quality of life.

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Meanwhile, Ellen and Turner (1997), and Poortinga et al. (2016) discovered that the neighbourhood condition shapes the individual performance. Most of the people agree that “good” neighbourhood is better and safe to live and to raise the little children. “Bad” neighbourhood tends to give an adverse development to the children and automatically reduce the chances of better future for the children (Musterd and Ostendorf, 1998). Outcome and poverty had affected the quality of the neighbourhood. The mobility within households is influenced by socio-economic properties. Most of the past researchers agreed that the movement is due to the scarcity of the financing available. As the size of the households grows, the need for expenses also increases and it is hard to find comfortable residential areas; they tend to seek for affordability by ignoring neighbourhood attributes in their choices. Therefore, this paper focuses on identifying the main factors influencing the residential mobility among households in Penang especially the home renters. Looking into the need of the households is vital as it can raise the awareness of the developers and builders to consider the lack of the users, enabling the Malaysian government to achieve ‘1 Malaysia’ aspirations towards the year 2020.

2.0 Literature Review

2.1 Sustainability and Social Sustainability

According to Brundtland Commission 1987 (Michael Redclif, 2005), sustainable development or sustainability is defined as the ability of the event to meet the needs of the present without compromising the need of future generations. There are three pillars of sustainability which are economic, social and environment. The concept of sustainability development is essential to conserve the resources for the need of future generations which distinguish them from the traditional environmental policy. Besides, it also helps to internalise the externalities of environmental degradation. Overall, the sustainable development is one of the long-term goals for both the economy and environment. However, the goals of sustainable development might be achieved through the integration and acknowledgement of three pillars of sustainability which are economic, environmental and social. According to Dobson (2003); Agyeman et al. (2003), the researcher rarely considered and defined social sustainability. Moreover, the “social” was integrated into debates on developing sustainability (Eizenberg and Jabareen, 2017). The difficulty in identifying and measuring the social sustainability causes it to be excluded from most sustainability literature and policy. It was an elusive idea when social sustainability is defined as the group of factors related to aspects of life. It is composed of social issues and different levels of importance that matter towards an individual’s perspective in the community. A few problems and elements are essential during the research of social sustainability which are health, employment rate, level of educations, safety and security, social capital, social equity, social inclusion as well as the political, religious and spiritual freedom. The previous research recognised the importance of social sustainability in the community and the impact of the change in the development of communities over time. Social sustainability is the informal and formal processes that actively support the current and future generations to ensure healthy and liveable communities. Socially sustainable communities are fair in distribution, where they have a variety of neighbourhoods, where they respected each other and provided a good quality of life

2.2 Quality of Life of Residents in Urban Neighbourhood

Quality of life is defined as the overall satisfaction of an individual (Schumaker et al., 1990). The neighbourhood satisfaction affects the quality of life. According to Choguill, (2007), the participation of the communities in the neighbourhood will create sustainable housing and communities which affect their quality of life. Satisfaction with social and physical features of the area creates overall satisfaction towards the block and possibly creates the positive feeling towards the quality of life. As cited in Sirgy and Cornwell (2002), social and physical pleasures had been divided into several components (see Table 1). According to Sirgy and Cornwell (2002), the satisfaction with the neighbourhood’s physical and social features as mentioned had significantly contributed to people’s happiness with regard to their housing and neighbourhood. The overall assessment of neighbourhood qualities might include the adequacy of public services, safety and accessibility. However, the house and community can create dissatisfaction with the current location. The poor quality of the neighbourhood might become the motivation for the households to move to another place. Moreover, Batson and Monnat (2015) argued that neighborhoods remain among the most common settings where residents forge attachments to people and create meaning, significance, and coherence in their lives.

Table 1: Physical and Social Satisfaction (Cornwell, 2002)

Physical Satisfaction		Social Satisfaction	
i.	Homes and yards.	i.	Relationship with neighbours.
ii.	Landscape and infrastructures in the neighbourhood.	ii.	Recreational space.
iii.	Street lighting in the neighbourhood.	iii.	People living in the neighbourhood.
iv.	Nearby to the public facilities.	iv.	Ties with people in the community.
v.	Crowding and noise level in the neighbourhood.	v.	Crime rate in the neighbourhood.
vi.	Quality of environment in the neighbourhood.	vi.	Relation among the races in the community.
		vii.	Sense of privacy at home.

2.3 Neighbourhood Dissatisfaction Influenced Residential Mobility

Lina (2011) had defined residential mobility as the movement of households from one neighbourhood to another neighbourhood to adjust their preferences and needs. Coupe and Morgan (1981) in their research considered that the household relocation is not only caused by personal characteristics and it may be affected by the market forces and residential history. Meanwhile, Clark and Onaka (1983) discovered the amalgamation as one of the factors that contribute to the residential relocation and mobility of the households.

