

EFFECTIVE HOUSING MANAGEMENT FRAMEWORK FOR MULTI-OWNER LOW-COST HOUSING IN MALAYSIA

by

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Abstract

The Malaysian government is committed to providing access to the low-income households to become homeowners by creating a low-cost housing category. In urban areas, multi-storey development is the most economical strategy to accommodate this group. Categorised as stratified development, the homeowners of low-cost units are subject to the Strata Title Act 1985 (Act 318) and the Building and Common Property Act (Maintenance and Management) 2007 [Act 663] like other housing categories. They have collective roles and responsibilities for the management and maintenance of their residential environment. However, after several years of occupation, this development began to show signs of physical obsolescence of the building and residential environment. Housing management problems such as conflicts between stakeholders, involving residents, owners' organisations and managing agent are often associated with these problems. It is time, this scenario requires the full attention of the government and researchers.

This study addresses the gap in knowledge by providing additional insight into the conflictual relationships between the stakeholders and ways to overcome their diversity of interests. The conceptual framework of 'Effective Stakeholders' Relationships' is proposed. Three objective variables (the characteristics of owner-occupants, chairpersons of housing Management Corporations and housing characteristics) and three subjective variables (competency of owner-occupants, owners' organisations and managing agents) are predicted to influence the stakeholders' relationships. These relationships are further predicted to intervene by the effect of owner-occupants' perception of their residential environment represented by their satisfaction with their dwelling, neighbourhood and neighbours.

A lack of a national database and previous local empirical studies has led this study to conduct a preliminary interview survey. This approach was taken to avoid mistakes when generalising previous studies' findings, especially from other countries. Based on four propositions, namely homeownership, housing

management, collective action and residential satisfaction, the conceptual framework was developed. This framework was then tested and evaluated using a combined method consisting of a questionnaire survey and an interview survey. Through a multiple stage random sampling process, 618 owner-occupants of 73 multi-owner low-cost housing communities, and 34 owners' organisations from three urban areas of Selangor state were recruited. The data collected from the interview survey were analysed manually. The data collected from the questionnaires were statistically analysed and the results are based on descriptive analysis, univariate and multivariate analysis, and Structural Equation Modeling (SEM).

Descriptively, this study identifies that most of the owner-occupants are aged over 41 years, the majority with a length of residency over 15 years who choose to continue living there. In terms of housing management, owner-managed housing management is the most preferred for all selected housings that have established their management corporation. Without the services of managing agents, the relationship between owner-occupants and the owners' organisation is crucial. This study also proves that the occupancy rates factor is the main challenge in improving stakeholders' relationships. Multi-owner low-cost housing in Malaysia is found to be dominated by tenant-residents. Further analysis indicates that respondents from housing developments with high tenant-residents occupancy rates record low satisfaction with the stakeholders' relationships and with the residential environment.

With regard to the subjective variables, the owner-occupants' competency variable is shown by statistical analysis as the main significant predictor of effective stakeholders' relationships as opposed to the owners' organisational competency variable. Owner-occupants' perceptions of the residential environment are also closely related to housing management. Homeowners who are satisfied with their dwelling and neighbours are also satisfied with the relationships among stakeholders, even though the neighbourhood satisfaction is not the determining factor. Finally, the effects of residential satisfaction as an intervening variable have a partial mediation effect. This research proves that the residential environment (comprising of dwelling, neighbour and neighbourhood)

is able to provide improvements to housing management, although it is not a prerequisite.

This study argues that owner-occupants of multi-owner low-cost housing in Malaysia are suffering to maintain their residential environment. In fact, this study argues that a conducive residential environment can be achieved through effective stakeholders' relationships in housing management institutions. In general, owner-occupants and owners' organisations have adequate knowledge and awareness; however, differences in the goals and interests between owner-occupants and tenant-residents will lead to conflicts. Being a minority in a collective group leads owner-occupants to feel that their cost of participation is high, although some of the benefits will be shared with other tenant-residents.

A set of recommendations are identified and has the potential to improve the current provision of urban low-income household settlements. This thesis contributes to the theory, methodology and operational practices of housing management. It is anticipated that this study will make a positive contribution to enhance the low-income household living environment and could assist with future housing research in Malaysia.

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List of Abbreviations

AJMC	Ampang Jaya Municipal Council
AMOS	Analysis Moment of Structure
ANOVA	Univariate Analysis of Variance
FT	Federal territory
GDP	Gross Domestic Product
HBA	National House Buyers Association
HD	Housing Department
HDB	Housing and Development Board
HOS	Homeownership Scheme
JMB	Joint Management Body
MC	Management Corporation
MND	Ministry of National Development
NHD	National Housing Department
PJCC	Petaling Jaya City Council
PMA	Private Management Agent
Pre-MC	Pre-Management Corporation
PRH	Public Rental Housing
SACC	Shah Alam City Council
SEM	Structural Equation Modeling
SHRPB	Selangor Housing and Real Property Board
SPSS	Statistical Package for the Social Sciences
SSDC	Selangor State Development Corporation
UK	United Kingdom
URA	Urban Redevelopment Authority
US	United States of America

Definitions

Terms used by researchers are often not uniform even when referring to the same research context. This is due to country's differing housing policies and housing management practices. Therefore, for the purposes of consistency, the terms used in this thesis are described as follows:

Multi-owner low-cost housing

In the Malaysian context, the current government guidelines defined low-cost housing category as a housing unit where the selling price is RM 45,000 or below. Based on the location, the units may include flats¹, terraced or detached houses with a minimum design specification of built-up area of 550-600 sq ft, two bedrooms, a living room, a kitchen and a bathroom. Only Malaysian citizens with a monthly household income not exceeding RM 1,500 are eligible to apply and purchase the unit (Kementerian Perumahan dan Kerajaan Tempatan 2002, p.2).

Multi-owner refers to the multi-storey type of development which is categorised as stratified development involving individual ownership (or title) for individual units and shared ownership of common property. This term refers to affordable housing, which is sold to low-income households. The housing is multi-storey, and inhabited by more than one household. In the Malaysian context, low-cost housing is the main strategy of the government to provide access to homeownership for this group, especially those residing in the city and suburb. The price of units and the design standards are controlled by the government of Malaysia.

Housing management

Housing management in this study refers to collective living arrangements requiring the common interests to be collectively managed for the common good. In the context of stratified development as practiced in Malaysia, multi-storey buildings' housing management requires an organisation that consists of all buyers. The organisation needs to manage the building and common property as

¹ In the Malaysia context, 'flat' refer to multi-storey development.

set out in the approved strata plan. Like other organisations, housing management also requires resources.

Owners' organisation

This term refers to organisations established by the purchaser or occupier of the respective development involving the collective arrangement. The term owners' organisation used to represent the various terms used by different countries. Terms like "Owners' Association", "Owners' Corporation", "Management Corporation", "Body Corporate" and etc. are among the terms used to represent management by or for any owners' organisation.

Dependent variable

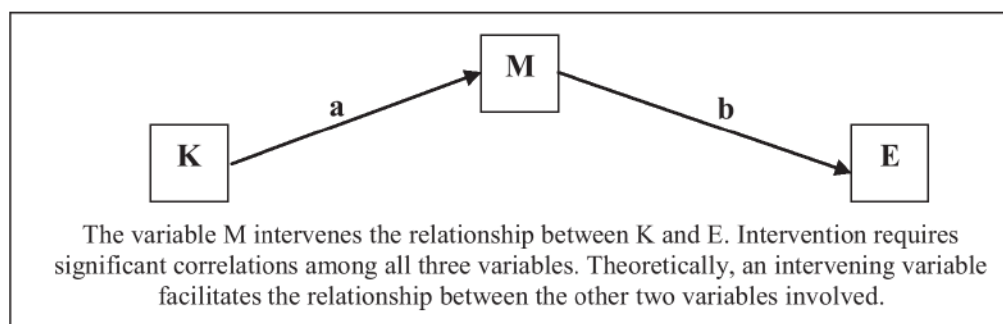
This refers to the variable that is presumed to be influenced by another variable (Caldwell 2004, p. 270). The dependent variable values are predicted by the independent variable, whether or not caused by it (Vogt 1999, p. 78)

Independent variable

This refers to the variable that is presumed to influence another variable (Caldwell 2004, p. 270). The independent variable is manipulated by the experimenter who predicts that the manipulation will have an effect on another variable (the dependent variable) (Vogt 1999, p. 137)

Intervening variable

An intervening variable is also known as a mediating variable. This variable is a third variable created to intervene in the relationship between two other related variables (Hair 2006, p. 866). The following figure, illustrates an intervening effect:



Source: Adopted from Hair et al. (2006, pp. 866-7)

Chapter 1: Introduction

1.1 Background

A government focus on affordable housing for low-income households is essential, especially in urban areas. Without decent, affordable housing, low-income residents will have no choice but to live in improper conditions, such as squatter and slum settlements, as they cannot afford upmarket housing (Agus 2005; Ha 1987). Malaysia, as a developing country, cannot avoid having these problems especially in early stage of its development (Agus 2005; Agus, Doling & Lee 2002; Salleh & Meng 1997). Rapid manufacturing and industrialising have caused migration from villages to cities, creating increased demand for affordable housing and shortage in supply to meet the demand. Therefore, government of Malaysia has organised a variety of strategies to solve problems concerning low-income household settlements, especially in towns, through the implementation of public housing and low-cost (homeownership) housing programmes (Agus, Doling & Lee 2002; Salleh & Meng 1997).

Homeownership is strongly promoted and has been the primary strategy for providing decent, affordable housing for low-income households. The public and private sectors together are committed to providing affordable low-cost housing through Malaysia's five-year development plans. The demand for low-cost housing is expected to increase corresponding to the growth in urbanisation. The Malaysia National Urbanisation policy notes that the rate of urbanisation is expected to increase 75 per cent by 2020, and the population will be concentrated mostly in major conurbation areas (Federal Department of Town and Country Planning Peninsular Malaysia 2006, p.13). However, rapid economic development and urbanisation will contribute to increasing land values and high construction costs in urban areas and in turn will affect low-cost housing (Sirat et al., 1999). As a result, multi-storey housing developments have been identified as the most economical option for housing low-income households, especially in urban areas.

However, a home is not just the physical structure. It should be understood in terms of the dwelling's environment, which is qualitative and not quantitative or tied to material standards; the value lies in the relationship between humans and the environment (Turner 1968). If this relationship is addressed, it can collectively contribute to the prosperity of a community and to the country's economy and social stability. One way of maintaining this relationship is through housing management. The residential environment should be maintained to be suitable for occupation, as in the long-term, physical obsolescence and deterioration of the housing and the environment could affect the residents' well-being. Thus, in addition to emphasising efforts to provide decent homes, housing management requirements are also an essential.

From squatter and slum areas, people move to multi-storey multi-owner housing environments where they share walls, floors, ceilings and hallways as well as common facilities and services, such as lifts and playgrounds. Owning a home in a multi-storey residential building requires that every aspect of the residential environment is determined collectively by the residents. The statutory provision of multi-storey living in Malaysia, the Strata Titles Act (Act 318) requires the transfer of strata ownership from the original developer/land-proprietor to the purchasers. Strata ownership is a title issued to units in any strata-development on alienated land held as one lot under the final title. When the strata title is issued, the ownership of the building lot comes under the management corporation (MC) (Ministry of Housing and Local Government 2008). The MC is the owners' organisation established by the unit owners to manage their common interests for the common good. The concept of lifestyle in such developments requires collective action among the residents. However, mismanagement is a major barrier to success when a consensus cannot be reached (Muhamad Ariff & Davies 2009a).

According to statistics from Malaysia's National House Buyers' Association (HBA), management and maintenance issues have received greater attention since 2002 after complaints arose regarding strata titles (House Buyers' Association of Malaysia 2009). Multi-storey (ownership) housing in Malaysia was widely reported by the media as being badly managed; as a result many of the residents

were forced to put up with deplorable and even hazardous conditions. If housing management is considered to be low priority, there is no doubt that the residential environment will start to resemble the slums that these housing developments were meant to replace. Therefore, this study aims to provide an insight into the current practice of housing management for multi-owner low-cost housing in Malaysia. The findings are expected to provide an extension to the development of management theory and offer a conceptual framework to enhance the management and maintenance of multi-owner low-cost housing, predominantly in Malaysia.

1.2 Previous Research

Research on multi-owner housing management has received extensive attention due to the complexity associated with residents' participation, managing agents' performance and legislation, all of which claim to affect the performance of housing management structures (Budgen 2005; Christudason 2004, 2007; Encon 2005; Hui & Zheng 2010; Muhamad Ariff & Davies 2009a; Randolph 2006; Walters 2002). Several previous studies have investigated upper market housing management in Malaysia, but few have looked at the low-cost category (Muhamad Ariff & Davies 2009b). Indeed, to date, there has been limited research both internationally and locally, regarding the experiences of low-income residents as owners of private residential developments.

As shown in Table 1.1, earlier studies on low-cost housing in Malaysia have generally focused on housing provision. This scenario is mainly due to Malaysia's efforts to eradicate squatter colonies, especially in urban areas, and the need to resolve low-cost housing shortages. Researchers who have discussed the performance of the government's housing policy and the problems associated with its implementation include Wegelin (1978), Yahaya (1989), Singh (1980, 1992a), Agus (1989, 1995, 2002) and Sirat et al. (1999).

Table 1.1: Previous studies on low-cost housing (affordable housing) in Malaysia

Research areas	1970s	1980s	1990s	2000s
<ul style="list-style-type: none"> Housing policy and provision Government roles and strategies Performance 	Chong (1979) Wegelin (1978)	Tan & Sendut (1983) Agus (1989) Ha (1987) Yahaya (1989) Yahaya (1989)	Singh (1992a) Agus (1995) Osman & Yusof (1994) Sirat et al. (1999) Ismail & Husin (1997) Salleh & Meng (1997)	Sudin (2002) Agus (2002) Agus, Doling & Lee (2002) Che Omar & Sha (2007) Wan Abd Aziz, Azriyati & Hanif (2007) Mohit & Yunus (2007) Idrus & Ho (2008)
<ul style="list-style-type: none"> Private sector roles 	Chong (1979)		Agus (1994)	Agus (2005)
<ul style="list-style-type: none"> Urbanisation and squatters' settlement 	Chong (1979) Wegelin (1978)			
<ul style="list-style-type: none"> Quality (construction and design) 			^(b) Abdul-Rahman, Kwan & Woods (1999)	
<i>Psychological</i> <ul style="list-style-type: none"> Residential satisfaction 	Chong (1979)	^(a) Sulaiman & Yahaya (1987) ^(b) Tan & Sendut (1983)	^(a) Yahya (1997)	^(b) Abdul Karim & Sariman (2007) ^(b) Abdul Karim (2007) ^(b) Salleh (2007) ^(a) Mohit, Ibrahim & Rashid (2009)

^(a) Public housing ^(b) Ownership (low-cost housing)

Source: This study's literature survey

Other areas that have been researched include the psychological aspects of low-cost housing, such as investigations into the quality of life of residents in multi-storey low-cost housing by highlighting the satisfaction element in the living environment (Abdul Karim 2007; Abdul Karim & Sariman 2007; Mohit, Ibrahim & Rashid 2009; Salleh 2007; Sulaiman & Yahaya 1987; Yahya & Hashim 2001). Unfortunately, none of these issues and investigations is associated with the current practice of housing management.

As shown in Table 1.2, the study by Singh (1992b) was one of the earliest on housing management in Malaysia. The boom in high-rise residential buildings, especially in urban areas, increased awareness of the need for adequate housing management in the 2000s. In addition, Table 1.2 breaks down the pattern of previous research in the current decade. Clearly, non-low-cost housing has received greater attention than low-cost housing in terms of housing management.

Table 1.2: Previous studies on multi-storey housing management in Malaysia

Research areas	1970s	1980s	1990s	2000s
• <i>Low-cost housing</i>				Muhamad Ariff & Davies (2009a) Muhamad Ariff & Davies (2009b)
• <i>Public housing</i>				Salleh et al. (2008) Ramly, Ahmad and Ishak (2006)
• <i>Non-low-cost housing</i>				Ramly, Ani & Tawil (2005) Che Ani et al. (2007) Che Ani (2007) Che Ani et al. (2008) Mohd Tawil et al. (2008)
• <i>Mixed categories</i>			Singh (1992b)	Tiun (2003) Malek & Tiun (2004) Tiun (2006) Abdul Talib & Johari (2007) Tiun & Lim (2007) Mohamad (2007)

Source: This study's literature survey

Focus on a stratified housing management is not only limited to technical issues relating to the management of common property. The same attention should be given to the human factor (Che Ani et al. 2007). The study of human factors has been done by Che Ani et al. (2008) who investigate the attitude of stakeholders involved in stratified housing management. This research group has measured the satisfaction level gap among stakeholders, i.e. the residents and council members

of Management Corporation of non low-cost housing development. By taking into account three important factors of finance, maintenance and residents participation, their study shows significant differences in satisfaction levels between the residents and council members of Management Corporation. Residents recorded low levels of satisfaction compared to the council members of Management Corporation for all the measured factors.

Mohamad (2007), in her studies reviewed the implementation of relevant acts related to stratified housing management in Malaysia, stressed that more attention should be given to human factors, namely strengthening the human-relationship between the parties involved in housing management. This includes efforts to raise awareness of the responsibilities and rights among property owners or occupants. Mohamad (2007) ascertains that awareness and knowledge is crucial to generate a sense of responsibility among the parties responsible for the management of stratified residential development. Successful implementation of the relevant acts strongly depends on the cooperation, commitment and seriousness of the stakeholders.

Back to the low-cost housing management in Malaysia, this type of development requires the attention of policy makers and researchers. The physical building and the environment of their residential is showing signs of obsolescence due to problems such as rubbish dumping, graffiti and vandalism (Bahari 2007). Lack of knowledge of the role and responsibilities as contained in the Strata Title Act 318 (183) contributed to misunderstandings among people on housing management (Tiun & Lim 2007). These misconceptions lead to the lifestyle needs of the stratified residential which require people to share use of facilities and services that are categorised as common property is not complied with (Bahari 2007; Mohamad 2007; Muhamad Ariff & Davies 2009a; The Star 2004). As stated in the Act, residents also share the responsibility of looking after common property, however difficult to achieve (Bahari 2007; Muhamad Ariff & Davies 2009a).

Several past studies have investigated the management of low-cost housing in Malaysia as to identify and search for housing management solutions. Since not many low-cost housing has acquired the strata title, researchers mainly have

focused on developments that are not managed by the Management Corporation. The study by Abdul Talib and Johari (2007) investigated all categories of multi-storey housing. However, the study focused on new housing schemes that had not yet obtained strata titles and were still under the management of the developers. The findings were more relevant to management aspects, such as current practices that are associated with the professionalism of the management and governance statutes. Meanwhile, empirical surveys conducted by Tiun and Lim (2007) on low-cost and medium-cost housing management systems practised in four different states in Malaysia also did not consider the effects of the issuance of the strata title. However, they ascertained that a lack of understanding among the owners and inexperienced MCs contributed to the mismanagement.

A preliminary study by Muhamad Ariff and Davies (2009a) provides an overview of the issues involved in low-cost housing management. They have explored both low-cost housing developments that have strata titles and those that did not. From interviews with the chairpersons and managing agents, they found that the residents' behaviour towards their housing management system was influenced by the ownership status of the housing settlement. Owners of units that are still maintained by the developers are mainly concerned with making complaints about the structural defects of the building (including damage that does not involve common property), whereas the behaviour of residents toward housing management in housing developments that have obtained strata titles is much more influenced by the leadership of the owners' corporation committee. In fact, the neighbourhood cohesion that has been developed over a long period can either aid or hinder housing management.

Previous studies, as outlined in Tables 1.1 and 1.2, indicate that the research on low-cost housing has reached the housing management phase. In the context of the building life cycle, the existing domestic low-cost housing stocks are now in a fragile stage, in which they can easily be affected by obsolescence if they are not managed properly. This study differs from previous studies on low-cost housing management, which often compare other categories of housing and do not consider the strata-status. This study focuses on the human-relationship, the

relationship between stakeholders as criteria to establish a framework of effective housing management.

1.3 Research Problems

Given the lack of research concerning the issues involved in low-cost housing management with regard to strata titles, this study proposes to investigate the following questions:

- a) What are the current situations of urban multi-owner low-cost housing developments in terms of residency and housing management?
- b) What are the variables that affect the effectiveness of stakeholders' relationships in order to increase owners' participation in housing management for multi-owner low-cost housing?
- c) What are the variables that could influence the effectiveness of stakeholders' relationships in housing management for multi-owner low-cost housing?
- d) What are the relationships between the variables, and how can these variables be utilised as a foundation to enhance the effectiveness of stakeholders' relationships in the management of multi-owner low-cost housing?

1.4 Theories and Issues/Propositions

This study assumes four main propositions as references in developing its conceptual framework. The four propositions are, namely, homeownership, housing management, collective action (residents' participation), and residential satisfaction. This section briefly reviews the literature concerning these propositions. Detailed reviews of each of the propositions are presented in Chapters 2, 3 and 4.

1.4.1 Homeownership

As mentioned earlier, homeownership among low-income households, especially in urban areas is a priority of the Malaysian government. This study takes into account the literature related to homeownership because homeownership, it has

been claimed, has brought many benefits to homeowners (Saunders 1990; Rohe, McCarthy & Zandt 2001).

The study of low-income households' settlements is incomplete if it does not address a country's housing policy. This group is dependent on government assistance, particularly access for a decent accommodation (Ooi & Phua 2007; Yuen 2005). Housing is not just about shelter, but it is an integrated social system that has strong impact on a nation's social and national stability (Ramesh 2003). In Chapter 2, the Malaysian government policy in providing access of homeownership to low-income citizens, especially those residing in urban areas are discussed. This discussion is important to see the extent of the role played by the Malaysian government in providing and maintaining a decent residential environment for this group. For a better understanding of how other countries realising their national housing policy that provides an opportunity for the low-income households to own their own homes, and able to maintain a good quality of life, Chapter 2 provides a comparative study between Singapore and Hong Kong compared with Malaysia. In fact, findings from this comparative study will be used to suggest improvements to the current housing policy of the Malaysian government.

A preference for homeownership over renting has been a leading factor in guiding housing policy (Saunders 1990). Homeownership has been argued by policy makers and researchers to contribute positively to economic and socio-psychological benefits, which in return help to maintain the economic and social stability of the country. In terms of economic impact, homeownership creates real estate activities (Galster 1987). Homeowners are also expected to have interests in both investing in and consuming goods (Galster 1987; Rohe & Stewart 1996; Saunders 1990). Regarding social benefits, homeownership contributes both freedom and greater control over property, neither of which are fostered by renting (Rohe, McCarthy & Zandt 2001; Rohe & Stegman 1994a). This greater control over one's residential environment can lead to a greater sense of control over life (Rohe, McCarthy & Zandt 2001). In social and psychological terms, the benefits include family pride of ownership, self-expression, security, an idyllic view of family life and freedom from landlords (Galster 1987).

Purchasing a home is, for most people, a major investment of a life-time. As a result, they tend to stay for a longer period of time, and they consequently develop deep emotional attachments to their communities. Previous studies have shown that homeownership influences the behaviours of homeowners in terms of their satisfaction with their neighbourhoods, their expectations about the future of their neighbourhoods, their social interactions and their participation in organisations and upkeep decisions (Cox 1982; Galster 1987; Rohe & Basolo 1997; Rohe & Stegman 1994a, 1994b; Rohe & Stewart 1996; Saunders 1990). Comprehensive reviews of this research are discussed in Chapters 2 and 4.

Most previous studies on the benefits of homeownership are dominated by western researchers and mostly examine single-detached housings or low-rise dwellings occupied by medium-income households. Little attention has been given to low-income households, especially those living in multi-family housing units. The positive benefits of homeownership, however, are not necessarily achieved through the realities of multi-storey living. As argued by Wekerle et al. (1980), even though homeowners of multi-storey housing units are free of the control of landlords, the social and psychological benefits are difficult to realise because the owners have less control than their counterparts who own single detached housing. Thus, in reality, not all people reap the benefits of homeownership, particularly homeowners who live in low-value or poor housing units.

Whether homeownership in a collective living environment, especially for low-income households, can generate positive or negative outcomes remains to be studied. Whilst homeownership is the main desirable goal, it is important for low-cost housing to be maintained at a high standard to facilitate community development, social cohesion and stability. This study indirectly investigates the impact of homeownership on housing management by focusing on multi-owner low cost housing developments.

1.4.2 Housing Management

Decent housing is essential for peoples' individual well-being and contributes to the overall neighbourhood environment. Decent home is a subjective term. Thus each of the housing policy of a country will interpret according to their needs. For example, Malaysia's housing policy aimed at providing adequate and quality housing, and equipped with adequate environmental facilities and equipment that will improve the quality of life (Jabatan Perumahan Negara 2011).

Based on the above statement, to ensure long-term improvements on the quality of life, adequate housing management is required. Housing management is vital as it contributes to the creation of a safe, secure and comfortable living environment for residents. Previous studies have proved that housing suffering from inadequate management has often been the major cause of rapid physical deterioration of housing environments (Budgen 2005; Encon 2005; Lias 2007; Shabha 2003; Walters & Kent 2000) and has long-term consequences for the neighbourhood's social cohesion and community-sustainability (Budgen 2005).

Regarding housing management, living in multi-storey housing units requires residents to depend on each other. As an example, Malaysia's Strata Title Act 1985 provides residents should share the common property and a common residential environment (Mohamad 2007). Similarly, the provisions of the Land Title (Strata) Act 1967 of Singapore distinguished the provisions of the individual and common ownership (Christudason 1996). As a homeowner in a collective living environment, an individual's freedom and control over the environment is limited to the internal part of the individual unit. Whether the application of Strata Title Act 1985 in Malaysia or the Land Title (Strata) Act 1976 in Singapore, the Building Management (Amended) Ordinance (Cap. 344) of Hong Kong also insisted that any action outside of the individual's unit should be done collectively as any physical elements attached to the building and their environment is common property (Yiu, Wong & Yau 2006). Usually, unit owners have a common interest in the common property. Hence, all parties are jointly responsible for its management. The agreed standards and effective management are highly dependent on the collective action taken by the owners.

Although the common interests of the unit owners are managed through owners' organisations, agreement among the members is difficult to achieve. When people do not have the same interests, a lack of participation among unit owners will become a problem. This lack of interest has been identified as one of the main barriers to providing adequate housing management. This study identifies conflicts in housing management, which have been debated internationally (Chen & Webster 2005; Lau 2002a; Wekerle et al. 1980) and also in Malaysia (Abdul Talib & Johari 2007; Ramly, Ani & Tawil 2005; Tiun 2006; Tiun & Lim 2007; Yip & Forrest 2002).

The housing management regulations are set by the authorities and require the involvement of various stakeholders, whether directly or indirectly. The authorities, however, are not involved directly in housing management affairs. The unit owners and owners' organisations are the direct stakeholders. As mentioned by Wekerle et al. (1980), both individuals and organisations are the policy and decision makers, whereas managing agents are also regarded as direct stakeholders since they implement the policy made. The relationship between the stakeholders and the agents is triangular, and the relationship between the stakeholders is two-way without the services of the managing agents.

This study particularly focuses on direct stakeholders. Previous studies have investigated the complicated stakeholders' relationships but have paid little attention to developments occupied by low-income households. As the research on housing management is unique due to different housing systems, with different tenures and legislation applicable, the findings of previous studies cannot be applied directly without taking into account these contexts (Bengtsson 2000; Lau 2002a). To better understand the issues faced by the subjects of this study, a brief discussion of the approaches taken by other countries is presented in Chapters 2 and 3.

1.4.3 Resident Participation and Collective Action

Multi-owner living represents a combination of individual and common ownership of one property and required an administrative framework that enables the

owner of the units to manage the property to their common benefit. If it is to be successful, owners' participation is highly crucial (Wekerle et al. 1980). The Strata Title Act 1985 of Malaysia and also the practice of other countries (such as the Land Title (Strata) Act 1967 of Singapore, the Australian (NSW) Conveyancing (Strata Title Act 1961) and the Unit Title Act 1972 of New Zealand) requires the establishment of owners' organisation as a platform for residents to jointly manage their housing. The primary objective of such organisations is to conduct the management and maintenance of the common properties and facilities. Unlike tenants' associations in public housing, which arise in opposition to the established order and must strive for some measure of public participation (Cairncross, Clapham & Goodlad 1997), owners' organisations are in full control of their housing management, and the participation of residents is vital for successful management.

The literature on participation mainly focuses on tenant-participation and is dominated by the Western countries, such as the United Kingdom (UK) and United States of America (US), because of their extensive experience in the public housing sector (Lau 2002a). Thus, this study draws on the literature of residents' participation in both the private and public housing sectors. The studies in both sectors are associated with collective actions, and are derived from the same theories, such as the theory of democracy, Olson's group theory and the participation chain theory.

The need to manage housing is made compulsory by legislative acts, but getting unit owners involved is a continuing problem despite the fact that owners' organisations are the best platforms for unit owners to express their views on issues affecting them. Researchers have continuously reported on the conflicts associated with participation in owners' organisations (Blandy, Dixon & Dupuis 2006; Budgen 2005; Chen & Webster 2005; Christudason 2007; Easthope & Randolph 2009; Liias 1998; Lim 2002; Yip & Forrest 2002). In owners' organisations, individuals are selected to perform committee duties on a voluntary basis. Committee members are required to devote part of their time and energy to their housing. They have a responsibility to manage the common interest for the common good.

Previous studies have also shown the relationship between the cost of participation and the benefits that influence participation (Olson 1971; Somerville & Steele 1995). If this relationship is not balanced, conflicts will develop between stakeholders. The stakeholders should be motivated in such a way that effective relationships between them can be achieved (Birchall 1997). In addition, the role of institutions themselves is seen as an important element (Bengtsson 2000). However, previous studies have indicated that forming a group with common interests is easy, but maintaining the group is a major challenge.

In addition to the costs associated with participation, previous studies have shown statistical relationships between objective factors (such as housing and owners characteristics) and subjective factors (such as owners' associations and competency of the managing agents) on the issue of housing management (Bengtsson 2000; Encon 2005; Yip, Chang & Hung 2007). Yet to date, no national studies have given priority to these characteristics. At the national level, the objective variables are usually only used for a descriptive analysis, and their impacts on housing management are not identified. Conversely, the subjective variables are known to influence the stakeholders' perceptions of technical factors, such as finance and performance. Thus, this study focuses on the relationships between stakeholders in both objective and subjective variables regarding the effectiveness of the stakeholders' relationships.

1.4.4 Residential Satisfaction

Environmental evaluation research, which studies the relationships between people and their surroundings (i.e. between the environment and human behaviour or experience), has grown rapidly since the 1970s (Canter & Kenny 1982). Residential satisfaction dimensions, namely the owners' satisfaction with their dwellings, neighbourhoods and neighbours, are widely used by housing researchers as indicators in measuring satisfaction in many aspects of individual living. These include studies that examined residents living in public and private housing and residents occupied single detached dwelling and multi-storey residential. Chapter 4 of this thesis presents the literature review on previous studies by taking into account the type of dwellings occupied by the residents.

Residential satisfaction forms an important component of peoples' quality of life, in that the way they evaluate their housing and neighbourhoods determines the way they respond to their residential environments (Lu 1999; Salleh 2007). Empirical research has considered (i) neighbourhood components to investigate residential satisfaction in residential environments (Amerigo & Aragonés 1990, 1997; Sulaiman & Yahaya 1987), (ii) neighbourhood relationships between homeowners (Rohe, McCarthy & Zandt 2000; Rohe & Stewart 1996), (iii) the relationship between housing satisfaction and housing tenure (Elsinga & Hoekstra 2005), (iv) relationships between residential satisfaction, mobility intention and moving behaviour (Lu, 1999) and (v) residential satisfaction as an indicator of the housing management's performance (Galster 1987; Paris & Kangari 2005). These studies can be grouped into two approaches that consider these relationships as either criteria or predictors of behaviour.

The physical characteristics of dwellings (Amerigo & Aragonés 1990; Rent & Rent 1978) and neighbourhoods and the social status between neighbours influence an individual's interaction with his or her environment (Amerigo & Aragonés 1990). The benefits of homeownership are further claimed to increase participation. Homeowners who are satisfied with their homes and neighbourhoods are more likely to participate in voluntary activities and are likely to commit to their neighbourhoods (Rohe, Zandt & McCarthy 2002). Saunders (1990) ascertains that greater control over individual dwelling units may directly improve residential satisfaction as satisfied homeownership will have positive social impacts, as discussed above.

Most empirical studies on residential satisfaction investigate tenants and homeowners in multi-family affordable housing (e.g. Abdul Karim 2007,2008; Amerigo & Aragonés 1990; Forest, Grange & Yip 2002; Mohit, Ibrahim & Rashid 2009; Rohe & Basolo 1997) and owners residing in single detached dwellings (e.g. Galster 1987; Rohe & Stewart 1996; Salleh 2007). An individual's opinion about his or her dwelling, neighbourhood environment and neighbours offers important insights into his or her behaviour and are predicted to have a great impact on his or her participation in property management. Whether these

benefits accrue to homeowners in multi-owner low-cost housing is unknown because few relevant investigations have been conducted, and none deal with housing in Malaysia. This study predicts that a resident's satisfaction with his or her dwelling, neighbourhood and neighbours could influence his or her perception of variables that predict effective stakeholder relationships.

1.5 Aims and Objectives of Research

The aim of this research is to develop a conceptual framework of effective stakeholder relationships to improve owners' participation in multi-owner low-cost housing in Malaysia. The framework is expected to provide recommendations for the government to help maintain the well-being of low-income households. The following objectives are undertaken to achieve these aims:

- a) To identify the current situation of multi-owner low-cost housing in Malaysia regarding the practice of housing management.
- b) To develop a conceptual framework that could improve stakeholders' relationships and subsequently enhance owners' participation in multi-owner low-cost housing management.
- c) To test and evaluate a conceptual framework that could improve the management performance of multi-owner low-cost housing in Malaysia.

1.6 Justification of the Research

Comparing empirical research on housing in different countries has drawbacks. Indeed several factors, such as the economic, social and political conditions in the different countries shape their housing provision policies (Ha 1987). Further, both housing management and housing tenure practices may differ according to different national systems (Bengtsson 2000; Lau 2002a). Therefore, one can argue that few empirical works are specifically comparable with the interests of this study.

The majority of previous studies that have investigated low-income household settlements, deals with public housing residents (either rental or homeownership sectors) (e.g., Amerigo & Aragones 1990; Rohe & Stewart 1996; Sulaiman & Yahya 1987; Paris and Kangari 2005), or homeowners living in single-dwelling units (e.g., Galster 1987; Kangwa & Olubodun 2003a, 2003b). Management of public housing is the responsibility of the landlord. Homeowners of single-detached dwellings have a greater control over their property. With regard to multi-owner housing management, several studies have investigated upper market multi-storey living (e.g., Che Ani et. al. 2007; Christudason 2004, 2007; Encon 2005; Ramly, Ani & Tawil 2005).

1.7 Contribution to Knowledge

By examining multi-owner low-cost housing, this research will make several contributions to the current body of knowledge regarding housing management. It is anticipated that this research will accomplish the following tasks:

- a) Propose a conceptual framework for effective stakeholders' relationships in the management of multi-owner low-cost housing in Malaysia. In particular, it aims to benefit the housing management stakeholders, practitioners and policy makers as follows:
 - By providing guidance for improving stakeholder relationships and to increase the awareness of stakeholders of the importance of effective stakeholders' relationships.
 - By assisting policy makers and housing practitioners in their long-term decision making associated with the wellbeing of urban low-income residents.
- b) Provide empirical, statistically-significant findings for future work that will enhance the current practice of multi-owner low-cost housing, particularly in Malaysia.

1.8 Overview of Research Methodology

This is a deductive study that began with a general theory of making specific predictions. The ideas that arose from the researcher's own observations and also from previous studies in Malaysia were clarified and refined. This study's areas of interest have been developed based on relevant theories and previous studies. To develop the conceptual framework, this study has been through two major phases, namely, a preliminary survey and a final survey.

The purpose of the preliminary survey was to provide an initial exploration to gain insight into multi-owner low-cost housing management. Due to the lack of local (or any) studies in this area, the preliminary survey was conducted to clarify the research questions and boundaries and to establish the direction of the research. It has also assisted this study in making generalisations with the findings from previous studies.

The preliminary survey involved semi-structured interviews with selected Selangor state government departments/agencies, the chairpersons of owners' organisations and the managing agents as a means of data collection. The state government's representatives were from relevant departments/agencies, such as the Selangor Housing Development Board, Selangor Strata Division, Selangor State Development Corporation (SSDC) and local authorities. The chairpersons were from two types of owners' organisations, namely, the resident's associations² and MCs. The data collected from interview sessions were analysed, common issues were identified and the themes were used for the development of the study's conceptual framework and the design of a subsequent questionnaire.

Two methods of data collection were employed for the second phase of the study, namely, (i) the questionnaire survey as the primary means of data collection and (ii) the interview as the secondary means of data collection. The questionnaire was designed to examine the chairpersons' and owners' agreement and the owners' satisfaction levels with the proposed variables that were expected to

² Residents' association is a term used for housing developments that have not yet established a management corporation or joint management body. Further explanation can be found in Chapter 3.

enhance stakeholders' relationships. Meanwhile, interviews were conducted with the chairpersons and managing agents to provide further information and checks to enable further depth in the discussion and conclusions.

The subjects of this study are located in the urban areas of Selangor state. The focus was placed on housing developments that had obtained strata titles, where the owners played the main role in any collective action with regard to housing management. Using multi-stage random sampling, the selected sample comprised the main stakeholders involved in housing management, namely, the owner-occupants, the chairpersons of owners' organisations and the managing agents (for housing developments that used services of the managing agents). Three major urban areas of Selangor were selected for the sample recruitment.

The data collected from the questionnaires were analysed using descriptive and inferential statistical methods. The hypothesised relationships were analysed using the Statistical Package for Social Sciences (SPSS). To examine the multiple-relationships and to test the fitness of the proposed conceptual framework, the researcher used Structural Equation Modeling (SEM) analysis with the Analysis Moment of Structure (AMOS) software. Data from interviews were analysed manually by identifying issues and themes that were then used to support the interpretation of the statistical data.

1.9 Report Outline

This thesis consists of eight chapters. Chapter 1 introduces the study and develops the reasons behind the study's investigation. The chapter then briefly introduces the problem statement, aims and objectives of the research, significance of the research, methodology and justification, and the limitations of the research. It further provides an overview of the thesis and a brief introduction to the subsequent chapters. Chapter 2 presents an overview of the national and international approaches in providing affordable housing for low-income households. The review begins with the literature on urbanisation that has contributed to the demand for affordable housing in urban areas. The chapter then

discusses homeownership benefits to explain the underlying advantages that are considered to arise from homeownership. Further, Malaysia's strategies in providing affordable housing are explained, followed by an Asian study of other countries' experiences.

Chapter 3 reviews the literature of housing management. This chapter explores the importance of housing management and the problems associated with multi-owner housing management. Types of housing tenure are elaborated to provide further understanding of the current housing management practices employed by Malaysia and other countries. Chapter 4 reviews the literature and theories underpinning this study's proposed conceptual framework, namely, the theories of housing management, collective action (residents' participation) and residential satisfaction. This chapter describes how the conceptual framework of effective relationships among stakeholders is developed based on theory, previous research findings and this study's preliminary review. The expected relationships between the variables are explained and presented in the form of testable hypotheses.

Chapter 5 presents the strategies and the methodology applied in this study. This chapter addresses the sampling framework and provides a brief description of Selangor state, from where the subjects were recruited. The chapter details the two methods used for data collection, namely, the preliminary and the final surveys. Data analysis techniques are explained and justified, and the reliability and validity of the data collection are addressed. Finally the ethical issues involved in this research are discussed. Chapter 6 presents the findings of this study. This chapter presents the analysis and results of the data gathered from both the preliminary survey and final survey. The important points and themes of the preliminary survey are presented, followed by the final survey's statistical results and tests of the proposed hypotheses.

Chapter 7 provides a discussion of the main findings of the study. The discussion begins with data to describe the multi-owner low-cost housing situation in Selangor. In addition, this chapter discusses the examination's results on whether the null hypotheses are accepted or rejected. The discussions refer back to theories and previous studies that have been discussed in the earlier chapters to identify

any significant similarities and dissimilarities with this study's findings. Finally, the conceptual framework that has been validated and evaluated is clearly explained. Chapter 8 presents the summary and conclusions of the study. The chapter explains how this study's findings can contribute to the present body of knowledge of low-income housing management and to the housing management and policy making authorities. The limitations of the tested conceptual framework are examined, and the chapter concludes with suggestions and recommendations for further research.

1.10 Limitations of Scope and Key Assumptions

This study relates to residential environments that are owned by low-income households residing in urban areas in Selangor. The type of residential housing is limited to multi-owner low-cost housing developments because such developments have been identified as the most appropriate type of development in accordance with the main strategy of the Malaysian government of providing affordable housing to urban low-income households.

Selangor was selected as the location of the subjects because it is the state with the highest number of low-cost housing developments in the Malaysian market. To reflect the long-term housing management practices in Malaysia, low-cost housing developments that have been issued strata titles are the ultimate focus because, at this stage, the owners bear the full responsibility of the management of their housing.

Research subjects of this study focused on unit owners who occupy their units and also the chairperson of the owners' organisation's that are responsible for housing management matters. Tenant-residents and owner-investors are not involved directly in this research survey. Information regarding their implications on housing management is provided by the chairpersons of owners' organisation through interviews conducted. However, the implications resulting from both groups are discussed in this study's literature review and also in the discussion of research findings.

The above justifications for the limitations of this study, however, allow this study's findings to represent a much larger population, and the proposed conceptual framework can be extrapolated to other states and multi-owner low-cost housing developments.

1.11 Conclusion

This chapter describes the foundations of this thesis. It begins with an overview of the study as a basis to justify the examination of the satisfaction levels in relationships between stakeholders in the management of multi-owner low-cost housing in Malaysia. To identify the requirements of this research, this chapter has introduced the research problems and issues. Next, the previous research on housing management in Malaysia and other countries has been outlined to identify this study's position in the field of housing management research.

To provide an overview of how this study has developed its conceptual framework, the propositions of the underlying literature, namely, homeownership, housing management, collective action and residential satisfaction, have been briefly elaborated and will be more thoroughly covered in Chapters 2, 3 and 4. For this study to contribute to a wider community, this chapter has outlined the contributions to the body of knowledge on housing management practices and to affordable housing policy makers.

The study's aims and objectives have also been clearly explained. Justifications for carrying out this study and the methodology involved have been discussed to demonstrate that this study provides value and that the findings are valid and reliable. To give an overview of the overall contents of this thesis, a summary of each chapter will be presented and finally, the limitations of the study will be justified. In conclusion, this study has been conducted on the foundations discussed in this introductory chapter. The next chapter presents a detailed implementation of this study.

Chapter 2: Literature Review—Housing for Urban Low-Income Households

2.1 Introduction

This study focuses on affordable housing-ownership for urban low-income households in Malaysia's urban areas. This discussion begins with an overview of how Malaysia developed in terms of its economy and urbanisation. This is to reflect Malaysia's past experience, particularly dealing with the housing provisions for urban low-income households. Thus, it is essential to review Malaysia's past and recent policy and strategies in housing provision and clearly identify the extent of the Malaysian government's involvement.

In addition, this chapter presents comparative Asian country studies by assessing two other countries' experiences in re-housing those in need, namely, Singapore and Hong Kong. An international study is vital as relevant literature on housing management is shaped by each individual country's national context and practices. Generalisation from international literature, without considering an individual country's national context, should be avoided. The selection of these two industrialised countries is based on their success in housing their low-income households in decent homes. Both, at the early stages of their development, have also had difficulties in meeting the demands for affordable housing from low-income households, experiencing similar high rates of urban migration. As the provisions of affordable housing in Malaysia are regulated by state governments and the study is focused on urban housing, this scale allows the experience of Singapore and Hong Kong to be used in this study.