The previous study indicated that the local movement is driven as the desire of the families to become a homeowner, upgrading themselves to having a lovely home or neighbourhood and living in appropriate house size (Schachter, 2011) and (Dieleman, 2001). Life-course event and socio-economic status also have a significant impact on residential mobility (Dieleman, 2001). Besides, the employment opportunities and local housing markets can also lead to households relocation (Boheim and Taylor, 2002) and (Van der Vlist, 2001). The location of the household and workplace is defined as one of the drivers for residential mobility (Waddel et al., 2007). They discussed the trade-off between residential mobility with the accessibility and the social and physical aspects of neighbourhood amenities. Moving from one place to another place is a very complicated process. Whether the households had moved home or planned to move to a new home, the families shall be aware the current push and pull factors that serve as indicators of residential mobility. 'Push' means bringing the households away from the neighbourhood while 'Pull' means attracting the households to the neighbourhood. The desirable area will pull the families towards it, while less desirable neighbourhood will push away the families. Sustainable urban mobility has come to mean the development of high-quality, livable cities with acceptable standards of access to goods and activities.

2.3.1 Push Factors

Most of the households have been choosing the urban area compared to a rural area due to facilities provided to make them convenient and satisfy their need. Review from (Aluko, 2011) had stated several locational attributes such as the location to the nearby schools, market, workplace and worship. The neighbourhood situated in the strategic area will affect the value of the community. The excellent place will provide beneficial facilities to the households. Besides location, the other factors are cleanliness. Cleanliness matters to health and becomes one of the pull factors for residential mobility (Paul, 2010). The clean neighbourhood can increase the satisfaction for the households. However, the cleanliness of the area actually depends on the attitudes and awareness of the families. Meanwhile, Planners considered denser neighbourhood. According to Carruthers, 2003; Speir and Stephenson, 2002, more solid blocks are provided with efficient services and amenities. Kline, 2000; Nelson, 1999 demonstrated the function of open space in urban areas that affect the bonding of the people, and Talen, 2006 in his research discovered that the higher density increased the diversity of people. Low-density neighbourhood contributes to the segregation of racial and income compared to denser development which contributes to social integration and society (Burton, 2000; Talen, 2002). Reducing the transportation cost, the standard utility maximisation theory suggested that most of the households choose the accessible residential location (Alonso, 1964). Living in the denser neighbourhood can help to reduce the transportation time.

According to Brower (2003), one way to increase neighbourhood satisfaction is by having close friends and relatives in the same neighbourhood. There is a significance in the social interaction and communication as the old Korean saying indicates "a good neighbour is better than a brother far off". This phrase shows that the functional relationship among the neighbours can replace the feeling of being alone. Nowadays, the difficulty of finding children day-care makes the households have to move to live nearest to their relatives to take care of their children while they are working. Living nearest to families makes them feel safe and increase self- belonging to the neighbourhood. The previous study indicated that the rate of crime in cities is higher compared to that in the suburban areas. The unmarried adults and poor were more fearful of the living conditions in towns. The household will move out from the cities as a result of the push by fear of crime (Wesly, 1986). According to Mesch and Manor (1998), neighbourhood satisfaction is defined as the provision of the physical and social features. Previous research found that physical characteristics come to be the 'push' factor for households resulted from the dissatisfaction of the current neighbourhood (Sirgy and Cornwell, 2002). As mentioned by Morrow-Jones, Wenning and Li (2005), another way to achieve household satisfaction is by having homogeneity in the community of multiple races. Most of the ethnic minorities face the discriminatory constraints when mobilising to the new neighbourhood. Some of the households have the intention to move as they underwent poor construction condition and reduced the maintenance and management of neighbourhood physical facilities (Yiping, 2005). Regarding social network, small minority group had been passive in the neighbourhood activities and social networks. However, still, some of the tiny minorities group participated in the events but not frequent due to different languages and beliefs (Gary, 2002).

2.3.2 Pull Factors

Households always have a personal choice of the residential unit based on the density and location. The frequency and location influence the housing price, job opportunities and transportation tradeoff (Glan et al., 1978). The high-income households preferred to stay in the suburban area as they wanted privacy and were willing to pay higher transportation cost. The research in the United States discovered the importance of public services such as school, health care, police department, fire department and recreational park. The levels of households' expenditures on education, healthcare, police department, fire department and recreational park are less important factors in location choice compared to the accessibility to the workplace.

The distance of the households is influenced by community attachment and social ties. According to Dawkins (2006), when the families have built a strong relation and social connection in the neighbourhood, it can increase the length of stay in that neighbourhood and also affect the residential mobility of low-income households. The positive attachment may influence where families move and the way they adjust themselves to new surroundings. A study from Seattle movers found that people prefer to have close friends and relatives nearby.

2.4 Developing Neighbourhood Satisfaction

The accessibility of the location determines the transport system and land-use pattern which indicate the excellent position for households. Living close to offices and shops seem to be preferable by families (Barry and Marits, 2004). Usually, these functions are located nearby the households' neighbourhood location. Every house has their perception of location and accessibility. Activity pattern

might influence the importance of place and availability. For example, families with children will be more interested in having the great convenience of schools and workplaces. Meanwhile, for retired households, they may prefer to live nearby the shops/groceries and being surrounded by close social contacts (friends and relatives). Comparing to the homes that have their transportation and without transportation, households without transportation might prefer to live in the neighbourhood which has excellent public transportation systems. Research in the United States explained that the low-income families preferred to live in urban areas while high-income households preferred to live in suburban areas. High-income households were willing to pay more for the commuting cost and they need peaceful areas to relieve stress from daily hectic working time. Despite the higher cost of living, households preferred to live and work in the denser area. In the denser area, creative households have an opportunity to develop new products primarily in the business area (Carlino, 2001). Of course, dense regions have wide openings for labour markets with different fields of job and workers (Jeffrey, 2011). Households living in denser areas consume a large number of goods and services. According to Forsyth et al., 2007, households might also prefer a neighbourhood with good physical and social attributes. For example, less traffic congestion, free from crime rate, and good social relation. The previous study had discussed that most of the households preferred neighbourhood safety. By having a neighbourhood with proper surveillance of security, this might reduce the fear of crime (Pawlukiewicz and Myerson, 2002). Living with the same ethnic group tends to be preferred as they are aware of their basic need and as they share some common understanding. According to the overview from Bolt and van Kempen, (2003), the choice the households make over the neighbourhood considers the sets of minorities and low-income people.

2.5 The Effect of Residential Mobility on Social Sustainability

The effect of residential mobility had become one of the challenges in developing social sustainability. Residential mobility leads to the improvement in the living of the households, but it also might cause instability and insecurity. According to past researchers, it can disrupt the daily routine for some families and become a source of depression to parents and children (Murphey, et al, 2012; Coulton et al., 2012). Neighbourhoods which have high rates of residential mobility will experience more social problems than solid blocks. The unstable area will experience social exclusion which will weaken the social bonds among residents as well as increase the crime rates. The adverse effects commonly arise due to shorter timespan living in the neighbourhood. The households care less about their neighbours whom they do not know each other so they can be oblivious to the problems that arise in the neighbourhood (controlling teenagers and strangers). They are also probably less committed to the safety and security of the current neighbourhood. According to Sandstrom and Huerta, (2013) residential mobility might develop inequalities among the diversity of the people and transmission of wealth. Poor households especially the elderly might be discriminated against and their basic needs compromised. Children who frequently experienced residential mobility usually have a low academic level and social outcomes such as being weak in vocabulary skills, having bad attitudes, and increasing rates of school dropouts, less close friends (Sandstrom and Huerta, 2013). Therefore, the effect of residential mobility on socially sustainable development can be overcome if proper alternatives took places. The pull factors are referred to neighbourhood preferences and push factors are referred to mobility intention gained from literature review summarized in Table 2 and 3.

Table 2: The Factors of Neighbourhood Attributes (Neighbourhood Preferences)

FACTORS OF NEIGHBOURHOOD ATTRIBUTES	Barry and Maris, (2004)	Forsyth et al., (2007)	Bhat and Guo, (2004)	Barry and Maris, (2004)	Mills, (1972)	Jeffrey, (2011)	Giddens, (2009)	Burton, (2000)	Talen, (2002)	Bot and van Kempen, (2003)	Westly, (1986)	Pawlukiewicz and Myerson, (2002)	Meegan and Mitchell, (2001)	Banerjee, (2003)
(Location)														
• Working place	/													
• Educational Institute		/												
• Health and Safety Department		/												
• Worship Place		/												
• Recreational Park		/	/											
• Leisure		/	/											
• Groceries				/										
• Public Transport					/									
• High Density						/								
(Social and Physical)														
• Active Neighbourhood							/							
• Neighbourhood Relationships								/	/					
• Multiple Races and Religions										/				
• Privacy											/			
• Crime Rate												/		
• Security												/		
• Physical Infrastructure													/	

on the importance index, the equation is used as shown in Equation 1 and the factors are arranged accordingly to the significant variables. The overall analyses of the Section B and C from the questionnaires are present in Table 4 and 5. The importance index was used to rank the critical variables (Kaming et al., 1998 and Nima, 2001). This vital index was computed using the formula cited by Hanafi et al., 2010:

Equation 1:

$$\text{Importance Index (II)} = \frac{5(n1) + 4(n2) + 3(n3) + 2(n4) + n5}{5(n1 + n2 + n3 + n4 + n5)} \quad (1)$$

Where;

- n1 = number of respondents who answered 'very important' and 'strongly agree'
- n2 = number of respondents who answered 'important' and 'agree'
- n3 = number of respondents who answered 'neutral'
- n4 = number of respondents who answered 'not important' and 'disagree'
- n5 = number of respondents who answered 'very not important' and 'strongly disagree'

From the findings of the analysis on the 17 factors, 5 most influential factors regarding the neighbourhood preferences based on the main numbers as put forth by Abdul Kadir et al. (2005) are as follows:

- 1) Safe from crime rate (II = 0.9682)
- 2) Enough parking spaces (II = 0.9409)
- 3) Good security (II = 0.9091)
- 4) Worship Place (II = 0.8864)
- 5) Health and Safety Department and Public Transport (II = 0.8636)

Table 4: The Importance Index for Location and Social and Physical Attributes Preferred by Households