2.2 Housing for Urban Low-Income Households

Housing is a basic necessity, and one which low-income households, especially in urban areas, struggle to provide for their families (Drakakis-Smith 1971). In literature on housing, the aspects of need and supply are reviewed together since

they cannot be viewed in isolation, and they are determined by three factors related to historical trends: political, social and economic development (Agus 2002; Agus, Doling & Lee 2002; Ha 1987; Ichimura 1998; Wegelin 1978). Ha (1987) noted that even though each individual nation may be different in its political, social and economic systems, these three factors will have a significant impact on the housing situation. The next chapter will discuss these factors through two topics. The first topic that is in the national context will discuss the political and economic factors. The social factors will be discussed under the topic of urbanisation.

2.2.1 National Context Factor

Generally, the demographic composition significantly affects the approach towards social policies including housing. Ramesh (2003) made clear that housing has a strong impact on a nation's social and economic welfare since housing is not just about shelter but an integrated social system. A shortage of decent housing, especially for low-income households, will create problems for the social system that will later affect the nation's economy and politics stability.

In terms of economic effects, economic activities have a strong bearing on the social system of a nation and their people. It determines the government's ability to raise and utilise its revenues and resources for housing programmes (Ramesh 2003; Sirat et al. 1999). The national economy also affects income levels and distribution, and thus determines the population's capacity to generate income and afford a house (Ha 1987).

Today, there is no country that allows for total private sector housing provisions. Nevertheless, the extent of government intervention varies between countries. The objectives and their commitment to mobilise the nation's resources to implement the program in all sectors of the national economy are carefully strategized. Since low-cost housing and housing for the people is a popular political agenda worldwide, providing a house for every citizen can clearly be an election campaign tool. Ha (1987) expressed the view that political ideologies and practice have great impact on the housing policies. An unstable political situation can

critically affect the process of formulating and implementing housing programs since they require long-term commitment.

Juppenlatz (1970) demonstrated that the growth of squatter populations is greatly influenced by the political structure of countries. Where the majority of voters are from low-income households, affordable-housing issues will always be vote-winners in the political market. Yuen (2005) noted that the local political environment will always influence the degree of a government's commitment, policy and the decision-making process. The housing policy statement setting in national development plans is mainly followed by persistent reminders from top political leaders to ensure that low-cost housing remains on the public agenda (Agus, Doling & Lee 2002). Therefore, the housing issues must be clearly understood by all parties involved especially the policy makers, the government bodies implementing these policies, the consumers and the housing developer (Salleh & Meng 1997).

The review above on housing literature illustrates the effects of both the economy and political conditions on the housing situation. In addition, economic concentration on industrialisation contributes to rapid urbanisation, which accelerates rural migration to urban areas (Agus, Doling & Lee 2002). The next section explains the impact of urbanisation that contributes to acute housing demand.

2.2.2 Urbanisation Factor

Salleh and Meng (1997, p.6) defined urbanisation as a phenomenon characterised by an increasing higher proportion of urban population compared to the total population. This phenomenon can be attributed to natural population growth, the transformation from traditional to modern society and changing economic activity from agriculture to manufacturing (Agus, Doling & Lee 2002; Ha 1987; Salleh & Meng 1997). Rapid urban growth exacerbates housing problems in urban areas where the housing demand is higher than the supply. A shortage of decent housing has become an enduring feature of the urbanisation process (Agus 1994; Wegelin 1978). The situation worsens when combined with a high natural growth of urban

population and the inflow of poor, rural migrants. Increasing unemployment rates, congestion and pollution have been highlighted as the causes of the deterioration of the urban living environment (Agus 2005; Ha 1987; Perry, Kong & Yeoh 1997).

Most immigrants lack appropriate skills and earn low wages. They cannot afford to enter decent homes that are often provided for the middle- and high-income households. Their income is often too low for formal, regulated markets to accommodate them with options of permanent or decent housing. As a result squatter and slum settlements are the preferred types of housing that are affordable and accessible to them in cities. Their colonies are often unhygienic, lack of basic municipal services and overcrowded (Agus 2005; Ha 1987; Perry, Kong & Yeoh 1997). Their settlements become a neglected part of the city with horrifying housing and living conditions. Squatter and slum settlements can be found in most major cities in the developing world. Data reported by Un-habitat³ indicates that almost one billion people or 32 per cent of the world's urban population inhabit slum areas. The majority of them are in developing countries. Slum inhabitants increased substantially during the 1990s and if no action is taken, the global number of slum inhabitants will increase to 20 billion (United Nation Human Settlements Programme 2003, p.26).

Squatters are generally defined as those who are in illegal occupation of land. Slum-dwellers, whilst generally in legal possession of their premises, add excessively to the existing housing densities, and can have a similar quality of life as squatters (Wegelin 1978, p.96). The World Bank Group⁴ characterises squatter slums as often being illegally occupied land tending to be on the outskirts of urban areas, with residents commonly having difficulty accessing clean water and sanitation, disposing sewage and accessing other customary community services. City centre slums are found in older city sections. Families and young migrants

³ The United Nations Human Settlements Programme, UN-HABITAT, is the United Nations agency for human settlements. It is mandated by the UN General Assembly to promote socially and environmentally sustainable towns and cities with the goal of providing adequate shelter for all. Retrieved 15 June 2010, <<http://www.unhabitat.org/categories.asp?catid=1>>.

⁴ For a detail description of characteristics of squatters and slums please refer to website <http://web.mit.edu/urbanupgrading/upgrading>

are overcrowded into badly maintained buildings such as rented rooms or shared small apartments in converted houses or apartment buildings. Their living conditions are very poor, rundown and public services are poorly provided or non-existent.

In order to resolve such human settlement-problems, countries have adopted a range of strategies. One is to promote homeownership programmes among the low-income households. The main idea is to encourage these people to experience the benefits of owning houses that are believed not to be made available to renters. The following section will discuss the benefits of homeownership that policy makers have often described as greatly advantageous.

2.3 Homeownership

Homeownership has often been substantiated to have a wide variety of positive benefits; economic, social and psychological for both the individual and society, and this has placed homeownership at the centre of housing policy (Rohe & Stewart 1996). Homeowners are expected to have interests in both consumption and investment. The following section reviews some of these ideas and considers the impact for the low-income households housing management.

2.3.1 Determinants of Homeowners

In order to discover the benefits of homeownership, most studies have compared owning and renting (Elsinga & Hoekstra 2005; Rohe, McCarthy & Zandt 2001). These studies have revealed that owning a home brings with it freedom and greater control over the property that cannot be achieved by renting. This greater control over one's residential environment could lead to a greater sense of control over life (Rohe, McCarthy & Zandt 2001; Saunders 1990; Wekerle et al. 1980). Elsinga and Hoekstra (2005) examined the relationship between housing tenure and housing satisfaction in eight countries of Europe and found that homeowners were much more satisfied with their housing situation compared to renters.

Homeownership research has identified several benefits when people own a house, rather than be a tenant, such as increased upkeep behaviour, increased participation, decreased residential mobility, increased neighbourhood stability and greater self-efficiency and satisfaction. The reviews of these benefits are as follows:

2.3.1.1 Upkeep Behaviour

Homeowners have primary responsibility for the condition of their properties (Stewart, Clayton & Ruston 2006) and as such are likely to value their house and amenities more highly than renters (Rohe, McCarthy & Zandt 2001). In addition, they are more likely both maintain and improve their homes (DiPasquale & Glaeser 1999; Saunders 1990). Renters are less attached to their units and seldom engage in these activities. The main reason being they will not continue to enjoy the economic benefits for the improvements upon leaving their unit (Galster 1987; Saunders 1990). In order to avoid maintenance responsibilities some choose not to purchase a home but just consider renting (Cairncross, Clapham & Goodlad 1997; Helderma 2007; Saunders 1990).

The condition and overall attractiveness of a dwelling, particularly if it is owned, reflects the household's social status and personal characteristics. Since homeowners have stronger social ties between their neighbourhood compared to landlords and renters, they are most likely to be pressured to maintain their property at some minimum level (Galster 1987; Rossi & Weber 1996). Therefore, from an economic point of view, homeownership is directly connected to improved property maintenance.

2.3.1.2 Participation

Studies have also focused on the relationship between housing tenure and community attachment. Owners' interests in maintaining the economic value of their homes can lead to greater social interaction with their community surroundings and their neighbourhood and is thought to have societal impact by leading to a higher level of participation in local voluntary organisations and

political activities and creating emotional attachments to the neighbourhood (Rohe, McCarthy & Zandt 2001; Rossi & Weber 1996).

Homeowners who plan to stay longer will be committed to their local community organisation as they desire the benefits of being in a community over a longer time period. Improved communities benefit the value of the homes (DiPasquale & Glaeser 1999). A study by DiPasquale & Glaeser (1999) examined the relationship between homeownership and the sense of citizenship between homeowners and tenants in the US and Germany. They found homeowners were much more likely to be involved in both non-professional organisations and in local politics.

2.3.1.3 Mobility

Homeowners are far less likely to move out compared to tenants due to their homeownership interests (Rossi & Weber 1996). They tend to spend more time and money on their homes and hence, the possibility of residential mobility may likely be reduced. Large transfer costs associated with buying and selling homes versus small transfer costs for terminating a lease agreement may affect their decision (Cox 1982; Haurin & Gill 2002; Rohe, McCarthy & Zandt 2001). In turn, the decrease in residential mobility contributes to neighbourhood stability, which is likely to provide better neighbourhood 'health' and boost property values (Rohe, McCarthy & Zandt 2001).

However, diminished mobility may trap residents in distressed or deteriorating neighbourhoods. Crowding in dwelling units, dissatisfaction with the neighbourhood, lack of confidence in the future of the neighbourhood and neighbourhood racial change may cultivate mobility and thus discourage neighbourhood stability (Galster 1987).

2.3.1.4 Neighbourhood Stability

The decision to purchase a home is likely to influence homeowners to commit to stay for a long period of time and influence neighbourhood stability. The trend to

stay longer could lead them to develop deeper emotional attachments to their communities. A number of studies have examined the connection between homeownership and neighbourhood stability.

Rohe and Stewart (1996) had studied the relationships between homeownership and neighbourhood for single-family owners. They used tenure period and property value as control variables for examining the impact on neighbourhood stability. They found that homeowners tend to stay longer in one home compared to renters. Homeowners living in a relatively stable neighbourhood are more likely to participate in community organisations, local social interactions and activities, property maintenance, and experience positive neighbourhood satisfaction expectations about the future of their neighbourhood. In return, an increase in neighbourhood stability over time leads to an increase in the property value.

2.3.1.5 Self-efficiency and Satisfaction

Homeownership is a status symbol in societies as it is recognised as a major indicator of households' economic well-being (Megbolugbe & Linneman 1993). The greater control over one's house is argued to affect an owner's sense of self-efficacy or an individual's satisfaction with home and life in general (Rohe, McCarthy & Zandt 2001; Saunders 1990). In terms of psychological benefits, owners typically have greater residential satisfaction and life satisfaction (Rohe & Stewart 1996).

Homeowners' living environments are likely to shape their lifestyles and may increase their satisfaction with both residence and life in general (Galster 1987). The freedom to customise a unit to suit their own taste further can lead to a sense of control over life (Rohe & Stegman 1994b; Saunders 1990). A longitudinal study by Rohe and Stegman (1994b) showed that homeowners indicated significantly increased life satisfaction compared to renters when interviewed prior to purchase and 18 months later. A further survey three years after house-purchase by Rohe and Basolo (1997) indicated the same positive effect.

2.3.2 Homeownership and the Housing Structure

The above reviews of homeownership have been thought to bring benefits to the individual homeowners and collectively benefit a neighbourhood or community by stabilising the property's value, encouraging homeowners to maintain their property and involve themselves in local organisations to protect their interests. Are the determinants of homeownership influenced by the type of residential dwellings? Is the behaviour of homeowners of single detached dwellings similar to those who live in multiple-units?

Glaeser and Sacerdote (2000) have identified the influences of the dwelling structure on homeownership's determinants. They examined the connection between housing structure and important social outcomes represented by citizenship, social connection and crime, on homeowners from three different types of dwelling structures in the USA and Germany. They found that homeowners of apartments with five to nine units and apartments with more than ten units in the development were less involved in local politics compared to homeowners living in developments with fewer units (authors classified dwellings consisting of less than five units as non-apartments). This result was likely to be due to the homeowners being less connected with the public infrastructure and space around them. In terms of social connections, they ascertained that homeowners in the larger developments (more than ten units) were more likely to be socially connected with their neighbours. They suggested that this was due to the decrease in the costs of connection, that is, less distance between neighbours.

Policy makers assume that homeownership is a social good that creates better property owners, neighbourhoods, citizens and they therefore promote homeownership. But in reality, all of these advantages might not be gained by low-income households, especially those living in declining neighbourhoods (Rohe, Zandt & McCarthy 2002). The next section will review homeownership and low-income households.

2.3.3 Low-Income Homeowners and Homeownership

Homeownership in a good neighbourhood will bring different residential satisfaction compared to homeownership in a poor district. Both housing tenure and perceived housing conditions were found to be significant in predicting satisfaction with life (Rohe, McCarthy & Zandt 2001; Saunders 1990; Wekerle et al. 1980). Those who purchase and live in a cheaper housing market may not realise the economic or social benefits of homeownership. As noted by Rohe and Stewart (1996, p. 72):

Encouraging families with highly variable or even flat income trajectories to purchase dwelling units are counter-productive: They are unlikely to be able to afford them over the long run. Encouraging low-income families to purchase units that they will not be able to maintain at a reasonable standard is also harmful.

Little attention has been given to low-income groups especially those living in vulnerable, declining neighbourhoods or poor quality housing stock. A study by Louie, Belsky and McArdle (1998) has shown that low-income homeowners in the US face serious housing problems. They ascertain that low-income homeowners are often trapped in deteriorating homes as they cannot afford the extreme housing repair costs. The situation is further compounded by the often initial low quality of housing.

Another example of a study examining low-income households is one by Rohe and Stegman (1994a). They examined low-income home buyers and renters in Baltimore, Maryland and found that home buyers were more likely to participate in neighbourhood and block associations but not other types of community organisations, compared to renters. They were more likely to be acquainted with the neighbours and were more likely to develop a strong sense of community. They also reported that home buyers who perceived more neighbourhood problems or who emphasised economic reasons for buying were not likely to participate in social and political affairs.

Based on the previous findings and studies by others that have shown significant determinants of homeownership, Rohe & Stewart (1996) proposed a conceptual model of effective homeownership on neighbourhood stability. They tested the model through the literature review and empirical testing. From the literature, they anticipated that significant relationships between homeowners and upkeep behaviour and participation in neighbourhood organisation were based on two conditions. First, they predicted that the unit living conditions of individual homeowners were usually better than those of tenants. While in the second situation, they predicted the homeowners mainly lived in the area with higher proportion of homeowners residing in units in good condition compared to areas with a higher proportion of units occupied by tenants. They also anticipated that poor neighbourhood quality would have significant negative impact in terms of the relationship between homeownership and decreased self-esteem.

They then tested the model on the non-affluent neighbourhoods around the cities of the US. Using the US census data for 1980 and 1990, they measured the relationships between housing, the impact on the property and length of tenure and found that homeowners, who had the financial means and a long-term interest in their property, would maintain their property at higher standards. They also would take part in the local community's associations that protected the collective interests of all homeowners in their area. They stressed that high rates of homeownership would reduce the residential units dominated by the tenants, thus the potential to improve maintenance would be higher. This suggestion is consistent with a previous study by Galster (1987) that proposed that in order to improve housing conditions for the poor, the rate of homeownership would have to be increased. However, Rohe and Stewart (1996) stressed that lack of mobility could affect the state of their property as they lacked resources to maintain their property.

The few studies that have looked into these determinants of homeownership issues are mixed and do leave questions about ownership and well-being problems, unanswered. Does homeownership promote well-being for the low-income groups living in multi-owner low-cost housing? How well is maintenance managed and carried out by owners in low-cost housing, given the long-term

impact on neighbourhood quality and residential satisfaction? These questions require further investigation and should be considered by policy makers when promoting homeownership. The following section reviews the study concerning the determinants of homeownership as conducted by the researcher.

2.3.4 Malaysian Studies on the Determinants of Homeownership

A comprehensive study on the determinants of Malaysia's homeownership has been carried out by Tan (2008). Tan (2008) assessed whether social-cultural, economic and housing determinants influenced the determinants of homeownership by studying a sample recruited from urban areas that represented four types of dwellings: terraced houses, high-rise and semi-detached and single-detached dwellings. In line with other Western researchers, Tan proved that Malaysia's homeownership improved neighbourhood stability, which would benefit homeowners both economically and socially. In terms of economic stability, Tan showed that homeowners were more likely to maintain their properties at a higher standard. Concerning social stability, most homeowners wished to stay in the neighbourhood for a long time and this generated greater connection with the neighbourhoods in the community. In return, the homeowners indicated higher participation in local organisations.

Tan's findings also reveal interesting points as they also examine the impact of types of housing and property. As this study's interest is more on the impact of homeownership related to housing management, these further results are not discussed here. Tan's survey pertaining to housing type, revealed insignificant relationships between housing type, length of community tenure, and property maintenance and improvement. With regard to the social and demographic factors, the survey revealed that a household's income, education, employment type, size and amount earned from the Employees' Provident Fund significantly influenced the determinants of homeownership. In contrast, surprisingly, only education was found to be correlated to property maintenance and improvement.

Although the above findings revealed important insights, the study did not include low-income households in low-cost housing. Wan Abd Aziz, Azriyati & Hanif

(2007) in their research, investigated the homeownership programme for low-income households in Malaysia's capital city of Kuala Lumpur. Their interviews found a correlation between homeownership and duration of residency as a majority of the respondents did not intend to move out in the near future. The authors concluded that this behaviour was likely to be due to a high sense of belonging developed within the communities. However, alternative conclusions could be drawn from the studies by Abdul Karim and Sariman (2007) and Abdul Karim (2008). They concluded that the duration of residency among low-income households was due to the fact that they had no choice but to settle and 'make do' with whatever was available. For many of them buying a house was a huge financial commitment, and they could not afford the additional cost incurred by moving.

2.4 Housing for Low-Income Households: Malaysian Perspective

Malaysia is committed to providing affordable housing for its people (Jabatan Perumahan Negara 2010). Housing policies that give great priority to re-house the low-income households have been implemented. This section discusses action taken by the Malaysian government. Therefore, the discussion begins with a brief introduction to Malaysia's national context and urbanisation in order to illustrate the factors that underlie Malaysian housing policy.

2.4.1 National Context and Urbanisation

Malaysia is a nation comprising thirteen states and three federal territories in Southeast Asia. As shown in Figure 2.1, the country consists of two geographical regions separated by the South China Sea, i.e. Peninsular Malaysia (West Malaysia) and Malaysia Borneo (East Malaysia). Peninsular Malaysia borders Thailand on the north and is connected by a carriageway to the island of Singapore in the south. Sabah and Sarawak comprise the largest portion of Northern Borneo. Malaysia received its independence from British Colonial rule in 1957.

According to the demographic information, Malaysia has fourteen states including the Federal Territory with a total area of 330.803 sq. km recorded in 2009 (Department of Statistics 2009, p. 1). With regard to the population, the statistics of the census in 2009 show a total population of 27.9 million. 63.3 per cent of the total population represents the urban population, while 36.7 accounts for the rural population (Economic Planning Unit 2010, p. 376).

Prior to 1971, rubber plantation, palm oil and tin mining were the main contributors to Malaysia's economy (Malaysian 1981) and over time, Malaysia became the world's largest producer of these commodities (Ichimura 1998). During British rule, tin mining activities resulted in the growth of the mining towns of Ipoh and Kuala Lumpur; and the port towns of Penang, Malacca and Singapore became growth centres given the existence of job opportunities (Salleh & Meng 1997). During the 1970s, Malaysia became committed to economic transformation, from relying on mining and agriculture as the main source of wealth, moved to manufacturing and industrialisation. The Economic Planning Unit (2009, p.1) figures show that the Services and Manufacturing sectors now make up the biggest components of Malaysia's Gross Domestic Product (GDP) accounting for 57.4 per cent and 26.8 per cent of the total GDP respectively.

The socio-economic statistics for 2009 show the national mean monthly gross household income is RM 4,025, an increase of 4.4 per cent for the period between 2004 and 2009. At the state level, three urbanised states and two Federal Territories recorded a higher mean monthly gross household income than the national level. For example, Selangor, where this study was conducted recorded the second highest figures of RM 5,962 after the Federal Territory of Putrajaya (RM 6,747) (Economic Planning Unit 2010, p. 399).



Source: Adapted from Wikipedia <http://en.wikipedia.org/wiki/Malaysia>

Figure 2.1: Map of Malaysia

Rapid manufacturing and industrialising have caused migration from villages to cities, creating increased demand for affordable housing and a shortage in supply to meet the demand. As a result, Malaysia has also experienced a growth of squatter settlements in its urban areas. Concentration of employment in Kuala Lumpur has become a major attraction for immigrants, hence forcing Kuala Lumpur to experience early growth of squatter settlements. Based on data collected from town councils and state development offices, Wegelin's (1978, p.98) study showed that in 1968, 32.0 per cent of Kuala Lumpur's households were squatters. Squatter structures or houses are not only built on government land, but also on land under private ownership (see Bahagian Dasar dan Perancangan Strategik 2009).

The Malaysian government undertook intensive squatter clearance programmes in 1998 when the government announced the implementation of the 'zero squatters by 2005' policy (Agus 2005). However this was not an easy task and most of the local authorities did not achieve this target. Some authorities claimed they could

only achieve zero squatters by the end of 2007 (Adnan 2007; Saad 2007). Statistics for 2008 indicated that 86,885 squatter families were still living in Malaysia. However, this figure is 20 per cent less than that recorded in 2004—108,704 squatter families. Among the states, Selangor, the wealthiest state, recorded the most aggressive reduction in the numbers of squatter families. Between 2004 and 2008, Selangor eradicated 94 per cent of its squatters and currently, the state has only 1.4 per cent of Malaysia's squatter families. However, a few states are recording an upward trend of squatter settlements due to the urbanisation process. Among them are Kelantan, Perak, Penang, Kedah, Pahang, Johor and Negeri Sembilan. Johor currently has the largest number of squatter families increasing from 1,541 in 2004 to 12,565 in 2008. As the Malaysian government committed itself to solving the squatter issue parallel with the Nation's 2020 vision, Malaysia's new target was set to achieve 'zero squatters' by 2020 (National Housing Department 2008a).

Urbanisation today, is still continuing but in different ways. Jaafar (2004) identified that people were now moving away from the densely populated urban cores in Malaysia to settle in the outer limits of their urban boundaries. Data from the population census shows that urbanisation levels in Malaysia are increasing. According to the Ninth Malaysian Plan (2006-2010) population in urban areas are projected to increase to 63.8 per cent in 2010 (Economic Planning Unit 2006, p. 361). This means that housing demands will continue to increase, especially in urban areas. Affordable housing will continue to be a part of the national agenda. The following chapter explains how Malaysia formulates strategies to overcome the problems of low-income households' settlement, especially in the city.

2.4.2 Low-Cost Housing Provision

Prior to independence, Malaysia's public housing facility was initiated by the British administration and was known as 'the institutional quarters'. This housing facility was for upper class British employees who worked in public institutions such as hospitals, schools and district offices (Agus 1989). Formal housing implementation for the public was undertaken by the colonial administration when they established the Housing Trust in 1950. The committee was appointed to

study the nature and extent of housing problems and to provide recommendations to overcome housing shortages. To overcome the shortage of suitable state land, the government authorised the Housing Trust to buy private land and to develop low-cost housing. The Housing Trust became fully operational in 1952, marking the beginning of direct intervention of public authorities in the construction of affordable housing for low-income groups in Malaysia (Yahya 1997).

After Independence, the government envisioned homeownership for all levels of society. Therefore, the provision for low-cost housing for all was introduced in Malaysia in 1967 by the second Prime Minister, with the aim of providing public housing that was affordable for all low-income groups. The emphasis was on the development of low-cost public housing programmes for low-income households, settlers in federal land development schemes and some categories of the public sector (Agus 1995).

Today, Malaysian housing provisions are being co-ordinated by the National Housing Department (NHD) under the supervision of the Ministry of Housing and the local government. Established in 1974, the NHD plays a major role in providing affordable housing for all income groups particularly the low-income households. Alongside the NHD, there are other public sector agencies involved in the implementation of housing programmes such as the State Economic Development Corporations in Peninsular Malaysia, the Public Works Department, Kuala Lumpur City Hall, Sabah Housing and Town Development and Sarawak Housing and Development Commission.

Malaysia has two types of affordable schemes for the low-income households: a rental scheme and a homeownership scheme. The rental scheme mainly offers housing for the urban poor and eligible squatters who are affected by site-clearance programmes in cities like Kuala Lumpur. Eligible low-income households and squatters can purchase low-cost units either developed by the public or the private sectors with the purchase price as well the purchase process completely under state governments' control.

According to current government guidelines, low-cost housing is defined as a housing unit where the selling price is RM 45,000 or below. Based on the location, the units may include flats, terraced or detached houses with a minimum design specification of built-up area of 550-600 sq ft, two bedrooms, a living room, a kitchen and a bathroom. Only Malaysian citizens with a monthly household income not exceeding RM 1,500 are eligible to apply and purchase the unit (Kementerian Perumahan dan Kerajaan Tempatan 2002, p.2). The application process is made through The Open Registration System (ORS) ⁵ controlled by the state government (National Housing Department 2008b).

Initially the private sector in Malaysia only focused on medium- and high-cost housing. However, the public sector failed to meet its targets for low-cost housing due to limited funding, complicated land policies and the ever-increasing demand for low-cost housing, particularly in urban areas (Agus 2002; Sirat et al. 1999). As an alternative, the government sought the co-operation of the private sector to build affordable housing for the low-income households (Ministry of Housing and Local Government Malaysia 1999). Since 1982, all private developers involved with housing projects had to allocate at least 30 per cent of the houses as low-cost units. This quota is imposed by the government on developers as a social obligation. Developers subsidise the cost of building these low-cost units from the sale of high-cost units (Research and Development Department 2001).

The private sector's involvement has increased since the Fourth Malaysia Plan (4MP, 1981–1985). The private sector consists of both private developers and co-operative housing bodies. Co-operative housing bodies contribute less low-cost housing as they mostly concentrate on medium-cost housing categories (Department of Statistics 2006). Table 2.1 shows the private sector contributing at an increasing rate every year in completing the quota for low-cost housing, except during the economic downturn in 1997–1998. As in the Ninth Malaysia Plan (9MP, 2006–2010), the private sector is expected to double their contribution for low-cost housing units compared to the previous Eighth Malaysia Plan (8MP, 2001–2005). The table illustrates that private sector's participation reduced the

⁵ The Open Registration System (ORS) is a computerized system used as a mechanism to distribute low-cost houses to eligible applicants by registering and assessing applications.

rate of incomplete projects during the Seventh Malaysia Plan (7MP, 1996–2000) and Eighth Malaysia Plan (8MP, 2001–2005). However, the overall performance was still below target.

Table 2.1: Output of low-cost housing by private and public sector in Malaysia

Malaysia Plan (MP)	Public sector (unit)		Private sector (unit)		Total (unit)	
	Targeted	Completed	Targeted	Completed	Targeted	Completed
2MP (1971–1975)		55,209				55,209
3MP (1976–1980)	122,200	63,020			122,200	63,202
4MP (1981–1985)	286,510	108,414	90,000	22,799	376,510	131,213
5MP (1986–1990)	103,300	58,228	370,400	88,877	473,700	147,105
6MP (1991–1995)	96,100	23,451	215,700	212,003	311,800	235,454
7MP (1996–2000)	73,300	70,000	137,000	127,514	210,300	197,514
8MP (2001–2005)	192,000	103,219	40,000	97,294	232,000	200,513
TOTAL	958,410	481,541	933,500	548,487	1,891,910	1,030,028
^(a) 9MP (2006–2010)	85,000		80,400		165,400	

Sources: Research and Development Division (2001)

^(a)Compiled from http://www.kpkt.gov.my/jpn/Lampiran_6.pdf

2.4.3 Urban Low-Cost Housing

Land availability, affordability and building construction costs have an impact on the location and quality of low-cost housing. Land scarcity resulting from rapid urbanisation, influences the affordability of housing development (Agus 2002; Sirat et al. 1999). In cases where the government controls land prices, it is possible to make land affordable for low-cost housing development projects. Land however, is frequently used as a commodity for speculation. Central urban land can command the highest price for development. Land in Malaysia is priced by the market, making affordable low-cost housing uneconomic for urban areas.

In Malaysia, multi-storey residential property homes have been built from the early 1960s. The first public housing unit was built in 1967 in the centre of Kuala Lumpur, known as Flat Tunku Abdul Rahman, which consists of sixteen storeys with 3,000 units (Abdul Talib & Johari 2007). This rental public housing was purposely built for the urban poor in the capital city of Malaysia. However, the development is now under re-development in order to enable commercial land use to commence. The residents have been relocated to other public housing facilities.

Rapidly increasing cost of development in urban areas has affected the developers in supplying adequate low-cost housing due to low profit margins with the controlled price of low-cost housing as imposed by the Malaysian government. This situation has pressurised the government into revising the selling price of such developments. Prior maximum prices of RM 45,000 were set in 1998, and RM 25,000, set in 1982 (Kementerian Perumahan dan Kerajaan Tempatan 2002, p. 1). Although the private sector is pressurising the government to increase the price of low-cost housing, at the moment the government seems not to be responding. The cross subsidy from non-low-cost housing development is considered sufficient to enable the developers to maintain their profit margin.

The developments of low-cost housing are being reviewed by developers nationwide in order to keep the costs within the levels of economic development. Detached-terrace housing is no longer viable in urban areas and multi-storey housing is the most economical solution. Table 2.2 shows the guidelines for Peninsular Malaysia, which has five categories of housing based on location.

Table 2.2: Category of low-cost housing development in Malaysia

Category	Location	Type of housing	Unit price	Monthly income of target group (RM)
A	Cities and largest towns	Flats more than 5 stories	RM 42,000	1,200–1,500
B	Large towns and urban fringes	5 stories flats	RM 35,000	1,000–1,350
C	Small towns and urban fringes	Terrace and clustered	RM 30,000	850–1,200
D	Rural areas	Terrace and clustered	RM 25,000	750–1,000

Note: Guideline only applies for Peninsular Malaysia

Source: National Housing Department (2008c)

High land costs in urban areas limit the choice of location for low-cost housing. Most low-cost housing developments are located in remote corners of developments, so as not to affect the high-income housing or are often located on poor quality land (Sudin 2002).

2.5 International Comparison

It is relevant to explore strategies for low-cost housing provision, internationally. The rationale is to understand how other countries strategise their social responsibility within their economic, political and social systems. The discussion will provide an insight by examining the strategies adopted by two other Asian countries—Singapore and Hong Kong that have experienced a range of similar phenomena, i.e. economic development, urbanisation, human settlement-problems and shortage of decent housing particularly for low-income households.

The comparison is based on their experience in dealing with massive urbanisation at an early stage of their economic development just as Malaysia is undergoing now, and their practices in providing and managing affordable housing for low-income households. The objective is to identify how each of these countries provides for their low-cost housing portfolio. This section will discuss and compare the effectiveness between the policies introduced and the problems associated with providing low-cost housing. The more successful policies and factors contributing to the success together with lessons to learn from each individual country will be identified.

2.5.1 Singapore

2.5.1.1 National Context and Urbanisation

With an area of only 710.3 sq km, Singapore is acknowledged as the smallest country in Southern Asia, with a population of 4,987.6 as documented in 2009 (Singapore Department of Statistics 2010, p. 1). Singapore is among the most densely populated countries in the world. Upon independence, Singapore faced a lack of physical resources and a small domestic market (Park 1998). Proactive stances by Singapore have resulted in a nation with a dynamic economy, and strong service and manufacturing sectors that now power the economy (Singapore Department of Statistics 2010, p. 7).

Post-war rapid urbanisation and population growth had led to overcrowding in the urban areas and led to heavy demand for housing (Yeung & Drakakis-Smith 1974). The immigrants from China and India migrated to Singapore because of the employment opportunities resulting from rubber and tin development in Malaya (now Peninsular Malaysia). Later, labour shortages in industrial sectors also resulted in migrations from external borders. Most of the migrants were poor and could not afford to rent or buy accommodation. Insufficient decent housing to meet the needs of the growing population contributed to the growth of slums and squatter colonies on the city fringes (Yuen 2002). Housing stock in the city became severely overcrowded and thus created one of the world's slums (Wan 1975).

2.5.1.2 Housing Provision

The first public housing effort in Singapore began as early as 1927 under the Singapore Improvement Trust (SIT) (Perry, Kong & Yeoh 1997, p.43). Limited by financial support and ineffective legal jurisdiction, the Singapore Improvement Trust was unsuccessful in solving the housing issues (Yeung & Drakakis-Smith 1974). Due to the large number of people still living in unhygienic, potentially hazardous slums and overcrowded squatter settlements in the Singapore city centre, the Housing and Development Board (HDB) was set up in 1960 to replace the Singapore Improvement Trust in order to resolve the nation's housing crisis, and particularly to relocate these people from slums into quality homes (Housing and Development Board Singapore 2010).

Their first task was to build as many housing units as possible within the shortest period of time in order to cater to the need for decent housing in the 1960s. The HDB's housing policy in the First Five-year plan (1960-65) was to clear the squatters by providing small apartments to be rented at low costs. Consequently, during the first five year plan (1960-65), the HDB successfully built 55,000 apartment units, exceeding the 50,000 units targeted earlier. This allowed 23 per cent of the total population to be re-housed in HDB flats by 1965 compared to only nine per cent in 1960 (Perry, Kong & Yeoh 1997, p.229).

As a statutory body under the jurisdiction of the housing division of Ministry of National Development (MND), the HDB is the sole agency that operates as Singapore's Public Housing Authority. The HDB is subject to the direction of the Ministry of National Development and is required to implement policies and comply with instructions from its supervisory Ministry, other government Ministries and departments. The HDB adopts a total approach to housing, i.e. from planning and design, to land assembly and construction, through to allocation and management of public housing. It receives the government's strong political, financial and legislative support (Housing and Development Board Singapore 2010).

In Singapore, development planning and public housing, together with education and health care, are categorised under the Development Sector. The Development Sector receives the largest share of government expenditure compared to other sectors (Ministry of Finance Singapore 2007). In order to facilitate supply, the government provides land and concession loans to the HDB to build houses (Ramesh 2003). In addition, the government also provides grants to cover the HDB's deficits from renting, besides bank loans and bonds (Housing and Development Board Singapore 2005). The HDB also obtain financing from public housing programme activities: through rent, conservancy and service charges, sale of flats, land and other premises and interest from mortgage loans and investment.

In 1964, the Homeownership for the People's Scheme was introduced to enable Singaporean citizens to buy HDB flats. This scheme was introduced in order to create a property-owning democracy extending to the lower middle-income households (Perry, Kong & Yeoh 1997). Even though the HDB is the sole agency in charge of public housing, it also collaborates with the private sector in building a variety of house designs for public housing. Considering the needs of Singaporeans, and their modern lifestyles, the HDB has introduced an Executive Condominium housing scheme to meet the housing aspirations of the growing number of graduates and young professionals. In March 2005, the Design, Build and Sell Apartment scheme was launched by the HDB with the private sector undertaking the entire public housing development process. This is to cater to those Singaporeans who can afford more than the HDB flats but find private

property too expensive (Housing and Development Board Singapore 2010). Various designs of affordable housing units provided to meet the needs and capabilities of Singaporean households. With a minimum household income range from \$ 2,000 to \$ 15,000, citizens are eligible to purchase units of two rooms, three rooms, four bedrooms or more than four rooms, depending on the income ceiling set by the HDB (Housing and Development Board Singapore 2011).

The HDB has been successfully meeting its aim of providing decent housing and promoting homeownership for all citizens (Yuen 2002). Beginning from their first rental blocks in the early 1960s, by 2005-2006 the Housing and Development Board flats housed 82 per cent of all Singaporeans (Table 2.3). The same period also indicated that the HDB managed 879,566 flats. Eighty per cent of these were homeownership flats and the pattern shows that the number of homeownership flats was higher than the number of flats for rental throughout the years. Thus, the HDB continued to maintain policies and programmes catering to public housing that met the needs of Singaporeans, especially their demand for better quality living environments.

Private housing in Singapore is not intended for the low-income households. The prices and rental costs of private residential properties are higher than the HDB flats and are not uniform, given they vary from project to project. This sector is affected by market forces and real estate's statistics released for the third quarter of 2010 by the Urban Redevelopment Authority (URA) shows that both prices and rents had increased compared to the previous year for the same quarter (Urban Redevelopment Authority 2010). Therefore, the HDB flats are the main option for the low-income households to purchase or rent.

Singapore's successful performance has been attributed to the high level of government intervention in the provision of housing and strong government control over the land. The government monopoly over the land supply allows it to provide public housing at a modest cost and stabilise housing costs (Agus, Doling & Lee 2002; Ramesh 2003; Vasoo & Lee 2001).

Table 2.3: Characteristics of Singapore's public and private housing

	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
Residential properties under management as on 31 March (unit)	n. a.	795 888	828 215	849 422	862 918	868 774	875 887	879 566
Resident population living in HDB flats (%)	86	86	85	85	84	84	83	82
Resident population in homeownership flats (%)	82	82	82	83	82	82	81	80
New flats sold under Homeownership for the People Scheme (unit)	34 720	28 732	23 568	19 854	18 201	14 914	9 433	10 100
Flats rented (unit)	3 178	4 279	3 842	3 850	2 903	3 483	3 609	3 962
^(a) Supply of private residential units	183 551	193 028	198 354	205 197	210 934	221 903	229 356	233 364

Sources: Compiled from Annual Reports 1999/2000–2005/2006, Housing and Development Board, Singapore

^(a)Singapore Department of Statistics (2007)

2.5.2 Hong Kong

2.5.2.1 National Context and Urbanisation

Hong Kong is situated at the south-eastern tip of mainland China and its land area consists of three major regions namely Hong Kong Island, Kowloon and the New Territories. Statistics recorded for the year 2009 shows that Hong Kong's land area is 1104.4 sq km with a population of approximately seven million (Census & Statistics Department 2010, p. 9–10). Hong Kong was a British colony since 1824 and in 1997 it was returned to China. On 1 July 1997 Hong Kong became the Special Administrative Region (SAR) for the People's Republic of China (Information Service Department 2010, p. 4).

The population for Hong Kong increased dramatically after the Civil War on the mainland. In the 1950s and 1960s, immigrants from outside their borders continuously entered the territory and joined Hong Kong's population. Data compiled by Liu et al. (1996, p.24) from Census statistics found that Hong Kong's natural population growth was faster than expected - the actual total population for mid 1995 amounted to 6,164,700, 312,700 people more than projected. The main explanation for this extra population came from accounts of legal migration from the Mainland and the return of Hong Kong's overseas migrants given the optimistic economic outlook for Hong Kong. Like Singapore, Hong Kong is one of the world's most densely populated countries.

In terms of economic development, Fong and Yeh (1987) identified that the development pattern in Hong Kong was strongly influenced by the country's history and topography. The early economy was much attached to the ports. Economic development in Hong Kong started when an inflow of Chinese businessmen, mainly from Shanghai, moved to Hong Kong (Ichimura 1998). Today, Hong Kong is one of the fastest growing economies in the world, having been transformed from relying on manufacturing-based economy to services based (Newell, Chau & Wong 2004; Newell et al. 2007). Hong Kong had rapid economic growth since the Second World War and after the Asian financial crisis in 1997 it witnessed substantial GDP growth. From the 1960s Hong Kong became one of the leading manufacturing countries in Asia and in 2007 Hong Kong achieved and became the world's twelfth largest trading economy (Hong Kong the Special Administrative Region n.d., p.5)

2.5.2.2 Housing Provision

Low-cost housing provision in Hong Kong was triggered by a disaster in 1953 at Shek Kip Mei in Kowloon. A major fire swept through a squatters' colony leaving more than 50,000 people homeless overnight. The following year, a semi-independent organisation – the Hong Kong Housing Authority was set up to provide low-cost, self-contained flats to resettle the victims from their temporary accommodation (Hong Kong Housing Authority 2007; Lau 2002b). The re-

settlement programme was later extended to cater to the peoples' re-housing needs that were affected by the government's clearance operations.

The Housing Authority continues building low-cost rental housing to cater to the low-income households having completed its first low-cost housing estate in 1958. A new low-cost housing scheme was launched by the government in mid 1961. Between the years of 1965 and 1972, several initiatives were launched to achieve the slum-clearance objectives. However the performance fell significantly short of the target and this persuaded the government to launch the Ten Year Housing Programme (1973-1983) in 1972 (Ramesh 2003).

The new Hong Kong Housing Authority (HA) continued to play the role of provider and co-ordinator for public housing and it later became a statutory body, in 1973. In order to support the Housing Authority to develop the country's massive housing programme, the Housing Department (HD) has been formed (Hong Kong Housing Authority 2007; Lau 2002b). The Housing Authority owns and manages over 600,000 flats in more than 160 estates. The Housing Authority is the world's largest public rental housing (PRH) provider (Yip 2001). Referring to Table 2.4, in September 2009, 29 per cent of Hong Kong's total population lived in PRH managed by the Housing Authority.

Table 2.4: Stock of permanent quarters by type

Type	2004		2008		2009	
	Number (‘000)	%	Number (‘000)	%	Number (‘000)	%
PRH ^(a)	707	29.3	727	28.8	740	29.0
Subsidise sale flats ^(b)	391	16.2	396	15.7	394	15.5
Private permanent housing ^(c)	1 316	54.5	1 401	55.5	1 416	55.5
TOTAL	2 414	100.0	2 524	100.0	2 550	100.0

Notes: Figures for end-September of the year.

^(a)PRH flats sold by the Housing Authority are classified as subsidised sale flats.

^(b)Subsidised sale flats include quarters sold by the Housing Authority and Hong Kong Housing Society that cannot be traded in the open market. Flats that can be traded in the open market are classified as private permanent housing.

^(c)Figures include non-domestic quarters for living purpose.

Source: Census & Statistics Department (2010, p. 34)

In addition to the dominant public sector providing public housing, Hong Kong also has strong direct role in land supply and in managing land release for housing. This greatly affects their capacity to intervene in the housing sector and indeed in the economy generally. Public land ownership also allows the government to provide housing at nominal cost (Doling 1999).

In 1978, the Housing Authority introduced the Homeownership Scheme (HOS) followed by the Private Sector Participating Scheme, which supplemented the HOS. In 1998, the Tenant Purchase scheme was launched. These schemes were launched by the Housing Authority in order to give an opportunity to Hong Kong's residents to own houses. However in 2002, following the government's amendments to housing policies, the Housing Authority suspended the production and sale of housing from these three schemes. In 2004, the Home Assistance loan scheme was terminated concurrent with the amended policy. As stated in the Corporate Plan 2010/2011, the Hong Kong Housing Authority continues to play a major role in providing subsidised PRH to low-income households that cannot afford private rental housing (Hong Kong Housing Authority 2010).

2.5.3 Comparison of Housing Provision

This international comparison of each government's role and the methods adopted to provide public housing for the low-income households in Malaysia, Singapore and Hong Kong has demonstrated significant differences in approach even though there is a shared objective. Therefore, the following discussion discusses the factors that lead to these differences and make comparisons based on their performance.