Factors of Neighbourhood Preferences	Importance Degree As Stated by 44 Respondents					Categorical	Mean	Importance Index (II)	Rank
	N1	N2	N3	N4	N5				
Safe from crime rate	39	4	0	1	0	SPA	1.16	0.9682	1
Enough parking spaces	32	11	1	0	0	SPA	1.30	0.9409	2
Good security	27	14	3	0	0	SPA	1.45	0.9091	3
Worship Place	25	14	4	1	0	LA	1.57	0.8864	4
Health and Safety Department	21	18	4	0	1	LA	1.68	0.8636	5
Public Transports	20	20	2	2	0	LA	1.68	0.8636	5
Working place	21	16	6	1	0	LA	1.70	0.8591	6
Good relationship among neighbours	22	14	7	1	0	SPA	1.70	0.8591	6
Groceries	16	21	6	1	0	LA	1.82	0.8364	7
Educational Institute	18	18	5	3	0	LA	1.84	0.8364	8
Privacy	14	22	8	0	0	SPA	1.86	0.8273	9
Neighbourhood with park, public hall, gymnasium and etc.	16	17	10	1	0	SPA	1.91	0.8182	10
Neighbourhood which have activities to develop social interaction	18	12	11	2	1	SPA	2.00	0.800	11
Neighbourhood which have different races and religion	13	13	18	0	0	SPA	2.11	0.7773	12
Recreational Park	9	11	20	4	0	LA	2.43	0.7136	13
High Density	4	12	17	10	1	LA	2.82	0.6318	14
Leisure	6	5	6	20	7	LA	3.39	0.5227	15

Note: Referred to LA= Location attributes and SPA = Social and Physical Attributes

- Safe from crime rate (II = 0.9682)

The most preferred neighbourhood by households is safe from crime rate. 88.64 % of households agreed that safety is paramount. The secure area is significant for the positive development of children and youth. The children who live in the safe neighbourhood may have positive life outcomes and stronger relationships with their family, friends and community as well as active participation in social activities. Parents considered a safe zone to avoid their child from engaging in violent crime. The unsafe neighbourhood may limit the households to participate in physical and social events. Conversely, the secure area may promote a suitable social and physical environment.

- Enough parking space (II = 0.9409)

The second most preferred condition by households is enough parking spaces. According to the housing policy, one parking lot must be provided for each unit of the houses. Some housing policies allowed for the reserved parking lots which use the concept of 'first come first served'. Reserved parking lot may cause an unfair distribution to all households, and it becomes a problem when the households

have more than one transport in the house. The housing policy had put some pressure on the congestion and limited space available. Also, some of the homeowners make a profit by leasing their parking lot to renters and charging them at high prices.

- Good security (II = 0.9091)

The safe neighbourhood comes with good security. It is the third vital factors with an essential index of 0.9091. Excellent protection is necessary to avoid crime violence and it gives the feeling of security to the households. Living in the high volume of community, the families may be exposed to the risks of intrusion and burglary. Security technology and access control may increase the level of protection and control (McGoey, 1996).

- Worship place (II = 0.8864)

As compared to other locational attributes, 56.82% of households preferred the place of worship to be close to home in their neighbourhood and it had the important index of 0.8864. Developing a place of worship is a critical development and it needs sponsorship or sufficient fund from the non-government organisation. Place of worship is vital for the community to strengthen the faith and principles of God (Nickson, 2012). Instead of religious activities, it also ties the bond between communities which significantly contribute to life quality.

- Health and safety department and public transports (II = 0.8636)

The fifth most essential preferences by households are nearby health and safety department and accessible public transports which have an important index of 0.8636. Nearby health and safety department may allow the households to feel secure. Safety practices by households urge them to live close to the health and safety departments. From the literature review, the neighbourhood which is situated nearby the health and safety department had experienced an increase in the neighbourhood quality (Aluko, 2011). Meanwhile, the accessible location of public transports is important to ensure less commuting time and cost.

From the findings of the analysis on the 18 factors, five most influential factors that influenced residential mobility as put forth by Abdul Kadir et al. (2005) are as follows:

- 1) Cleanliness (II = 0.8909)
- 2) Apart from family members and friends (II = 0.8136)
- 3) Distance to working place (II = 0.7955)
- 4) Poor management and maintenance of neighbourhood facilities (II = 0.7500)
- 5) Increase in crime rate and lack of parking spaces (II = 0.7455)

Table 5: The Importance Index for Location and Social and Physical Attributes That Influenced Residential Mobility

Factors Influenced Residential Mobility	Importance Degree As Stated by 44 Respondents					Categorical	Mean	Importance Index (II)	Rank
	N1	N2	N3	N4	N5				
Cleanliness	22	21	0	1	0	LA	1.55	0.8909	1
Apart from family members and friends	10	29	3	2	0	LA	1.93	0.8136	2
Distance to working place	10	24	9	1	0	LA	2.02	0.7955	3
Poor management and maintenance of neighbourhood facilities	11	18	9	5	1	SPA	2.25	0.7500	4
Increase in crime rate	14	17	5	3	5	SPA	2.27	0.7455	5
Lack of parking spaces	15	16	3	6	4	SPA	2.27	0.7455	5
Problem for public transport	10	21	5	6	2	LA	2.30	0.7409	6
Traffic Congestion	13	13	10	6	2	LA	2.34	0.7318	7
Lack of Privacy	10	19	7	6	2	SPA	2.34	0.7318	7
Lack of infrastructure facilities	4	28	6	3	3	SPA	2.39	0.7227	8
Increasing rental price	14	13	4	10	3	LA	2.43	0.7136	9
Competing in job-hunting Opportunities.	8	13	18	5	0	LA	2.45	0.7091	10
Low Density	5	17	13	7	2	LA	2.64	0.6727	11
Passive neighbourhood	5	15	17	5	2	SPA	2.64	0.6727	11
Minority of races and religion	5	13	20	4	2	SPA	2.66	0.6682	12
Distance to educational, safety and health institutes/departments	5	15	15	7	2	LA	2.68	0.6636	13
Problem with neighbours	6	14	13	6	5	SPA	2.77	0.6455	14
Argument with other races	5	12	12	9	6	SPA	2.98	0.6046	15