2.5.3.1 National Context

The three countries demonstrated an increase in their population annually, although Malaysia's population and density are still low compared to Singapore and Hong Kong, which are known as city-states due to their limited land area. However, the three countries also have some similarities such as the fact that they are all former colonies of a western power and underwent Japanese occupation before and after World War II. Malaysia, Hong Kong and Singapore were under British rule before and after World War II. In 1957, Malaysia received its independence from the British after a strong political struggle. In the case of Hong Kong, there was no political struggle after World War II and the country remained as British colony until 1997 when the country was handed back to China.

Unlike Malaysia, both Singapore and Hong Kong lack natural resources. In order to achieve sustaining economic development, they needed to develop their industrial and manufacturing sectors. Today, Singapore and Hong Kong share common economic success stories based on long-term industrialisation. However, Malaysia's economy, which was previously dependent on agriculture, has also shown rapid economic growth by gearing up its industrial output. Similarly industrialisation-based economic activities have demonstrated the impact on urban population patterns in Malaysia, Singapore and Hong Kong given better economic opportunities and social lifestyles that have attracted migrants from rural areas.

2.5.3.2 Urbanisation

Since Singapore and Hong Kong started industrialisation earlier, both countries now are 100 per cent urbanised. This explains the fact that both countries experienced the emergence of one dominant mega city without a hinterland and the consequent rural-urban dualism (Agus, Doling & Lee 2002; Yuen 2002). In contrast, Malaysia's urbanisation rate in 2009 was 63.3 per cent with rural areas still existing especially in less-developed states. However, Malaysia's industrial states such as Selangor and Penang have shown a high percentage of urban population. With strong economic growth, these states have shown the potential to be 100 per cent urbanised.

2.5.3.3 Low-Cost Housing Provision for Low-Income Households

In terms of provision of decent, affordable housing to low-income groups, nevertheless, no government responded as extensively as Singapore's. Singapore started its public housing programme to resolve squatters' problems much earlier than Malaysia and Hong Kong. The following discussion then explains the action taken by each country to solve their housing problems.

The HDB of Singapore plays a major role in providing public housing for its citizens. The first efforts were made to re-house squatters through a massive public housing development scheme. As a consequence, by the beginning of the 1990s, the nation's housing problem had been solved (Tu 1999). Therefore Singapore's public housing facilities became increasingly ambitious over time. After successfully eradicating the squatters, the HDB scaled up to cater to the middle-income households. Significant revisions were made to the policies in order to meet the changing needs and aspirations of the population (Housing and Development Board Singapore 2010).

The above circumstances show that Singapore reached maturity with regard to their housing programme when their development strategies to re-house the squatters and eradicate squatter settlements were achieved. With the strong economic and political support, exhaustive strategies like comprehensive mass

construction implemented at an early stage of national development had successfully resolved the shortage in housing. Squatters' eradication and their success in promoting homeownership among Singaporeans was a lesson that could be learned by others and was achieved through high levels of government intervention in housing provisions. Today the HDB is successfully promoting homeownership and the percentage of people now owning flats is higher than those renting them.

In Hong Kong, there are still a number of squatters and illegal rooftop structures to be dealt with (Information Service Department 2010). Squatters' huts last surveyed in 1982 are being tolerated by the government. The number has reduced in recent years through re-housing and clearance programmes. Most of the squatters situated in the New Territories are not targeted for re-development or clearance programmes. The government provides and maintains basic facilities in the existing squatter areas under the Squatter Area Improvement Programme to ensure that basic safety and hygienic standards are met (Information Service Department 2006, p. 211). In the early stages of the development of affordable housing, the Hong Kong government focused on both PRH and homeownership schemes. However, the government now only focuses on the development of PRH and the homeownership development programme has been entrusted to the private sector.

Meanwhile, Malaysia is still struggling to deal with its squatters as a result of the below-target performance of low-cost housing development programmes. In contrast to Hong Kong and Singapore, low-cost housing provision in Malaysia has three main components of delivery, i.e. the public sector, public agencies (entities formed by the federal and state government) and the private sector. Too many agencies are involved in trying to address the issues of the urban poor leading to a high degree of complexity as well as an absence of an integrated approach (see Singh 1980; Sirat et al. 1999). Different states are faced with different low-cost housing demand issues and adopt different approaches and policies (Salleh & Meng 1997). Therefore an integrated policy at the national level needs to be established and co-ordinated in order for the states to synchronise their practice.

From the above discussions it is clear that Singapore and Hong Kong have a dominant public sector involvement in their housing provision programmes. The participation of the private sector in public housing development in Singapore is no more than to provide a range of public housing design concepts at prices suitable for the middle-income households. In Hong Kong, the government is responsible for the PRH facilities, while the private sector expands provision for homeownership. Consequently, the affordable housing programmes in Hong Kong and Malaysia still have an objective of re-housing squatters who are affected by the squatters' clearance programmes, but with differing levels of priority. Current housing policies in Malaysia and Hong Kong clearly state that their main priority is to provide affordable public housing for the low-income households (rental scheme in Hong Kong and both rental and homeownership in Malaysia).

Therefore, for a full fledged government intervention, its control over land will be one of the factors that will measure the ability of a government in providing affordable housing. Singapore and Hong Kong have both demonstrated high levels of government intervention in public housing provision and control of land supply, which has allowed them to supply housing at an affordable rate to the low-income groups. Government control of land supply appears to be a key difference between these countries, making more affordable housing a possibility in Hong Kong and Singapore. Continuing government control over public housing provision is also a major factor in what appears to be successful low-cost housing provision in Hong Kong and Singapore.

Land is the number one resource enabling the development of low-income households' housing, and land supply is ranked as posing the greatest challenge in low-cost housing development in Malaysia (Agus 2002; Sirat et al. 1999). Unlike Hong Kong and Singapore, land in Malaysia is under the jurisdiction of the state government and in the development process, all matters regarding land are dealt with by the respective state governments. Most complaints are about delays in the processing and approval of applications for land development, conversion, subdivision and issuance of title (Agus 2002; Chong 1979; Salleh & Meng 1997; Sirat et al. 1999).

The housing demand of the low-income households in Malaysia cannot be viewed as one scenario because each state has different social systems and is at different levels of economic development. The task of providing affordable housing for the low-income households in Malaysia is more challenging compared to the other two countries. Malaysia's regional development pattern demonstrates the development gap between those developed states and the less developed states (Economy Planning Unit 2006). The government is now trying to reduce the gap between urban and rural-urban development by balancing these economic activities. Their re-distribution will act as a stimulus for the less developed states to develop urbanised cities in the future. Given that developed states (i.e. Kuala Lumpur, Selangor and Pulau Pinang) currently are struggling to eradicate their squatters and supply affordable housing for their low-income households, other states should learn from their experience in order to avoid shortages of affordable, decent housing and prevent (or at least reduce) encroachment by squatters in the future.

2.6 Conclusion

This chapter has described how Malaysia is experiencing population pressures to provide affordable housing for low-income households, especially those groups living in cities. Although this thesis overall focuses on housing management, housing provision is inextricably linked, since the quantity, quality and style of housing (low or high-rise) provided will be dictated by government policy. Any country experiencing rapid urban growth will inevitably have housing shortages.

The literature of housing provision supports the idea that adequate decent affordable housing is considered to provide economic and social stability. Thus the influence that voters from low-income households can have on economic and social stability will always capture government attention and keep affordable housing provision at the top of every government's agenda.

Homeownership is also seen to give benefits to individual owners and the community, and thus in return provides social stability. These benefits have been

viewed in terms of economic, social and psychological aspects. Middle-class homeowners who feel strong ties with their residential environment will undertake upkeep behaviours and take pride in the neighbourhood. However, not all homeowners experience the same benefits of home ownership. Low-income households residing in low-cost housing facilities in less-attractive locations, for example, may not. Homeowners who live in multi-owner housing facilities may have to share or modify some of the individual benefits with other homeowners and may not be able to afford to maintain their homes or wish to take part in developing community in the same way.

To explain the housing situation for this study's subjects — low-income households in Malaysia — this chapter has also reviewed the experience of Malaysia itself. Based on the review of the housing provisions, the discussion began with a background of Malaysia's housing problems in order to show how the influences of economic development have affected the process of urbanisation in Malaysia. Problems related to urbanisation, such as those of squatter settlements and the shortage of affordable housing, have been described. These help explain government strategies used to try to solve these problems. This study's findings have implications for Malaysia's housing policies relating to low-income households' housing and housing management programmes.

For a better understanding of how other countries enact low-cost housing provision and ensure a good quality of life for low-income households, a comparative study between Singapore and Hong Kong compared with Malaysia has been undertaken. Singapore and Hong Kong have earlier experience of rapid urbanisation than Malaysia. Both these countries responded to the problem of low-income households' settlements at the beginning of their phase of economic development and urbanisation, and they have now reached a level of effort that could be deemed mature. One key feature in their successful eradication or reduction of squatter and slum settlements has been government control of land supply, something that is absent in Malaysia. Malaysia is still a developing country compared to Singapore and Hong Kong, which have long been recognised as industrialised countries (and economic tigers), but Malaysia could perhaps be considered as being on the same path towards industrialisation and urbanisation,

and therefore findings from these countries can be generalised and considered in the urbanised Malaysian context. Low-cost affordable housing is controlled by the government of each country. However, for Malaysia with its greater area, the administration of housing provision is by the state, with consequent greater complexities and problems. Further, Malaysia is alone in requiring private developers to undertake low-cost housing provision.

Overall, this chapter has shown how a country can be committed to improving the quality of life for low-income households in terms of providing access to adequate affordable decent housing. Providing housing is important, but providing continuing support to maintain property in good condition is also essential to sustain peoples' well-being in the long run. The next chapter focuses on housing management and maintenance of low-income dwellings with special attention on how multi-owner residential buildings are being managed. Comparative studies will also be conducted with the aim of reviewing what other countries have been practising and what they have experienced in order to sustain the living environments of low-income settlements.

Chapter 3: Literature Review—Housing Management and Maintenance

3.1 Introduction

The previous chapter has explained how the issues associated with rapid economic development pressurise a country to solve the problems of housing supply especially for low-income households. In the long-term, management of these developments becomes as important as their provision. Housing stocks must be adequately maintained in order to continue to provide a decent living environment.

The purpose of this chapter is to explore the fundamentals of housing management of multi-owner housing with reference to private homeownership. Starting with a discussion of the importance of housing management, the chapter goes on to focus on housing tenure types. Housing tenure provides an understanding of different concepts and ways of living related to housing management practices adopted. The subsequent sections discuss issues related to housing management, particularly low-cost housing, and outline the structures and practices in some countries. The chapter concludes with an examination of the current practice of housing management in Malaysia.

3.2 Housing Maintenance

Maintenance is defined by British Standard BS3811:1993 as the combination of all technical and administrative actions, including supervision, intended to retain an item in, or restore it to, a state in which it can perform a required function. In the context of buildings, British Standards Institution (1984, as cited in Smith & Building Economics and International Policy Division 1993, p.1) maintenance is defined as ‘work to be done to keep or restore a building so that it continues to perform properly and retains its appearance and value’. This definition includes redecoration, repair and renovation, but excludes improvement.

Meanwhile, in the context of human settlement, proper operation and maintenance are important to prevent the building's condition from deteriorating as well as to ensure that the building is safe, secure and comfortable for habitation (Encon 2005). Proper documentation, such as keeping records, plans, maintaining incident records and occupants' feedback, are important to facilitate building management and maintenance (Paadam & Liias 2008; Yau & Ho 2009).

Worldwide, prior to the development of multi-storey residential buildings, single dwellings were the principal forms of owner-occupation settlements. The settlements gradually evolved to semi-detached or terraced houses. As the population increased, the demand for housing concurrently increased. In rapidly urbanising areas, such low-rise property development was no longer economical. As a solution, high-rise home designs developed. This development involved many households living in one single block where the density of residents ranged from medium to high. With such developments, the issue of housing management became a main concern.

In contrast with single owner-occupied dwellings where the owner had control over his or her property, living in multi-storey dwellings entailed communal action and agreement by the residents. With respect to housing management and maintenance the residents were governed by legal responsibility and required an inclusive framework. The next section explains the importance of housing management and then looks at reviewing the practices of multi-owner housing management.

3.2.1 The Importance of Housing Management and Maintenance

The higher and older the building, the greater the demands of maintenance (Alterman 2010) and this includes technical and social needs (Jarvani & Liias 2003). Technically, the building should be maintained in order to prolong its utility and life. This requires that the building and its maintenance is properly managed. In terms of human needs, environmental infrastructure should be maintained according to the needs of people as it changes over time. For example, a new housing development may be occupied by households with young children.

Over time their needs may differ, or adult or elderly residents may predominate. The occupancy pattern as well as the density of residents may change.

Buildings that fail to meet the occupants' requirements for change are most likely to become obsolete over time as physical and structural aspects contribute to the deterioration. If the degree of usefulness of the building decreases, the building's obsolescence is likely to increase (Shabha 2003). The above requirement highlights the importance of a well-developed property management and maintenance sector as technically, the provision of satisfactory property management services would extend the economic life of a building and thus limit the resources needed for more expensive alternative works, such as re-development and refurbishment, to a minimum (Graeme 1994). If maintenance action is only taken when there is danger (spilling cladding for example), failures, or complaints from users (Lim 2002), this approach leads to inefficient use of resources. Planned maintenance is recognised as essential for maintaining property (Chanter & Swallow 2007; Pelling 1991).

Another factor pertaining to housing management is mismanagement, which is often one of the major issues that contribute to dilapidation and obsolescence (Yip, Chang & Hung 2007). Housing is one of the most valuable assets for any country and should be maintained to strengthen its value, both, economic and socio-political (Lim 2002). From the economic point of view it is essential to maintain the value and the utility of the building by preventing deterioration due to time and usage. From the socio-political point of view, keeping buildings in a good state of repair will reflect the prosperity of a country and discourage anti-social behaviour (for example, vandalism and graffiti), thereby contributing towards a good quality neighbourhood. Dwellings that are in poor state create not only direct but also indirect hazards for the health and safety of the residents (Lias 2007), and hence will affect the general and overall neighbourhood environment (Budgen 2005).

During periods of rapid housing construction, housing management will generally receive less attention from the policy makers – priority being given to providing housing, especially to those in need (Lau 2002a). Initial housing quality may

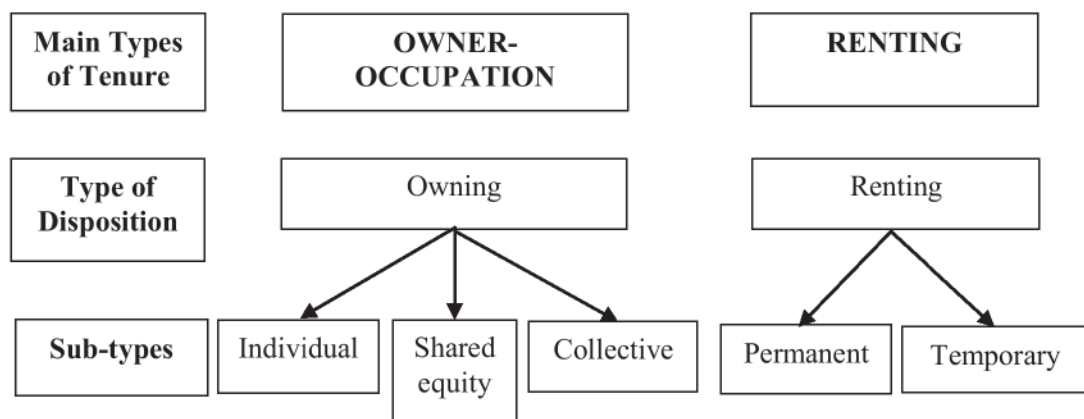
have been poor, and, combined with increasing resident expectations and standards, results in this housing failing to be satisfactory in the longer term. Residential units built several generations ago that were considered appropriate are now likely to be classified as inadequate for decent housing (Liias 2007). Difficulties in maintaining properties combined with anti-social behaviour such as vandalism (especially in public spaces) have resulted in the poor dwelling conditions of shared ownership (Liias 2007).

These considerations highlight the need for buildings to be maintained effectively and professionally to provide best value for money as well as for effective habitation. As previous chapters have already reviewed, affordable housing policy is influenced by the national context of a country, since housing management practices especially those involving homeownership depend on the type of housing tenure. Each country has different strategies in terms of housing provisions particularly the affordable housing varieties, even though the same objective is applied, namely to housing the low-income households. Similarly, housing management will have differences in systems and levels of government intervention. Therefore, the next section discusses the forms of tenure prior to a review of housing management.

3.3 Form of Tenure

In its simplest form, tenure can be classified into two categories, owning and renting. The concept of tenure as defined by Cole and Robinson (2000, p. 599) 'is a condition, or form of the rights or title under which the property is held'. Under English Law, two forms of tenure have been distinguished namely, freehold and leasehold, with different possession and legal rights pertaining to each (Lau 2002a). However, these forms of housing tenure may have different legal interpretations in different countries. Classifying tenure is always problematic and complicated since housing tenure can be shown to consist of a set of necessary rights and duties that are contingently related to them (Ruonavaara 1993).

As shown in Figure 3.1 below, Svensson (1998, as cited in Yip & Dalholm 2006) divided ownership into three sub-types and renting into two sub-types. Each sub-type has different degrees of authority. For instance, under the owners'-occupation category, 'individual' ownership means homeowners have complete control over their properties. A single detached dwelling is an example of 'individual' ownership. In contrast, a housing corporation is an example of 'shared equity' with each individual owner owning the equity of his or her unit. The resident leases his or her unit from a co-operative that is jointly owned by the occupants. Individual unit owners can sell their units by trading their membership to the co-operative, which is responsible for the management of the building and other common properties. Retired members will be refunded the capital cost they have invested in the corporation (Yip & Dalholm 2006). The third sub-type of owner-occupation is 'collective'. 'Collective' refers to multi-owner housing in which ownership of flats is individual but ownership of common property is joint.



Source: Svensson (1998, as cited in Yip & Dalholm 2006, p. 22)

Figure 3.1: Types of tenure

In some countries, tenure and housing types are highly correlated. For example, in Australia, the housing system is dominated by owner-occupation of individually-owned, detached houses, except in the capital cities such as Sydney and Melbourne, where luxurious, high-rise living is rapidly increasing due to high demand and rapid increase of land prices (Westacott 2002). While homeownership is associated with single-family, detached dwelling, rental accommodation is typified by multi-family apartment blocks. Public housing in

Australia is typically early high-rise buildings in the inner cities, which were built as a solution to slum clearance and urban renewal (Westacott 2002).

In city-state country such as Singapore, where land for housing development is limited, high-rise dwellings are the most economical and practical, whether for private or public housing. For Singapore citizens, access to affordable homeownership is heavily dependent on public housing managed by the government. In Singapore, owned public housing is the dominant type of ownership. Data for the year 2008/2009 indicates that 82 per cent of Singapore's residents live in HDB's public housing and 80 per cent of them are living in homeownership schemes housing (Housing and Development Board Singapore 2009). Under the leasehold system, owners own their individual units, and the common properties belong to the HDB and managed by the Town Councils. Owners pay maintenance charges for the upkeep of communal areas and other maintenance requirements of the property.

Homeowners of single-family dwellings enjoy a high degree of control and autonomy compared to multi-occupation units in multi-storey housing (Lau 2002a; Yip & Forrest 2002). In social housing, there is a complex set of the relationships between occupants and managers/owners (Boelhouwer 1999; Clapham, Franklin & Saugeres 2000), relationships among inter-occupants and between occupants and the built-environment (Boelhouwer 1999). As an example, social, rental housing sectors in western countries have institutional structures that vary mainly in terms of profile and the role of social housing. Social housing is not only managed by the private, non-profit organisations but also by the public agencies (municipalities), and some countries combine the two types of management. For example, in Sweden, the municipality is the main manager of social rental housing whilst in Denmark and France, the management is mainly carried out by non-profit organisations. In terms of profile too, this sector is different in size. For example, in Belgium, the social rental housing system represents only six per cent of the total housing stock of the country. In some western countries, social rental housing also caters to upper-income households (Boelhouwer 1999, pp. 226-227).

In collective ownership, there is a distinction made between individual and common elements. Ownership involves responsibility for common properties (areas and facilities) and some kind of organisation is required to manage these common elements (Lau 2002a; Yip & Dalholm 2006; Yip & Forrest 2002). The introduction of the concept of the condominium homeownership required a major shift in attitudes towards homeownership since it mandates shared responsibility and increased involvement in community living (Wekerle et al. 1980). Around the world, such developments, i.e. dense, urban, residential developments are popular with developers as they increase profits and attract government support at national and local levels (Blandy, Dixon & Dupuis 2006). This type of ownership makes sense in satisfying the demand for homeownership by reducing the cost of entry (Yip & Forrest 2002). However, little research has been undertaken in studying the living experiences in such developments (Blandy, Dixon & Dupuis 2006; Yip & Forrest 2002). The following section explores the housing management issues associated with this form of dwelling in particular the situation for low-income households.

3.4 Housing Management for Multi-Owner Housing

Various terms are used for private unit ownership in high rise residential developments. In the US ‘apartment’ or ‘condominium’ is the preferred term. Other terms commonly favoured are strata building or development, flats, multi-family dwelling or multi-occupancy dwelling. Therefore, in this thesis, the general subject of the research, which is homeownership in multiple storeys or strata, is referred to as ‘multi-owner housing’. The above terminology tends to be used interchangeably by the researcher, depending on the particular case or country being reported.

The concept of a ‘condominium’ dates back to the Roman Empire (Clurman and Hebard 1970, as cited in Wekerle et al. 1980, p. 171). The term means simply, ‘to have control (dominion) over certain property, jointly with (con) one or more owners’. There is an implied relationship between ownership and management. From this definition, Wekerle et al. (1980) derived two essential components for a

collective-living environment. Firstly, a condominium represents a combination of individual and common ownership of one property. The property is divided into individual property (individual dwelling unit) and common elements that are shared by the owners. The second is the necessity of an administrative framework that enables the units' owners to manage the property to their common benefit as well as contribute to the expenses of its management.

Hence, the concept of multi-owner housing requires collective action and agreement in every aspect of the management of the common property. There is a social dependence and greater reliance on 'neighbourhood' that has been described as a triangular relationship between ownership, management and owners' participation (Encon 2005). Owners need to establish an owners' corporation in order to manage the collective action. For this reason, in literature on housing or property management, research on the performance of owners in housing or property management is a developing area (Lai & Chan 2004).

3.4.1 The Structure

Decision-making, organising improvement and maintenance are the major problems facing owner-occupiers of multi-occupancy housing (Lias 2007). Owners in single-family dwellings do not have these issues, having sole control over their property. Renters pass this decision-making over to the landlords. Owners of multi-owner housing have less control than owners of single-family dwellings. They have the legal and legislative rights and responsibilities of control over their living environment, but the decision-making must have collective agreement.

To facilitate and to regulate the collective interests of purchasers, multi-owner housing requires formation of an owners' organisation (Lau 2002a). The establishment of this organisation is often subject to those Acts or the rules set by a government. Owners' corporations are seen as the best structures to manage the constant conflicts of interest by balancing the interests of all and helping to develop the collective responsibility for setting up the management and maintenance strategy of their housing estate (Lias 1998).

Once the owners' corporation has been established, the committee and the members (for all the unit owners) can decide on their housing's management. They can directly manage (owner-manage) or appoint a managing agent as a third party to act on behalf of the owners' corporation. If they opt to directly manage, the corporation is totally responsible for all aspects of housing management and maintenance (Wekerle et al. 1980).

In general, although owners of the multi-owner housing are legal owners, they are not technically or professionally qualified to take responsibility for any property-related decisions (Bounds 2010; Dupuis & Dixon 2010; Liias 1998; Yip & Dalholm 2006). The scope of building maintenance requires expert manpower ensuring value for money-services and the liability of the owner for the proper management and maintenance of their buildings (Encon 2005). As a result, housing management will usually be outsourced since it requires a professional to deal with structural or system faults and defects.

According to Tiun (2003), owner-managed housing management will likely result in lower maintenance charges compared to third party-management. The professional managing agent normally will charge 20 per cent to 25 per cent of the total maintenance charges as professional fees. High-rise dwellings, complete with complex facilities such as a security system, swimming pool and club house, normally employ professional management because of the complexities of maintenance management (Ramly, Ani & Tawil 2005). Selection of a suitable contractor is important and at least one member of the management committee should ideally have some knowledge of basic contracts (Encon 2005). Nonetheless, not all housing developments choose to use third party-services - for specific reasons, such as avoiding expensive service charges (Muhamad Ariff & Davies 2009a), or because an organisation feels there is no requirement for this given the small number of units (Yip, Chang & Hung 2007).

Although co-operation is established by laws requiring residents' participation, it has not necessarily generated social ease, resulting in some residents feeling isolated from the environment because of the limitations that restrict their actions

(Bounds 2010; Wekerle et al. 1980). This feeling often leads to residents' dissatisfaction with their housing management as they feel their needs are not met or there are some residents who prefer to remain silent rather than actively participate in housing management.

3.4.2 Multi-Owner Low-Cost Housing Management

The majority of studies of the management of low-income households' dwellings are of public housing in developed Western countries. Therefore, this section begins with a discussion of public housing management as it directly relates to issues concerning homes for low-income households, before focusing on privately owned housing.

Housing management of either private or public housing developments poses its own set of challenges. In the public housing sector, one solution adopted has been to privatise the management of public housing in order to produce substantial cost savings and improve the level of service to tenants (Becker, Dluhy & Topinka 2001; Ling Hin & Amy 2001). For instance, to reduce costs, Hong Kong's government has privatised the management of PRH, now using a private management agent (PMA). A customer survey that investigated the PMA and HD's performance showed that a large portion of the tenants were dissatisfied with the service provided by the HD. The PMA's performance achieved a level of greater tenant satisfaction with regard to their service (Ling Hin & Amy 2001). A comparison study by Becker, Dluhy and Topinka (2001) found that the privatisation of management of public housing in the US resulted in costs savings without a decrease in housing-quality.

In Singapore, affordable housing for low-income households is not separated from that for high-income households, as is practiced in Malaysia. This is because the provision of affordable housing facilities is through public housing systems and is not limited to low-income households only. The government is involved in not only the provision of housing facilities but also housing management and maintenance. With the majority of the citizens owning and living in public housing units, housing management tasks are decentralised to the town councils

(Yu & Han 2001). Residents are given opportunities to participate in the affairs of housing management, thus establishing a sense of belonging and identity over their estates (Lim 1998).

Generally, owning and living in prestigious high-rise dwellings benefits the owners in terms of reducing maintenance responsibility combined with lifestyle, convenience and security (Preston 1991; Preston, Murdie & Northrup 1993). However, not all low-income households of multi-owner low-cost housing settlement reap such benefits. As discussed in Chapter 2, homeownership has been cited as providing a variety of social benefits. Despite the concept that homeownership can create social stability, some groups of households have difficulty creating and maintaining stable environments. The elderly or retired homeowners may have inadequate levels of income or savings; younger households with low incomes are often affected by economic uncertainties and job insecurities; homeowners may be affected by relationship-breakdowns and consequent economic difficulties; and people who purchase their home with government subsidies or discounts can face difficulties in affording ongoing maintenance and long-term repair costs (Lias 2007).

Proper maintenance of low-cost housing is often neglected due to the social and political pressures to build as many new homes as possible with available resources in an effort to fulfil national housing demand. Cheap building materials, poor quality of workmanship and supervision during the construction process are reflected in subsequent maintenance requirements and costs (Smith & Building Economics and International Policy Division 1993) and also contribute to poor quality living spaces and in the long-term, increases in the maintenance and repair problems (Randolph 2006). In addition, the low-quality housing developments located in low-value neighbourhoods affects the residents' attitudes towards each other and their neighbourhood and creates a chain reaction producing tension and conflict between residents (Randolph 2006). Financially-restricted owners in cheaper and decaying units live with a high risk of having neighbours who are either reluctant or unable to pay the maintenance charges (Yip & Forrest 2002).

Housing management requires adequate resources, properly managed. The availability of funds and financing mechanisms are important resources that bring about the distinction between public and private sector management practices (Rowe 1996). In terms of human management, the level of residents' participation between the above practices is also different. In public housing sectors, the tenant is regarded as a consumer of the public goods or services. Thus, tenant participation is not only limited to housing issues, but also to issues as citizens, as members of the local community and even as activists in social movements (Somerville & Steele 1995).

In contrast, multi-owner housing management is fully dependent on the homeowners and their organisations. Intervention by authorities is limited to monitoring and implementation of Acts that they have set, the rest depends on the homeowners. For example, the financial resources derived from fees charged to homeowners and adequate housing management ultimately depends on the co-operation of the homeowners. Adequate housing management organisations, in turn are able to make decisions for the common good. An overview of the residents' participation in the aspect of collective theory will be discussed in Chapter 4.

Chapter 2 and this section demonstrate how homeowners of low-income households face difficulties in maintaining conducive living environments due to government policy decisions regarding housing provision. As this study's main focus is on housing management issues, the next section will discuss the private multi-owner's housing management practices adopted by several countries before proceeding with the discussion of the practice of housing management in Malaysia.

3.4.3 The Practices

A review of previous studies has indicated two important reasons related to the management and maintenance of multi-storey housing development (e.g. Christudason 1996; Lau 2002a; Wekerle et al. 1980; Yip, Chang & Hung 2007; Yip & Dalholm 2006). The first is the importance of developing a framework for

managing the housing environment keeping in mind the common interest of the homeowners, to ensure proper management and maintenance of common property and second is the need to distinguish between the title of common property and the individual titles for individual units. This section briefly discusses the housing management practices undertaken by some countries.

Governments set a legal framework that governs the stakeholders such as the homeowners, the owners' organisations and the property manager. The aim is to create a balance between the accountability of the stakeholders and the efficient management of collective property, particularly the communal spaces and facilities. Legislation ensures maximum control by the owners and the freedom to manage their own communal facilities (Lai & Chan 2004).

Among the examples of such enabling legislation within common law jurisdictions, are: (i) The Commonhold and Leasehold Reform Bill (UK) introduced in June 2001, (ii) The Australian (New South Wales) Conveyancing (Strata Title) Act 1961 and Strata Title Schemes Management Act 1996 (NSW) of New South Wales, Australia and (ii) The Building Management (Amendment) Ordinance (Cap. 344) of Hong Kong, China (Lai & Chan 2004, p.55). Among the above examples, the Strata Title Acts have formed a basis for the strata legislation⁶ in many countries including Canada (Strata Title Act 1966), Singapore (The Land Titles (Strata) Act 1967, South Africa (Sectional Titles Act 1971), New Zealand (Unit Titles Act 1972), Indonesia (Strata Title Act 1985), Malaysia (Strata Title Act 1985), and Brunei (Strata Title Law 2006) (Easthope & Randolph 2009, p244). The following discussion will briefly elaborate some of these country's practices.

About 70 per cent of Hong Kong's families live in private sector-housing (Yip 2010) and are typically resident in high-rise buildings of 20 to 38 storeys (Lau 2002a) – condominiums being the preferred housing development. A common law system, as practiced in Hong Kong, has been inherited from earlier colonial rule. Unlike other common law jurisdictions, in which the strata title system is

⁶The years for each of the examples refer to the original acts. Amendments have been made in most cases.

practiced, under the leasehold system in Hong Kong, the unit owners are only tenants-in-common on the land (Walters 2002; Yip & Dalholm 2006). The interests of owners are represented by the owners' corporation as a legal entity formed under the Building Management Ordinance (BMO) (Encon 2005; Yip 2010). Alongside the BMO, the Deed of Mutual Covenant is a legal document governing the rights and obligations of the owners in respect of the building's occupation. The owners' corporation is merely a MC and does not hold ownership of the common properties and hence the owners hold unlimited liability relating to common parts of the buildings (Yip & Dalholm 2006). The formation of an owner's corporation is not compulsory and, not surprisingly, the response is limited (Lau 2002a; Walters 2002; Yip 2010).

The same approach also applies to Hong Kong's Homeownership Scheme, which is sold by the Housing Authority. As owner-occupiers, they have responsibilities for managing the common parts outlined in the Deed of Mutual Covenant and are required to set up their owners' corporation (Lau 2002a). The management agent, (known as the PMA) is appointed by the HD to carry out the estates' management, while the HD charges the owners for the delivery of supervision services with regard to the work of the PMAs. This explains the limitation seen with regard to owners' participation in estates' management especially in the decision-making process where the HD maintains the decision-making power of overall estate management matters (Lau 2002a).

Similar to Hong Kong, over a period of 40 to 50 years, high-rise public housing has become a lifestyle for a majority of Singaporean citizens and is the dominant form of housing facility (Yuen et al. 2006). Singapore's private housing is mainly dominated by the luxurious and expensive condominiums (Deo Bardhan et al. 2003) and the management is regulated by the Land Titles (Strata) Act Cap 158 (Christudason 2004; Lim 2002). Meanwhile, public homeownership, developed by the HDB is not subjected to the Land Titles (Strata) Act Cap 158. Unlike the private estates, the common properties belong to the HDB. For people who previously occupied public housing facilities, the decision to upgrade from public housing to private housing requires a change of owners' mindset towards housing management (Lim 2002). They have to be prepared to pay expensive maintenance

charges and have to be willing to work with other stakeholders' in order to maintain the physical environment and the quality of life (Lim 2002).

Before 2004, Singapore's private strata development was regulated by the Land Titles (Strata) Act based on the principles of the Australian (New South Wales) Conveyancing (Strata Title) Act of 1961. In addition, The Buildings and Common Property (Maintenance and Management) Act 1973 complements the application of the Land Strata Act by providing for the proper upkeep of the buildings (Choon 1984; Christudason 2007; Lim 2002). This Act introduces the 'Commissioner of Building' (COB) as an entity to administer the application of the statutes governing strata development-management. This step has been adopted by countries such as Malaysia. In 2004, relevant parts of the Land Titles (Strata) Act and the entire The Buildings and Common Property (Maintenance and Management) have been combined into a single legislation known as the Building Maintenance and Strata Management Act 2004 (Building and Construction Authority 2005). However, the current practice does not guarantee management to be free of problems.

Conflicts and disputes can arise between stakeholders. In Singapore, the disputes between the MC and developers are increasing because of defects in the common property in strata development (Christudason 2007). A clash of interests is also found to occur between minority residential owners and majority commercial owners residing within a mixed strata development (Christudason 2010). Alongside these issues, Lim (2002) ascertained that owners' attitudes and financial considerations were being rejected by the maintenance management as they adopted a 'crisis management' approach where maintenance was only carried out when the need arose.

With earlier industrialisation and urbanisation, Western countries, have had a longer history of social housing management and maintenance. Low-income households in Western countries mostly dwelled in public housing developments, which they rented from the local authorities or social landlords. For example, a large portion of the population in the UK lives in dwellings owned and maintained by local authorities. Over the past nineteen years, this proportion has reduced and

the demographic structure of the tenants has changed (Fine 1998). Many of them have moved out from these properties and some have purchased them. With regard to homeownership, the leasehold form is well established in the UK for the ownership of multi-owned residential buildings. Under English Law, the leased owners are represented by residents' management companies, responsible for the upkeep of their development (Blandy, Dixon & Dupuis 2006).

In Australia, each state and territory has its own strata legislation, although it does adopt similar principles (Everton-Moore et al. 2006). Introduced in the 1960s, the Strata Act provided for a major expansion of higher density residential development in Australia by allowing the ownership of individual units in high-rise development (Randolph 2006). In New South Wales, alongside the Strata Title Act (1961), the Strata Schemes Management Act 1996 imposed restrictions and duties on the strata owners (Easthope & Randolph 2009). Bounds (2010) in a study of conflict among stakeholders (owners, body corporate and the managing agent) of the three strata developments in Australia found there was frustration among the owners over their body corporate. The failure of the body corporate caused disinterest with regard to further participation among the owners. Bounds (2010) claimed that the units' purchasers had less understanding of their role with regard to participation in the management of common property.

In New Zealand, The Unit Title Acts 1972 established the Body Corporate as a legal entity comprising the owners of all units. The Body Corporate is set up at the same time as the unit plan is legally deposited (Dupuis & Dixon 2010; Blandy, Dixon & Dupuis 2006). Although the experience of governing multi-owner housing developments in New Zealand is new, conflicts in housing management have begun to attract attention. One identified cause is the lack of experience among stakeholders (Dupuis & Dixon 2010).

The above discussion has shown that whilst each country has a different legal framework pertaining to collective living arrangements (in several instances based on similar legal premises), there does not appear to be any one model that results in best practices. The above discussion also shows that key issues related to housing management need to focus on collective action. This is consistent with

Yip's (2010) opinion that issues related to collective action are a complex problem compared to the technical problems of housing management. The next section discusses the practice of housing management in Malaysia and also observes whether Malaysia is facing the same issues as countries that have been discussed above.

3.5 Management and Maintenance of Multi-Owner Housing in Malaysia

In Malaysia, the current management and maintenance practices for strata development are different for East Malaysia (Peninsular Malaysia) and West Malaysia (Sarawak and Sabah). For the purpose of this study and discussion, this section will concentrate on Peninsular Malaysia, given the case study is also located in Peninsular Malaysia.

There are four categories of ownership dwellings in Malaysia's private sectors and these are the high-cost, medium-cost, medium-low cost and low-cost housing developments. With the exception of the low-cost category, the prices of the housing developments are mostly influenced by the location and the housing market. Low-cost housing (as described in the previous chapter), is controlled by the government and the price is fixed for a certain period until the government revises the cost. Known as strata development, any unit sold to an individual purchaser has to be given a document of ownership known as the 'strata title'. The strata title is a title issued to units in any building having two or more storeys on alienated land⁷ held as one lot under the final title (Ministry of Housing and Local Government 2008, p. 5).

The strata title was first introduced in Peninsular Malaysia in 1966 by the Malaysian National Land Code 1965, which was enacted to deal with the legal

⁷ 'Alienated land' refers to any land (including any parcel of a sub-divided building) in respect of which a registered title for the time being subsists, whether final or qualified, whether in perpetuity or for a term of years, and whether granted by the State Authority under this Act (the National Land Code Act 56 of 1965 and Regulations) or in the exercise of powers conferred by any previous land law, but does not include mining land (Legal Research Board of Malaysia 2003).

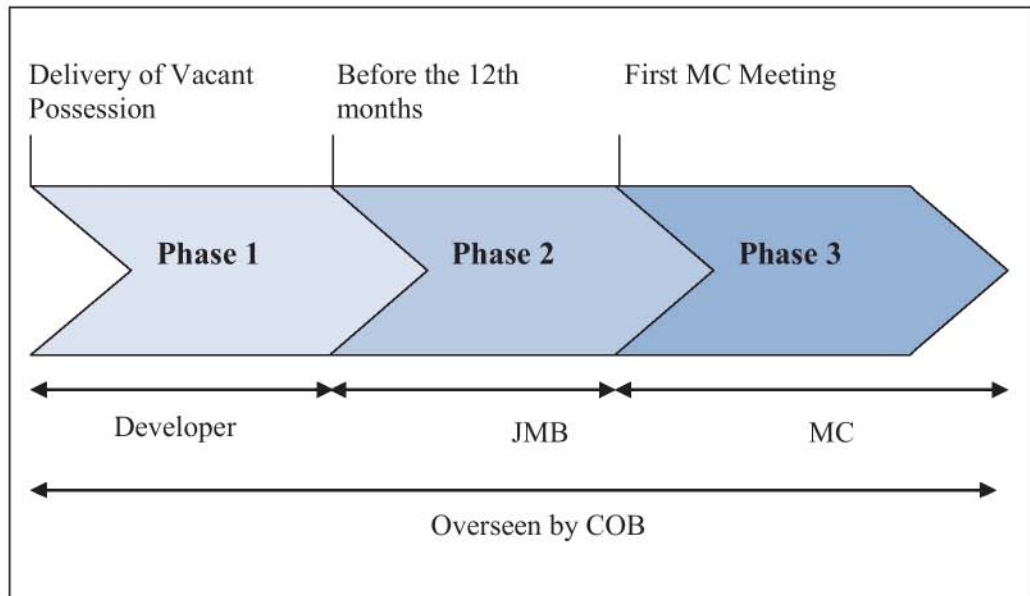
ownership of multi-storey buildings. Earlier land laws did not have provisions for strata titles. The provisions for strata titles went through several amendments in 1977, 1979 and 1981 before it was replaced by the Strata Titles Act 1985 (Act 318) in 1985. It repealed the Strata Title Provision in the National Land Code. Act 318 incorporates new provisions and concepts modelled on the New South Wales Strata Title Act 1973 and Singapore Land Title (Strata) Acts (Christudason 2007). It deals with the application of sub-division, registration and issuances of titles (Legal Research Board of Malaysia 2007a). The Act provides a system for management of strata schemes after the issuance of titles and a system for settling disputes through the Strata Title Board. This Act has undergone a few amendments due to the non-effectiveness of a few regulations that have resulted in inadequate management and maintenance practices for sub-divided properties.

Act 318 provides clauses for the setting up of MCs for all buildings with strata titles. Although the provisions of strata titles are now within Act 318, they are still regarded as part of the NLC and should be read concurrently. The Housing Developer (Control and Licensing) Act 1966 (Act 118) is another legal tool that contains provisions with regard to housing management and maintenance. Schedule H (Act 118) outlines the standard Sales and Purchase Agreement for subdivided buildings and the agreement for specific provision pertaining to common areas, outgoings and the service charge for the management and maintenance of strata properties before the establishment of MCs (Legal Research Board of Malaysia 2007b). This means that the property will be managed by the original proprietor or developer until the strata title is issued.

In practice, when the strata title is issued, the ownership of the original building plot will get transferred to the name of the MC, which is formed automatically when the strata title is registered (Note: this automatic formation of the MC is not applicable to low-cost housing schemes). The MC represents collectively, the owners of the 'parcels' in the strata scheme. It is a corporate body having perpetual succession and a common seal. The body may sue and be sued in the court. The MC is also the proprietor of the common property and the custodian of the issue of documents for the lot title where the building is situated. Once the MC has been established, the committee and the members (all the unit owners) can

decide on their housing estate's management. They will be able to directly manage (owner manage) or appoint a managing agent as a third party to act on behalf of the MC.

However, the implementation of these Acts has not resulted in any improvement in strata properties management, especially for housing developments (Mohamad 2007). This has urged the Malaysian government to enact additional legislation to enhance the practice. In 2007, the Building and Common Property Act (Maintenance and Management) 2007 [Act 663] was enacted at the federal level and its implementation commenced in April 2007. This Act is under the supervision of Ministry of Housing and Local Government and only applies to all states in Peninsular Malaysia and Labuan Federal Territory (Laws of Malaysia 2007, p.7). As shown in Figure 3.2, this Act applies throughout the vacant-possession stage until after the establishment of an MC. Act 663 exists to improve and complete the earlier Strata Title Act (Act 318), which it has been claimed is unable to resolve disputes in strata properties' management (Ismail 2007; Mohamad 2007). The Ministry of Housing and Local Government has identified problems with the previous Acts with regard to imposing excessive scope and responsibilities onto the stakeholders (Ismail 2007).



Notes: MC=Management Corporation; JMB=Joint Management Body; COB=Commissioner of Building

Source: Ministry of Housing and Local Government (2008, p.19)

Figure 3.2: Phases in the transfer of responsibility for maintenance and management of buildings and common property

Therefore, Act 663 was initiated to streamline the process of managing and maintaining developments from vacant-possession until after the MC was established. This Act introduced responsibility for maintenance repairs during the interim period. During the registration process of the strata title, the responsibility of the building and the common properties was given to the joint management body (JMB). This body would act as a mechanism for sharing responsibilities between the developer and the parcel owners. Parcel owners' participation at this stage was seen as being akin to a training ground in order for them to prepare themselves to manage their building and common properties when the MC is established. The new Act also introduced a new entity; the 'Commissioner of Building' (COB).