Note: Referred to LA= Location attributes and SPA = Social and Physical Attributes

- Cleanliness (II = 0.8909)

The factor most affecting residential mobility is cleanliness which has an essential index of (II = 0.8909). The majority of the respondents strongly agree that purity has contributed to the mobility intention among households. There is no 'neutral' answer for this factor which shows that the respondents have their own perceptions of the cleanliness. From the literature review, the quality of the neighbourhood is measured by looking at its freshness. Purity can affect health, especially of the elderly and children. Cleanliness matters to health and becomes one of the pull factors for residential mobility (Paul, 2010). The clean neighbourhood can increase the satisfaction for the households.

- Apart from family members and friends (II = 0.8136)

Being apart from family members and friends is the second highest rank in the factor affecting residential mobility. Only 4.54 % of respondents disagree with these. According to Brower (2003), one way to increase neighbourhood satisfaction is by having close friends and relatives in the same neighbourhood. There is a significance in the social interaction and communication as the old Korean saying goes "a good neighbour is better than a brother far off". This phrase shows that the proper relationship established among the neighbours can replace the feeling of being alone.

- Distance to working place (II = 0.7955)

When it comes to reducing the transportation cost, the classic utility maximisation theory suggested that most of the households choose accessible residential locations (Alonso, 1964). To avoid from traffic congestion, people preferred working close to their homes; which is 0.7955 of the important index. Living nearest to the working location enables the households to have equality in their work and personal life. Besides, other causes for people to move within their working area are because of the increased price of the fuels, living expenses and traffic congestion.

- Poor management and maintenance of neighbourhood facilities (II = 0.7500)

The fourth important factor influencing the residential mobility is poor management and maintenance of neighbourhood facilities (II = 0.7500). 65.91 % of respondents move as they experienced poor construction condition and poor maintenance and management of neighbourhood physical facilities. In comparison to renters, usually, homeowners achieve residential satisfaction, and this might be because of the right as an owner of the residential units. Poor management and maintenance of neighbourhood facilities may cause discomfort and danger to the users.

- Increase in crime rate and lack of parking spaces (II = 0.7455)

As discussed in the neighbourhood preference, 88.64 % of households agreed that safety is very important. Thus, the increase in crime rate is ranked at the fifth place with 0.7455 of an important index. The previous study indicated that the rate of crime in cities is higher compared to that in suburban areas. The household will move out from the cities as a result of people's fear of crime (Wesly, 1986). One of the factors that contribute to crime in the neighbourhood is due to strangers freely gaining entry into the neighbourhood. Lack of parking space also falls into the same index with an increase in the crime rate. There is also the lack of parking spaces so the households have the intention to move and seek for the houses that will cater to their need.

5.0 Concluding Remark

The findings of this research expose the most important factor regarding the neighbourhood preference as safe from crime. The environment of their existing settlements surrounded by various industrial activities allows them to get new settlements to continue their lives. A safer residential environment is needed to enable people to attain good life quality with their neighbours if they can stay in the new neighbourhood. Limited and restricted parking space factors are also one of the key elements of neighborhood preference in this context. This is because most communities now in Malaysia have at least one car or motorcycle to live a life of convenience. The difficult situation to park their car or motorcycle in a safe place will put pressure on them and this negatively affects the quality of their lives as a whole. A good safety factor in the community has also become one of the key attracting factors for a more meaningful quality of life in the future. Obviously, the elements related to personal safety and security, family members and property are the main attraction factors of the low and middle-income groups who are staying in the apartment in the study area. This study also reveals the factors that affect the residential mobility. The main factor underlying this element is the cleanliness factor because the uncontrolled condition of the apartment in this context is one of the features that have become an issue here. In addition, another factor that causes them to be depressed to move to the new settlement is that they have to be apart from family members and friends. This is because the multi-racial society in Malaysia still wants to live around their relatives and friends. This is easier for them because the feelings of tolerance and unity are still in their hearts. In addition, factors related to their distance to work also put pressure on them to move to a place close to their work placement.

Obviously, both influential factors category namely neighborhood preferences and residential mobility must be carefully observed to get a more detailed description of household mobility. Both these pull and push factors should be refined in detail by relevant stakeholders to ensure that the quality of life of the population is improved from time to time. Efforts to achieve one of the key elements in the context of social sustainability will ultimately have a positive impact on Malaysia's overall economic growth.