The COB is appointed by the State Authority and is authorised 'to administer the provisions of Act 663 and Act 318 (Parts IV and VII) and to exercise powers conferred upon him or her by Act 318' (Ministry of Housing and Local Government 2008, p. 14). These include major roles such as regulation of the maintenance and management of buildings and common property in order to

ensure proper housing management. Other responsibilities of the COB are to resolve conflicts and enforce legal provisions in accordance with the powers conferred by both Acts.

With the introduction of Act 663, Act 318 has undergone some amendments in 2007. A major amendment was the introduction of the requirement for the formation of the MC. In order to expedite the establishment of the MC, the amended Act modified the existing clause on the transfer of title. Previously the Act required 100 per cent transfer of ownership in order to set up the MC. However, this requirement has been identified as a problem causing delays in the setting up of the MC with most parcel owners often delaying the application process. Maintenance charge arrears and the high costs of the transfer process are two of the reasons that have been identified to delay the application (Lembaga Perumahan Negeri Selangor 2005). The newly amended Act 318 requires the MC to be set up when a minimum of 25 per cent of ownership transfer has been achieved.

3.5.1 Housing Management and Maintenance of Low-Cost Housing

Unlike non-low-cost housing, the formation of the MC for low-cost housing developments does not come into existence automatically with the registration of the strata title. The original proprietor or the developer is given the responsibility of managing the building while awaiting the establishment of the MC. The MC may be formed under two circumstances: (i) once the strata titles of all the purchased parcels or after more than half of the total units of all the parcels have been transferred and an application made to the Commissioners of Land and Mines (CLMs) for an order that the MC can be established or (ii) as ordered by the CLMs when the CLMs are satisfied that the original proprietor has failed to discharge his or her duties satisfactorily or when there is good reason to support the application made by the original proprietor. Once the MC is established, the authority and responsibility to maintain and manage the building and common properties becomes similar to the medium- and high-cost buildings.

The Building and Common Property Act (Maintenance and Management) 2007 [Act 663] generally defines ‘common property’ as the portion of the lot that is not comprised of by any parcel or any provisional block as shown in the approved strata plan. This includes the land on which the building is situated, the part of the building that is not included in any parcel (individual units) and the remaining part of the lot that is not comprised in any provisional block. The location of the common property may also be outside the building lot that is issued a strata title. Examples of common property are stairs, fire escape, corridors, refuse bins, drains, water tanks, pipes and cables that serve more than one parcel, the exterior of all common parts of the building, the playground, the recreational areas, walls and fences and all other facilities and installations any part of the land used or capable of being used or enjoyed in common by all the occupants (Ministry of Housing and Local Government 2008).

In Malaysia, the low-cost housing dwellers are expected to manage and maintain their common properties and facilities like other multi-storey housing facilities. The determination of common property depends on the strata plan for each development. In the registered strata plan, the lot’s boundaries of development and the boundaries of the unit or parcel (floor and wall) are clearly defined. Any element that is not included in the unit parcels but included within in the development lot’s boundaries is classified as common property (Legal Research Board of Malaysia 2007a).

3.5.2 Management Practices in the State of Selangor

Selangor state where the study was conducted is one of the prominent states when it comes to housing management. This is because Selangor has witnessed rapid development of multi-storey buildings compared to other states. Before the implementation of the JMB as in the new ACT 663, Selangor was the first state to introduce a similar entity, termed the pre-Management Corporation (pre-MC). Although not gazetted as a law, its establishment was supported by the state government. Just like the JMB, the pre-MC integrated the developers and unit owners in matters of housing management before the development obtained a strata title and established the MC.

Several approaches were taken to facilitate the management of multi-owner low-cost housing. According to the information given by one of the respective local authorities⁸ of the state of Selangor, early development of low-cost housing in Selangor had fixed the development lots' boundaries of low-cost housing based on individual buildings. The lots' boundaries only cover the building block's perimeters. This means that if there are five blocks of buildings in a development, each building will be registered under an individual strata plan, while the land surrounding the building will be excluded from the strata plan. In this approach, the number of common properties to be managed by the MC will be reduced, thereby, lowering the burden of the MC. Once the building has obtained a strata title and fulfilled the minimum requirement, the MC for the respective block will be established.

In the above approach, the common property of low-cost housing developments is limited to the common elements that are located in the residential building and the exterior parts of the building surfaces. No element of the common property is situated outside the building (except for instance the water pump, if the building requires a pump system to pump water into the water tank located on the top or on the roof). The properties and facilities located outside of the building, such as parking areas and playgrounds, are the responsibility of the local authority and other service providers (such as Indah Water Consortium responsible for the sewage system and monsoon drains. This falls under the scope of the respective local authority and Department of Irrigation and Drainage).

At the time of the interviews conducted for this study, according to the Director of Building department, the determination of what constituted the common property of low-cost housing developments was extended considerably. Based on the feedback, this approach was taken to give more freedom to the unit owners and the MCs. This approach allowed several blocks to be registered in the same strata plan. Thus, it extended the boundaries of the strata plan to include the elements outside of the buildings, such as the land around the buildings, car parks and recreation areas. MCs now have more freedom to organise their residential

⁸The information was obtained during an interview with the Director of the Building Department from one of the Selangor's local authorities in 2008.

environment so that the sense of belonging to the residence can be enhanced. As an example, they can build fences around their residential areas so as to improve the residential security levels.

At the moment, no local study has examined the implications of the above mentioned approaches. Does the approach to reduce or increase the scope of common property's management improve housing management and produce quality residential environments for low-cost housing developments? With the rising standards of living and increased demand for a better living environment, these people are in a dilemma. Low-cost housing communities are often renowned for anti-social behaviours such as rubbish dumping, graffiti and vandalism (Bahari 2007). The Executive Director of the Selangor Housing and Real Property Board (SHRPB), Berhad, reported a common misunderstanding among owners of low-cost housing where the residents ignored their responsibilities and demonstrated lack of knowledge of housing management and maintenance. For instance, residents would assume repair work on common properties such as the roof, which would actually be the responsibility of the local authority (The Star 2004). In fact as stated in the Strata Title Act 318 (1985), the roof belongs to the owners and they are obliged to repair the roof at their own cost.

In terms of owners' participation, like in the non-low-cost housing developments, the effective low-cost housing management depends on the owners and their MCs. Hence, the owners' participation in housing management is very important. However, the process of registration of the strata title and that of title transfer are often time consuming, further complicating the situation. The situation worsens further when most of the owners rent out their units and are not interested in participating in the MCs, although they contribute to the maintenance and management funds (Muhamad Ariff & Davies 2009a). Securing participation becomes even harder when the occupancy is dominated by tenants, particularly, foreign migrant workers. Besides feeling that they are not part of the building community, tenants also bring in different social norms to their housing environment, thus adding to the problem of already complex management and social relationships (Muhamad Ariff & Davies 2009a).

3.6 Conclusion

Housing management offers many challenges. Even more complex are the challenges of managing low-cost housing where owners typically have restricted budgets and the necessity for co-operative action is greater. Even though regulations can prescribe an administrative framework, the potential for mismanagement still remains. Historically, models of low-cost housing management have been based on public housing where housing authorities are both the providers and managers. Management of owner-occupied low-cost housing for low-income households has received less attention from researchers to date.

Efficient housing management is important for the well-being of the occupants and also for the creation of a long term good quality living environment. Efficient management requires an effective administrative framework. Internationally, countries have established legislation to require collective action and administration of management in multi-unit developments. In the management of multi-unit housing developments, the concept of a collective dwelling consists of two types of ownership: the individual (their individual units) and common property. In multi-owned private housing developments, the common property belongs to the owners' organisations. It should be shared and managed by the owners, and this requires a good management framework to manage the common property in the common interest.

Public housing sector management practices have also been reviewed – since this is because the majority of previous studies are of low-income households living in public housing. In the public housing sector, the involvement of residents in housing management is usually limited – they are the consumers of services, but not involved in setting policy or management. In the sector of homeownership in public housing developments, homeowners collectively, are not the owners of the entire development, and any actions they may perform (such as maintenance, upgrading or resale of their unit) are subject to the relevant authority's agreement. Residents can only challenge the decisions made by the authority through their

management institutions. Governing bodies, setting legislative frameworks, need to be aware of the long term effects of their policies. Attempts to solve housing shortages in the short term that fail to consider how residents will be able to afford adequate maintenance in the long term could lead to housing problems – essentially building the slums of tomorrow. And this could prove critical to both economic and political stability.

This chapter has discussed several examples of practices undertaken by a selection of countries. However, management problems still remain, even though every country has drawn up clear guidelines to facilitate mechanisms for housing management. This is because housing management is not just limited to the technical management of buildings, but more importantly to the management of each stakeholder. The relationships between stakeholders are seen as problem areas that lead to difficulties in establishing an efficient housing management system.

The final section of this chapter has discussed the practice of housing management in Malaysia. The Malaysian government is committed to improving the housing management system and a number of improvements with regard to the relevant Acts have been made. As required by such legislation, when a low-cost housing development has set up its MC, these also have the same roles and responsibilities as the non-low-cost housing developments. Whilst technically the management of low-cost housing developments is less challenging than for up-market housing developments (with their higher specification shared facilities), low-cost housing developments probably offer greater collective challenges for housing management systems with restricted budgets.

If any government's policy is in promoting homeownership to enhance the sense of ownership among low-income households, then that government also needs to address issues of sustaining and maintaining the value and condition of that housing stock. If the issues related to the management of low-cost housing in Malaysia are not resolved, these developments, once claimed by the policy makers as the best solution for low-income households, will be turned into future slums. The next chapter discusses how theories of collective action have been

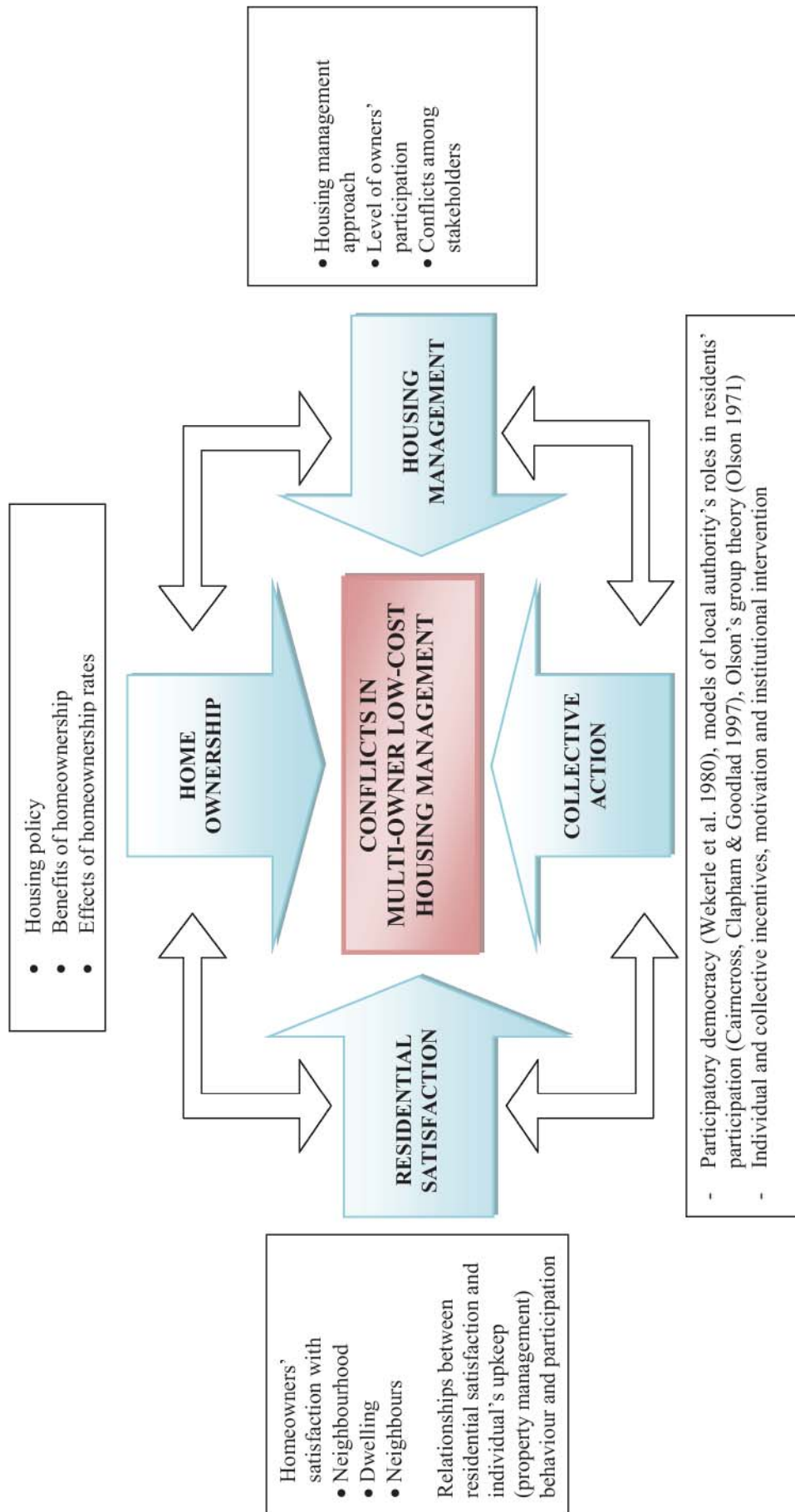
used to develop this study's conceptual framework. Predicted relationships between the conceptual framework's variables and the development of this study's hypotheses will be also presented.

Chapter 4: Developing the Theoretical Framework, Conceptual Framework and Hypotheses

4.1 Introduction

This chapter will establish the theoretical and conceptual frameworks for the study. The theoretical framework is the foundation on which the entire research process is based (Sekaran 2003). It consists of the theory or issue on which the study is embedded (Kumar 2005, p. 37). Figure 4.1 refers to the domains of homeownership (discussed in Chapter 2), housing management, (residents') participation in collective action and residential satisfaction, which explain the problems examined in this study. Thus, it serves as a basis for and clarifies the variables of this study.

After an explanation of the development of the theoretical framework, the study looks at the conceptual framework for effective stakeholders' relationships and tries to explain it with regard to how this framework reflects the synthesis of earlier studies. The conceptual framework shows this study's position and provides it, direction. A series of variables are identified and the cause-and-effect relationships among variables are also explained. The discussion then outlines the proposed hypotheses.



Source: This study's literature review

Figure 4.1: Theoretical framework; theories underpinning this study

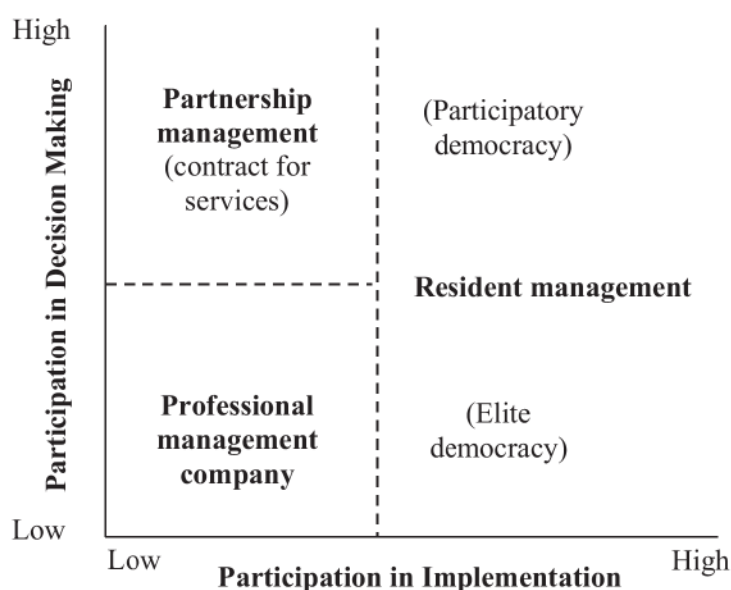
4.2 Theory of Housing Management

Literature on housing management has demonstrated that an administrative framework is needed to enable unit owners to manage the common properties for their common benefit. These unit owners are required to collectively plan their common properties' management and their approach is seen to influence their involvement. This study adapts the theory of housing management propounded by Wekerle et al. (1980), which has often been used by other investigating researchers involved in housing management (Encon 2005; Lau 2002a; Yip, Chang & Hung 2007; Yip & Forrest 2002).

Wekerle et al. (1980, p.178) proposed three types of condominium management that illustrated different modes of owners' involvement, i.e. through (i) professional management company (ii) partnership management and (iii) residents' management. As shown in Figure 4.2, the abovementioned management modes were based on two stages of owners' participation: policy and decision-making, and implementation. The professional management mode involved the presence of a third-party where the agent would be involved in the decision-making and implementation processes. This mode had low interaction and owners' participation. The owners however, are involved as stakeholders during the formulation of the structure of the contract with the management company. The owners then entrust the delivery of services to a management company.

In the partnership management mode, the members were required to interact with the management company frequently. Owners would sub-contract the services to sub-contractors. Onsite staff from the agent or sub-contractor would then be employed to perform the management functions. However, the owners would act as the decision-control agents, monitoring their performance on a regular basis and making decisions for general policies but leaving the daily management to the sub-contractors. In the residents' management mode, the residents would be required to participate extensively. Both the functions of decision control and decision management would be assumed by the owners. A majority of the members of the owners' corporation would be involved voluntarily in the

management of their housing development. The owners would perform a majority of the tasks and monitor their peers.



Source: Wekerle et al. (1980, p. 181)

Figure 4.2: Typology of resident involvement in management

Successful housing management practices in multi-owner housing developments necessitate efficient organisations. Building maintenance tasks require expertise, value for money, and the need for owners to take responsibility to manage and maintain common property (Encon 2005). Housing estates that use professional management agents to deliver their services successfully depend on effective interaction between owners' organisations and the management service delivery agents. However, for housing estates functioning without professional management agents, the interaction between members is important to their collective action for the building and living environment (Anon 2005, as cited in Easthope & Randolph 2009, p. 250).

The usual practice of owners in multi-owner low-cost housing in Malaysia is to manage their building and common property without the assistance of a third-party agent (Muhamad Ariff & Davies 2009a). The main reason behind this decision is to avoid an increase in maintenance charges, which typically cause disagreement and conflict between owners. An attempt to maintain similar costs

charged by the original developer who has managed their housing for the past fifteen to 20 years is important. However problems are likely to arise from costs being pegged or with only marginal increments for years, which may result in insufficient funds to adequately maintain the building and leave no sinking funds for major intermittent repairs or renovations such as re-roofing. The low maintenance charges can only cover daily maintenance requirements

This form of housing management practice will have serious consequences if the trend continues for multi-owner low-cost housing developments in Malaysia. At the moment there is no systematic data collected concerning the number of residents managing their own low-cost housing developments, their management structure, or the rate of success. Further study is needed to identify their knowledge and experience. However, it is too early to measure the success or otherwise of these practices in terms of economic and technical aspects, since MCs for low-cost housing developments are still novel. This following section reviews the theory that influences owners' in their housing management practices and that contributes to the effectiveness of stakeholders' relationships.

4.3 Collective Action Theory: The Context of Owners'/Residents' Participation

In reviewing previous research, it is found that there are a limited number of studies investigating owners' participation in managing housing estates compared to a large body of research on 'tenants' participation' or 'residents' involvement' (Lau 2002a). Indeed, even when the issues of residents' involvement are studied, the 'residents' are actually 'tenants' in public housing or social-rented housing facilities of non-profit organisations. There are few studies on owner-occupiers in housing estates. In economic terms, the purpose of collective action in housing management is either to get a better home or value for money (Bengtsson 1998, p. 112). Different types of homeownership and tenure confer different rights and obligations on the occupants and engender different forms of collective action and residents' involvement in housing affairs (Lau 2002a).

Residents' participation can be discussed based on different concepts such as political, social-ideologist, service-user participation, social movement, urban movement, political participation, community development, neighbourhood association. Residents' participation in housing management systems is believed to have evolved from residents' dissatisfaction with the bureaucratic and poor management of public housing. For example, in the 1960s and 1970s in Western countries, political democracy and the civil rights movement consolidated citizens' rights and the rights to participate in affairs that affected them (Cairncross, Clapham & Goodlad 1994; Grayson 1997).

In Britain, tenant participation started in the post-war years resulting in the formation of tenants' associations during the 1950s and 1960s. Thus, Western countries like the UK and the US have a longer history of experience in public housing and social rented-housing affairs. 'Tenants' are not purely limited to the tenants of public housing, but users of public services, as responsible citizens, as members of the local community and even as activists in a social movement (Somerville & Steele 1995). Numerous European and North American studies have focused on tenants' participation in public housing management, but scarce information is available on the residents' role in private housing management systems.

Since the early studies on residents' participation were triggered by the issues of tenants of public housing developments, the following review on collective action will focus on theories and previous studies related to both public housing and multi-owner housing developments. The experience of tenants is considered because this study involves low-income households, which may have similar social and economic backgrounds. Although this study concentrates on homeownership, there are very few studies on low-income households living in multi-owner low-cost housing.

4.3.1 Theories of Resident Participation

Wekerle et al. (1980, p.179) observed two 'theories of democracy: (i) an elite model of participation and (ii) participatory democracy (see Figure 4.2

previously). The first model is restricted to the election of the leaders who represent them and make decisions. The second model has greater individual involvement that provides opportunities to them to participate and engage in collective behaviour. By participating, an individual will be more prepared to accept collective decisions and this will therefore increase the sense of belonging within the community (Pateman 1970, p.27, as cited in Wekerle et al. 1980, p. 179). In both models above, there are risks in ensuring participation commitment.

The first model lacks representation and the second suffers lack of participation (Somerville & Steele 1995, p. 264). Wekerle et al. (1980, p.180) concluded that three aspects should be considered for condominium management systems to practice participatory democracy theory: (i) the lower level of the day-to-day maintenance and management, (ii) the policy making and (iii) freedom to change authority structure. The above three aspects can be grouped into two resident participation levels: (i) policy and decision-making and (ii) policy implementation.

Cairncross, Clapham & Goodlad (1997, p.24) studied tenant participation in public housing in Britain and proposed three elements of: (i) the structures, (ii) process and (iii) the objectives. The structure explains the communication methods used between tenants and their landlords. The process is the arrangement or the order of tenant participation, and finally the objectives will be the reason for participation. Through a comprehensive study, the authors identified three role models of local authority housing management and tenants' participation. The three models are traditional authority, consumerist authority and citizenship authority. In traditional authority, tenants' involvement is limited to local councillors representing the tenants. In contrast, consumerist authority views tenants as individual consumers that welcome individual tenants' views but not the tenants' organisations. Citizenship authority emphasises both individual and collective involvement. The councillor supports arrangements for individual tenants and tenants' groups to engage in dialogue and negotiations.

Another collective action theory is 'Mancur Olson's group theory'. This theory was developed based on several assumptions of human rationality and the word

‘group’ refers to ‘a number of individuals with common interests’ (Olson 1971, p. 8). From an economist point of view, Olson stated that:

Groups of individuals with common interests are expected to act on behalf of their common interests much as single individuals are often expected to act on behalf of their personal interests (Olson 1971, p. 1).

Olson suggests that common interests will trigger individuals to set up voluntary organisations. He argues that the critical number of potential individuals will have an impact on voluntary group formation and participation costs. Participation will involve both costs and benefits for individuals and the groups. However, an individual might have ‘personal interests’ that contradict the interests of others and that may hinder his or her participation or support for the organisation. The level of participation is subject to the groups’ perceptions and the balance between costs and benefits. Collective action will only be initiated and sustained if every participant finds it beneficial (Olson 1971).

Three reviews have been presented in this section. Wekerle et al. (1980) discussed the practice of democracy theory in the perspective of the multi-owner housing management system. The owners’ participation is divided into two and the extent of their involvement depends on the management practices adopted. Models developed by Cairncross, Clapham and Goodlad (1997) show the relationship arrangement between tenants and landlords. Three elements used by them can be generalised (with caution) to explain the arrangement between owners and their MCs, especially if they choose to manage their own housing systems.

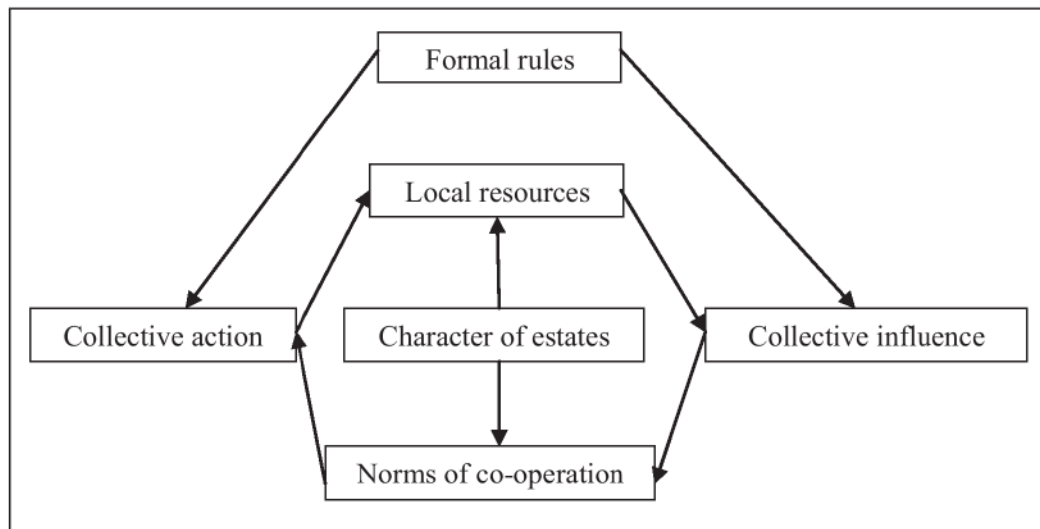
An owners’ corporation in housing management is an organisation that involves collective action. The formation could be established either by law or voluntarily. The formation of owners’ corporations required by law may not be voluntary but the committee will comprise a group of volunteers elected by members with common interests, while a voluntary owners’ corporation will be formed when common interests exist, for example, the owners’ corporation in Hong Kong. The formation of both groups involves group costs and benefits of participation as suggested by Olsen’s group theory.

Collective action requires commitment and continuous involvement, which in turn require motivation. Meeting the needs of each individual owner is therefore important. The subsequent section will review the theory and previous related studies.

4.3.2 Motivation Factors for Residents' Participation

The balance between costs and benefits will affect peoples' decisions whether or not to participate (Somerville & Steele 1995) and a person's level of interest in collective action (Oliver 1984). Somerville and Steele (1995, p. 263) in their discussion on collective action issues arising from economic theory, have proposed three types of motivating forces enabling tenants' participation: (i) those arising from individual personalities, (ii) those arising from social construction of communal responsibility and (iii) those arising from institutional intervention. They determine the introduction of appropriate institutional arrangements (such as the marketised arrangements, tenant-controlled management and tenant-landlord partnerships) that combine appropriate incentives to participate where an appropriate mechanism is required to ensure effective participation. An increase in participation alone without institutional arrangement, cannot achieve the continuity of participants (Somerville 1998).

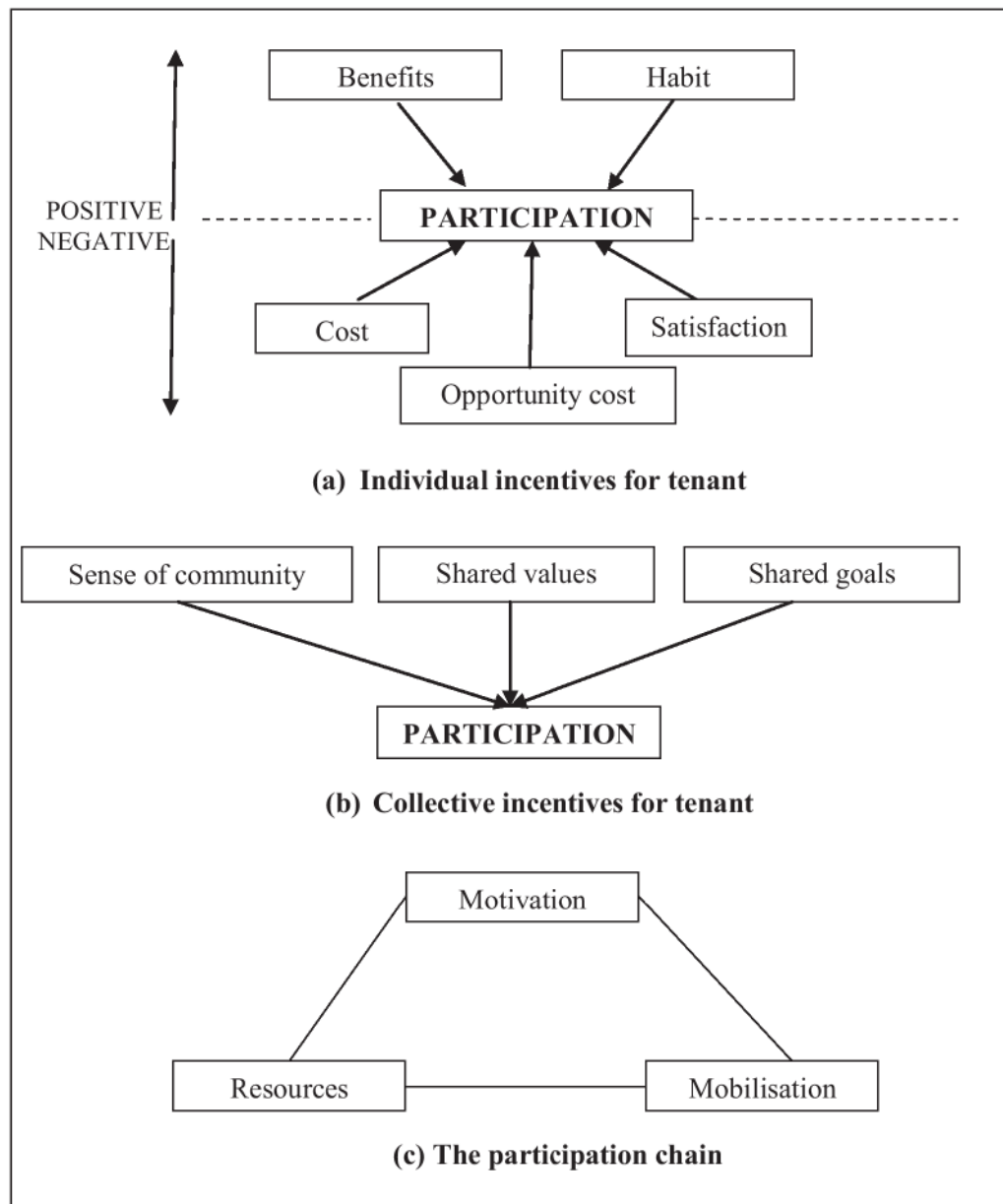
Institutions have an important role in creating and retaining collective action in housing systems that are defined by the tenure forms (Bengtsson 1998, p. 100). Bengtsson (2000) proposed an institutional arrangement (formal rules) in his model of 'Collective Action in Housing Estates' for Sweden's public housing systems (see Figure 4.3). Bengtsson collected relevant information related to collective action from 26 housing estates that were involved in different institutional arrangements (i.e. traditional rental estates, tenant management co-operatives and collective-housing units). The study aimed at tracing the norms and other social factors behind the creation and selection of collective action arrangements. Bengtsson's findings were that collective action arrangements had taken place in a large number of estates studied. The critical phase was found to be not during the initiation of co-operation, but during the 'consolidation phase'—the phase when local collective action was most vulnerable.



Source: Bengtsson (2000, p. 178)

Figure 4.3: Bengtsson's model of 'collective action in housing estates'

Birchall (1997, p.187) reviewed two theories of participation: (i) the individualistic and (ii) the communitarian, derived from Homans in the late 1950s and Sorokin (1954). An individualistic theory of participation assumes that people are motivated by individual rewards and punishments. Communitarian participation assumes that people can be motivated by collective goals, a sense of community and co-operative values. Focused on users' participation in two public services in the UK, Simmons and Birchall (2005) built an understanding of what motivates user's participation. Using the 'mutual incentive theory', which considers the individualistic benefits (see Figure 4.4a) and collectivistic incentives (see Figure 4.4b), they developed 'the participant chain' (see Figure 4.4c). The participant chain connects three factors: motivations, resources and mobilisations. The same framework was later applied by Simmons and Birchall (2007) specifically to tenant participation in two different contexts: Tenants' Associations and Tenants-management Associations of UK's public housing. In this survey they only considered three factors of individualistic incentives, i.e. the benefits, cost and opportunity cost. They determined that a strong relationship between these three factors is required in order to avoid failure in participation.



Source: Simmons and Birchall (2005, pp. 266-272);

Figure 4.4: ‘The participation chain’, individual incentives and collectivist incentives

Regardless of the institutional arrangement in public housing sectors, the key relationship is between the tenants and landlords. Institutional arrangements in public housing are needed to counteract the power imbalance between the landlord and tenants. For multi-owner housing developments, regardless of the management mode practised, the owners need to be both the policy and decision makers. However, as seen in the Hong Kong case, without a mandatory structure requiring owners to work together to maintain common property, owners may not

choose to participate leading to growing disrepair and disputes. Mandating a collective structure such as an owners' corporation for multi-owner housing appears to be a necessity, owners can then choose policies and how they will be enacted.

Conflicts among stakeholders, i.e. between the residents, owners' organisation and managing agents, are often cited as the reasons for co-owned housing mismanagement (Blandy, Dixon & Dupuis 2006; Budgen 2005; Chen & Webster 2005; Christudason 2007; Easthope & Randolph 2009; Lias 1998; Lim 2002; Muhamad Ariff & Davies 2009a; Yip & Forrest 2002). Therefore, the following section reviews the integration and development of collective action in multi-owner housing management systems. It will then explain the issues associated with the stakeholders.

4.4 Collective Action and Stakeholders' Relationships in Multi-Owner Housing Management

As discussed in Chapter 3, the legislation associated with multi-owner housing management systems is mainly intended to provide a legal framework that governs key stakeholders including the owners, owners' corporations and managing agents. The framework outlines the roles and responsibilities of all stakeholders that need to be implemented. As part of the same management system, each stakeholder group should develop a good relationship with the other stakeholders. This is because the housing management requires consensus and action from all parties. This section will discuss each of the stakeholders and the issues arising from the relationship between them.

A summary of significant factors explaining stakeholders' conflicts is presented in Figure 4.5. From these studies, a number of generalisations (with caution) are drawn and are discussed in the following sections.

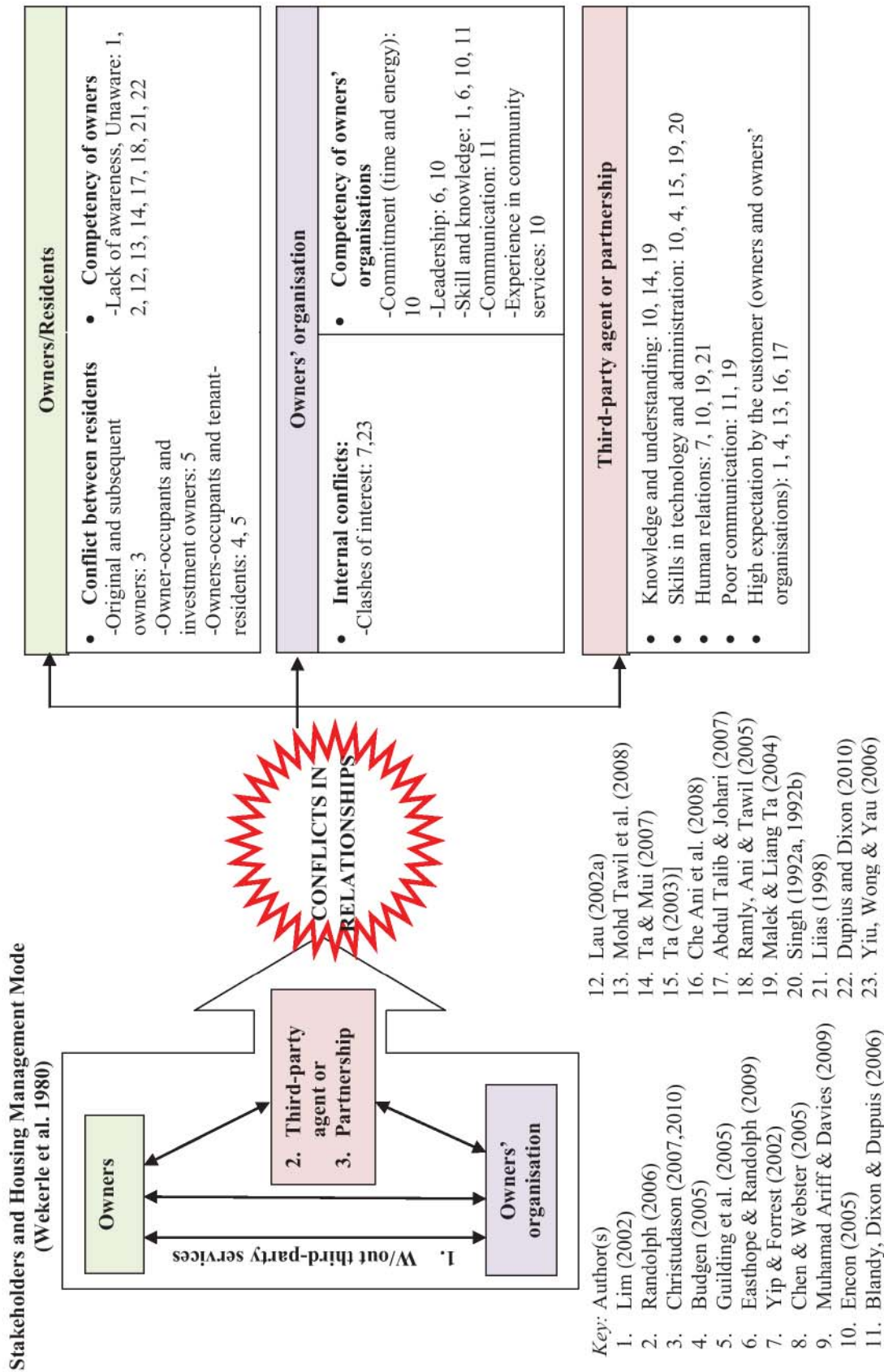


Figure 4.5: Factors contributing to the conflicts in stakeholders' relationships

4.4.1 Unit Owners

Past studies have suggested that owners' participation and owners' control over their housing environments are the main criteria that contribute to the owners' organisational success. Owners' participation is 'a two-way process', the sharing of information and ideas, where unit owners are able to influence decisions and take part in property management (Lau 2002a, p. 40). This means unit owners have the right to gain access to information and participate in decision-making. In this section, the term 'unit owner' refers to individuals who own a unit in multi-owner housing developments, whereas 'homeowner' is a general term regardless of the type of housing development.

As shown in Figure 4.5, residents' and owners' categories, owners' competency, conflict of interests, owners' background and residents' mobility have been claimed to contribute to conflicts in relationships. These factors are discussed within three groups namely: (i) homeownership rates, (ii) occupancy category and (iii) owners' competency. This section reviews each of these factors before attempting to generalise it.

4.4.1.1 Homeownership Rates

The review of homeownership in Chapter 2 stated that homeowners are likely to improve the property condition and will show better upkeep behaviour than tenants. This significant relationship has attracted many researchers to study the impact of homeownership rates on an individual's behaviour towards the residential environment.

The proportion of homeownership rates is found to be related to: (i) neighbourhood satisfaction (Galster 1987; Parkes, Kearns & Atkinson 2002), as homeowners could have developed long-term neighbourly interests (Forrest, Grange & Yip 2002), (ii) the neighbourhoods' socio-economic surroundings such as change in property value (Haurin, Dietz & Weinberg 2002; Rohe & Stewart 1996) and (iii) the social outcomes such as improved child behaviour (Galster & Quercia 2000; Haurin, Dietz & Weinberg 2002), increased dwelling maintenance

awareness (Haurin, Dietz & Weinberg 2002) and children's educational outcomes (Galster et al. 2007). In contrast, other researchers did not find any relation between property upkeep or property condition (Galster 1987) and neighbourhood attachment and involvement (Carson, Chappell & Dujela 2010).

The above studies have investigated the relationships amongst the middle- and upper-income households of owner-occupants in single-family, detached housing developments and also examined low-income households in various types of housing developments. The findings show varied results. For example, a study by Carson, Chappell and Dujela (2010) involves low-income households from different types of housing developments such as single-dwellings, apartments and public housing units. Their survey results may not be generalisable as they have aggregated the data. Thus, the effects of the relationships between homeownership rates and improved property conditions or participation in neighbourhood's affairs on low-income households living in multi-owner low-cost housing developments still remains unclear.

Does a high proportion of owner-occupants in multi-owner low-cost housing developments improve housing management? Is there any relationship between a high proportion of owner-occupants and effective stakeholders' relationships? These are the questions that will be addressed in this study. To correctly capture the situation of multi-owner housing, this study suggests the term 'occupancy rate' be used to distinguish the percentage of owner-occupants and tenant-residents of particular housing developments. To achieve the above goals, the occupancy pattern must be studied and this is discussed in the subsequent section.

4.4.1.2 Occupancy Categories

Conflicts in collective-living arrangements are mainly due to the interdependency of the unit owners (Christudason 1996; Walters & Kent 2000). Unit owners can be distinguished into original purchasers and subsequent purchasers (Christudason 2007). The original purchasers will have bought their units directly from the developer, while subsequent purchasers will have bought their units from the original or subsequent owners (Christudason 2007, p. 307). The duration of

residency among owner-occupants is likely to influence individual responses to housing management systems.

Long-term unit owners have typically experienced various phases of housing management. They may be more educated or aware of the provisions contained in relevant legislation. They are likely to have gained knowledge and awareness of how to respond to the collective living environment through conditions in the Sale and Purchase Agreement. They also will have experienced maintenance and corrective repairs carried out by their developers, before the management is transferred to them through the owners' corporation. However, subsequent purchasers may not have the same experience, depending on when they begin occupying their units. Unit owners who join after the establishment of the owners' corporation may not obtain the same knowledge and experience.

Previous studies (see Chapter 2) have shown that differences in residency-periods of the owner-occupants results in differences in neighbourhood attachment and this can influence an individual's behaviour towards housing management. Long-term owners may be satisfied as they are used to the situation or alternatively, their involvement may be greater due to strong social cohesion. Subsequent purchasers may be younger than the long-term owners and either have some vision of how they wish management to be organised or they may be unconcerned and mostly accepting of the current practice.

A closer examination of the unit owners' category shows that unit owners can be distinguished into owner-occupants and investment-owners (Guilding et al. 2005). Both can be original purchasers or subsequent purchasers as indicated by Christudason (2007). Investment owners normally rent out their units to a tenant or in some cases short-let to tourists. These two can be grouped into non-owner-occupants or tenants as described by Budgen (2005). Conflicts between owner-occupants and investment owners arise due to differences in interests. Owner-occupants are primarily interested in the building and ground-caretaking, whereas investors are primarily interested in sub-letting services (Guilding et al. 2005).

This study has situated Selangor tenant-residents as indirect stakeholders in housing management as they are not governed by the Acts. They are not entitled to participate in housing management systems as the right remains with the unit owner. Tenants have no voting rights and can only influence decisions made by the owner of their unit (Easthope & Randolph 2009). However, tenants are part of the community because they have personal ties within the unit and may have a social relationship within the community (Easthope & Randolph 2009). Their actions can affect the efficiency of housing management systems (Muhamad Ariff & Davies 2009a). If tenants' interests are represented in housing management systems there may be a greater chance of resolving disputes (Chen & Webster 2005).

A high proportion of rented units contribute to high-occupancy mobility. Frequent changes of occupancy may create more conflicts in housing management (Muhamad Ariff & Davies 2009a; Randolph 2006). Owners' corporations will have difficulty in carrying out housing management when their building is dominated by tenants (Muhamad Ariff & Davies 2009a). Owners and tenants may not share the same goals related to their residential environment. The minority unit owners may disagree about repair and maintenance work and this may impact on the residents' behaviours and attitudes towards each other (Randolph 2006), possibly resulting in neighbourhood disputes (Budgen 2005). Such conflicts result in long-term housing management plans being more difficult to achieve. The impact is on residents who want to remain resident longer – they may be affected by the results of short-term planning with no consideration for major expenses over the longer term (Lim 2002).

4.4.1.3 Owners' Competency

Unit owners often pay no heed to their rights and responsibilities even though the organisational structure provides the best platform for them to express views on relevant issues. Collective-living arrangements require residents to co-operate (Randolph 2006). Inefficient housing management is often the result of inadequate awareness and knowledge by the unit owners (Lim 2002; Paadam & Liias 2008).

For instance, some unit owners do not understand the importance of paying the service charge because they do not understand the practice of housing management (Mohd Tawil et al. 2008; Tiun 2003). Their attitudes may affect others' attitudes and lead many to disregard the affairs of their housing management systems (Tiun 2003). They may be unwilling to participate since there will be 'free riders' who benefit from their efforts. Low-income households may not understand the necessity of maintaining quality living standards and may be reluctant to support any additional expenses (Liias 1998). They do not understand how to live in and respond to a collective-living arrangement (Abdul Talib & Johari 2007; Tiun 2006). This claim is supported by a study by Ta and Mui (2007) that examined the unit owners of low-cost housing units in Malaysia. They found that unit owners did not understand the meaning of common properties, their rights over these properties and the need to maintain these properties.

As presented in Figure 4.5, conflicts due to differences in households' socio-economic status were identified by Yip and Forrest (2002). They studied owners' corporations in Hong Kong's condominiums and found that both the social class and income levels had an impact on investment decisions for building maintenance. Moderate-income households were more willing to invest in future improvement work, while households who lived in cheap and old buildings were reluctant to do so.

4.4.2 Owners' Organisations

The interests of unit owners are mostly represented by an owners' organisation such as an owners' corporation that is similar to a business corporation where the owners are legally the authorities for decision-making (Wekerle et al. 1980; Yip & Forrest 2002). The chairperson and the committee members are elected by unit owners based on majority votes at an Annual General Meeting, similar to a board of directors in a business corporation. The difference between the two is that all unit owners have to participate in the corporation, whereas in a business corporation, ordinary stockholders' participation is limited to the dividend level (Yip & Forrest 2002).

Chairpersons of owners' corporations are required to commit their time and energy even though the position is voluntary (Encon 2005). Encon (2005) has identified the key success factors in the relationship between owners and agents in Hong Kong's condominiums. She ascertains that leadership skills and commitment of the corporation's members are very important while the chairpersons' involvement in other community service is an advantage as chairpersons could acquire additional experience.

Conflicts occur within the organisation itself. A study by Yip and Forrest (2002) demonstrates that conflicts within owners' corporations in Hong Kong's condominiums are caused by different interests. For example, in mixed-use developments (condominiums with residential and commercial units), conflicts arise between residential occupants and commercial unit owners on the decision to invest in building maintenance to maintain the property's value. Further, competition for positions in the owners' corporations often results in fragmentation through the political differences between the owners. When a housing management agenda is politicised, the owners' political diversity could also invite conflicts (Yip & Forrest 2002).

Figure 4.5 summarises that the competency of the owners' corporation committee is an issue since the members are volunteers with different backgrounds and experiences. The committee members themselves often claim to have limited skills and inadequate knowledge and experience to manage their housing systems. An incompetent owners' corporation committee may not be able to appreciate and assess the advice of their agents (Lim 2002). Competent management will become even more important if the housing system is managed without an agent (Easthope & Randolph 2009).

4.4.3 The Managing Agent

Figure 4.5 identifies literature citing issues relating to the managing agent personnel's lack of adequate knowledge and skills in technical, administrative and social relations (Budgen 2005; Encon 2005; Liias 1998; Malek & Tiun 2004; Singh 1992b, 1992b; Tiun 2003; Tiun & Lim 2007). Christudason (2004) has

examined managing agents' knowledge with regard to Singapore's private developments and observed that most agents do not understand the meaning of common properties. These managing agents show a lack of understanding of key items related to developments with strata titles.

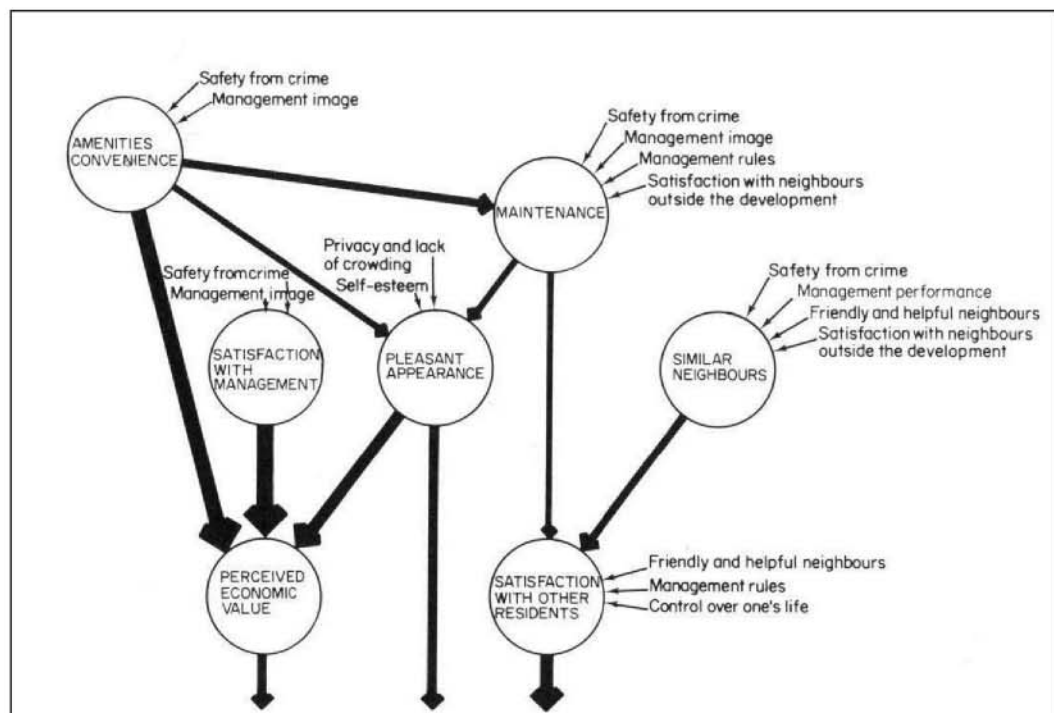
The relationship between managing agents and the owners (Paadam & Lias 2008) and the relationship between managing agents and the owners' corporations (Budgen 2005) challenges the housing management systems. Housing units managed by an agent, form a customer-oriented service industry. 'Customers', who are the owners of residential units, are entitled to demand better performance for the management fees charged by the agents (Lias 2007). Besides being responsible for providing quality services, agents are also required to advise the owners' corporations in all technical and administrative aspects. Thus, in order to reduce the conflicts between the stakeholders, agents and their staff need to be proactive to develop good relationships with their customers: the owners and the owners' corporations. Communication should not be just through formal memoranda and official letters (Malek & Tiun 2004). In housing management systems, agents need to be part of the community. They need to promote social relationships by creating and participating in residents' activities. However, they are usually not interested in carrying out any community activities (Tiun 2003).

4.5 Residential Satisfaction

Residential satisfaction is widely used as a variable to measure satisfaction in many aspects of individual living. It is an important component of the quality of living since it is the way people evaluate their housing and neighbourhood that determines the way they respond to their residential environment (Lu 1999; Salleh 2007).

Francescato et al. (1974, as cited in Lawrence 1987) were among the first to examine physical, social and psychological factors that influenced residents' satisfaction. They examined the urban and rural residents' satisfaction with the design and management of public housing units in America. They identified a

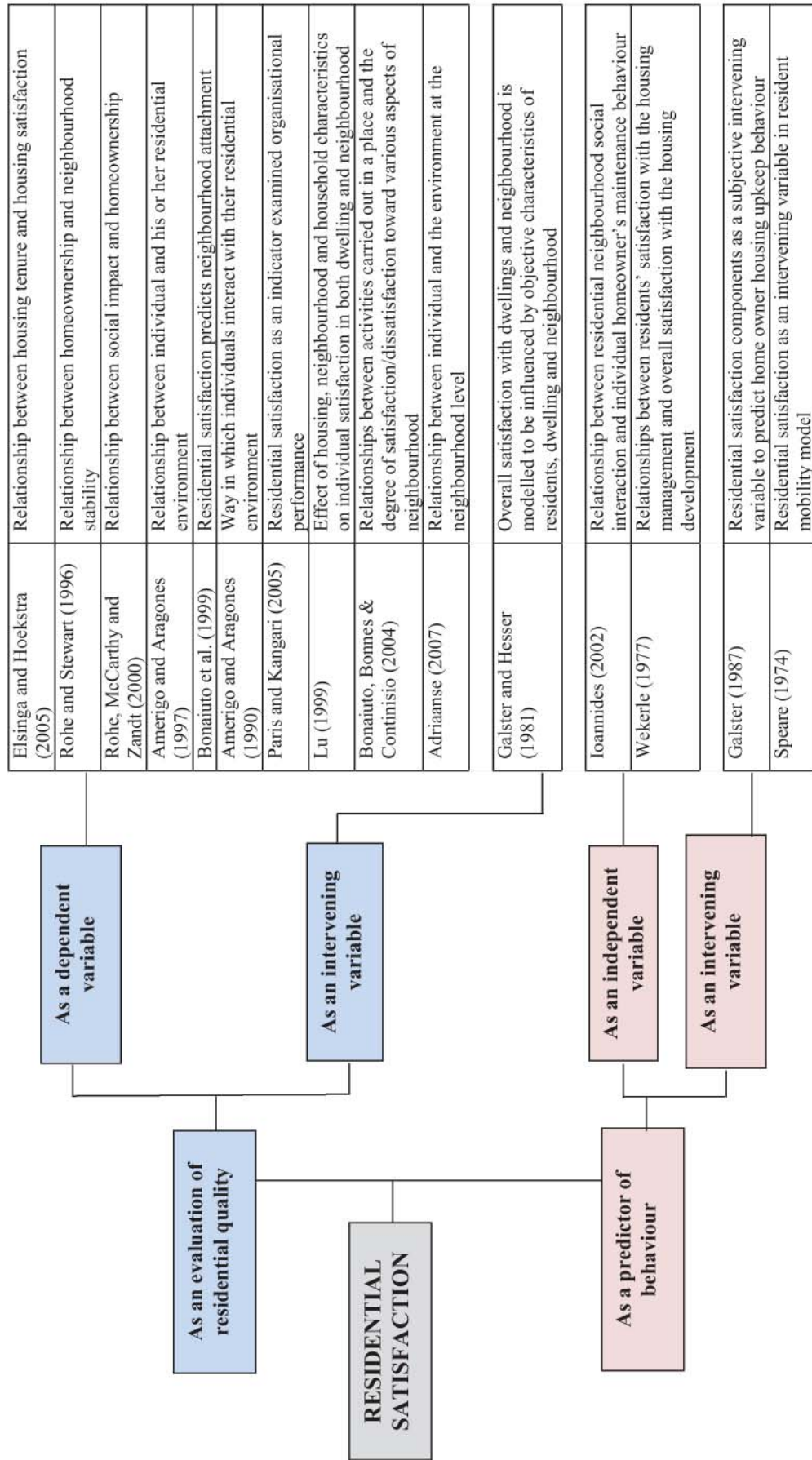
range of issues thought to be vital to the residents as both direct and indirect predictors. Figure 4.6 illustrates the inter-relationships between seven sets of important variables that contribute to comprehensive understanding of residential satisfaction. These predictors are related to the physical environment, the social environment and housing management. This model is a prototype for later research on residential satisfaction conducted by several housing-evaluation researchers.



Source: Adopted from Francescato et al. (1974, as cited in Lawrence 1987, p. 195)

Figure 4.6: The interrelationship between seven sets of variables of residential satisfaction

In general, studies on residential satisfaction can be grouped into two different categories: (i) as an evaluation of residential quality and (ii) as a predictor of behaviour (Weidemann & Anderson 1985). The studies for each group are presented in Figure 4.7. As shown, the first category mainly refers to residential satisfaction as a dependent variable. The second category, residential satisfaction is considered as an independent variable. In certain cases, some dimensions (or predictors) of residential satisfaction were used as intervening variable(s) for the two categories.



Source: This study's literature review

Figure 4.7: Previous studies of residential satisfaction

4.5.1 Residential Satisfaction as an Evaluation of Residential Quality

As shown in Figure 4.7, residential quality has been examined by a number of studies. Empirical studies have considered (i) the impact of housing tenure on housing satisfaction (Elsinga & Hoekstra 2005), (ii) neighbourhood components to investigate residential satisfaction in residential environment (Amerigo & Aragonés 1997, 1999; Adriaanse 2007; Galster and Hesser 1981; Lu 1999), (iii) the relationship between social impact and homeownership (Rohe, McCarthy & Zandt 2001; Rohe & Stewart 1996), neighbourhood attachment (Rohe & Stewart 1996) and (iv) examined the residential satisfaction indicators to measure organisational performance (Paris and Kangari (2005).

As an example, Bonaiuto et al. (1999) examined neighbourhood attachment aspects of 20 different neighbourhoods in Rome. Neighbourhood attachment is regarded as a dependent variable, while the socio-demographic (age, sex, socio-economic level) and residential (duration of residence both in the neighbourhood and in Rome, number of persons living together) elements are considered independent variables. Their survey's results proved the residential quality that is described as neighbourhood attachment was influenced by the duration of residency and the socio-economic levels of the residents.

Another example in the same category is the study by Amerigo and Aragonés (1990). They investigated public housing tenants' behaviour in Madrid, by testing the extent of tenants' satisfaction on three components of residential satisfaction. They sought to establish the objective and subjective predictors for both physical and social characteristics that influenced residential satisfaction. Their findings highlighted important physical characteristics of dwellings, neighbourhoods and neighbours as a means for individuals to interact with his or her residential environment.

A study by Paris and Kangari (2005) used the indicators of residential satisfaction to measure the performance of property management services of nonprofit multifamily affordable housing community owned by Atlanta Mutual Housing Association. They recognised the importance of the relationship between property

management and residents as the management staffs represent the residents in highlighting their problems and concerns such as rent collection, and work orders. Meanwhile, to sustain the residents' satisfaction with their residential environment, they suggested that attention should be given to the transition of managing property management company.

Research examples discussed in this section have been using indicators of residential satisfaction as independent variable or dependent variable or predict the impact on residential satisfaction influenced by the intervening variable. As an example, Andrainse (2007), Amerigo and Aragonés (1990) and Lu (1999) applied residential satisfaction indicators as the dependent variable. Lu (1999) used objective socio-economic variables of the residents and the length of residency as independent variables. Meanwhile, Amerigo and Aragonés (1990) used both objective variables (socio-demographic) and subjective variables (residents' perceptions on residential neighbourhood and the relationship between neighbours) to describe the residents' satisfaction with Madrid's council housing.

For Rohe, McCarthy and Zandt (2001), Rohe and Stewards (1996) and Paris and Jangari (2005), they employed indicators of residential satisfaction as an independent variable explained the determinant of homeownership. Rohe, McCarthy and Zandt (2001), in their critical assessments, have shown several objective variables (socio-economic) and subjective variables (evaluation of the residential environment) that have significant relationships with the determinant of homeownership. In other situation, Galster and Hesser (1981) predict that the process of overall residential satisfaction indicators may be modelled with presumed casual paths emanating (originate/derive) from objectives independent variables, passing (sometimes) through subjective intervening variables.

4.5.2 Residential Satisfaction as a Predictor of Behaviour

The interaction between residents and residential satisfaction influences individual behaviour - for example housing adaptation such as carrying out home improvements or moving house (Priemus 1986). The study by Ioannides (2002) is an example of the use of residential satisfaction as a predictor of behaviour. This

study examined the effect of individual neighbours in small neighbourhoods on homeowners' decisions related to maintenance, while individual neighbours and neighbourhoods' characteristics were controlled. Through the interview survey, Ioannides confirmed a positive relationship that 'satisfied homeowners' in their neighbourhood were likely to increase homeowners' upkeep and maintenance behaviour.

The second example is a study by Speare (1974) who applied residential satisfaction as an intervening variable predicting residents' mobility behaviour. Speare showed the influence of individuals' (such as age, duration of residence, homeownership) and residential characteristics (room crowding) on residents' mobility behaviour through the effects of residential satisfaction.

A study by Galster and Hesser (1981) exemplified another approach where residential satisfaction was not only modelled to be directly influenced by the objective contextual characteristics (physical characteristics of individual's dwelling and neighbourhoods) and the objective compositional characteristics (resident's characteristics) of Ohio's neighbourhood, but also intervened through subjective attitude and assessment of specific aspects of the residential environment such as respondents' lack of 'anomie'⁹, run-down properties, services, noise, crime and common neighbourhood activities. Overall the results supported Galster and Hesser's theoretical specification of intervening variables.

Referring to Figure 4.7, both owned and rented housing developments have been studied with regard to two aspects: the residential environment and property management. The following section discusses the relationship between residential satisfaction and property management.

⁹In societies or individuals, anomie refers to a condition of instability resulting from a breakdown of standards and values or from a lack of purpose or ideals. **Anomie** (2010), in *Encyclopædia Britannica*, retrieved 5 May, 2010, from Encyclopædia Britannica Online: <http://www.britannica.com/EBchecked/topic/26587/anomie>

4.5.3 Relationship between Residential Satisfaction and Housing Management

Past studies suggest that by giving public housing residents an opportunity to participate in housing management or ownership opportunities result in greater satisfaction with the indicators of quality of life such as housing, neighbourhood, and the relationship among neighbours (Rohe & Stegman 1992; Van Ryzin 1994, 1996). Van Yyzin (1996) in his study on public housing residents in the USA found that residents' satisfaction with their neighbours is an important mediating (intervening) variable explained the impact of resident management with their living environment. USA's public housing emphasises the concept of resident-management as a means of involving residents in the management of their residential. This management practice received good response from the public housing residents. The key indicators that led to this response is the effect of residents' satisfaction with their housing, not only on the overall housing quality but also the level of social integration within their community (Weidemann and Anderson 1985) and both are important for the successful of resident-management (Leavitt and Saegert 1990; Van Yyzin 1996).

An empirical study by Galster (1987) applied residential satisfaction as a subjective, intervening variable predicting American urban homeowners' behaviour towards housing upkeep and maintenance. Galster pointed out that previous empirical studies mainly focused on the relationship between housing upkeep behaviour and homeowners' characteristics, while overlooking the neighbourhood's social-interaction dimensions and homeowners' mobility plans. Based on multiple regression analysis, Galster indicated the modest impact on homeowners' satisfaction with regard to dwelling and neighbourhood, and homeowners' upkeep behaviour. Galster proved that residential satisfaction is not a prerequisite for home improvement. Galster also found that though homeowners had the intention to stay longer in their current homes, they often neglected the external conditions of their dwelling.

An empirical analysis by Rohe and Stewart (1996) of single-family dwellings in America proved the existence of the relationship between homeowners living in a

stable neighbourhood environment and their positive participation in local neighbourhood affairs. This significant relationship appears to be due to their protecting their investment and economic interests. Neighbours will pressure homeowners to maintain their property at some minimum standard as it reflects their social status and personal characteristics.

A similar outcome to the above was also found by Rohe and Basolo (1997). They analysed the data collected from the low-income households involved in a homeownership programme sponsored by the Enterprise Foundation and the City of Baltimore (modular townhouses). They employed longitudinal research and found that homeownership has positive and significant influences on homeowners' formal participation in neighbourhood and block association meetings. A comprehensive and critical review by Rohe, McCarthy and Zandt (2001) further confirmed that satisfied homeowners showed greater participation levels in voluntary and political activities, and were also committed to their neighbours.

Much of the research on residential satisfaction is predominantly from Western countries. The experience of Western societies may not accurately reflect the situation in other cities that differ in culture and physical form (Forrest, Grange & Yip 2002). Western studies are set typically in single-family detached dwellings or low- to medium-rise blocks of social housing. While in Malaysia context, studies focus more on public housing and multi-storey low-cost housing development. The following section reviews previous studies by Malaysian researchers to identify research needs in Malaysian housing facilities.

4.5.4 Empirical Studies of Residential Satisfaction in Malaysia

As illustrated in Table 4.1, Malaysian studies of residential satisfaction can be categorised as an evaluation of residential quality. The studies mainly examine individuals' satisfaction in many aspects of individual living. Unlike Western nations, Malaysian studies are limited to low-income households occupying dwellings in both public housing (Mohit, Ibrahim & Rashid 2009; Sulaiman & Yahaya 1987) and private, low-cost housing developments' ownership (Abdul

Karim 2007, 2008; Abdul Karim & Sariman 2007; Salleh 2007). In general, none of the Malaysian studies have directly examined the relationship between residential satisfaction and property management. However, a study by Abdul Karim and Sariman (2007) provides a basic understanding of this relationship.

Table 4.1: Empirical studies of residential satisfaction in Malaysia

Objective	Authors	Type of tenure
Relationship between demographic and socio-economic characteristics with housing and environment satisfaction	Sulaiman and Yahaya (1987)	Public housing
Effects of dwelling, services and neighbourhood facilities on individual's residential satisfaction	Salleh (2007)	Linked and multi-owner low-cost housing
Relationship between individual's perceived level of satisfaction with objective components of dwelling, support services, public facilities, and social environment and neighbourhood facilities	Mohit, Ibrahim and Rashid (2009)	Public housing
Relationship between individual's perception of components of quality of living, family life, neighbourhood/community life and public and social facilities	Abdul Karim and Sariman (2007)	Multi-owner low-cost housing
Relationship between individual's socio-characteristics and neighbourhood and community environment	Abdul Karim (2007)	Multi-owner low-cost housing
Relationship between neighbourhood facilities and residents' satisfaction towards housing environment	Abdul Karim (2008)	Multi-owner low-cost housing

Source: This study's literature review

Abdul Karim and Sariman (2007) used the data collected from residents of multi-owner low-cost housing developments from two urban, local authorities in the state of Selangor. They measured the residents' perceptions of three dimensions of the quality of living: (i) the characteristics of family life, (ii) the quality of the neighbourhood's life and (iii) public and social facilities. Two significant results were identified. The first significant result was the relationship between the duration of residency and the quality of the neighbourhood's social environment. They proved that the longer the residents stayed in the neighbourhood the more they became concerned with their housing development's security, the easier they were able to communicate with neighbours, and the more concerned they grew

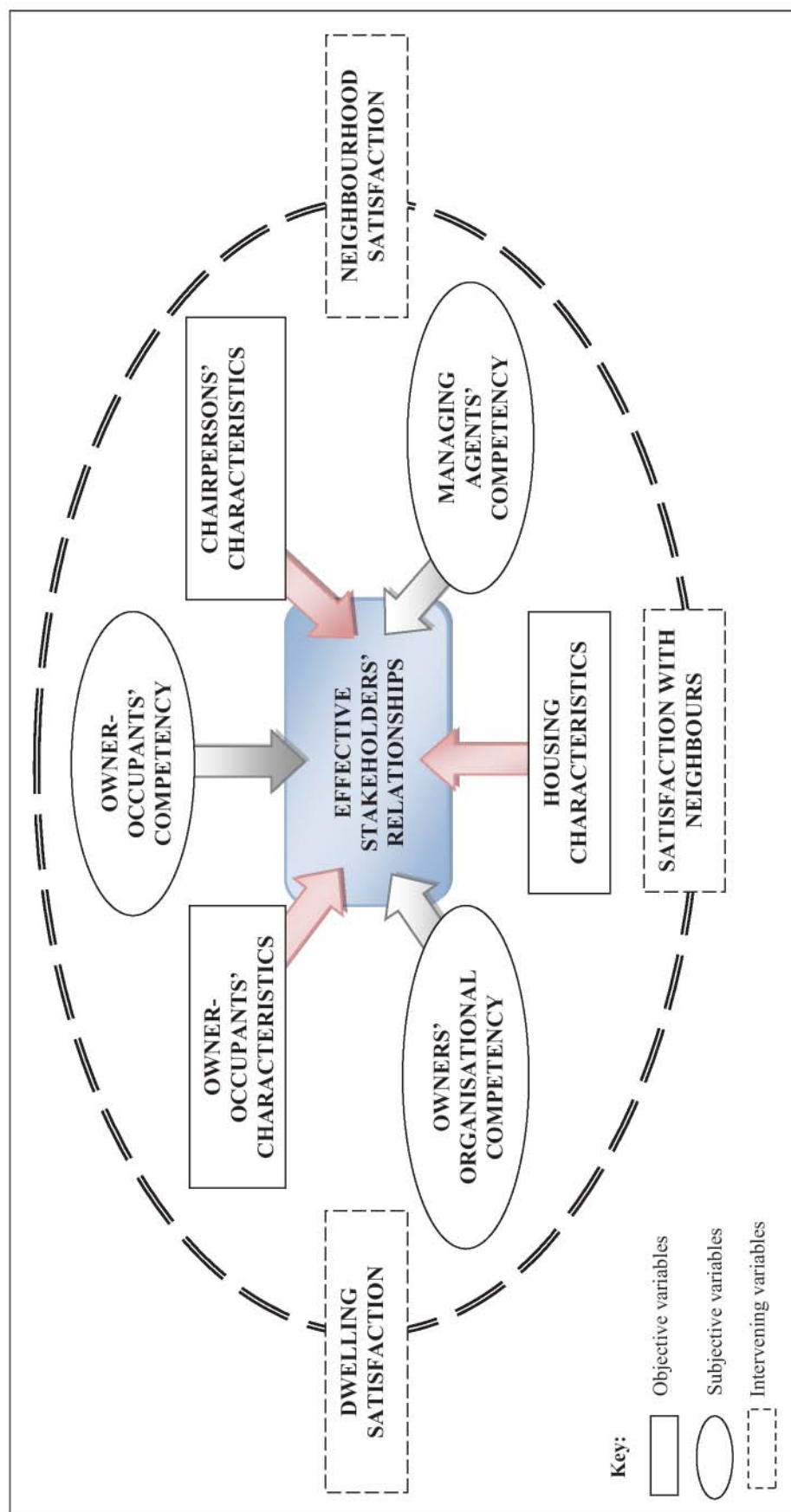
with the community's well-being and the more pleased they became on being residents of such a neighbourhood. The second result revealed that a low level of residents' participation in the residents' association resulted in a lack of neighbourhood cohesion, although many claimed that they attended meetings organised by their residents' associations.

If previous studies by researchers outside Malaysia investigated the upmarket single-family dwellings (e.g., Galster 1987; Rohe & Stewart 1996) or low-income homeowners of new town housing (e.g., Rohe and Basolo 1997), studies in Malaysia mainly investigated low-income housing developments. However, these studies did not take into account the criteria of housing management systems (as shown in Table 4.1), which is an important element of this research thesis.

4.6 Variables Explaining the Conceptual Framework of Effective Stakeholders' Relationships

The conceptual framework of this study has been developed based on the literature review of four main propositions, namely, homeownership, housing management, participation in collective action and residential satisfaction. A series of variables explaining the conceptual framework of effective stakeholders' relationships is proposed through Figure 4.8.

In general, the proposed variables are grouped into two components: (i) objective variables component and (ii) subjective variables component. Objective variables describe the elements' characteristics. For this study, the characteristics of owner-occupants, chairpersons and housing form the objective variables. Subjective variables include elements of an individual's perception and behaviour. As shown in Figure 4.8, owner-occupants' competency, owners' organisational competency, managing agents' competency, dwelling satisfaction, neighbourhood satisfaction and satisfaction with neighbours are grouped into this component. The next section explains in detail all the proposed variables and their relationships.



Source: This study's proposed conceptual framework

Figure 4.8: Conceptual framework of effective stakeholders' relationships for multi-owner low-cost housing management

4.6.1 Specification of Dependent Variable for Effective Stakeholders' Relationships

Chapter 3 has discussed the importance of housing management to ensure that buildings, facilities, services and physical environment of residential area are in a good place to live, and appropriate to the needs of people that change over time. Furthermore, the literature review in this chapter has shown the need for the formation of residents' associations to manage multi-owned housing, either ownership or rental scheme, and either private housing or public housing.

Act 318 and Akta663 currently used in Malaysia provide for the needs of the establishment of residents' associations, the Management Corporation. These Acts also outlines the roles and responsibilities need to be executed by residents of the stratified residential development (see Chapter 3). However, housing management is never easy. Previous studies either in Malaysia or outside Malaysia, have been debating issues related to housing management organisation (e.g. Econ 2005; Lias 2007; Muhamad Ariff & Davies 2009a; Lau 200a; Tiun & Lim 2007; Christudason 2004).

Issues related to housing management organization have been discussed in Chapters 3 and 4. Complex relationship between the stakeholders in the housing management organisation; people (owner-occupants, tenant-residents and investment-owners), resident associations, and (or without) the management agent has stated clearly in the Figure 4.5 of this chapter. Inspired by these findings, this study suggests that conflicts between stakeholders could be reduced if their relationships could be improved. This study suggests that conflicts between stakeholders could be reduced if their relationships could be improved.

As shown in Table 4.2, an effective stakeholders' relationships variable is measured by the sum of seven items including two behavioural and perception components: (i) stakeholders' behaviour toward their relationships with other stakeholders and (ii) the perception of stakeholders' participation.

The stakeholders' behaviour toward their relationships with other stakeholders consists of three items that measure their relationships with other owner-occupants and tenant-residents, their owners' organisation and managing agents. Meanwhile four items measure the stakeholders' perceptions about other stakeholders' participation-behaviour. Although tenant-residents are not classified as direct stakeholders, however, based on previous studies, tenant-residents may have an impact on housing management systems. Thus, one item concerning tenant-residents is included to measure the overall stakeholders' relationships.

Table 4.2: Dependent variables of effective stakeholders' relationships

Components	Measurement parameter
Stakeholders' behaviour toward their relationship with other stakeholders	(i) Relationship between owner-occupants and the owners' organisation
	(ii) Relationship between owner-occupants and the managing agent
	(iii) Relationship between the owners' organisation and the managing agent
Perception of stakeholders' participation	(i) Owner-occupants participation in owners' organisation
	(ii) Owners' organisation acting on behalf of the owners
	(iii) Managing agents' participation in owners' organisational activities
	(iv) Tenant-residents' participation in housing management and maintenance affairs

Source: This study

4.6.2 Specification of Independent Variables for Effective Stakeholders' Relationships

Six independent variables that include objective and subjective variables are modelled to influence the dependent variable.

4.6.2.1 Objective variables

Figure 4.8 shows owner-occupants' characteristics, chairpersons' characteristics and housing characteristics as objective, independent variables predicting satisfaction with stakeholders' relationships.

In the owner-occupants' characteristics variable, the variable is divided into two categories: socio-demographic characteristics and socio-economic characteristics. The socio-demographic characteristics are the age (AGE), gender status (GENDER), marital status (MARITAL), number of people living together (PEOPLE), number of children living together (CHILDREN), duration of residence (RESIDENCY) and intention to move or mobility plan (MOBILITY). Socio-economic characteristics variables are explained by the owner-occupants' education attainment (EDUCATION), households' gross incomes (INCOME) and two items related to owner-occupants' participation level in activities (Part_activities) and meetings (Part_meetings) organised by their respective owners' organisations.

The chairpersons' characteristics variable is represented by the chairpersons' category (Chairperson_category), the duration for which the current chairman has held the position (Chairperson_duration), the chairpersons' commitments in other community organisations (Chairperson_other_organisations) and chairpersons' experience levels (Chairperson_experience) associated with housing management.

The housing characteristics variable is derived from the theory of collective action reviewed in Section 4.3 and the influence of homeownership rates reviewed in Section 4.4. Bengtsson (2000) determined housing characteristics to be an important element in his model of collective action for Sweden's public housing estates. His research revealed no definite relationship between the physical character of the estate and development of a sustainable corporation, but indicated that sustainable co-operation can be established in large rental housing areas occupied by low-income groups.

As shown in Table 4.3, other empirical studies by Lai and Chan (2004) and Yip, Chang and Hung (2007) confirmed the influence of several housing characteristics in multi-owner housing management systems. The study by Lai and Chan (2004) indicated that housing characteristics, that is, the size, age and location have a significant relationship with residents' collective actions in the formation of Hong Kong's private condominium owners' corporations. They examined the owners' patterns of participation to verify Olson's group theory—the larger the number of

owners of an estate, the less likely that the estate's owners would establish an owner's corporation (p. 59). Their findings showed that the older urban estates with fewer owners were the ones who were more likely to set up owners' corporations.

Table 4.3: Influence of housing characteristics on housing management

Authors	Research aim	Housing characteristic variables
Lai and Chan (2004)	Formation of owners' corporation	Number of owners/units
		Location (urban)
		Age of the housing estates
Yip et al. (2007)	Choice of condominium mode	House price
		Types of condominiums
		Sense of community cohesion
		Age
		Density
		Percentage of communal floor areas

Source: This study's literature review

Using Wekerle et al.'s findings (1980), Yip, Chang & Hung (2007) investigated the relationship between condominiums' characteristics in Hong Kong and Taipei, and the management approach taken by the residents. Their findings indicated that the house price, age of buildings and household density were significant factors for both cities. Types of condominium are significant only in Taipei, whereas community cohesion is significant only in Hong Kong. However, the proportions of communal floor areas (to measure the complexity of management's scope) do not have any significant impact on the choice of management approach for both cities.

Referring to Section 4.4.1.1, homeownership rates have been shown to increase neighbourhood attachment, but not the homeowners' behaviour towards upkeep and maintenance and involvement. Can similar results be achieved if the subject of the study is the low-income homeowners who live in multi-owner low-cost housing? This study investigates the aforementioned findings in the context of low-income units' owners in multi-owner low-cost housing.

Considering the different categories of residents in multi-owner housing developments as reviewed in Section 4.4.1.2 the term 'homeownership rates' used

in previous studies is replaced with 'owner-occupant rates'. Homeownership rate refers to the percentage or number of home owners in a respective neighbourhood. For this study, occupancy rates are referred to as the percentage of unit owners-occupants compared to rented units and vacant units. This ratio is predicted to affect the stakeholders' relationships.

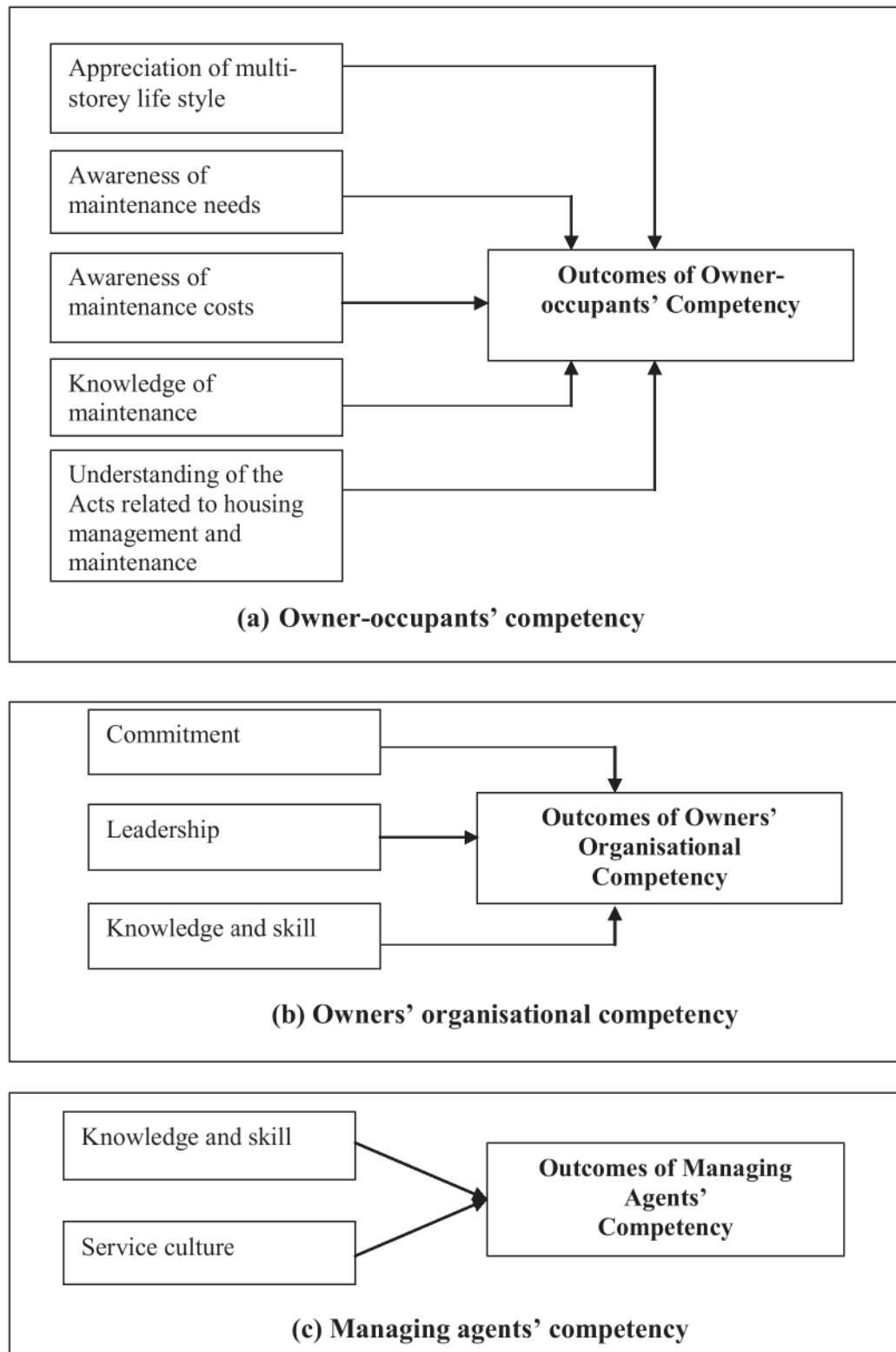
In order to meet the needs of this study, occupancy rates (OCCUPANCY RATES), location (LOCATION), age of development (AGE) and type of development (TYPE) have been used to describe housing characteristics.

4.6.2.2 Subjective variables

Studies of stakeholders' conflicts, have suggested three subjective independent variables: (i) owner-occupants' competency, (ii) owners' organisational competency and (iii) managing agents' competency.

As shown in Figure 4.9, the owner-occupants' competency variable is defined by five items, namely (i) owner-occupants' appreciation of multi-storey lifestyle, (ii) owner-occupants' awareness of maintenance needs, (iii) owner-occupants' awareness of the costs of maintenance, (iv) owner-occupants' knowledge of maintenance and finally, (v) owner-occupants' understanding of the Acts relating to housing management and maintenance.

Owners' organisational competency variable is explained by owners' organisational commitment, owners' organisational leadership and owners' organisational knowledge and skill. Finally, the managing agents' competency is measured by two items: (i) the managing agents' knowledge and skill and (ii) managing agents' service culture.



Source: This study's proposed variables

Figure 4.9: Indicators of subjective independent variables

4.6.3 Intervening Variables

Previous studies have indicated that low-income households may not be able to move away if they are dissatisfied with their residential environment (Amerigo & Aragonés 1997). Therefore the conceptual framework models the degree of residential satisfaction as the need, aspiration and the reality of the current residential context. It is unlikely that all homeowners will demonstrate an equal degree of satisfaction with the same residential environment. Three dimensions of residential satisfaction are described here, namely, (i) dwelling satisfaction (DwellSat), (ii) neighbourhood satisfaction (NbhoodSat) and (iii) satisfaction with relationships with neighbours (NbourSat).

This study considers the effects of residential satisfaction dimensions as intervening variables that intervene in the relationships between independent variables and the dependent variable. Residential satisfaction is modelled to produce direct and indirect effects. A direct effect can indicate a causal relationship between two variables and an indirect effect is the relationship that involves a sequence of two direct effects.

DwellSat is measured by four items: (i) overall features, (ii) the overall state of maintenance for the housing estate, (iii) the physical condition of individual units and (iv) the overall state of maintenance for individual units. As this study's focus is on multi-owner low-cost housing developments' management, three of the four items (items (i), (ii) and (iv)) mentioned here are relevant to the overall housing units. Only the third item concerns the respondents' individual unit.

NbhoodSat examines the effect of neighbourhood satisfaction on housing management practices in Malaysia. The titles of low-cost housing developments relate to each residential block, therefore, neighbourhood satisfaction is measured by five items that consist of two neighbourhood features: (i) physical features and (ii) social features. Satisfaction with the overall housing's living environment and community's facilities is explained by the physical features. Satisfaction with neighbourhood cohesion, the neighbourhood as a good place to live in and the neighbourhood as a safe place to live in are considered as social features.

NbourSat consists of four items: (i) interaction and owner-occupants' relationships, (ii) interaction and relationships between owner-occupants and tenant-residents, (iii) owner-occupants' participation and (iv) tenant-residents' participation in social activities organised by owners' organisations. Satisfaction with neighbours also considers the owner-occupants' satisfaction with tenant-residents since the literature suggests tenant-residents cannot be excluded from the residential environment as they are part of the reason affecting housing management processes.

These relationships are illustrated in Figure 4.10 and explained in the next section.

4.7 An Overview of the Conceptual Framework

Figure 4.10 illustrates the relationships proposed for the conceptual framework of effective stakeholders' relationships. These relationships between variables have been identified from literature, observation and preliminary survey as being significant to this study. In this figure, sets of the dependent variable, independent variables and intervening variables are denoted as rectangles. Meanwhile, presumed causal relationships between these variables are shown as arrows or 'paths'. The next section provides an explanation and justification for each presumed relationship.

4.7.1 Independent Variables

As previously identified, there are six sets of independent variables established as influencing satisfaction with effective stakeholders' relationships (refer Figure 4.8). Owner-occupants' characteristics, chairpersons' characteristics and housing characteristics are regarded as objective variables and the owner-occupants' competency, owners' organisational competency and managing agents' competency are modelled as subjective variables. The following sub-section clearly explains the relationship developed between these variables.