From the survey in this study, from renters to homeowners, the first step that the households take is determine the new development and try to suit the housing price with their income. They never noticed the importance of neighbourhood attributes in their preferences and selection. The households preferred a quality neighbourhood, but it seems overlooked that quality usually comes with higher price. Settling down in a less desired vicinity may contribute to neighbourhood stress and the intention to move. Thus, this study sheds light on the importance of considering neighbourhood attributes in residential preferences. Besides, financial burden, also stressful neighbourhood can also cause dissatisfaction to the households. The mobilisation of households in and out of the neighbourhood causes neighbourhood instability which disrupts the process of social sustainability. By identifying the factors that contribute to residential mobility in this study, the households who intend to move might consider the neighbourhood attributes in their analysis before they select their new houses or homes. This study considers the location as well as social and physical characteristics which might need to be considered before choosing the new home to avoid from the residential move. Overall this study enlightens the readers on the interrelation between residential mobility and social sustainability. The overview of the factors affecting residential movement and neighbourhood preferences might help the households to choose their own desirable neighbourhood. This study contributes some knowledge on social sustainability by proposing quality neighbourhood in the future. As scarce research has been done on social

sustainability, the researcher has emerged to highlight the importance of neighbourhood attributes to achieve social sustainability. The unstable communities may result from inadequate physical and social attributes. The high consideration on the communities especially the households may produce quality communities in the future. By listing the need of the households through neighbourhood preference, the initiatives to achieve social sustainability can be taken immediately. Thus, this study initiates the social sustainability by considering the communities' needs and preferences.

6.0 Limitations and Recommendations

Findings of this study are limited as the study only investigates the reasons why the renters are moving from one neighbourhood to others; additional research is needed to provide more understanding on the neighbourhood attachment and the effect on social interaction. Moreover, the study is limited to the renters as the respondents. The difference in the mobilisation trend between renters and homeowners may allow the study to be more interesting. Thus, the analysis needs to be extended to explore how neighbourhood attributes may influence homeowner's decision to move. The correlation between homeowners' affordability and neighbourhood attributes would be natural to extend the analysis. Compared to renters, homeowners are usually more sensitive to their neighbourhood change. The study shows that homeowners have powerful control over the physical structures and social attributes. In a simple understanding, the neighbourhoods occupied by many homeowners tend to become more desirable and selected. Therefore, the study would be interesting if it extends to homeowners as well. Their relocation's behaviour, as well as their responsiveness towards the neighbourhood and change can be drawn into comparison. Secondly, this study shall be extended to determine the factors of geography in the neighbourhood structure. The opinions of households and their perceptions towards geography are needed to determine whether or not the factors influence residential mobility. Geography explained the land and earth phenomenon. Thirdly, there is a call for researchers to study the apparent move within the neighbourhood. A portion of renters may move in the same community. Thus, it is critical to explore the factors that influence the renters to do so as it may cause neighbourhood instability.

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References

- Abdul Kadir M.R., Lee W.P., Jaafar M.S., Sapuan S.M. and Ali A.A.A., (2005). Factors Affecting Construction Labour Productivity for Malaysian Residential Projects. *Journal of Structural Survey*, Vol. 23 (1), 42-54.
- Addo, Irene Appeaning (2016). Assessing residential satisfaction among low income households in multi-habited dwellings in selected low income communities in Accra. *Urban Studies Journal*, Vol. 53(4), 631-650.
- Agyeman, J., Bullard R., and Evans, B. (2003). *Just Sustainabilities: Development in an Unequal World*. United States: MIT Press.
- Alonso, W. (1964). *Location and Land Use*. Cambridge, MA: Harvard University Press.
- Aluko, O. (2011). The Effects of Location and Neighbourhood Attributes on Housing Values in Metropolitan Lagos. *Ethiopian Journal of Environmental Studies and Management*, 4(2), 69-82.
- Barry, Z., and Marits, P. (2004). Influence of Accessibility on Residential Location Choice. *Journal of the Transportation Research Board* 19 (2), 63-70.
- Batson, Christie D. and Monnat, Shannon M. (2015). Distress in the Desert: Neighborhood Disorder, Resident Satisfaction, and Quality of Life During the Las Vegas Foreclosure Crisis. *Urban Affairs Review*, Vol. 51(2), 205-238.
- Bhat, C.R., and J.Y. Guo (2004). A Mixed Spatially Correlated Logit Model: Formulation and Application to Residential Choice Modeling. *Transportation Research Part B*, Vol. 38(2), 147-168.
- Boheim, R., and Taylor M.P., (2002). Tied Down or Room to Move? Investigating Relationships between Housing Tenure, Employment Status and Residential Mobility in Britain. *Scottish Journal of Political Economy*, 49 (4), 369-392.
- Bolt, G., and van Kempen, R. (2003) Escaping Poverty Neighbourhoods in the Netherlands. *Article of Housing, Theory and Society*, 20 (4), 209-222.
- Brower, S. (2003). *Designing for Community*. College Park: University of Maryland Press.
- Burton, E. (2000). The Compact City: Just or Just Compact? A Preliminary Analysis. *Journal of Urban Studies*, 37 (11), 1969-2001.
- Carlino, G., (2011). Knowledge Spillovers: Cities' Role in the New Economy. *Federal Reserve Bank of Philadelphia Business Review (Fourth Quarter)*, 17-26.
- Carruthers, J. I. (2003). Growth at the Fringe: The Influence of Political Fragmentation in United States metropolitan areas. *Journal of Economics*, 82 (4), 475-499.
- Choguill, C.L. (2007). The Search for Policies to Support Sustainable Housing. *Journal of Habitat International*, 31(1), 143-149.
- Clark, W.A.V., and Onaka, J.L., (1983). Life Cycle and Housing Adjustment as Explanations of Residential Mobility. *Journal of Urban Studies*, 20 (1), 47-57.