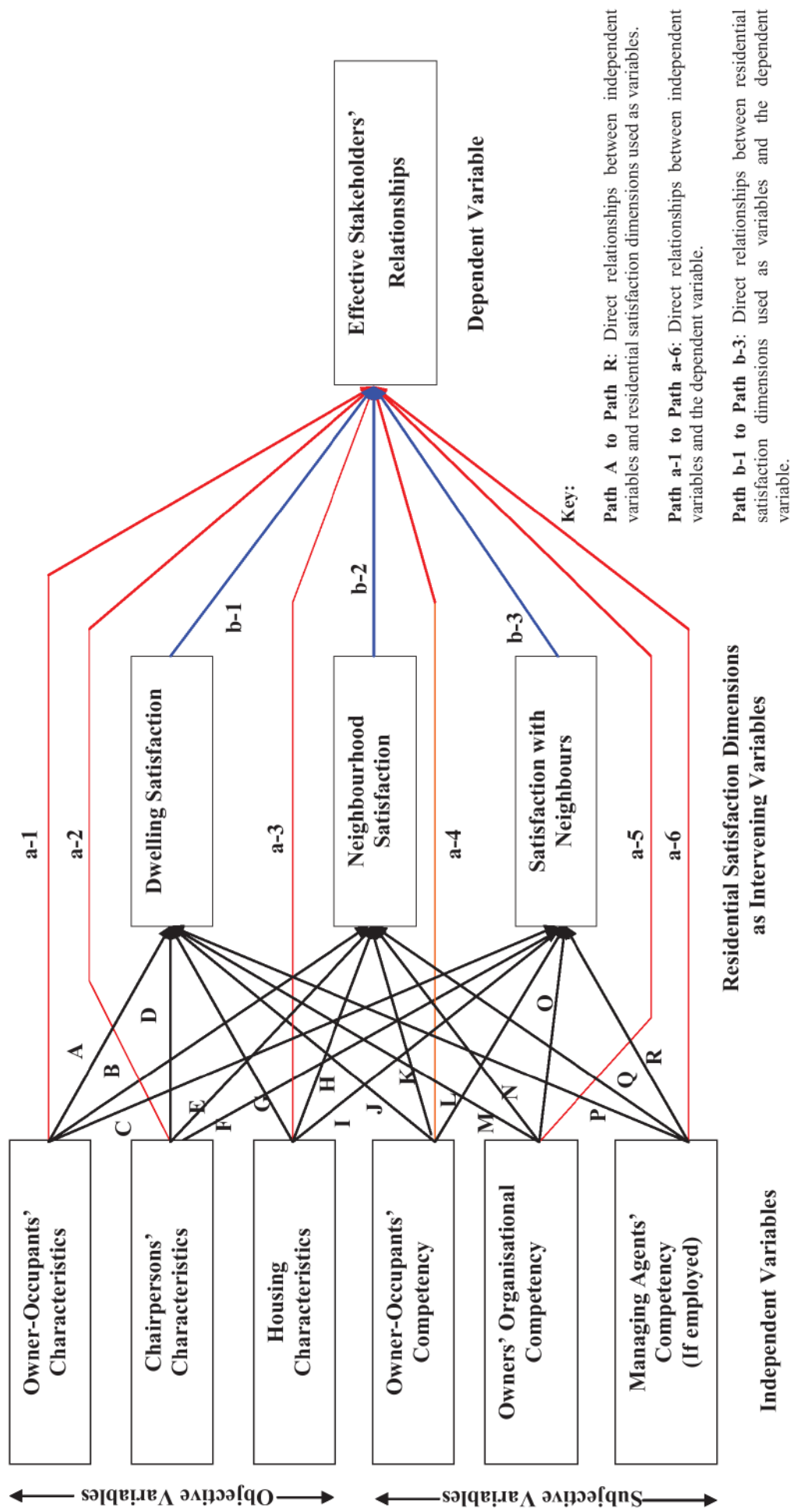
4.7.1.1 Objective Variables

As illustrated in Figure 4.10, the dependent variable effective stakeholders' relationship is expected to be influenced by the objective variables of the characteristics of owner-occupants, chairperson and housing development. The next sub-section describes in detail the presumed relationships.

4.7.1.1.1 Owners-occupants' Characteristics

As shown in Figure 4.10, the first objective independent variable is owners-occupants' characteristics. This variable is predicted to directly influence respondents' satisfaction with stakeholders' relationships (Path a-1). Owner-occupants' characteristics may also impact upon their satisfaction in residential satisfaction dimensions of dwelling satisfaction (Path A), neighbourhood satisfaction (Path B) and satisfaction with neighbours' relationship (Path C).

As illustrated in Figure 4.10, this study predicts that owner-occupants' characteristics such as aged owner-occupants who stay longer, are married and have children are more attached to their residential environment. They are expected to have a strong sense of neighbourhood and a sense of pride and belonging. In order to continue to maintain this identity, they will engage with housing management systems and promote good relationships among stakeholders. They are also expected to have high level of satisfaction with their dwelling, neighbourhood and neighbours.



Source: This study's proposed conceptual framework

Figure 4.10: Presumed relationships of the conceptual framework of effective stakeholders' relationships

Owner-occupants who have high household incomes and high levels of education are predicted to have good relationships with stakeholders. This is likely as they perceive the standard of condition of their unit and housing environment as a symbol of prosperity and social status. Hence, they may have a higher concern for their residential environment compared to other owner-occupants with low household incomes and education levels. Meanwhile, those who are active in community activities and meetings organised by their owners' organisations are expected to have good relationships with stakeholders. Greater affection and satisfaction with residential satisfaction dimensions are also expected to be dominant in this group due to their involvement in the organisation.

4.7.1.1.2 Chairpersons' Characteristics

The chairpersons' characteristics variable is presumed to directly affect satisfaction with stakeholders' relationships (refer Path a-2 of Figure 4.10). As shown in Figure 4.10, the relationship between chairpersons' characteristics and residential satisfaction is also examined. Path D is linked to dwelling satisfaction, Path E is linked to neighbourhood satisfaction and Path F is linked to satisfaction with neighbours.

Past studies have shown that effective housing management requires an effective owners' organisational structure (Blandy, Dixon & Dupis 2006; Budgen 2005; Chan & Webster 2005; Christudason 2007; Easthope & Randolph 2009; Liias 1998; Lim 2002; Yip & Forrest 2002; Wekerle et al. 1980). Chairpersons of owners' organisations are expected to have greater leadership skills in order to lead the housing management. As shown in Figure 4.10, their characteristics are presumed to influence their perception of their relationships with stakeholders. Chairpersons are also expected to have an impact on relationships between stakeholders. In addition, chairpersons who have other community work experience and have held leadership positions for a long period are also expected to have higher satisfaction with other stakeholders and with residential satisfaction dimensions.

4.7.1.1.3 Housing Characteristics

As shown in Figure 4.10, the housing characteristics variable is expected to have a significant relationship with the dependent variable (Path a-3). In addition, housing characteristics may be seen to affect respondents' perception of dwelling satisfaction (Path G), neighbourhood satisfaction (Path H) and satisfaction with neighbours (Path I).

Based on the relationship illustrated in Figure 4.10, owner-occupants who occupy units in walk-up housing developments (less than five storeys) is predicted to have a higher attachment to their neighbourhood than the owner-occupants who live in high-rise dwellings. Greater neighbourhood attachment could lead to higher effective relationship between stakeholders. The higher proportion of units being occupied by owners will influence stakeholders' relationships as they are likely to share their common interests, goals and values for their residential environment.

4.7.1.2 Subjective Variables

As shown in Figure 4.10, the dependent variable effective stakeholders' relationships is expected to be influenced by the subjective variables of stakeholders' competency, i.e. owner-occupants' competency, owners' organisation competency and the managing agents' competency. These relationships are explained in the next sub-section

4.7.1.2.1 Owner-Occupants' Competency

Looking at Figure 4.10, satisfaction with the owner-occupants' competency variable is expected to directly influence the effectiveness of stakeholders' relationships (Path a-4). Owner-occupants' competency may also have direct impacts on dwelling satisfaction (Path J), neighbourhood satisfaction (Path K) and satisfaction with neighbours (Path L).

The presumed relationships expected that owner-occupants with high levels of awareness and knowledge and who understand matters related to housing management are expected to be more proactive, thus enhancing relationships between stakeholders. Owner-occupants with such competency are also expected to have high levels of residential satisfaction.

4.7.1.2.2 Owners' Organisational Competency

The next subjective variable shown in Figure 4.10 is owners' organisational competency, modelled to directly respond to the effectiveness of stakeholders' relationships (Path a-5). This variable is considered to have significant relationships with residential satisfaction dimensions. Path M is linked to dwelling satisfaction, Path N is linked to neighbourhood satisfaction and Path O is linked to satisfaction with neighbours.

The conceptual framework presumed that competent owners' organisations and committee members with effective leadership's skills and having adequate knowledge of maintenance are likely to instigate positive relationships between stakeholders. Satisfied owner-occupants are presumed not only to be satisfied with the relationships between stakeholders, but they could also be satisfied with their dwelling, neighbourhood and neighbours.

4.7.1.2.3 Managing Agents' Competency

The final subjective variable is the managing agents' competency illustrated in Figure 4.10, which has direct impact on the effectiveness of stakeholders' relationships (Path a-6). In providing further insight towards this relationship, residential satisfaction dimensions are presumed to be affected by the variables dwelling satisfaction (Path P), neighbourhood satisfaction (Path Q) and satisfaction with neighbours (Path R).

The proposed relationships imply that managing agents as service providers are predicted to influence housing management. Appointed to serve both owners and the owners' organisations, their competency is important. This study predicts that

owner-occupants satisfied with their managing agents' knowledge, skill, and service culture delivery would have enhanced stakeholders' relationships. Owner-occupants satisfied with those factors of the managing agents' competency variable are also predicted as having the same perception for the satisfaction with the dwelling, neighbourhood and neighbours.

4.7.2 Residential Satisfaction Dimensions

As mentioned earlier, residential satisfaction dimensions are predicted to have direct and indirect effects. The direct effects are linked to residential satisfaction dimensions with six sets of independent variables as described in the previous section (see section 4.7.1). Supported with Figure 4.10, this section explains the direct relationships between residential satisfaction and effective stakeholders' relationships. It will then explain the indirect effects of residential satisfaction that are expected to intervene in the direct relationships between the subjective independent variables and the dependent variable.

4.7.2.1 Residential Satisfaction Dimensions as Independent Variables (Direct Effects)

As shown in Figure 4.10, residential satisfaction dimensions are presumed to have relationships with the dependent variable. The links are presented by the following: Path b-1 is linked to dwelling satisfaction, Path b-2 is linked to neighbourhood satisfaction and Path b-3 is linked to satisfaction with neighbours.

The proposed links indicate that owner-occupants who are satisfied with their dwelling, neighbourhood and neighbours are more likely to form a strong attachment to their residential environment. They are expected to be more aware of good housing management that maintains or improves the standard of their residential environmental standard. Thus, they are expected to actively engage in housing management. They may develop a sense of shared responsibility with other stakeholders. Alternatively, those who are less satisfied with the above residential satisfaction dimensions tend not to participate in housing management or may isolate themselves.

4.7.2.2 Residential Satisfaction Dimensions as Intervening Variables (Indirect Effects)

The relationships produced from intervening effects of residential satisfaction dimensions are considered to be the indirect effects. Only the relationship between the dependent variable and the three subjective independent variables namely the owner-occupants' competency, owners' organisational competency and managing agents' competency are modelled to be intervened in by the residential satisfaction dimensions. The objective variables are excluded as measurements for these variables are based on nominal scales. In order to statistically analyse the intervening effects, all variables must have the same measurement scale, that is, ordinal or score (Schumacker & Lomax 1996). In this case, subjective independent variables, intervening variables and the dependent variable are measured using an ordinal scale, later treated as scores in order to allow further statistical analysis.

As illustrated in Figure 4.10, the intervening effect of direct relationships between owner-occupants' competency variable and the dependent variable are shown as (i) 'Path J to b-1' by dwelling satisfaction, (ii) 'Path K to b-2' by neighbourhood satisfaction and (iii) 'Path L to b-3' by satisfaction with neighbours. With regard to owners' organisational competency, the effects of intervening variables are shown as 'Path M to b-1' by dwelling satisfaction, 'Path N to b-2' by neighbourhood satisfaction and 'Path O to b-3' by satisfaction with neighbours. With regard to managing agents' competency, the intervening effects of dwelling satisfaction, neighbourhood satisfaction and satisfaction with neighbours are shown as 'Path P to b-1', 'Path Q to b-2' and 'Path R to b-3', respectively.

The descriptions of this links are the owner-occupants' opinions about their dwelling, neighbourhood and neighbours offer important insights and are predicted to have a greater impact on the overall residential satisfaction dimensions. This study argues that residential satisfaction is a determination of whether owner-occupants will have a good relationship with other stakeholders. This study ascertains the subjective, independent variables of the owners-occupants' competency, owners' organisational competency and managing agents'

competency that will provide predictive power for residential satisfaction evaluation, which will probably affect stakeholders' relationships.

4.8 Hypotheses Development

The previous section (see section 4.6 and 4.7) has described the proposed relationships with statements of assumptions and expectations. Relationships between two or more variables must be transferred to logic statements in the form of testable hypotheses (Caldwell 2004; Sekaran 2003). This section lists the hypotheses and because there are a series of relationships, the study makes use of sub-sections for ease of understanding. In this study, the null hypothesis (H_o) means that there is no statistical difference between the relationships. If significant difference is found, the null hypothesis is rejected. Therefore, an alternative hypothesis (H_a) will be accepted.

4.8.1 Hypotheses for Relationships between Objective Independent Variables and the Dependent Variable

The main hypotheses for predicting significant relationships between objectives independent variable and the dependent variable are as follow:

H1_o: Respondents' category differences [represented by: (i) owner-occupants and (ii) Chairpersons] have no significant influence on stakeholders' relationships.

H1_a: Respondents' category differences [represented by: (i) owner-occupants and (ii) Chairpersons] have significant influence on stakeholders' relationships.

H2_o: Owner-occupants' characteristics [represented with socio-demographics' characteristics: AGE, GENDER, MARITAL, PEOPLE, CHILDREN, RESIDENCY and MOBILITY] have no significant influence on stakeholders' relationships.

H2_a: Owner-occupants' characteristics [represented with socio-demographics' characteristics: AGE, GENDER, MARITAL, PEOPLE, CHILDREN, RESIDENCY and MOBILITY] have significant influence on stakeholders' relationships.

H3_o: Owner-occupants' characteristics [represented with socio-economics' and participation's characteristics: EDUCATION, INCOME, Part_activities and Part_meetings] have no significant influence on stakeholders' relationships.

H3_a: Owner-occupants' characteristics [represented with socio-economics' and participation's characteristics: EDUCATION, INCOME, Part_activities and Part_meetings] have significant influence on stakeholders' relationships.

H4_o: Chairpersons' characteristics [represented by: Chairperson_category, Chairperson_duration, Chairperson_other_organisations and Chairperson_experience] have no significant influence on stakeholders' relationships.

H4_a: Chairpersons' characteristics [represented by: Chairperson_category, Chairperson_duration, Chairperson_other_organisations and Chairperson_experience] have significant influence on stakeholders' relationships.

H5_o: Housing characteristics [represented by: OCCUPANCY RATES, LOCATION, AGE and TYPE] have no significant influence on stakeholders' relationships.

H5_a: Housing characteristics [represented by: OCCUPANCY RATES, LOCATION, AGE and TYPE] have significant influence on stakeholders' relationships.

4.8.2 Hypotheses for Relationships between Objective Independent Variables and Residential Satisfaction Dimensions

The main hypotheses for predicted significant relationships between objectives independent variables and residential satisfaction dimensions are as follow:

H6_o: Respondents' category differences [represented by (i) owner-occupants and (ii) chairpersons] have no significant influence on residential satisfaction dimensions.

H6_a: Respondents' category differences [represented by (i) owner-occupants and (ii) chairpersons] have significant influence on residential satisfaction dimensions.

H7₀: Owner-occupants' characteristics [represented by socio-demographics' characteristics including AGE, GENDER, MARITAL, PEOPLE, CHILDREN, RESIDENCY and MOBILITY] have no significant influence on residential satisfaction dimensions.

H7_a: Owner-occupants' characteristics [represented by socio-demographics' characteristics including AGE, GENDER, MARITAL, PEOPLE, CHILDREN, RESIDENCY and MOBILITY] have a significant effect on residential satisfaction dimensions.

H8₀: Owner-occupants' characteristics [represented by socio-economics' and participation's characteristics including EDUCATION, INCOME, Part_activities and Part_meetings] have no significant influence on residential satisfaction dimensions.

H8_a: Owner-occupants' characteristics [represented by socio-economics' and participation's characteristics including EDUCATION, INCOME, Part_activities and Part_meetings] have a significant effect on residential satisfaction dimensions.

H9₀: Chairpersons' characteristics [represented by Chairperson_category, Chairperson_duration, Chairperson_other_organisations and Chairperson_experience] have no significant influence on residential satisfaction dimensions.

H9_a: Chairpersons' characteristics [represented by Chairperson_category, Chairperson_duration, Chairperson_other_organisations and Chairperson_experience] have a significant influence on residential satisfaction dimensions.

H10₀: Housing characteristics [represented by OCCUPANCY RATES, LOCATION, AGE and TYPE] have no significant influence on residential satisfaction dimensions.

H10_a: Housing characteristics [represented by OCCUPANCY RATES, LOCATION, AGE and TYPE] have a significant influence on residential satisfaction dimensions.

4.8.3 Hypotheses for Significant Relationships between Subjective Independent Variables and the Dependent Variable

The main hypotheses for predicted significant relationships between subjective independent variables and the dependent variable are as follows:

H11₀: There are no significant relationships between satisfaction with stakeholders' competency [represented by (i) owner-occupants' competency, (ii) owners' organisational competency and (iii) managing agents' competency] and satisfaction with stakeholders' relationships.

H11_a: There are significant relationships between satisfaction with stakeholders' competency [represented by (i) owner-occupants' competency, (ii) owners' organisational competency and (iii) managing agents' competency] and satisfaction with stakeholders' relationships.

4.8.4 Hypotheses for Significant Relationships between Subjective Independent Variables and Residential Satisfaction Dimensions

The main hypotheses for predicted significant relationships between subjective independent variables and the residential satisfaction dimensions are as follow:

H12₀: There are no significant relationships between satisfaction with stakeholders' competency [represented by (i) owner-occupants' competency, (ii) owners' organisational competency and (iii) managing agents' competency] and residential satisfaction dimensions [represented by (i) dwelling satisfaction, (ii) neighbourhood satisfaction and (iii) satisfaction with neighbours].

H12_a: There are significant relationships between satisfaction with stakeholders' competency [represented by (i) owner-occupants' competency, (ii) owners' organisational competency and (iii) managing agents' competency] and residential satisfaction dimensions [represented by (i) dwelling satisfaction, (ii) neighbourhood satisfaction and (iii) satisfaction with neighbours].

4.8.5 Hypotheses for Significant Relationships between Residential Satisfaction Dimensions and the Dependent Variable

The main hypotheses for predicted significant relationships between subjective independent variable and the dependent variable are as follows:

H13_o: There are no significant relationships between residential satisfaction dimensions [represented by (i) dwelling satisfaction, (ii) neighbourhood satisfaction and (iii) satisfaction with neighbours] and satisfaction with stakeholders' relationships.

H13_a: There are significant relationships between residential satisfaction dimensions [represented by (i) dwelling satisfaction, (ii) neighbourhood satisfaction and (iii) satisfaction with neighbours] and satisfaction with stakeholders' relationships.

4.8.6 Hypotheses for Intervening Effects of Residential Satisfaction Dimensions on the Relationships between Subjective Independent Variables and the Dependent Variable

The main hypotheses for predicted significant intervening effects of residential satisfaction dimensions on the relationships between subjective independent variables and the dependent variable are as follow:

H14_o: There are no intervention effects of dwelling satisfaction on the relationships between satisfaction with stakeholders' relationships and stakeholders' competency [represented by (i) owner-occupants' competency, (ii) owners' organisational competency and (iii) managing agents' competency].

H14_a: There are intervention effects of dwelling satisfaction on the relationships between satisfaction with stakeholders' relationships and stakeholders' competency [represented by (i) owner-occupants' competency, (ii) owners' organisational competency and (iii) managing agents' competency].

H15_o: There are no intervention effects of neighbourhood satisfaction on the relationships between satisfaction with stakeholders' relationships and

stakeholders' competency [represented by (i) owner-occupants' competency, (ii) owners' organisational competency and (iii) managing agents' competency].

H15a: There are intervention effects of neighbourhood satisfaction on the relationships between satisfaction with stakeholders' relationships and stakeholders' competency [represented by (i) owner-occupants' competency, (ii) owners' organisational competency and (iii) managing agents' competency].

H16_o: There are no intervention effects of satisfaction with neighbours on the relationships between satisfaction with stakeholders' relationships and stakeholders' competency [represented by (i) owner-occupants' competency, (ii) owners' organisational competency and (iii) managing agents' competency].

H16_a: There are intervention effects of satisfaction with neighbours on the relationships between satisfaction with stakeholders' relationships and stakeholders' competency [represented by (i) owner-occupants' competency, (ii) owners' organisational competency and (iii) managing agents' competency].

4.9 Conclusion

This chapter presents the theoretical framework for understanding the relationships between the stakeholders for the management of multi-owner low-cost housing developments. The framework describes theories underlying this study namely: homeownership, housing management, collective action (residents' participation), and residential satisfaction. Conflicts between stakeholders undermine the effective management of multi-owner low-cost housing developments. Housing management theory has demonstrated the importance of having an organisation that administers unit owners' interests concerning common properties. This is supported by the theory of collective action that a group is formed when there are individuals that share the same interests.

An organisation is required to administer the common interests for the common good. In housing management theory, owners' participation is very important and necessary, but the level of participation depends on the method of management chosen. This is due to the fact that each method requires a different level of

owners' participation in the provision of policy, decision-making, and policy implementation. Characteristics of residents have been shown by previous studies to affect the approach to housing management taken by the organisation. Previous studies have discussed and proven the relationships between homeownership rates, duration of residency, and individuals' behaviour.

Indeed, previous studies on housing management have shown concerns about the category of residents and the impact on housing management due to different interests. A conflict between stakeholders not only involves stakeholders—namely owner-occupants, investment owners, owners' organisations and managing agents, but also tenant-residents.

Derived from theories and previous research, this chapter has explained the conceptual framework predicting the effectiveness of stakeholders' relationships. Combinations of objective variables (owner-occupants' characteristics, chairpersons' characteristics and housing characteristics) and subjective variables (owner-occupants' competency, owners' organisational competency and managing agents' competency) are expected to directly influence the relationships between the stakeholders. Further, this study has modelled the effects of residential satisfaction dimensions (satisfaction with the dwelling, neighbourhood and neighbours) as intervening variables that affect stakeholders' relationships. Effective stakeholders' relationships are argued to enhance a housing management system's approach and reduce conflicts. Further, testable hypotheses are presented in order to answer the research questions and to achieve the proposed research objectives.

Chapter 5: Methodology

5.1 Introduction

This chapter explains the research strategy employed to achieve the study's aims and objectives. Research is a systematic search for information and involves a systematic process of inquiry (Graziano & Raulin 2007, p. 31). Research requires a strategy that can be established by the process of deductive or inductive reasoning. Deductive reasoning is the method by which we arrive at a reasoned conclusion by logical generalisations of known facts. Inductive reasoning is a process where a certain phenomenon is observed and we logically establish general propositions based on observed facts. This study uses a deductive reasoning approach that involves several steps: observation, preliminary information gathering, theory formulation, hypothesising, scientific data collection, data analysis and deduction (Sekaran 2003).

5.2 Research Strategy

As a deductive study, this research begins with the general theory and goes on to making specific predictions. It started with ideas and interests that were initially built on assumptions based on observation of the current issues of multi-owner low-cost housing management in Malaysia's urban areas. Next, these ideas and interests were clarified and refined so as to define the research problem. In defining the research problem, as suggested by Graziano and Raulin (2007) the study began by clarifying and refining the identified area of interests that generated it. The problem statement was explained in Chapter 1, the observation was explored through literature as reviewed in Chapters 2 and 3. The exploration then was used as a platform to integrate relevant bodies of knowledge to develop the study's theoretical framework in Chapter 4.

Researchers in housing areas have suggested that any attempt to generalise findings of other studies should be done with caution as housing policy, provision

and strategies for each country are different (Ha 1987; Ruonavaara 1993) and studies on collective action and participation also vary depending on the tenure and housing type (Bengtsson 2000; Lau 2002a). Other studies may identify different variables that may not prove relevant to the situation presented there (Sekaran 2003). Therefore, this study has conducted a preliminary survey that involved a series of interviews to clarify research questions and boundaries. These clarifications provided a clear and understandable direction to the research.

The study drew information from the literature review and used the data collected from the preliminary survey to formulate the conceptual framework. Variables responsible for answering the research problem were then transformed into the testable hypotheses (Chapter 4). The goal was to produce comprehensible predictions that were soundly based on the knowledge of previous studies and theories.

The subsequent research strategy is termed the ‘data collection phase’ (Methodology) and entails all subsequent steps taken by the researcher that aim at answering the research questions that can further contribute to the body of knowledge (Graziano & Raulin 2007). A systematic method of data collection is needed to test the research hypotheses. Based on previous studies, the survey-research method used a combination of both quantitative and qualitative data collection techniques and this has been identified as the most appropriate method.

After data collection, comes data analysis. The data in this research are in numerical form and the statistical evaluation procedure is used to determine significant observations by testing the study’s hypotheses through appropriate statistical analysis techniques. Once the data analysis is completed, the results have to be interpreted. The interpretations of this study’s findings are not only related to the research questions and those theories that have been applied here but also consider other related bodies of knowledge. As this study is a problem-definition research, the conclusions are made by interpreting the meanings of the results. The remaining sections of this chapter discuss in detail the approach taken to determine the sample, the administration of data collection, data analysis, ethics and the reliability and viability of the data.

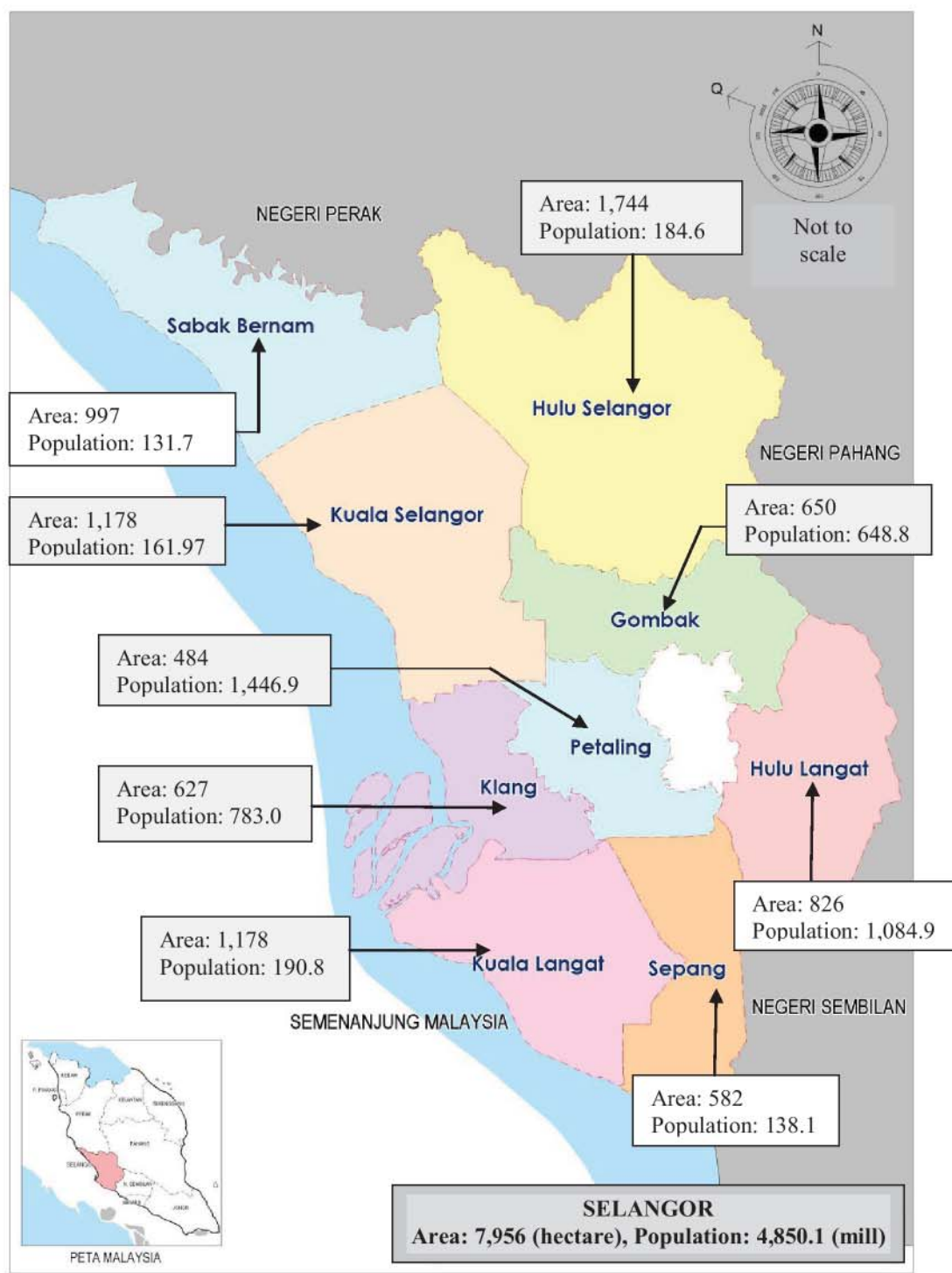
5.3 Criteria for Selection of Study Area

The study was conducted in Selangor state of Malaysia. The rationale for the selection is based on the rapid urbanisation and economic growth experienced by Selangor. These two factors combined with government policy have contributed to Selangor's dominant position as the location of a majority of the multi-owner low-cost housing developments in Malaysia. The following section briefly describes the state of Selangor.

5.3.1 The State of Selangor

Selangor is one of the fourteen states in Malaysia and is located in the central part of Peninsular Malaysia. In the past, Selangor was well-known for its rich tin deposits. This attracted migration from outside Malaysia particularly the Chinese Captains and their mining gangs. In the nineteenth century, the demand for tin increased due to the Industrial Revolution in Europe. In order to monopolise its resources the British colonised Selangor. After the Japanese occupation of Peninsular Malaysia and the Second World War, Selangor became part of the Federation of Malaya. In 1974, His Royal Highness the Sultan of Selangor, ceded the territory of Kuala Lumpur in order to enable the nation's capital to become a Federal Territory. In 1978 His Royal Highness declared Shah Alam as the new capital of Selangor (Warisan Kerabat 2004, p.31).

Figure 5.1 demonstrates that Selangor is divided into nine districts with a total area of 7,956 sq km and total population of 4,850,100. Table 5.1 shows that in 2005, the district of Petaling Jaya had the highest number of people at 1,446,900 and the greatest density compared to other districts, with the district of Sabak Bernam being named the least populated with 131,700 people. In terms of the urban population, 88.1 per cent of Selangor's total population live in urban areas particularly in the districts of Gombak and Petaling Jaya where these areas are 100 per cent urbanised. Selangor has twelve local authorities with two of the authorities achieving city council status, seven municipal councils and three district councils.



Note: Information about the districts' land area (hectare) and population ('000) are for year 2006. Population is in millions.

Source: Map from Selangor State Government (2008)

Land area and population adapted from Selangor State Economic Planning Unit (2006a, pp.2-5)

Figure 5.1: Map of Selangor

Table 5.1: Demographic data of districts of the state of Selangor

District	Number of zones	^(a) Land area 2006 (sq m)	Population			^(a) Population density (%)		^(a) Urban population	
			1999	^(a) 2006	2014	2001	2006	2001	2006
Gombak	6	650	473 116	648 800	719 051	919.54	998.15	100	100
Petaling	14	484	1 160 481	1 446 900	1 991 395	2 641.94	2 989.46	100	100
Hulu Langat	9	826	916 078	1 084 900	1 480 502	1 136.56	1 313.44	97	97.5
Klang	9	627	617 834	783 300	1 096 682	1 133.81	1 249.28	97.3	98.0
Sepang	3	582	143 520	138 100	357 151	202.58	237.29	44.5	46.0
Kuala Langat	3	871	152 409	230 700	242 782	236.97	264.87	43.7	44.5
Hulu Selangor	3	1 744	145 555	184 600	314 197	91.80	105.96	40.5	42.9
Kuala Selangor	5	1 178	165 209	190 800	325 817	146.60	161.97	38.5	39.5
Sabak Bernam	4	997	113 245	131 700	167 229	121.36	132.10	43.6	44.3
Selangor (Total)	56	7 956	3 887 447	4 850 100	6 694 806	538.75	609.62	87.8	88.1

Sources: Adapted from Lembaga Perumahan Negeri Selangor (2005)
^(a) Adapted from Selangor State Economic Planning Unit (2006a)

5.3.2 Economic Characteristics of Selangor

Selangor is located in a strategic geographical setting that makes it the main gateway into Malaysia. This has encouraged rapid economic development due to existing infrastructure that caters to light and heavy industries. Excellent transportation network systems throughout the state enable the emergence of financial centres and support services for investors both locally and abroad (Economic Planning Unit 2006; Unit Perancang Ekonomi Selangor 2006; Warisan Kerabat 2004).

Selangor has diversified its economy from agriculture to industry, commerce and tourism. This outstanding achievement made Selangor the first state in Malaysia to achieve recognition as a 'developed state' from the Malaysian government in 2005. This achievement is fifteen years ahead of Selangor's Vision 2020 (Selangor State Government 2009). Most of the industrial activities are concentrated in urban areas such as Petaling Jaya, which is the main catalyst for the state economy, followed by the districts of Hulu Langat and Klang. The other districts, especially the coastal and northern parts of Selangor, remain relatively non-urban areas with agriculture as the predominant economic activity. Overall in terms of its economic and urbanisation processes, compared to the rest of the states in Malaysia, Selangor is considered as a resourceful and vibrant state.

In line with the economic stability of the country, Selangor's growth rate for GDP as shown in Table 5.2 was the highest at 5.2 per cent in Malaysia for the period from 2001 to 2005. The manufacturing sector is the main contributor towards economic growth for the state (Unit Perancang Ekonomi Selangor & Universiti Putra Malaysia 2006, p. 9) In 2005, Selangor accounted for the largest share of Malaysia's GDP at 23.0 per cent in 2005 with 53.5 per cent in the manufacturing sector and 41.2 per cent in the services sector (Economic Planning Unit 2006, p357).

Table 5.2: Land area, population, urbanisation rate and GDP growth rate in Malaysian states

State	^(a) Land area (sq km)	^(b) Population (mill)			^(b) Urbanisation rate (%)			^(c) GDP growth rate (%) 2001–2005
		2000	2005	2010	2000	2005	2010	
Northern Region								4.4
Kedah	9 425	1.67	1.85	2.04	39.1	39.8	40.3	4.1
Perak	21 005	2.09	2.28	2.44	59.1	59.3	59.3	4.1
Perlis	795	0.21	0.23	0.25	34.0	35.1	35.9	3.4
Pulau Pinang	1 031	1.33	1.50	1.60	79.7	79.8	80.0	5.0
Central Region								4.6
Melaka	1 652	0.65	0.72	0.79	67.5	70.6	73.4	4.2
Negeri Sembilan	6 657	0.87	0.96	1.03	54.9	56.3	57.4	3.8
*Selangor	7 979	4.19	4.87	5.31	87.7	88.4	89.1	5.2 (includes Kuala Lumpur FT)
Kuala Lumpur FT	243	1.42	1.62	1.70	100.0	100.0	100.0	
Southern Region								
Johor	18 987	2.76	3.17	3.46	64.8	66.5	67.7	5.1
Eastern Region								3.5
Kelantan	15 105	1.36	1.51	1.67	33.5	33.4	33.3	3.3
Pahang	35 965	1.30	1.45	1.57	42.0	43.5	44.6	3.9
Terengganu	12 955	0.90	1.02	1.12	49.4	49.8	50.3	3.4
Sabah	73 620	2.60	3.13	3.33	48.1	49.8	51.6	4.3 (includes Labuan FT)
Labuan FT	92	0.08	0.09	0.09	76.3	77.6	78.6	
Sarawak	124 450	2.07	2.34	2.56	48.1	49.5	50.6	4.6
Malaysia	329 961	23.49	26.75	28.96	62.0	63.0	63.8	4.5

Note: (i) FT: Federal Territory, (ii) *Includes Putrajaya FT

Sources: ^(a) Department of Statistics (2009)

^(b) Economic Planning Unit (2006, p.361)

^(c) Economic Planning Unit (2006, p. 357)

In terms of social development, Selangor has shown marked improvement in its peoples' standard of living. The state's annual growth rate of GDP increased to 6.5 per cent in the year 2005 and this statistic was the highest in Malaysia (Selangor State Economic Planning Unit 2006b). Selangor recorded the highest

mean monthly income at RM 5175 compared to the national rate of RM 3249 in 2004. Meanwhile the incidence of poverty recorded a decline from 1.9 per cent in 1999 to 1.0 per cent in 2004 (Economic Planning Unit 2006, p.358).

5.3.3 Urbanisation and Growth of Selangor

Selangor, as the fifth smallest state in Malaysia has experienced rapid immigration inflow due to better job opportunities especially in industrial sectors. Table 5.2 indicates that Selangor's urban population is expected to increase to 89.1 per cent by 2010, higher than the national rate of 63.8 per cent by 2010. This indicates that besides natural population growth, Selangor continues to be attractive to people from rural areas looking for better economic opportunities. This contributes to the increased necessity for developing the housing as well as infrastructure and social amenities. Thus under the Malaysian National Urbanisation Policy, Selangor has been categorised at 'level one conurbation hierarchy' together with the capital city of Malaysia, Kuala Lumpur (Federal Department of Town and Country Planning Peninsular Malaysia 2006).

5.3.4 Squatters' Problem in Selangor

In 1998, the squatters' census had identified 46,941 families living in squatters' settlements in 341 locations in Selangor. As at the end of November 2006, 94.1 per cent or 44,165 families had been removed (Unit Perancang Ekonomi Selangor 2006). This figure is the highest in terms of the country's achievement in its efforts to realise its national vision 'zero squatters by 2005', which was unfortunately not successful. Statistics for year 2008 indicated that 86,885 squatter families were still living in Malaysia. However, this figure had reduced by 20 per cent compared to 2004, which recorded 108,704 squatter families (National Housing Department 2008a).

During the years 2004 to 2008, while other states recorded an upward trend in the number of squatter families present due to the urbanisation process, Selangor had eradicated 94 per cent of its squatters and currently, the state has only 1.4 per cent of Malaysia's total squatter families (National Housing Department 2008a). As

the Malaysian government continues to strive to resolve the squatter issue¹⁰, Selangor continues to be committed to eradicate squatters. Through the state agency, in 2001 the SSDC¹¹ confirmed the State Government's 'zero squatters' programme by instigating a proposal to relocate squatters to decent housing developments.

To assist low-income households in owning a low-cost housing unit, the squatters from the 1998 census were offered discounts and subsidies. Under this scheme the landowner/developer subsidised RM 7000 of the normal cost of low-cost units, which cost RM 42,000¹² in Selangor. This meant that the squatters would only have to pay the balance amount of RM 35,000 (Toyo 2005; Unit Perancang Ekonomi Selangor 2005, p. 111).

5.3.5 Low-Cost Housing Provision in Selangor

Selangor is committed to translating Malaysian government policy concerning low-income households' well-being through the state government's five-year development plan. Based on the state government's 'blue print', the housing policy's goal is to provide decent, affordable housing to be either owned or rented by low-income households. The Selangor Eighth Plan (2000-2005) saw the establishment of the SHRPB¹³ to adequately co-ordinate Selangor's housing sector.

¹⁰ In line with the Nation's 2020 vision, Malaysia's new target to achieve 'Zero Squatters' is by 2020 (National Housing Department 2008a).

¹¹ Selangor State Development Company is a statutory body state's development agency. Its role is as a leader in the economy of Selangor (Selangor State Development Corporation 2007).

¹² RM1 is equivalent to US \$ 0.296. The currency converter is performed by the [Google Currency Converter](#) accessed January 11, 2010.

¹³ The establishment of Selangor Housing and Real Property Board is under the Enactment of the Housing and Property State of Selangor 2001. Its focus is to provide guidance to local authorities (PBT), administer land and development related to housings and real estates, and to coordinate the link between agencies as to enable the rapid development of housing and real estate implemented rapidly (Selangor Housing and Real Property Board 2007).

As mentioned in Chapter 2, the Malaysian government requires 30 per cent of any housing development project to be allocated to the development of low-cost housing. This policy has been interpreted differently by each state depending on the local needs and demands. For Selangor, the percentage of allocation is based on the location and the total housing development area. Any development less than ten acres is subject to the planning authority (subject that the development is on a state-owned or joint venture with state owned/acquired land) while if the development encompasses more than ten acres, the required allocation is as per Table 5.3.

Table 5.3: Percentage allocated for low-cost housing in housing development in Selangor for development over 10 acres

Category of housing	City or municipal council areas (%)	District council areas (%)
Low-cost housing	20	20
Low to medium-cost housing	20	10
Medium-cost housing	10	10

Source: Adapted from Lembaga Perumahan Negeri Selangor (2005, P.123)

The Selangor Eighth Plan (2000-2005), reported low-cost housing developments as dominating Selangor's existing dwelling stock—32.5 per cent from the total 953,055 units reported (Unit Perancang Ekonomi Selangor 2005, p. 111). As shown in Table 5.4, national level data for the Q4 2009 showed Selangor leading with the highest number of low-cost housing units (27.1 per cent) of the national stock. In addition, about 42.2 per cent of Malaysia's multi-storey, low-cost housing stock was located in Selangor. In comparison, Kuala Lumpur ranked second with 20 per cent of the national stock (Valuation and Property Services Department 2010, p.5).

Table 5.4: Stock of residential property in Malaysia and Selangor

Characteristics	^(a) Q4 2002	^(b) Q4 2009
Total existing national stock of residential units (unit)	2,991,738	4,322,921
Percentage dominated by Selangor	24.7 per cent (rank 1/16)	28.7 per cent (rank 1/16)
*Total existing national stock of low-cost dwelling (unit)	739,685	1,017,542
Percentage dominated by Selangor	24.3 per cent (rank 1/16)	27.1 per cent (rank 1/16)
Total existing national stock of multi-storey low-cost/flats (units)	263,916	445,684
Percentage dominated by Selangor	39.5 per cent (rank 1/16)	42.2 per cent (rank 1/16)

Notes: *Includes multi-storey and detached landed dwelling

Sources: ^(a) Adapted from Residential Property Stock Report, Q4 2002, Valuation and Property Services Department (2003, p.12)

^(b) Adapted from Residential Property Stock Report, Q4 2009, Valuation and Property Services Department (2010, p.5)

This section has highlighted the economic base, rapid urbanisation and expansion of low-cost housing schemes to eradicate slum and squatter dwellings in Selangor. The rapid development of multi-storey properties, including the low-cost housing developments in Selangor has resulted in management and maintenance issues now requiring greater attention from the state government. Prior to the enactment of Malaysia's Building and Common Property Act (Maintenance and Management) 2007 [Act 663], which requires the co-operation between the developer and the unit owners to manage the housing before being transferred to a Management Corporation (MC), Selangor was the first state to introduce a pre-MC guideline—a guideline that requires participation from both developers and unit owners in housing management, which is quite similar to Act 663.

5.3.6 Areas Selected For Sampling

Three urbanised local authorities' areas have been selected for detailed study from two districts—Shah Alam and Petaling Jaya part of the district of Petaling and Ampang Jaya from the district of Hulu Langat (some areas of Ampang Jaya are located within Gombak district). Both districts, as shown in Table 5.5, have high proportions of multi-owner low-cost housing developments that have been issued strata titles. The background for each area is as follows:

Table 5.5: Distribution of existing stock of multi-storey low-cost housing units and number of low-cost housing units issued strata titles in Selangor

Districts	^(a) Existing stock of multi-storey low-cost housing (unit)		Housing estates that have been issued strata titles (number)
	Q4 2007	%	
Gombak	22 561	12.3	Not available
Petaling	68 328	37.0	^(b) 30
Hulu Langat	53 185	28.9	^(b) 30
Klang	16 381	9.0	^(b) 2
Sepang	2 725	1.5	Not available
Kuala Langat	1,880	1.0	^(c) none
Hulu Selangor	18,637	10.1	^(b) 4
Kuala Selangor	339	0.2	^(c) none
Sabak Bernam	0	0	Not applicable
Total	184 036	100	*66

Notes: *Only 66 titles of 97 housing estates (as December 2007) listed in the document provided by the Strata Title Division.

Source: ^(a) Statistics provided by the Valuation & Property Services Department, Ministry of Finance, Malaysia (2008)

^(b) Data provided by the Strata Title Division of Selangor (2008)

^(c) Data provided by respective Land District Officers (2008)

5.3.6.1 Shah Alam

Shah Alam is located within the district of Petaling and was established in 1963 as the administrative centre for Selangor state (since Kuala Lumpur was made a Federal Territory on February 1974). Fifteen years later, Shah Alam was proclaimed as the capital of Selangor. Due to rapid economic development and urbanisation, Shah Alam was upgraded from its status of a town and declared a city in 2000, and Shah Alam Municipal Council was upgraded to Shah Alam City Council (Majlis Bandaraya Shah Alam 2009). With land area covering 290.3 square km and a population of nearly 440,000 (as at 2006) Shah Alam is now preparing for additional population growth to 470,000 by 2010 as a result of nationwide population migration and a rising birth rate (Selangor State Economic Planning Unit 2006b).

5.3.6.2 Petaling Jaya

Petaling Jaya is located in the Petaling district and was established by the Selangor state government in the early 1950s as a new settlement and township to help relieve the urbanisation stress on Kuala Lumpur, which was witnessing rapid increases in residents and squatter areas in its suburban regions. To accommodate this population, about 3,600 acres of rubber estates were transformed into a new town (Petaling Jaya City Council 2009a). Being the first planned town in Malaysia, Petaling Jaya is the richest and biggest town in Selangor with a population of more than 470,000 as reported in 2006 (Selangor State Economic Planning Unit 2006b). Petaling Jaya has pursued modernisation and become a well-known industrial area in Malaysia (Petaling Jaya City Council 2009b). Petaling Jaya covers an area of 97.2 km square comprising 52 per cent housing developments, 20 per cent industrial areas and eighteen per cent commercial areas (Petaling Jaya City Council 2009b). Petaling Jaya is administered by the Petaling Jaya City Council.

5.3.6.3 Ampang

The history of Ampang is related to Kuala Lumpur. Ampang was a temporary settlement for the Chinese Captain Yap Ah Loy and his tin miners in Kuala Lumpur. Ampang is administered by Ampang Jaya Municipal Council, which was established in 1992. Ampang is located within two land district offices—the districts of Hulu Langat and Gombak. It shares boundaries with the Kuala Lumpur City Council, Selayang Municipal Council and Kajang Municipal Council. Ampang is growing rapidly, with a land area of 14,350 hectares, dominated by forest (50.7 per cent), housing developments (36.4 per cent) and commercial areas (the remainder) (Majlis Perbandaran Ampang Jaya 2009).

5.4 The Sampling

Sampling requires the selection of a small sub-population that is representative of the entire population. This study uses a probability sampling procedure as it gives

greater confidence that the sample selected adequately represents the population (Fowler 2002; Graziano & Raulin 2007; Groat & Wang 2002; Nardi 2006; Scheaffer, Ott & Mendenhall 2006). Probability sampling makes it possible to use inferential statistics to determine how likely it is that the results are a function of chance (Groat & Wang 2002). The following section explains the sampling procedure applied in this study.

5.4.1 Sampling Framework

This study has considered three factors for sample selection as suggested by Fowler (2002, p. 10). These are (i) how well the sample frame corresponds to the population the researcher wants to describe, (ii) probability sampling procedures that should be used to designate individuals for inclusion in a sample and (iii) the detailing of the sample design, its size and the specific procedures used for selection, which will directly influence the sample estimate's precision. The case study locations may be identified after assessing the sample's quality using probability sampling. The next step involves multi-stage sampling as described by Fowler (2002), which is used when (i) there is no suitable list of individuals in a population or (ii) when there is no sample list from which sampling can be conducted. In this procedure, the creation of the list and the process of sampling occur simultaneously.

The process for selecting this study's sample population begins with the development of the sampling framework as illustrated in Figure 5.2. This study's population is limited to the population in Peninsular Malaysia (West Malaysia) as the other parts of Malaysia (East Malaysia) employ different Acts related to housing management. As shown in the sampling framework, this research excludes the non-low-cost housing developments. Unlike the low-cost housing developments, in terms of prices and standards, non-low-cost housing developments are not fully controlled by the Malaysian government. Further, the formation of a MC between the low-cost and non-low-cost housing is distinguished by the Acts (see Chapter 3). The final step is to identify a sample representing the population to answer the research questions. Thus, three criteria that determine the sample are identified as follows:

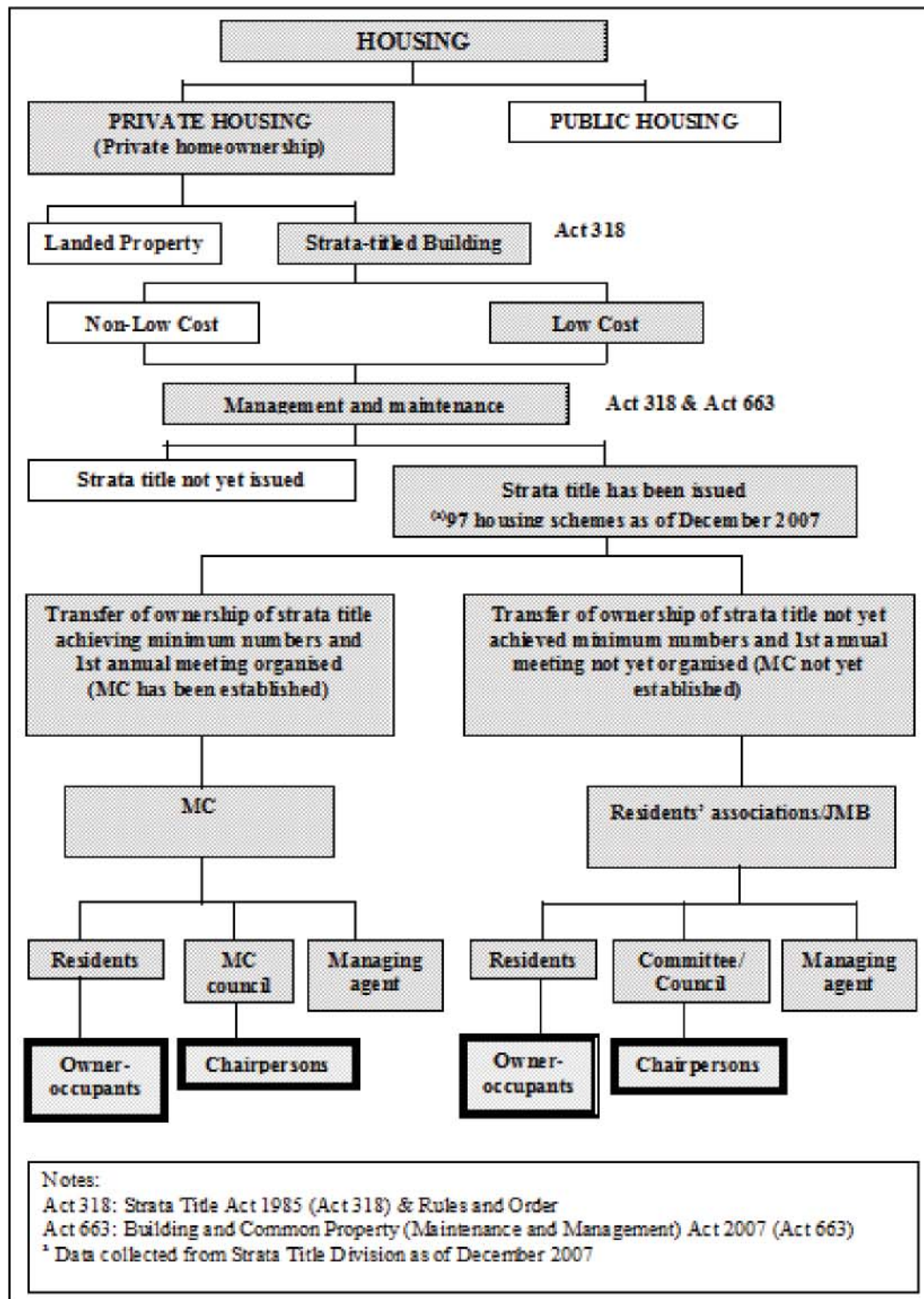
- a) First criterion: Owner-occupants of multi-owner low-cost housing developments.
- b) Second criterion: Housing developments that have been issued strata titles.
- c) Third criterion: Stakeholders.

5.4.1.1 First Criterion: Owner-Occupants of Multi-Owner Low-Cost Housing Units

The discussion in Chapter 3 identified unit owners' responsibilities for the upkeep of the building and common properties. Non-owner-occupants were excluded, as this study predicted their perceptions and involvement in housing management would differ from those of owner-occupants. For the owner-occupants too, the study has chosen only the heads of the families or individuals representing the households in matters related to housing management. Tenant-residents have not been considered in this study as they are not governed by the Acts, and previous studies have shown that tenants do not have the same interests as owners concerning housing management.

5.4.1.2 Second Criterion: Housing Developments That Have Been Issued Strata Titles

The second criterion is the status of the housing developments. Sampling only involved housing developments that were issued the strata title. This was important because it had to reflect the actual practice of housing management in the long-term. Preliminary information received from the Selangor's Strata Title Department, until the end of 2007, showed that 97 strata titles had been granted to low-cost housing developments. However, owing to confidentiality considerations, only 66 strata titles were given to the researcher. The information obtained only provided the names of the grants and information about the location referring to districts. This however helped the researcher locate these housing developments. Based on districts with a large number of strata titles issued (Table 5.5), the researcher then contacted the district offices and local authorities for more information.



Source: This study

Figure 5.2: Sampling framework

During a visit to the department, the researcher was informed that none of the low-cost housing developments that have been issued strata titles had established a MC due to incomplete transfer of the strata title between the developer and unit owners. However, by late 2008 several developments had established MCs. This was due to the implementation of a new Act 663 (2007) that facilitated and accelerated the establishment of MCs. At the same time, there were some local authorities who were still updating their data, because of which the researcher could only obtain a housing list with unknown strata status¹⁴. This resulted in the researcher undertaking visits to the housing developments in order to identify those developments' strata status. This study finally established that the sample must represent the housing developments that have obtained strata titles, regardless of whether or not they have established a MC.

5.4.1.3 Third Criterion: Stakeholders

For the purpose of evaluating the proposed conceptual framework, the third criterion emphasised the sample selection among stakeholders. This study's sample included only those directly involved in housing management. Therefore, external parties such as local authorities, the COB and the Strata Department were excluded. In addition to owner-occupants who have been discussed earlier, the owners' organisations (MCs or residents' associations) and managing agents were categorised as direct stakeholders. As described in Chapter 4, the owners' organisations are the institutions responsible for making decisions and policies, while the agents carry out the policies formulated by the organisations. In this study, the organisations are represented by the chairpersons.

¹⁴The new Act 663 introduces the requirement of a COB to be located in every local authority. The COB is responsible for the strata properties. At the time of the study, the newly appointed local authorities were in the process of updating their data.

5.5 Data Collection and Data Analysis

5.5.1 Preliminary Interview Survey

A lack of empirical local studies investigating the management of low-cost housing in Malaysia made it impractical for this study to directly use the findings from other studies for the purpose of developing research questions and conceptual framework. As suggested by Maxwell (2005), a preliminary study can focus precisely on the researcher's own concerns or theories as they serve the same function as prior research. The preliminary data gathering would increase the researcher's awareness about the actual scenarios and aid focus on the problem and associated factors (Sekaran 2003). Therefore, based on the justifications discussed in section 5.2, a preliminary survey was carried out.

5.5.1.1 The Objective

The survey applied semi-structured interviews specifically aimed to achieve the objectives listed below:

- a) To identify roles and responsibilities of both direct and indirect stakeholders in housing management practices. The direct stakeholders interviewed were chairpersons of owners' organisations (residents' associations and MCs) and managing agents. Selangor state government's agencies and departments are considered indirect stakeholders.
- b) To identify the issues concerning the relationships between direct stakeholders' (owners, owners' organisations and managing agents).
- c) To use the findings of this survey to determine the variables from previous studies that were relevant to Malaysia's situation and further, to assist this study in making modifications to the variables in previous studies. The outcomes were then used as a basis for developing this study's conceptual framework.
- d) To use the outcomes and the responsive comments obtained from the interviews as a basis for the final empirical survey design.

5.5.1.2 The Sample

As mentioned earlier, the preliminary survey's respondents consisted of direct and indirect stakeholders. Direct stakeholders were randomly selected from the available low-cost housing developments around the major cities in Selangor. A total of nine developments were selected, five of which had been issued strata titles. The study included both housing facilities with and without the strata titles in order to get an overview of the management of low-cost housing units. Overall, five chairpersons of MCs, two chairpersons of residents' associations and two representatives of the managing agents were interviewed. The distributions of respondents are provided in Table 5.6 below.

Table 5.6: Sample characteristics

Location	Number of housing developments	Number of housing developments with strata titles	Number of MC chairpersons recruited	Number of residents' association chairpersons recruited	Number of managing agents recruited
Shah Alam	4	2	1	3	-
Subang Jaya	1	-	-	-	1
Ampang Jaya	3	3	3	-	-
Klang	1	-	-	-	1
Total	9	5	4	3	2

Source: This study's preliminary survey (2008)

Indirect stakeholders consisted of representatives from the SHRPB, the Strata Title Division, the COB of Shah Alam City Council and the SSDC. The respondents' characteristics are shown in Table 5.7 below.

Table 5.7: Category of respondents (state's departments/agencies)

Respondents State government's agencies/departments	Research instrument used
<ul style="list-style-type: none"> • SHRPB Respondents: 1) Head of Planning Department, 2) Assistance Director of Property Department 	<ul style="list-style-type: none"> • Semi-structured interview • Database collection
<ul style="list-style-type: none"> • General of Land and Mines office (Strata Title Department), State of Selangor Respondent: Head of Strata Title Department 	<ul style="list-style-type: none"> • Semi-structured interview • Database collection
<ul style="list-style-type: none"> • COB, Shah Alam City Council Respondent: Secretariat (architect) • Ampang Jaya Municipal Council Respondent: Director of Building Department 	<ul style="list-style-type: none"> • Semi-structured interview
<ul style="list-style-type: none"> • Selangor State Agencies: SSDC Respondent: Property Department Officer 	<ul style="list-style-type: none"> • Semi-structured interview • Database collection

Source: This study's preliminary survey (2008)

5.5.1.3 The Survey Instruments

Face-to-face interviews were utilised as means of data collection. This procedure required the interviewer to ask prepared questions and to record the respondents' responses. This personal interview method offers several advantages. The primary advantage is that the respondents will usually respond when confronted in person (Scheaffer, Ott & Mendenhall 2006). Through communication, they have the opportunity to provide more comments and opinions. For the interviewer, any questions that lead to misunderstanding can be avoided, and additional information that may be overlooked during the literature review can be gathered through the interviews.

A standard set of questions were used during interviews with direct stakeholders (see Appendix 1). The set was divided into two parts: (i) structured questions and (ii) semi-structured questions. Structured questions consisted of three sections. Section A attempted to get information on respondents' housing profile and housing management organisations. Section B involved measuring the respondents' satisfaction levels about the effectiveness of the three variables related to their housing management: funding, maintenance performance and

residents' participation. Responses to these variables were based on the five-point Likert scale where 1 = poor (very dissatisfied); 2 = not satisfied, 3 = neutral, 4 = satisfied and 5 = very satisfied.

Finally, Section C was used to measure respondents' knowledge of the Acts governing multi-owner housing management, namely, the Strata Title Act 1995 (Act 318) and the Building and Common Facilities Act (Maintenance and Management) (Act 663). This section required respondents to select the scale indicating their level of understanding based on the five-point Likert scale where 1 = poor, 2 = do not understand, 3 = neutral, 4 = understand and 5 = fluent.

The semi-structured questions focused on variables that were drawn from the review by further describing the structured questions in Sections B and C. Through this method, the researcher predicted several variables that could be identified. This section was divided into four sections. Section D required respondents to precisely describe their perceptions of fund collection such as problems related to the maintenance charges collection and residents' attitude towards the needs of maintenance charges. Section E involved the performance of maintenance and required respondents to answer questions about residents' expectation, residents' participation and also about the performance of managing agents. Section F explored more details about the residents' participation and their attitudes towards the daily management of their housing units and relationships among stakeholders. Finally, section G involved questions about the residents' attitudes and response to Acts related to housing management and also the action taken by the organisations and agents in order to educate the residents.

Open-ended questions were used during interviews with the state government's agencies/department. This type of questionnaire enabled the researcher to gather information on the roles, responsibilities, and scope of each selected agency/department. Questions about current issues related to housing management and implementation of the Acts were also included.

5.5.1.4 The Administration

The interview sessions were conducted in January and February of 2008. Interviews with direct and indirect stakeholders were carried out at their preferred time and location. Each session approximately took between 45 minutes to two hours. Interviews with the managing agents were mainly done during office hours at their offices within the housing area. Most of the interviews with the chairpersons were conducted not only at their unit or office but also at restaurants or stalls near their housing developments especially if the interview was conducted after office hours. Interviews with the Selangor state government's agencies/departments were conducted during office hours at the respondents' office.

5.5.1.5 Technique of Data Analysis

Information gathered from interview sessions was analysed manually due to the small number of respondents. The data have been analysed through a process called content analysis. This process involved identifying the main themes from the responses (content) given by the respondents (Grbich 2007; Kumar 2005). Based on broad themes derived from the literature review, the themes then become the basis to analyse the interviews. Each theme was coded using a keyword. All the identified keywords were used as input to complement the literature review in this study in order to develop the study's conceptual framework. The output from this preliminary survey is discussed in Chapter 6.

5.5.2 Final Survey

This study is an explanatory research (theory testing research) because it intends to find relationships between previously identified variables. It demands evaluation of the effectiveness of the relationships among the stakeholders in the management of low-cost housing developments in Selangor, Malaysia. This study applied the survey research method to verify the proposed conceptual framework. This method is most commonly used in social science research because this approach involves obtaining information from individuals within their natural

environment and seeking their participation in sharing their experiences, attitudes, and knowledge (Graziano & Raulin 2007). The processes related to the survey are presented in Figure 5.3. The following section explains each of the processes involved.

5.5.2.1 Survey Instrument

The basic rule of survey research is that the instrument design should have a clear focus, be driven by hypotheses developed by researchers, be explicit and concise, and be accompanied by clear instructions. The instruments should be pre-tested on small samples from the population to be surveyed and then should be refined based on the pre-test's feedback (Graziano & Raulin 2007).

For the purpose of data collection, as shown in Figure 5.3, this study combines two methods, namely questionnaires and interviews in the survey. Each method brings certain strengths and weaknesses (Groat & Wang 2002), and combining these methods should provide an appropriate balance against the weaknesses, allowing the benefits to complement each other. The questionnaire survey is used as the primary means of data collection, while the interview is the secondary means of data collection. Details of both methods are described as follows:

5.5.2.1.1 Questionnaire Survey as the Primary Means of Data Collection

A questionnaire survey is a quantitative method and ideal for questions based on opinion, attitudes and suitable for probability sampling and accurate generalising (Nardi 2006). This study employed self-administered questionnaires. This allowed (i) measurement of the mean for variables with a range of values or response categories that were too extensive to read to respondents in an interview or on the telephone, (ii) investigation of attitudes and opinions that are usually non-observable, (iii) description of the characteristics of a large population and (iv) study of behaviours that may be difficult for people to explain face-to-face (Nardi 2006, p. 67).

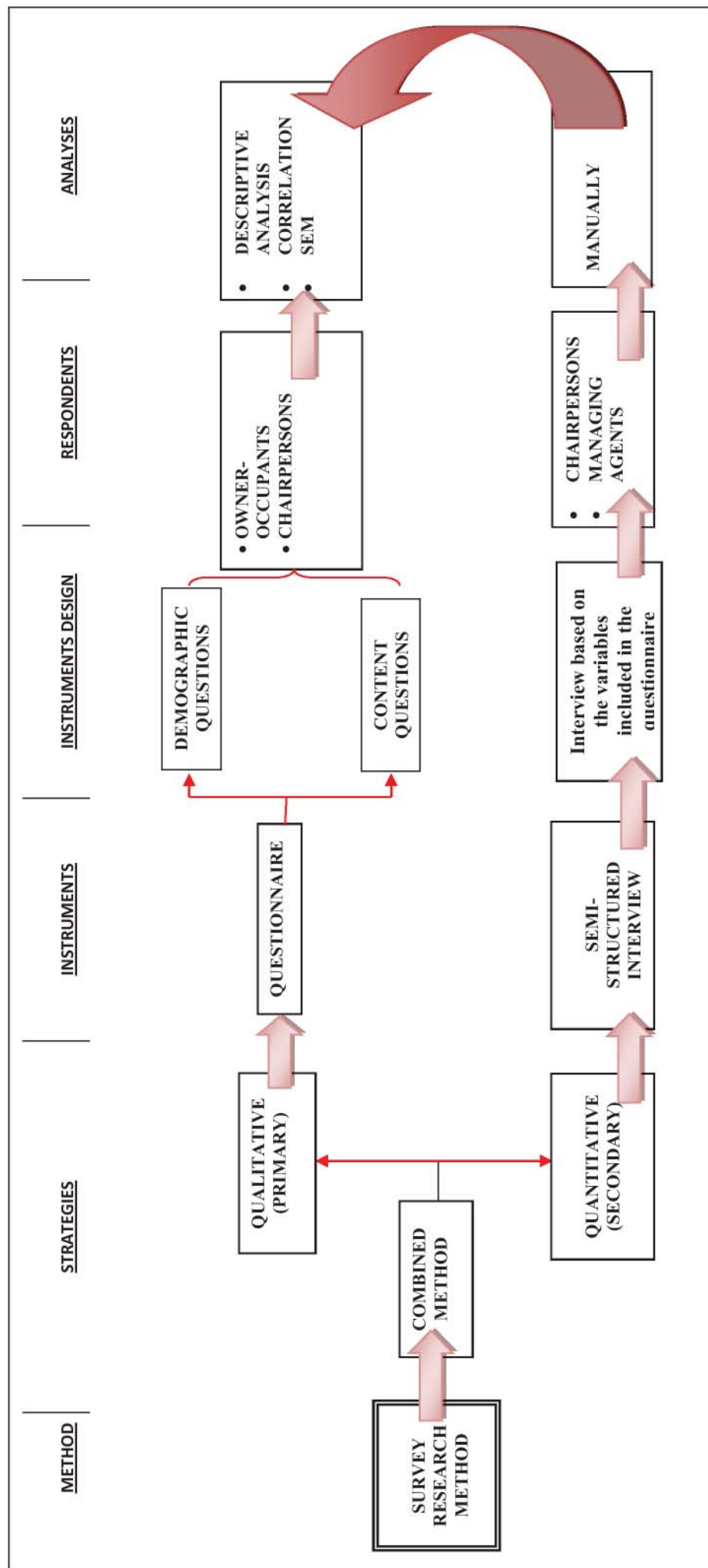


Figure 5.3: Data collection flow chart

Two sets of questionnaires as shown in Appendix 2 and Appendix 3 were developed and were translated into the Malaysian language. Basically each set of questionnaire was divided into two major parts namely the demographic questions and the content questions. The demographic questions sought factual information that was categorised as objective variables of this survey. As this survey had two different respondents' categories, the questionnaires were divided into two sets. As proposed in the framework, the demographic questions concerning owner-occupants contained questions related to socio-demographic and socio-economic characteristics. For the chairpersons, demographic questions were divided into three sections containing questions related to their position as Chairman, their housing characteristics and their housing management characteristics.

Content questions, were divided into two parts. The first part was used to measure respondents' agreement level with the variables that were predicted to enhance stakeholders' relationships. The second part used the same variables as the first part but with more questions for each variable and was used to measure respondents' satisfaction based on their life situations. Both parts were measured on a seven-point Likert-scale. In addition, open-ended questions were provided at the end of the questionnaires.

Prior to the survey, draft questionnaires were reviewed by the supervisor and tested on colleagues and friends. The questionnaires were later tried in pilot testing or pre-testing involving 32 respondents from one urban area that had been selected as the study area. Complete information about the survey is discussed in section 5.7.

5.5.2.1.2 Interview Survey as the Secondary Means of Data Collection

Face-to-face interview sessions were conducted with nine chairpersons and two managing agents. The decision to interview the chairpersons besides completing the questionnaire was undertaken so as to gather more input on how they managed their housing units. Only a few interviews with the managing agents were undertaken due to their small number, as identified through the sample

framework. The small number of respondents did not allow advanced statistical analysis to be undertaken. Interviews with chairpersons allowed the researcher to explore answers in depth (Groat & Wang 2002).

5.5.2.2 Survey Administration

The questionnaire survey was conducted from December 2009 and completed in April 2010. Of 97 low-cost developments reported by the Selangor State Strata Division as having been issued strata titles, 73 housing developments were successfully identified. This figure is equivalent to 34 per cent of the total number and can be considered to adequately represent the population. As indicated in Table 5.8, 30 housing developments have set up MCs, and the remaining are still in the process of transferring strata titles; the latter were represented by four residents' associations.

Table 5.8: Number of housing developments selected

Location	Housing with MCs	Housing without MCs	Total	Percentage
Shah Alam	8	26	34	46.6
Petaling Jaya	-	17	17	23.3
Ampang Jaya	22	-	22	30.1
Total	30	43	73	100

Source: This study's final survey (2009)

Chairpersons were given the choice of completing a questionnaire and additionally participating in an interview. Out of 40 chairpersons approached, 34 of them or 85 per cent agreed to participate. Of these, 30 were chairpersons of a MC and the remainder were the chairpersons of resident's associations. Of 34 chairpersons, nine (26.5 per cent) agreed to also be interviewed.

The distribution of questionnaires to owner-occupants required the permission of the chairpersons. The process of recruiting owner-occupants as respondents involved various approaches. This survey's pre-testing study had shown that placing a questionnaire with a self-addressed envelope in a letter box had very limited success. Therefore, several strategies were adopted:

- a) As directed by the chairman, the questionnaires were distributed during the annual general meeting or during social activities organised by the owners' organisations.
- b) With the chairpersons' permission, recruitment was also undertaken at the management office, when people came to pay maintenance charges.
- c) The third strategy involved visiting each unit occupied by owners. Information about owner-occupation was given by the chairpersons or acquired through conversations with neighbours.

It was noted that recruitments from activities organised by owners' organisations could result in bias because uninterested owner-occupants would perhaps not attend it. The third strategy as explained avoided this bias.

Owner-occupants who agreed to participate were given the option of completing the questionnaire either in the presence or absence of the researcher (researcher returned to collect the completed form or questionnaires were returned using the envelope provided). Most of the surveys were completed on weekends, when many residents were at home and the best time was between 10 am to 12 noon (before lunch). Attempts to get a response after office hours were ineffective.

Totally, based on information gathered from chairpersons, at the time of the survey a total of 2335 units were seen as occupied by owners. This can be seen in Table 5.9 below. This survey managed to obtain 618 owner-occupants as respondents and this represented 26.5 per cent of total owner-occupants. Shah Alam clearly dominated the total number of questionnaires collected, which is 49.5 per cent from the 618 questionnaires collected. Mailed questionnaires achieved a much lower response rate—out of 69 owner-occupants, only fifteen (21.7 per cent) returned the filled questionnaires.

All the selected housing developments that have established their MCs are being managed without a managing agent. Out of four residents' associations, three are being managed by the managing agents (on behalf of the developer). Of the three managing agents, only two agreed to be interviewed. The fourth housing development is being managed by the residents due to dissatisfaction with the developer's performance.

Table 5.9: Recruitment of respondents (owners = 618)

	Total number of units (of 73 housing developments selected)	Total number of owner-occupied units/percentage (of 73 housing developments selected)	^(a) Received on site	Questionnaires by post		Total questionnaires collected (number/percentage)	Percentage questionnaires collected (of total 618)
				Omitted	Number returned/percentage		
Shah Alam	2110	1043	297	32	9/28.1	306/29.3	49.5
Petaling Jaya	1271	649	133	20	2/10	135/20.8	21.9
Ampang Jaya	1124	643	173	17	4/23.5	177 / 27.5	28.6
Total	4505	2335/51.8	603	69	15/21.7	618/26.5	100

Notes: ^(a) This included questionnaires collected during meetings and communities' events and from management offices and door-to-door visits.

Source: This study's final survey (2009)

5.5.2.3 Data Entering and Treatment of Missing Data

Returned questionnaires were individually coded and were entered into the computer database using statistics software —SPSS Version 17. While the coding system allowed the researcher to group questionnaires according to housing, it also assisted the researcher during the data entry as the code system enabled easy error detection. Errors in data entry could produce misleading results that could affect the validity of results produced (Coakes, Steed & Ong 2009). To avoid such mistakes, data screening was employed using the frequencies and descriptive commands as suggested by Coakes, Steed and Ong (2009). Through this technique, any out-of-range values or error values detected were replaced with the correct values.

An additional problem was that of missing data. Ignoring incomplete observations could result in observations being used in a multivariate analysis involving many inaccurate variables (Hair et al. 2006; Sinharay, Stern & Russell 2001). Questionnaires collected on-site were less likely to be incomplete as the researcher checked the returned questionnaires upon their receipt from the respondents. However, because of the minimal numbers of questionnaires received by post, some missing data problems were encountered. To determine the missing data, frequency analysis was performed to detect the amount of data lost and the variables involved.

The missing data analysis is presented in Table A4.1 and Table A4.2 located in Appendix 4. There is no missing data involving the chairpersons respondents' categories, thus the tables refer only to owner-occupants. As shown in Table A4.1, out of 618 cases (respondents), 56 cases involved incomplete values (9.06 per cent) with only one case involving five missing values—the highest at 0.16 per cent. Table A4.2 shows that 80 missing values were from fifteen questions (total number of questions = 101), which represented only 14.9 per cent. These results could be considered minimal compared to the overall total cases and questions. As described by Hair et al. (2006, p. 55), missing data under ten per cent from an individual case and missing variables (questions) fewer than fifteen per cent were considered low, thus no complex remedy action was taken by this study.

The majority of missing values involved objective variables. Respondents' previous accommodation recorded the highest number of missing data, whereas employment status recorded the least (0.2 per cent) amount of missing data. Finally, while no missing data were identified from Part 1 questions, only one missing data was identified from Part 2 questions. This ordinal data has been corrected using the imputation techniques-model-base approaches without biasing the result in any appreciable manner. The 'EM' approach has been employed in order to impute (replace) the missing data. It consists of two stages in which the 'E stage' makes the best possible estimates of the missing data, and the 'M stage' then makes estimates for the parameter (means, standard deviations or correlation) assuming the missing data were replaced (Hair et al. 2006, p. 58). In this study, mean values are used for the estimation.

5.5.2.4. Technique of Data Analysis

Both descriptive and inferential statistics have been employed to statistically answer the study's research objectives. In descriptive analysis, numerical data is presented in the form of frequency distributions and used to explain the data responses to each survey question (Caldwell 2004; Graziano & Raulin 2007). Data drawn from descriptive analysis provided the basis for inferential statistics. Unlike descriptive statistics which represent the data for specific participants tested, inferential statistics are used to make statement about a population based on information from a sample (Caldwell 2004, p.13).

Through inferential statistics, this study's hypotheses are tested in order to identify differences between groups and relationships between groups. The first purpose involves the measurement of the cause and effect on the observed relationship. The differences between the means of the measured variables are evaluated to determine whether there are significant differences without indicating the strength and magnitude (Gravetter & Wallnau 2002; Nardi 2006). To identify the appropriate statistical method used to measure the differences and relationships between groups, the type of measurement for each variable must be considered (Hair et al. 2006; Nardi 2006). As proposed in Chapter 4, there are two categories of independent variables, the objective and subjective variables. The

objective variables is composed of owner-occupants' characteristics, chairpersons' characteristics and housing characteristics. These variables are measured with nominal and ordinal scores. While the subjective variables consisting of owner-occupants' competency, owners' organisational competency and managing agents' competency are measured using interval score. For the dependent variable and the intervening variables, the measurement on the level of satisfaction is categorised as interval scores. According to Nardi (p.192, 2006), the appropriate method of analysis for use in this situation is the univariate analysis of variance (ANOVA). ANOVA is a hypothesis-testing procedure used to examine differences between the means of two or more populations (Gravetter & Wallnau 2002). It assesses group differences on a single metric dependent variable.

The strength and magnitude of relationships were observed for the purposes of measuring the relationship between groups. Based on a large sample size, this study applied parametric statistics technique. In this technique, the data was approximated to a normal distribution and used to test hypotheses about population parameters (Vogt 1999). Although parametric statistics require data to be measured as scores this study's ordinal data have been treated to obtain score data. Each mean value for all items represented each variable was calculated to produce a single mean value to represent the variable. This final mean value can be considered as score data. Pearson's coefficient correlation technique was used to identify the strength and magnitude of relationships in a linear fashion. The magnitude of the relationship can be either positive or negative. Positive correlation means the two variables are moving in the same direction and vice-versa for negative correlation (Coakes, Steed & Ong 2009; Graziano & Raulin 2007). For example a correlation of -1.00 represents a very low (weak) negative relationship. This means as one variable increases, the other decreases by a predictable amount.

Chapter 4 has proposed the multiple relationships that predict the effect of intervening variables on the direct relationships between independent variables and the dependent variable. To examine these multiple relationships, the Structural Equation Modeling (SEM) has been employed. This technique provides

the most appropriate and efficient estimation, and the only technique that allows the simultaneous estimation of multiple equations (Grapentine 2000; Hair et al. 2006). The multiple relationships in SEM are in the form of mathematical notation, thus it is more convenient to illustrate the model in a visual form, known as a path diagram. This technique allows this study to specify, estimate, assess and produce a conceptual framework in the form of a path diagram that shows hypothesised relationships among variables, thus enabling the researcher to test and confirm the validity of claims.

SEM showed similarities to other multivariate dependence technique, such as multivariate analysis of variance (MANOVA) and multiple regression analysis (Grapentine 2000; Hair et al. 2006). The main difference found in the SEM compared to MANOVA and multiple regression analysis is construct that act as an independent variable in a relationship can be a dependent variable in other relationships. In this situation, the SEM allows these relationships to be estimated simultaneously. In contrast, the multiple regression analysis can examine only a single relationship between single dependent variable and several independent variables (Hair et al. 2007, p.705). Another advantage of SEM is the ability to examine the complex relationships between variables such as the impact of indirect effects of relationship involving a series of relationships with at least one intervening variable (Hair et al. 2007).

To apply the SEM, the sample size is very important and should be given attention by researchers (Anderson & Gerbing 1984; Boosma 1987; Hair et al. 2006; Hu & Bentler 1995; Shumacker & Lomax 1996). The sample size of 100 is said to be minimal and sufficient size to provide sufficient analysis (Ding, Velicer Harlow 1995), while the minimum sample size of 200 is the best (Boosma 1987). For this study, the sample size of 652 (owner-occupants respondents) has been successfully collected, thus this size allows SEM to be implemented. As to ensure accuracy and to avoid the fit-related problems, this study's proposed model is evaluated through the confirmatory factor analysis (CFA). More details on the data analysis are described in Chapter 6. The SEM requires a computer programme such as LISREL, AMOS, CALIS, EQS, Mplus, Mx Graph,

RAMONA and SEPATH (Kline 2005). For the purpose of this study, AMOS (version 8) has been used to produce the results.

With regard to the interview surveys, the data gathered were analysed manually. Each response was coded based on recurring themes. The results were then used to support the discussion of the statistical results presented in Chapter 7.

5.6 Ethical Issues

Ethical implications of social research have received attention as research is about and also for, the benefit of the community. Thus, it is important to identify and understand any impact on people or objects being studied during the data gathering without creating inconvenience or stressful situations (Nardi 2006). Ethics is not limited to the process of recruiting subjects but also applies to data analysis, interpretation and presenting results. Speculation, selection, bias and dishonesty should always be avoided (Nardi 2006).

As outlined by Deakin University and the Australian Code for Responsible Conduct of Research, this study has been through the process of Human Ethics clearance and approval before data collection was carried out. The study meets the criteria of low-risk research as outlined by the Human Ethics Committee of Deakin University. This study was approved by the Faculty of Human Ethics Advisory Group (HEAG) in compliance with the National Statement on Ethical Conduct in Human Research (2007). The project approval number is EC STEC-08-2008.

5.7 Validity and Reliability

In research, the validity and reliability of the procedures and measurements are very important (Graziano & Raulin 2007). Poor quality measurements such as inaccuracy and inconsistency are major errors in research that can lead to unreliable findings (Nardi 2006). Pilot testing was conducted to test the

questionnaires as recommended by Nardi (2006) where this is a common method to test the research item before the actual research is conducted.

5.7.1 Validity Test

To evaluate the accuracy of measurement used in this study, construct validity has been applied. 34 questionnaires completed by owners-occupants and chairpersons of three low-cost housing developments were collected after using two approaches where respondents completed the questionnaire in the presence of the researcher and in the researcher's absence. In the first approach, the time taken to complete the survey was recorded and respondents' feedback on the questionnaires was noted. Through this approach, one chairman and 28 owner-occupants were recruited.

The second approach involved the use of self-addressed envelopes for questionnaires. Fifteen sets of questionnaires were distributed by placing them in respondents' mail boxes, under the units' doors or given directly to the owner-occupants (with a request to return it via post). As expected the return rates were very low, only five questionnaires were returned. Therefore, the researcher determined questionnaires sent via self-addressed envelopes could not be used as the main method for obtaining data in the final survey.

5.7.2 Reliability Test

Validity in measurement does not necessarily mean it is reliable. Reliability is about consistency, and it is expected that the findings will not differ each time the measurements are made, assuming that nothing has changed in what is being measured (Nardi) 2006, p. 60).

Statistical analysis, known as Crobach's alpha (α) has been used to assess the internal consistency of this study's questionnaires. The closer the correlation coefficient is to 1.0, the more reliable is the data. According to Nardi (2006), the perfect reliability is 1.0 and no reliability is 0.0. With regard to this study's pilot-testing, the reliability test was done through the assessment of 76 survey items

measured in seven-point scales. Analysis showed that the scale used has strong internal consistency of Cronbach $\alpha = 0.971$. As shown in Table 5.10, it can be concluded that the questionnaire is reliable for this study.

Table 5.10: Reliability statistics

Crobanh's alpha	Number of items
0.971	76

Source: This study's data analysis

5.8 Conclusion

This chapter has discussed each of the strategies that have been employed to investigate the relationships between stakeholders for the management of multi-owner low-cost housing developments in Selangor, Malaysia. Each strategy has been implemented in accordance with procedures as recommended by experts in research methodology and also through a review of previous studies. Justifications for the selection of Selangor as well as three of its urban areas as the study's areas are explained clearly.

Two phases of data collection have been employed. The first phase involved a preliminary survey to aid this study in making any generalisations on findings from previous studies, but for a Malaysian context. This is important so that the conceptual framework proposed is representative of the study's population. Twelve respondents - representatives of state government's agencies/departments, chairpersons of owners' organisations (MCs and residents' associations) and managing agents were interviewed.

The second phase involved surveys verifying the proposed conceptual framework. However, this study encountered challenges during the identification and determination of subjects and samples' locations due to several incomplete databases. Multi-stage random sampling has been performed in order to overcome this issue. The validity and reliability test on this study's instrument were done by carrying out pilot-testing. This allowed the instrument to be corrected before the final survey. With regard to the final survey, questionnaires were employed as the

main instrument for data collection, while the interview provided additional inputs.

A total of 34 owners' organisations from 73 housing developments were selected, and these represented 34 per cent of the total low-cost housing developments in Selangor that were reported to have been issued strata titles by the end of 2007. Although the survey was relatively time-consuming, a total of 34 chairpersons and 618 owner-occupants successfully completed the questionnaires. A total of seven chairpersons and two managing agents were interviewed. Data collected from the questionnaire survey were analysed using SPSS software. Large amounts of data allowed this study to employ advanced statistical analysis techniques such as SEM to test the multiple hypothesised relationships, while data collected from the interview sessions were analysed manually due to the small number of respondents.

Overall, it can be concluded that this study was planned to provide valid and reliable results that take into account the views of experts and previous studies. Samples were selected with caution and satisfactorily represent the population of multi-owner low-cost housing developments in Malaysia. The following chapter will discuss the results generated from both data collection phases, i.e. the preliminary survey and the final survey.

Chapter 6: Empirical Results Analysis

6.1 Introduction

This chapter reports the findings gathered from two surveys employed in this study. The findings of the preliminary survey present a number of issues developed from respondents' responses and later categorised under the themes derived earlier from the literature review. The outcomes are used to complement existing literature (used to develop the conceptual framework in Chapter 4) and extend understanding of the issues relevant to housing management. This chapter also presents the statistical data analysis gathered from the questionnaire survey carried out in three urban areas of Selangor. Based on the proposed objectives of the study, the final survey's results outlined in this chapter are presented in four parts.

Part A presents the major sample's population characteristics. The descriptive characteristics include (i) the sample population of neighbourhood areas, (ii) the housing management, (iii) the owner-occupants' socio-demographic profile, (iv) the owner-occupants' socio-economic status, (v) owners' residency pattern, (vi) chairpersons' characteristics and (vii) the housing characteristics.

Part B reports the descriptive data gathered from Part 1 of the questionnaire survey. The results compare the agreement level rated between the owner-occupants and the chairpersons with the factors that are predicted to enhance the multi-owner low-cost housing management in the form of mean scores.

Part C presents the results generated from the univariate and multivariate analysis. These statistical methods are employed to examine the influence of the objective variables (represented by owner-occupants' characteristics, chairpersons' characteristics and housing characteristics) on the satisfaction on the stakeholders' relationships variable and the residential satisfaction dimensions (represented by satisfaction with dwelling, neighbourhood and neighbours).

Part D involves the analysis of the subjective variables proposed in the conceptual model of ‘Effective Stakeholders’ Relationships’. Part D also reports the estimation of the consistency and reliability of the scales that have been used in this study’s data collection and the evaluation of the unidimensionality of the proposed variables. The hypotheses relating to the relationships and the strength between variables are reported in this part in order to answer this study’s research questions. Finally, the tested and evaluated conceptual framework is presented. Table 6.1 and Table 6.2 summarise the outline of the research questions and statistical criteria employed in this chapter.

Table 6. 1: Statistical analysis tools used to answer this study's research questions

Research Questions	Part	Analysis techniques	Descriptions	Section
1) What is the current situation of urban multi-owner low-cost housing developments in terms of residency and housing management? <ul style="list-style-type: none"> • [To identify the present urban multi-owner low-cost housing characteristics and housing management adopted] 	A	Descriptive analysis (frequency and percentage)	Used to explore and describe basic data features.	6.3
2) What are the variables that affect the effectiveness of stakeholders' relationships in order to increase owners' participation in housing management for multi-owner low-cost housing? <ul style="list-style-type: none"> • [To identify the agreement level given by the stakeholders on the proposed factors effecting housing management performance] 	B	Descriptive analysis (mean and median)	Used to explore and describe basic data features.	6.4
3) What are the variables that could influence the effectiveness of stakeholders' relationships in housing management for multi-owner low-cost housing? <ul style="list-style-type: none"> • [To examine the significant relationships between variables (independent objective variables, dependent variable and intervening variables)] 	C	ANOVA P value significant at the < 0.05 level (comparing)	Used to determine whether samples from two or more groups come from populations with equal means.	6.5 and 6.6

Table 6. 2: Statistical analysis tools used to answer this study's research questions (continued)

Research Questions	Part	Analysis techniques	Descriptions	Section
4) What are the relationships between variables, and how these variables can be utilised as a foundation to enhance the effectiveness of stakeholders' relationships in housing management of multi-owner low-cost housing? • [To test and evaluate the model that can improve the stakeholders' relationships]	D	Cronbach's Alpha	To estimate how consistently an individual responds to items within a scale.	6.7
		Internal consistency analysis Factor Analysis	Used to examine the underlying pattern or relationships for a large number of variables and to determine whether the information could be condensed or summarised in smaller sets of factors or components.	6.8
		Pearson's Correlation P value significant at the < 0.05 level Relationship	A statistical measurement to measure the degree of linear relationship between two variables.	6.9
		Structural Equation Modeling (SEM)	Employed to examine the relationship between and among one or more dependent variables and two or more independent variables.	6.9

6.2 Findings of Preliminary Survey

As described in Chapter 5, nine low-cost housing developments located in Selangor's urban areas were selected for the preliminary survey. As shown in Table 6.3, the housing developments are referred to by the letters LCH A, LCH B, LCH C LCH D, LCH E, LCH F, LCH G, LCH H and LCH I. The respondents consisted of three chairpersons of Management Corporations (MCs), two chairpersons of residents' associations and two representatives from two managing agent companies.