- Clark, William A. V. and Lisowski, William (2017). Decisions to Move and Decisions to Stay: Life Course Events And Mobility Outcomes. *Journal of Housing Studies*. Vol. 32(5). 547–565.
- Claudia Coulton, Brett Theodos and Margery A. Turner (2012). Residential Mobility and Neighborhood Change: Real Neighborhoods Under the Microscope. *Cityscape: A Journal of Policy Development and Research* • Volume 14(3). 55 – 90.
- Coupe, R.T., and Morgan, B.S., (1981). Towards a Fuller Understanding of Residential Mobility: A Case Study of Northampton, England. *Journal of Environment and Planning*, 13 (1), 201-215.
- Dawkins and Casey, J. (2006). Are Social Networks the Ties That Bind Families to Neighborhoods?. *Journal of Housing Studies*, 21 (6), 867–881.
- Dieleman, F.M. (2001). Modeling Residential Mobility: A Review of Recent Trends in Research. *Journal of Housing and the Built Environment*, 16 (1), 249-265
- Dobson, A. (2003). *Citizenship and the Environment*. Oxford: Oxford University Press, UK.
- Eizenberg, Efrat and Jabareen, Yosef (2017). Social Sustainability: A New Conceptual Framework. *Journal of Sustainability* Vol. 9(1), 68. 1 – 16.
- Ellen, I.G. and Turner, M. (1997). Does Neighborhood Matter? Assessing Recent Evidence. *Journal of Housing Policy Debate* 8(4), 833-866.
- Forrest, R., and Kearns, A. (2001). Social Cohesion, Social Capital and the Neighbourhood. *Journal of Urban Studies*, 38 (12), 2125-2143.
- Forsyth, A., Oakes, J. M., Schmitz, K. H., and Hearst, M. (2007). Does Residential Density Increase Walking and Other Physical Activity?. *Journal of Urban Studies*, 44 (4), 679–697.
- Gary, B., (2002). The Neighbourhood and Social Network. Retrieved from: http://www.urbancenter.utoronto.ca/pdfs/curp/CNR_Neighbourhoods-SocialN.pdf. Accessed 23 May 2016.
- Giddens, A. (2009). *Sociology* (6th ed.). Cambridge: Polity Press.
- Glan, W., Moshe, B., and Steven, L. (1978). Tradeoffs in Residential Location Decisions: Transportation Versus Other Factors. Retrieved from <http://www.edgroup.com/pdf/tradeoffs-tpd.pdf>. Accessed 5 January 2016.
- Hamizah, A.F., Abdul, G.H., Nurwati, B. and Kausar A. (2014). Factors Affecting Residential Mobility among Households in Penang, Malaysia. *Journal of Social Behavioural Science*, 170 (2015), 516 – 536.
- Hanafi, M. H., Khalid, A., Razak, A. A., and Abdullah, S. (2010). Main Factors Influencing Labour Productivity Of The Installation Of On-Site Prefabricated Components. *International Journal of Academic Research*, 2(6).139 – 146.
- Harris, J.M., (2000). Basic Principles of Sustainable Development. Retrieved from: http://www.ase.tufts.edu/gdae/publications/working_papers/Sustainable%20Development.PDF. Accessed 5 January 2016.
- Jeffrey, L. (2011). Urban Productivity Advantages from Job Search and Matching. Retrieved from: file:///C:/Users/ACER/Downloads/brq111_urban-productivityadvantages.pdf. Accessed 29 January 2017.
- Kaming, P. F., Holt, G. D., Kometa, S. T. and Olomolaiye, P. (1998). Severity Diagnosis of Productivity Problems - A Reliability Diagnosis. *International Journal of Project Management*, 16 (2), 107-113.
- Kline, J. D. (2000). Comparing States with and Without Growth Management Analysis Based on Indicators with Policy Implications Comment. *Land Use Policy*, 17(4), 349–355.
- Lee, Suzanna M., Conway, Terry L., Frank, Lawrence D., Saelens, Brian E., Cain, Kelli L., and Sallis, James F. (2017). The Relation of Perceived and Objective Environment Attributes to Neighborhood Satisfaction. *Journal of Environment and Behavior* Vol. 49(2). 136–160.
- Lina, H. (2011). *Residential Mobility and Neighbourhood Effects: A Holistic Approach*. Uppsala: ActaUniversitatisUpsaliensis.
- Meegan, R., and Mitchell, A. (2001). It's not Community Round here, It's Neighbourhood: Neighbourhood Change and Cohesion in Urban Regeneration. *Policies. Journal of Urban Studies*, 38 (12), 2167-2194.
- Mesch, G. S., and Manor, O. (1998). Social Ties, Environmental Perception, and Local Attachment. *Article of Environment and Behavior*, 30 (4), 504-519.
- Morrow-Jones, H., Wenning, M. V. and Li, Y. (2005). *Differences in Neighborhood Satisfaction*. Cambridge, MA: MIT Press.
- McGoey, C.E. (1996). Apartment Security: Technological Promotes Safety. Retrieved from: <http://www.crimedictor.com/apartment1.html>. Accessed 31 October 2016.
- Michael Redclif, (2005). Sustainable Development (1987–2005): An Oxymoron Comes of Age. *Horizontes Antropológicos, Porto Alegre*, Vol. 12(25). 65-84.
- Mills, E.S., (1972). *Studies in the Structure of the Urban Economy*. Washington DC: Resources for the Future.
- Ministry of Finance Malaysia (2017). Bantuan Rakyat 1 Malaysia (BRIM). Retrieved from: <https://ebr1m.hasil.gov.my/>. Accessed 15 October 2017.
- Morrow-Jones, H., Wenning, M. V., and Li, Y. (2005). Differences in Neighborhood Satisfaction between African American and White homeowners. Paper presented at the Association of Collegiate Schools of Planning (ACSP46), Kansas City, MO.
- Murphey, D., Tawana B. S., and Moore, K. A. (2012). Frequent Residential Mobility and Young Children's Well Being. Retrieved from: <http://www.childtrends.org/>. Accessed 5 January 2016.

- Musterd, S. and Ostendorf, W. (1998). Urban Segregation and the Welfare State: Inequality and Exclusion in Western Cities. *Journal of Housing and the Built Environment*, 15 (2), 201 – 204.
- Nelson, A. C. (1999). Comparing states with and without Growth Management: Analysis Based on Indicators with Policy Implications. *Article of Land Use Policy*, 16(2), 121–127.
- Nickson, C. (2012). How Places of Worship Help the Community. Retrieved from: <http://www.communitygroup.co.uk/how-places-worship-help-the-community.html>. Accessed 21 January 2017.
- Nima, M.A. (2001). Constructability Factors in the Malaysian Construction Industry. Retrieved from: http://psasir.upm.edu.my/11159/1/FK_2001_47_A.pdf. Accessed 15 July 2016.
- Nunnally, J.C. (1987). *Teori a Psicométrica*, Editorial Trillas, Mexico City.
- Paul, H. (2010). Understanding Residential Mobility and Immobility in Challenging Neighbourhoods. *Centre for Regional Economic and Social Research*, 1 (8), 1 – 70.
- Pawlukiewicz, M., and Myerson, D. L. (2002). *Housing Density*. Washington, DC: Urban Land Institute.
- Poortinga, Wouter, Calve, Tatiana, Jones, Nikki, Lannon, Simon, Rees, Tabitha, Rodgers, Sarah E., Lyons, Ronan A., and Johnson, Rhodri (2017). Neighborhood Quality and Attachment: Validation of the Revised Residential Environment Assessment Tool. *Journal of Environment and Behavior*, Vol. 49(3) 255–282.
- Sanchez, T. W., and Dawkins, C. J. (2001). Distinguishing City and Suburban Movers: Evidence from the American Housing Survey. *Journal Housing Policy Debate*, 12 (3), 607–631.
- Sandstrom, H., and Huerta S. (2013). The Negative Effects of Instability on Child Development: A Research Synthesis Low Income Working Families. Discussion Paper 3. Retrieved from <http://www.urban.org/UploadedPDF/412899-TheNegative-Effects-of-Instability-on-Child-Development.pdf>. Accessed 5 January 2016.
- Schachter, J. (2001). Why People Move: Exploring the March 2000 Current Population Survey. U.S. Census Bureau, Washington, D.C. Retrieved from: <http://www.census.gov/prod/2001pubs/p23-204.pdf>. Accessed 14 July 2016.
- Schumaker, S.A., Anderson, R.T. and Czajkowski, S. (1990). Psychological Test and Scales. In B. Spiller (ed.). *Quality of Life Assessment in Clinical Trials*. New York: Raven Press.
- Sirgy, M. J. and Cornwell, T. (2002). How Neighborhood Features Affect Quality of Life. *Article of Social Indicators Research*, 59 (1), 79-114.
- Subhabrata Bobby Banerjee (2003). Who Sustains Whose Development? Sustainable Development and the Reinvention of Nature. *Organization Studies* 24(1). 143–180.
- Talen, E. (2002). The Social Goals of New Urbanism. *Article of Housing Policy Debate*, 13 (1), 165–188.
- Talen, E. (2006). Neighborhood–Level Social Diversity. *Journal of the American Planning Association*, 72 (4), 431–446.
- Van der Vlist, A., Gorter C., Nijkamp, P. and Rietveld, P. (2001). Residential Mobility and Local Housing Market Differences. *Article of Environmental Studies*, 34 (7), 1147- 1164.
- Waddell, P., Bhat C.R., Eluru, N., Wang L., and Pendyala, R., M., (2007). Modeling the Interdependence in Household Residence and Workplace Choices. *Journal of the Transportation Research Board*, 2003 (2003), 84-92.
- Wesly, S. (1986). Fear of Crime and Neighbourhood Change, *the Sociological Quarterly*, 32 (2), 232 – 249.
- Yiping, F. (2005). Residential Satisfaction, Moving Intention and Moving Behaviours: A Study of Redeveloped Neighbourhoods in Inner-City Beijing. *Journal of Housing Studies*, 21 (5), 671 – 694.