6.2.1 Description of the Sample

As shown in Table 6.3, out of nine low-cost housing developments, six have been occupied for more than 20 years. With the exception of LCH H, all developments comprise walk-up flats four and five storeys high. Each unit has between one and three bedrooms. Owner-occupation rates range from 40 per cent to 80 per cent. The remaining units are either rented out by the owners or left vacant.

Except for LCH I, nearly all developments have access to common public facilities that are located surrounding the housing areas, and include facilities such as a multi-purpose hall, kindergarten, play-courts and prayer hall. These facilities are provided by the public sector or agencies and managed by the respective local authorities. Four low-cost housing developments have obtained the strata title within the last two to three years. This signifies that their housing management is no longer under the original developers' responsibility. All have conducted their first Annual General Meeting and set up their MCs.

Table 6. 3: Description of low-cost housing developments under study

	LCH A	LCH B (sek27)	LCH C (Sek16)	LCH D (Sek24)	LCH E (Au3/AJ)	LCH F (Au3/AJ)	LCH G (Au3/AJ)	LCH H (Klang)	LCH I (Puchong)
Location of housing developments within vicinity	Shah Alam City Council	Shah Alam City Council	Shah Alam City Council	Shah Alam City Council	Ampang Jaya Municipal Council	Ampang Jaya Municipal Council	Ampang Jaya Municipal Council	Klang Municipal Council	Subang Municipal Council
Respondents' category	Chairman	Chairman	Chairman	Chairman	Chairman	Chairman	Chairman	Managing Agent	Managing Agent
Strata Title obtained	X	X	✓ ^(*)	✓	✓	✓	✓	x	X
Owners organisation	RA	RA	RA	MC	MC	MC	MC	RA	RA
Management mode	Owner-managed	Third-party	Combined	Owner-managed	Owner-managed	Owner-managed	Owner-managed	Third-party	Third-party
Age of buildings	< 5 yrs	> 20 yrs	> 20 yrs	> 20 yrs	> 20 yrs	> 20 yrs	> 20 yrs	< 5 years	<10 years
Storey height	5	5	4	5	5	4	4	13	5
Number of units	200	660	926 (+ 16 comm. unit)	160	60	40	32	526	200
Number of building blocks	2	22	26	4	1	1	1	4	4
Number of bedrooms	3	3	1, 2 and 3	3	1 and 2	1 and 2	3	3	3
Percentage of owner-occupied units	70%	60%	60%	40%	60%	80%	80%	-n.a-	-n.a-
Facilities provided nearby housing estate	CP	CP	CP, C, MP	CP, MP, PH	CP, C, K, MP, PH	CP, C, K, MP, PH	CP, C, K, MP, PH	PH	None
Maintenance Charge	RM30/unit	RM35/unit	RM15/unit	RM30/unit	RM25/unit	RM20/unit	RM20/unit	RM43/unit	RM50/unit
Sinking fund charge	-	-	-	-	RM5/unit	-	-	RM3.50/unit	-
Notes: ^(*) in the process of transferring		RA – Residents' Association MC- Management Corporation		n.a. – not available CP: Children playground		C : court MP: Multi-purpose hall		PH: Prayer Hall (Muslim) K: Kindergarten	

Source: This study's preliminary survey (2008)

None of the three MCs in this study with MC employs a managing agent. According to the chairpersons, affordability is the main cause for this. The focus is on avoiding excessive maintenance charges and maintaining the rate as close as possible to the previous fees charged by the developer. This is important because it has been found that increments in maintenance charges will create dissatisfaction among the residents. Hence, it is a very sensitive issue.

The remaining low-cost housing developments are still under the developers' responsibility. Although, the developers are required to share the responsibility of housing management, LCH A is managed by the residents themselves because of their dissatisfaction with the developers' commitment and performance. LCH B, LCH H and LCH I are managed by managing agents appointed by the developers. A managing agent's scope of work is mainly to collect the maintenance charges from the residents, to receive owners' complaints, and to organise repair work. LCH C has set up a Private Limited Company, which includes 220 owners as shareholders and acts as a collection agent on behalf of the developers. The company is also responsible for recording residents' complaints; however, the repair work is performed by the developer's agents or contractors. According to the LCH C chairperson, the formation of such a company has successfully reduced the maintenance charges arrears.

All the low-cost housing developments, unfortunately, run continuously in deficit because their expenses are higher than revenues collected through maintenance charges. The average monthly collection is between 40 per cent and 60 per cent of the expenses. LCH B and LCH C sometimes receive subsidised funding from the developer. As for the LCH A, since there is no other source of income available, they can only afford basic routine maintenance. The lack of a sinking fund further exacerbates the situation when they are not able to carry out major works such as repainting, rewiring and plumbing.

6.2.2 Part 1 Analysis of Structured Interviews

6.2.2.1 Chairpersons/Managing Agents' Satisfaction with Housing Management Aspects: Financial, Housing Management Performance and Owners' Participation

Table 6.4 shows on average that the nine respondents are not satisfied with their housing management's financial provisions. Shortage of funds collected and default payments prove challenging for successful management. However, this does not necessarily result in dissatisfaction with the maintenance performance. Surprisingly, three chairpersons who are not satisfied with the financial collection are satisfied with their maintenance performance (LCH C, LCH D and LCH G), which could perhaps result from their experience of working with a constrained budget.

The majority of the low-cost housing developments have low levels of owner participation. According to the chairpersons, most of the owners who rent out their units are not interested in participating in the housing management even though they contribute to monthly maintenance charges. Tenants officially cannot be members of the MCs; therefore, they are not interested in participation, even though they are invited to community events organised by the MCs. This scenario is especially difficult for LCH D, which has a very low percentage of owner-occupancy, with approximately 60 per cent of the residents being tenants. The MCs' committee struggles to gain support from the available minority owner-occupants.

Table 6. 4: Chairpersons/managing agents' satisfaction with maintenance management and level of understanding of governing legislations

Respondents	LCH A	LCH B	LCH C	LCH D	LCH E	LCH F	LCH G	LCH H	LCH I
	Chairman	Chairman	Chairman	Chairman	Chairman	Chairman	Chairman	Managing agent	Managing agent
<i>Satisfaction level</i>									
Financial aspect	Neutral	Poor	Not satisfied	Not satisfied	Satisfied	Not satisfied	Not satisfied	Poor	Poor
Maintenance performance	Neutral	Poor	Satisfied	Satisfied	Satisfied	Not satisfied	Satisfied	Not satisfied	Not satisfied
Owners' Participation	Not satisfied	Not satisfied	Satisfied	Not satisfied	Satisfied	Not satisfied	Not satisfied	Not satisfied	Not satisfied
<i>Understanding level</i>									
Act318 ^a	Neutral	Fluent	U/stand	U/stand	U/stand	U/stand	U/stand	Poor	U/stand
Act663 ^b	U/stand	U/stand	Do not u/stand	Do not u/stand	U/stand	Do not u/stand	U/stand	Do not u/stand	Neutral

Notes: ^a Strata Title Act 1985 (Act318) ^b Building and Common Facilities Act (Act663)

Source: This study's preliminary survey (2008).

6.2.2.2 Understanding the Acts

Table 6.4 illustrates that the majority of chairpersons are aware of the Strata Title Act 1985 (Act 318), and understand the clauses related to housing management; however, one managing agent's personnel (LCH I) claimed to have poor knowledge of the Act. The majority gained their knowledge from workshops conducted by the state government, from their developers and through experience. With regards to the new Act 663 (2007), half of the chairpersons do not understand the provisions due to lack of familiarity.

6.2.3 Part 2 Findings: Semi-Structured Interview

Based on interviewees' transcripts, the responses are categorised under the themes derived from the literature review. Several issues are identified (see Appendix 5) and finally categorised under seven themes, as shown in Table 6.5.

Table 6. 5: Seven themes relevant to housing management derived from preliminary survey

Themes	Brief Description
a) Competency	This refers to the stakeholders' (owners, owners' organisations and managing agents) level of knowledge, awareness and understanding of housing management aspects.
b) Lack of professionalism	This refers to the chairperson's leadership and the committee's commitment representing the owners. The theme further refers to the approach adopted by the managing agents dealing with their customers (residents).
c) Housing characteristics	This refers to the unit's tenure status that comprises owner-occupants, tenant-residents, and vacant units. The theme also refers to the facilities provided within their housing developments. Both are likely to affect the housing management, neighbourhood and community cohesion.
d) Owners' characteristics	This refers to several factors such as age, length of residency, number of households and so on that are likely to influence owner participation, neighbourhood cohesion and neighbours' relationships.
e) Dwelling quality	This refers to individual evaluation of individual units and the common properties.
f) Neighbourhood quality	This refers to the neighbourhood spirit within the community, the importance of developing strong neighbourhood cohesion and a vibrant living environment.
g) Neighbours	This is reflected by housing occupancy patterns as described above [in (c)]. Moreover, the owners' background (for example, age gap) is likely to affect neighbours' relationships. A good neighbours' relationship could contribute to more involvement in housing management.

Source: This study's preliminary survey (2008).

6.3 Analysis of Final Survey-Part A: Major Characteristics of the Sample Population

6.3.1 Neighbourhood Area

This study's surveys were conducted in three urban areas of Shah Alam City Council (SACC), Petaling Jaya City Council (PJCC) and Ampang Jaya Municipal Council (AJMC). SACC and PJCC are under the same district administration, Petaling

District. Meanwhile, AJMC is under Hulu Langat District. Figure 6.1 shows the sample distribution with 49.5 per cent of the total respondents being recruited from SACC area, 28.6 per cent of total respondents from AJMC and the remaining 21.9 per cent from PJCC.

The respondents' (owner-occupants) distribution category by housing management is summarised in Table 6.6. The figures indicate¹⁵ more 'category A' respondents (59.4 per cent) than those in 'category B' (40.6 per cent). Within 'category A', SACC makes up a higher percentage of respondents (51.8 per cent) than AJMC (48.2 per cent). However, no PJCC respondents are included in this category. As for 'category B', PJCC dominates, with a higher percentage of respondents (53.8 per cent) than SACC (46.2 per cent). However, no AJMC's respondents are categorised as 'category B' because all selected housing developments have established their MCs.

¹⁵'Category A' is a group of respondents from housing developments that have established their Management Corporations. 'Category B' is a group of respondents from housing developments that have not established their Management Corporations due to an incomplete transfer of Strata Title from developers to the purchasers.



Figure 6. 1: Distribution of sample population (owner-occupants; n = 618)

Table 6. 6: Distribution of respondents (owners-occupants) by category of housing management (n = 618)

Location within vicinity	Category of Respondents		Total
	A (59.4% / n=367)	B (40.6% / n=251)	
Shah Alam City Council (SACC)	51.8% (n=190)	46.2% (n=116)	49.5% (n=306)
Petaling Jaya City Council (PJCC)	not applicable	53.8% (n=135)	21.9% (n=135)
Ampang Jaya Municipal Council (AJMC)	48.2%(n=177)	not applicable	28.6% (n=177)

Notes: A: MC has been established

B: MC not established

Source: This study's data analysis.

6.3.2 Housing Management

As described in Chapter 5, 97 multi-owner low-cost housing developments reported by Selangor's Strata Title Department have obtained the strata title. This survey managed to identify 73 of those 97 developments, equivalent to 75.3 per cent of the total number. As shown in Table 6.7, 30 developments have established MCs. The remaining 43 developments still have not completed the transfer of strata title and the residents are represented by four residents' associations. One residents' association is from the SACC area and three are from PJCC. There is no residents' association in the AJMC's sample. The highest number of chairpersons selected (both MCs and residents' associations) were from AJMC, followed by SACC and PJCC.

All 30 MCs manage their housing without a third party's (managing agents) services. Residents associations' housing management are still under the developers' responsibility. At the time of the survey, three developments were being managed by managing agents appointed by the developers. The remainder were temporarily being managed by residents' associations due to conflicts with the developers.

Table 6. 7: Housing management organisations' category (n = 34)

Areas	Category of owners' organisations		Total
	Management Corporations	Residents' Associations	
Shah Alam City Council (SACC)	8	1	9 (26.5%)
Petaling Jaya City Council (PJCC)	0	3	3 (8.8%)
Ampang Jaya Municipal Council (AJCC)	22	0	22 (64.7%)
Total	30	4	34 (100%)

Source: This study's data analysis.

6.3.3 Owner-occupants' Socio-demographic Characteristics (n=618)

6.3.3.1 Age

The respondents' age distribution is presented in Table 6.8. The majority of the occupants are between 41 and 50 years of (31.1 per cent), followed by the group over 50 years old (29.1 per cent). Of the total respondents, 24.8 per cent are in the 31 to 40 years old age group. Only a small portion (14.7 per cent) of the respondents are in their 20s.

6.3.3.2 Gender

As expected, male respondents are more likely to be the head of the family. Table 6.8 shows that 53.2 per cent of the respondents are male compared to 45.8 per cent female.

6.3.3.3 Marital Status

Referring to Table 6.8, an overwhelming number (84.3 per cent) of the respondents are married. Only 11.2 per cent of the total respondents stated their marital status as not married and a minority (4.0 per cent) described themselves as single parents.

6.3.3.4 Household Size

Table 6.8 shows that a large percentage (73.6 per cent) of the respondents has one to five members in their households, while 24.4 per cent have six to ten members and the remaining 0.6 per cent have ten or more members in their households. However 1.3 per cent of the total respondents did not answer this question.

6.3.3.5 Length of Residency

Based on Table 6.8, 45.1 per cent of the respondents have been residing in their unit for more than fifteen years, followed by 20.9 per cent respondents occupying the unit between ten and fifteen years. Of the total respondents, 16.2 per cent indicated they have occupied their unit between one and five years and only 3.4 per cent of the respondents have been residing in their units for less than a year.

6.3.3.6 Previous Accommodation

Only 7.8 per cent of the total respondents were previously from squatters' settlement. Slightly less than fifty per cent (49.8 per cent) of them had previously rented a house or flat and 37.3 per cent of the respondents previously stayed with their families. Seven per cent of the total respondents chose the 'other' category, stating migration to Selangor from their hometowns as the most common reason given.

6.3.3.7 Number of Children in Residence

More than half (64.4 per cent) of respondents reported having between one and five children residing with them. Of the total respondents, 28.8 per cent do not have any children living with them. Only 5.5 per cent of respondents have more than five children residing with them.

Table 6. 8: Owner-occupants' socio-demographic characteristics (n = 618)

Variable	Levels	F	F%
<i>Age</i>	20–30	91	14.7
	31–40	153	24.8
	41–50	192	31.1
	Over 50	180	29.1
	Missing	2	.3
	Total	618	100.0
<i>Gender</i>	Male	329	53.2
	Female	283	45.8
	Missing	6	1.0
	Total	618	100.0
<i>Marital status</i>	Married	521	84.3
	Not married	69	11.2
	Single parent	25	4.0
	Missing	3	.5
	Total	618	100.0
<i>Households size</i>	1 to 5	455	73.6
	6 to 10	151	24.4
	More than 10	4	.6
	Missing	8	1.3
	Total	618	100.0
<i>Number of children in residence</i>	None	178	28.8
	1 to 5	398	64.4
	More than 5	34	5.5
	Missing	8	1.3
	Total	618	100.0
<i>Length of residence in current unit</i>	Less than a year	21	3.4
	1 year to 5 years	100	16.2
	5 years to 10 years	82	13.3
	10 years to 15 years	129	20.9
	More than 15 years	279	45.1
	Missing	7	1.1
	Total	618	100.0
<i>Previous accommodation before moving to current housing estate</i>	Squatter (owner or rented)	48	7.8
	Renting (other than squatter)	308	49.8
	Stay with family	208	33.7
	Others	43	7.0
	Missing	11	1.8
	Total	618	100.0
<i>The period expected to continue living in current housing estate</i>	2 years or less	49	7.9
	3 years to 10 years	114	18.4
	11 or more years	66	10.7
	Always	387	62.6
	Missing	2	.3
	Total	618	100.0

Source: This study's data analysis

6.3.3.8 The Period Expected to Continue Residency

About two-thirds (62.6 per cent) of respondents indicated they intend to live in the current unit for the rest of their lives. Another 18.4 per cent expected to continue their stay for the next three to ten years and 10.7 per cent indicated their intention to stay longer than eleven years but plan not to stay forever. Only 7.9 per cent of the total respondents have the intention to continue their residence for less than two years.

6.3.4 Owner-occupants' Socio-economic Characteristics (n=618)

6.3.4.1 Current Employment Status

As indicated in Table 6.9, the majority of the respondents (52.1 per cent) are full-time workers. Unemployed respondents are the second highest (22.5 per cent) category. A small percentage indicated that they are engaged in part-time employment (2.8 per cent).

Table 6. 9: Owner-occupants' socio-economic characteristics (n = 618)

Variable	Levels	F	F%
<i>Current employment status</i>	Full-time employment	322	52.1
	Part-time employment	17	2.8
	Self-employment	76	12.3
	Retired	63	10.2
	Unemployed	139	22.5
	Missing	1	.2
	Total	618	100.0
<i>Highest education attainment</i>	Secondary school	85	13.8
	Primary school	364	58.9
	Certificate	49	7.9
	Diploma and above	115	18.6
	Missing	5	.8
	Total	618	100.0
<i>Gross household income</i>	Below RM1000	107	17.3
	RM1001 to RM1500	143	23.1
	RM1501 to RM2000	166	26.9
	Above RM2001	195	31.6
	Missing	7	1.1
	Total	618	100.0

Source: This study's data analysis.

6.3.4.2 Education

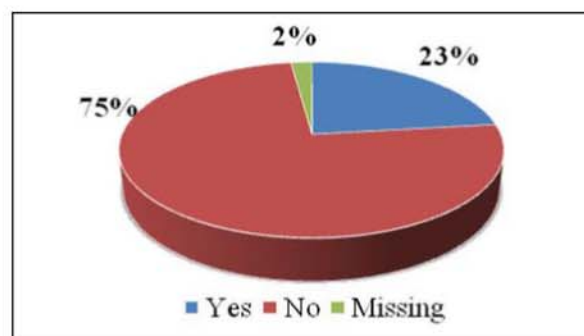
As summarised in Table 6.9, a majority of the respondents (58.9 per cent) have attended primary school. Another 18.6 per cent of the respondents have higher education attainment within the ‘diploma and above’ education level. About 13.8 per cent have attained the secondary school level, while a small portion (7.9 per cent) attained the certificate level.

6.3.4.3 Gross Household Income

Table 6.9 illustrates that 31.6 per cent of the respondents have a household income above RM2001, and a further 26.9 per cent are earning between RM1501 and RM2000. Less than a quarter of the respondents (23.1 per cent) reported monthly household income between RM1001 and RM1500.

6.3.5 Owner-occupants’ Participation Level (n=618)

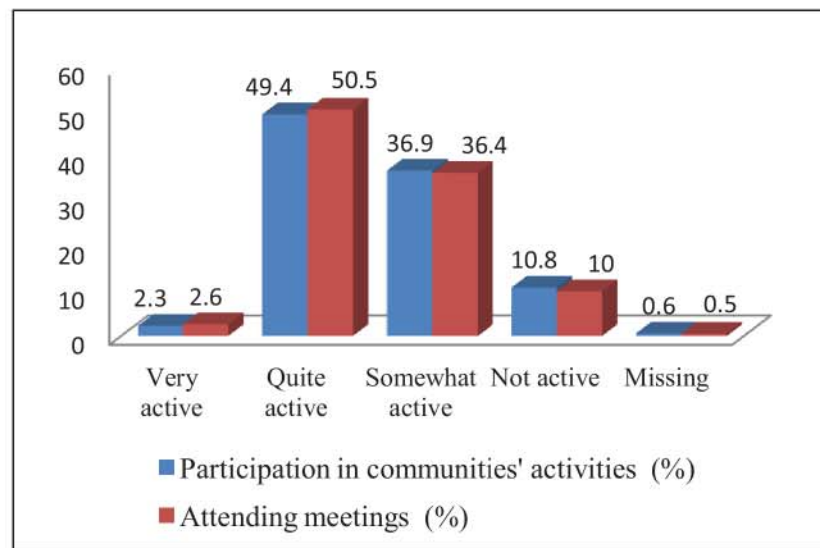
The majority (75 per cent) of the respondents do not hold any committee position in their current owners’ organisations (Figure 6.2). Only 23 per cent of the total respondents are committee members, holding a position such as block leaders, security committee members, or financial auditors.



Source: This study’s analysis of survey data.

Figure 6. 2: Owner-occupants holding committee position in owners’ organisation (n=618)

Owner-occupants were asked two questions concerning their participation in community activities and their attendance at meetings organised by their owners' organisations. Figure 6.3 shows that 49.4 per cent of the respondents are quite active in their communities' activities. Another 36.9 per cent indicated that they are somewhat active, and 10.8 per cent of the respondents are not active. Only 2.3 per cent consider themselves very active. Similar percentages were derived for meeting attendance.



Source: This study's data analysis.

Figure 6. 3: Respondents' participation level (owner-occupants; n = 618)

6.3.6 Chairpersons' Characteristics (n=34)

6.3.6.1 Category of Chairpersons

Table 6.10 illustrates the chairpersons' characteristics. The majority (88.2 per cent) of the chairpersons recruited for this study are the chairperson of the MCs. The remaining 11.8 per cent are the chairpersons of residents' associations.

Table 6. 10: Chairpersons' characteristics (n=34)

Variable	Levels	F	F%
<i>Category of respondents (Chairpersons)</i>	Chairman of Resident's Association	4	11.8
	Chairman of Management Corporation	30	88.2
	Missing	-	-
	Total	34	100.0
<i>Length of holding current position</i>	Less than 5 months	2	5.9
	5 months to 3 years	25	73.5
	3 years to 5 years	5	14.7
	More than 5 years	1	2.9
	Missing	1	2.9
	Total	34	100.0
<i>Commitment in other community organisations</i>	No	14	41.2
	Yes	20	58.8
	Missing	-	-
	Total	34	100
<i>Level of experience in housing management and maintenance</i>	Very experienced	3	8.8
	Quite experienced	16	47.1
	Somewhat experienced	10	29.4
	Limited experience	5	14.7
	Missing	-	-
	Total	34	100.0

Source: This study's data analysis.

6.3.6.2 Level of Experience

The survey used two variables to examine the chairpersons' experience in housing management affairs: length of time at current position and experience level in housing management affairs. As illustrated in Table 6.10, 73.5 per cent of the total respondents have held their current position between five months and three years. The second largest group of respondents (14.7 per cent) have been in their current position between three and five years. At the time of the survey, 2.9 per cent had been elected as chairpersons for less than five months. Only one respondent (2.9 per cent) had held the current position for more than five years.

6.3.6.3 Experience in Other Community Organisations

A number of the chairpersons (58.8 per cent) have commitments in other organisations (sitting on a committee or as a committee member), such as a mosque association, a parents and teachers association, a neighbourhood watch, a political party and/or a sports club. The remaining chairpersons (41.2 per cent) indicated they are not active in other organisations.

6.3.6.4 Chairpersons' Experience Level in Housing Management

About half (47 per cent) of the respondents reported they are quite experienced in leading housing management affairs compared to only 8.8 per cent who claimed they are very experienced. Another 29.4 per cent of the respondents claimed they have some experience, and the remaining 14.7 per cent rated their experience as limited.

6.3.7 Housing Characteristics (n = 34)

6.3.7.1 Housing Characteristics

Referring to Table 6.11, 55.9 per cent of the housing developments selected were built by the government. Twenty-nine per cent of the total chairpersons stated their housing developments were built by joint-venture between the government and the private sector, and the remaining five per cent were built by the private sector alone. As for the housing height, 33 chairpersons reported that their housing developments are less than five storeys. The remaining chairpersons indicated that their developments are between thirteen and twenty storeys.

Table 6. 11: Chairpersons' housing characteristics (n = 34)

Variable	Levels	F	F%
Housing development built by:	Government	19	55.9
	Private	5	14.7
	Joint venture (Government and Private)	10	29.4
	Total	34	100.0
Type of housing development:	Below 5 storeys	33	97.0
	13 to 20 storeys	1	3.0
	Total	34	100.0
Age of housing development:	15 to 20 years	3	8.8
	More than 20 years	31	91.2
	Total	34	100.0
Facilities			
<i>Multipurpose hall</i>	No	8	23.5
	Yes	26	76.5
	Total	34	100.0
<i>Prayer hall</i>	No	6	17.6
	Yes	28	82.4
	Total	34	100.0
<i>Children's playground</i>	No	6	17.6
	Yes	28	82.4
	Total	34	100.0
<i>Court</i>	No	11	32.4
	Yes	23	67.6
	Total	34	100.0
Number of bedrooms	1 and 2 bedrooms	8	23.5
	1, 2 and 3 bedrooms	1	2.9
	2 and 3 bedrooms	4	11.8
	2 bedrooms	18	52.9
	3 bedrooms	3	8.8
	Total	34	100.0

Source: This study's analysis of survey data.

According to the chairpersons, most of the buildings have been occupied for more than 20 years (91.2 per cent). Only 8.8 per cent of the developments have been occupied for between fifteen and twenty years. Three developments were mixed-use with commercial units located on the ground floor levels.

Eighty per cent of the developments have access to facilities such as a multi-purpose hall, prayer hall/room, children's playground and playing courts. About half (52.9 per cent) of the units have two bedrooms. A quarter (23.5 per cent) of the units has a combination of one and two bedroom units. Another 11.8 per cent have a

combination of two and three bedrooms, 8.8 per cent have three bedrooms and 2.9 per cent have a combination of one, two and three bedrooms. Very few housing developments have three bedroom units because the majority of these developments were built before the launch of the recent low-cost housing requirement that units contain three bedrooms.

6.3.7.2 Occupancy Rates

In this section, three rates of occupancy categories are discussed: the rates of owner-occupants, tenant-residents and vacant units. As shown in Table 6.12, about 54 per cent of the units are being occupied by the owners (mean=54.16 per cent, Std. Dev=19.14). For tenant-residents, the mean result is 42.3 per cent (Std. Dev=18.42), whilst the vacant units mean value is only 3.56 per cent.

Table 6. 12: Descriptive statistics of occupancy rates (n = 34)

		Average percentage of		
		Owner-occupants	Tenant-residents	Vacant units
N	Valid	34	34	34
	Missing	0	0	0
Mean		54.162	42.279	3.559
Median		58.000	40.000	.000
Mode		50.0 ^a	40.0 ^a	.0
Std. Deviation		19.1370	18.4223	5.5565

Source: This study's data analysis.

Table 6.13 shows that 32.4 per cent of the owners' organisations have an average owner-occupant rate between 51 and 70 per cent. A closer examination, however, indicates that 49 per cent of housing units have less than a 50 per cent owner-occupant rate.

Table 6. 13: The rate of owner-occupants (n=34)

Owner-occupants' rate		Frequency	Per cent
Valid	<30%	8	23.4
	31%-50%	9	26.5
	51%-70%	11	32.4
	71%-90%	4	11.8
	91%-100%	2	5.9
Total		34	100.0

Source: This study's data analysis.

6.3.7.3 Housing Management Affairs

Table 6.14 shows that 76.5 per cent of the chairpersons stated their current owners' organisations have been in operation between two and five years. About 17.6 per cent of them claimed their organisation's age to be less than one year. The remaining 5.9 per cent of the owners' organisations have been established for more than ten years.

All the maintenance charges are calculated per unit/month. Only one chairperson claimed to have two ranges of maintenance charges according to different numbers of bedrooms per unit. More than 60 per cent of the total housings' maintenance charge is between RM20 and RM30 (29.4 per cent=RM20, 29.4 per cent=RM25 and 26.5 per cent=RM30). Another 5.9 per cent of the maintenance charges are RM15 per unit per month. Some developments have charges between RM40 (2.9 per cent) and RM50 (2.9 per cent).

More than three-quarters (82.4 per cent) of the chairpersons stated they do not impose a sinking fund. Only five owners' organisations (14.7 per cent) imposed a sinking fund levy, with two of them stating they charge RM5 per unit per month. 'House rules' have been set up as an additional guideline to ease housing management by 55.9 per cent of the organisations, whilst the remainder have not established such rules.

Table 6. 14: Housing management affairs (n=34)

Variable	Levels	F	F%
Establishment period of the current organisation:	Less than 1 year	6	17.6
	2 to 5 years	26	76.5
	more than 10 years	2	5.9
	Missing	-	-
	Total	34	100.0
Maintenance charges per month	RM15	2	5.9
	RM20	10	29.4
	RM20–RM50	1	2.9
	RM25	10	29.4
	RM30	9	26.5
	RM40	1	2.9
	RM50	1	2.9
	Total	34	100.0
Does your housing development have sinking fund:	Yes	5	14.7
	No	28	82.4
	Total	33	97.1
	Missing	1	2.9
	Total	34	100.0
Do you establish and implement any house rules	Yes	19	55.9
	No	14	41.2
	Total	33	97.1
	Missing	1	2.9
	Total	34	100.0

Source: This study's data analysis.

6.4 Analysis of Final Survey-Part B: Essential Factors Affecting the Effectiveness of Housing Management (Part 1 Survey)

As described in previous chapters, the questionnaire used in the final survey consisted of two parts. Part 1 examined the expected factors that influence performance of housing management. The objective was to identify the respondents' (owner-occupants and chairpersons) agreement levels on these factors. Part 2 employed the same factors as variables predicting the effective stakeholders' relationships. Part 2 examined the respondents' satisfaction level and investigated it in depth, using more attributes to explain each variable.

This section describes the statistical analysis of Part 1 and the significant question that this study attempts to explore, which is:

a) What are the owner-occupants' and chairpersons' levels of agreement on the proposed factors for effective housing management?

Descriptive analysis is used to explain the agreement level of the owner-occupants and chairpersons. Both groups of respondents were asked to express their agreement level on the proposed factors using a seven-point disagreement–agreement scale. The discussion is based on the mean value generated from the analysis. Bar charts illustrate the different percentage results for both sets of respondents.

6.4.1 Descriptive Statistics of Effective Stakeholders' Relationships

As presented in Table 6.15, the seven factors listed explain the effective stakeholders' relationships variable. In general, the descriptive analysis results show that chairperson and owner-occupant respondents are in agreement on all the factors. This is proved by the mean values that are over 4.0. A closer examination shows that the chairpersons indicated higher levels of agreement compared to owner-occupants.

Three factors showed divergent levels of agreement between the chairpersons and owner-occupants. The chairpersons mostly 'strongly agree' that 'owners should have a good relationship with their managing agents' personnel' (mean=6.33), 'owners' organisation committee should have a good inter-relationship with their managing agent' (mean=6.33) and 'managing agents should be involved in owners' organisation activities' (mean=6.33). Conversely, the owner-occupants only 'agree' (mean=5.23, 5.18 and 5.36 respectively) with the same statements. However, both respondents showed an identical agreement level (chairpersons: mean=5.68 and owner-occupants: mean=5.34) on the need for tenant-residents participation.

Table 6. 15: Degree of agreement with statements relating to stakeholders' relationships variable

	Owner-occupants (n=618)	Chairpersons (n=34)
	Mean	mean
Effective Stakeholders' Relationships		
^(a) Owners should have a good relationship with their owners' organisation.	5.49	6.00
^(b) Owners should have a good relationship with their managing agents' personnel.	5.23	6.33
^(b) Owners' organisation committee should have a good inter-relationship with their managing agent.	5.18	6.33
^(a) Owners should co-operate and actively participate in owners' organisation.	5.54	5.88
^(a) Owners' organisation should co-operate when acting on behalf of the owners.	5.49	6.15
^(b) Managing agents should be involved in owners' organisation activities.	5.36	6.33
^(a) Tenant- residents should be involved in the housing management and maintenance.	5.34	5.68

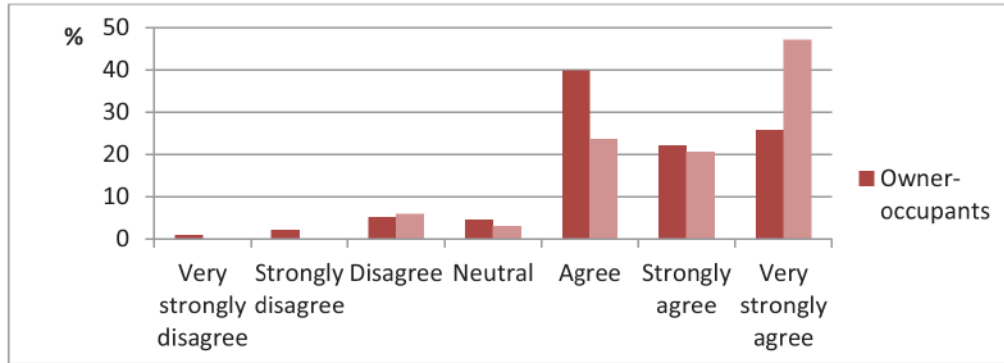
Notes :^(a) Owner-occupants: n=618, Chairpersons: n=34 ^(b) Owner-occupants: n=199, Chairpersons: n=3

Source: This study's analysis of survey data.

Figures 6.4 to Figure 6.10 are bar charts illustrating the direction of agreement with each statement related to the importance of factors affecting relationships between stakeholders (expressed as percentages) given by the owner-occupants and chairpersons. Further examination of Figures 6.4, 6.5 and 6.6 indicate opposite directions of agreement level given by both types of respondent. The largest percentage of chairpersons 'very strongly agree' that owners should have a good relationship with their owners' organisations (47.1 per cent), that owners should co-operate and actively participate in owners' organisation (44.1 per cent) and that owners' organisation should co-operate when acting on behalf of the owners (41.2 per cent). Conversely, the largest percentage of owner-occupants only 'agrees' with the same statements (39.8 per cent, 34.3 per cent and 32.4 per cent, respectively).

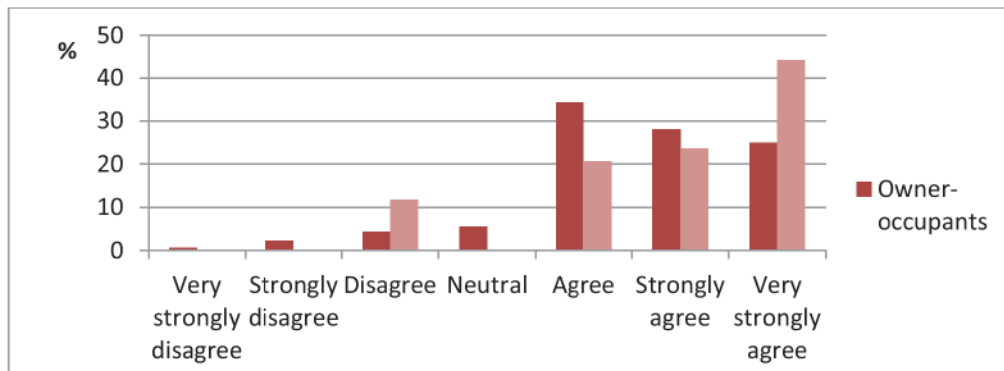
Whilst there are positive responses given by the majority of owner-occupants, a number of them consistently disagree with all the statements. The statement that 'owners should have a good relationship with their managing agents' personnel' received the highest percentage of disagreement, 10.8 per cent as compared to other

statements. The lowest percentage of disagreement is 4.5 per cent, concerning the tenant-residents' involvement in housing management.



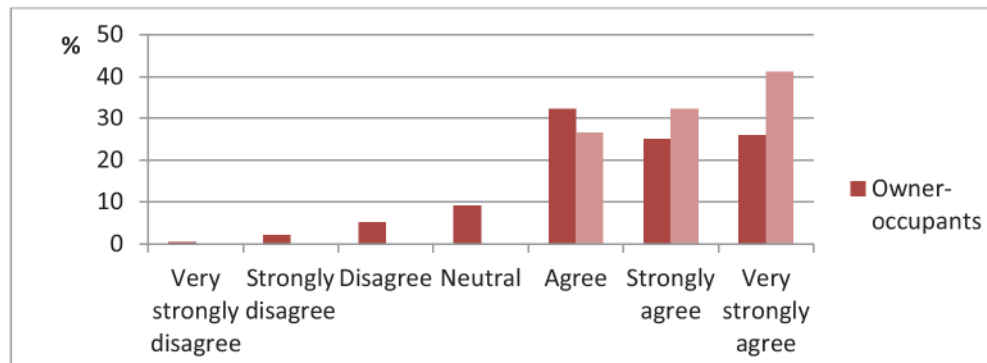
Source: This study's data analysis.

Figure 6. 4: Owners should have a good relationship with their owners' organisation



Source: This study's data analysis.

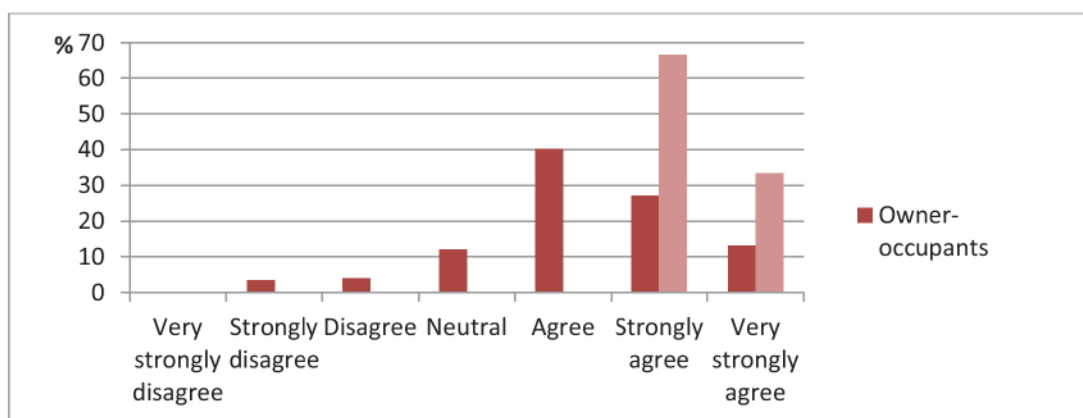
Figure 6. 5: Owners should co-operate and actively participate in owners' organisation



Source: This study's data analysis.

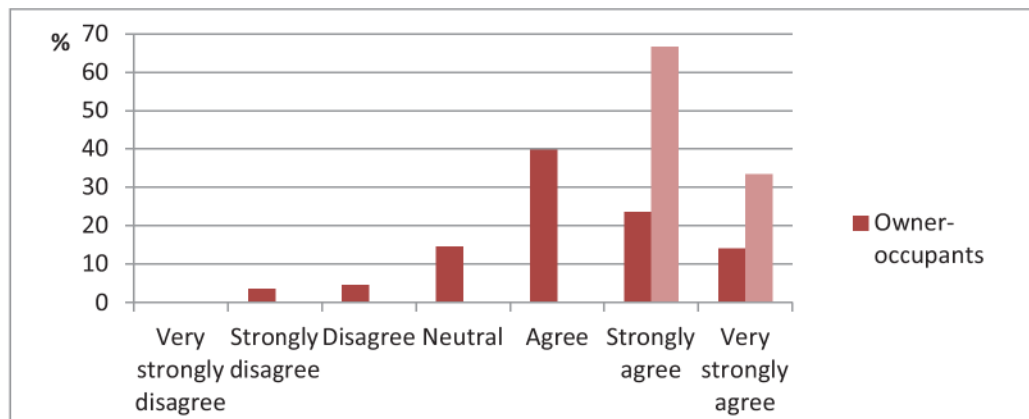
Figure 6. 6: The owners' organisation should co-operate when acting on behalf of the owners

As for the attributes associated with the Managing Agents' competency, Figures 6.7, 6.8 and 6.9 indicate that whilst all the chairpersons voted either 'strongly agree' (66.7 per cent for all statements) or 'very strongly agree' (33.3 per cent for all statements), the majority of owner-occupants stated 'agree' (40.2 per cent, 39.7 per cent and 38.2 per cent, respectively) to the same statements. Again, owner-occupants were less certain about agreeing with the statements, with several indicating 'not sure' (12.1 per cent, 14.6 per cent and 11.6 per cent, respectively), and a small percentage disagreeing with the statements (3.5 per cent, 3.5 per cent and 3.0 per cent, respectively).



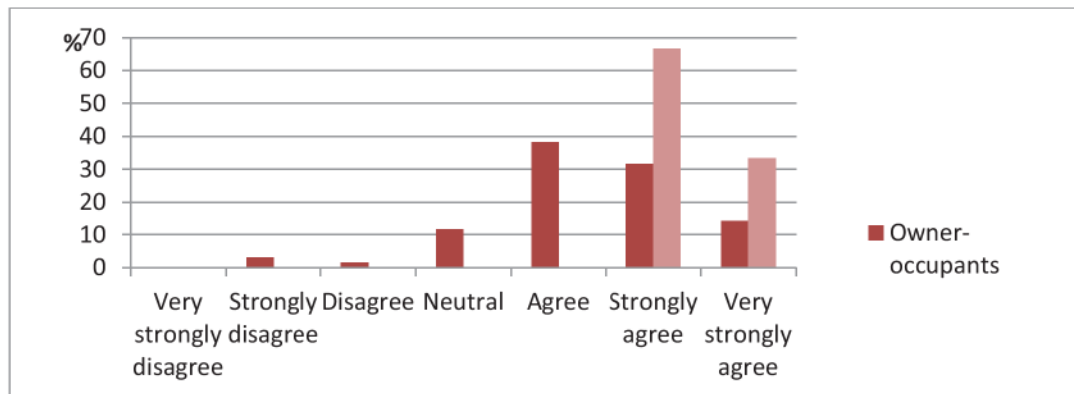
Source: This study's data analysis.

Figure 6. 7: Owners should have a good relationship with their managing agents' personnel



Source: This study's data analysis.

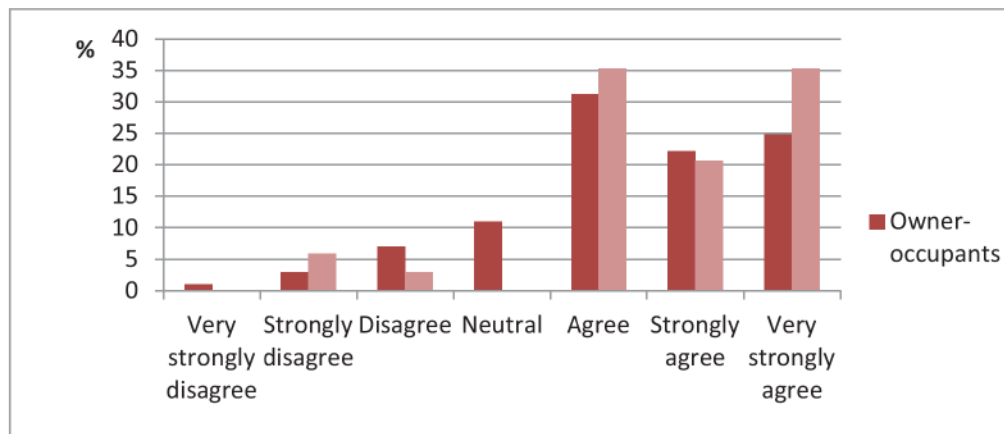
Figure 6. 8: Owners' organisation committee should have a good inter-relationship with their managing agents



Source: This study's data analysis.

Figure 6. 9: Managing agents should be involved in owners' organisation activities

Meanwhile, Figure 6.10 shows a wider range of responses. A majority of owner-occupants 'agree' (31.2 per cent) that tenant-residents should be involved in housing management, with a number neutral or opposed to the idea. Chairpersons' points of view are mixed, with this question receiving the only 'strongly disagree' responses. Overall, the majority consider tenant participation should be encouraged - chairpersons recorded 'agree' (35.3 per cent) and 'very strongly agree' (35.3 per cent).



Source: This study's data analysis.

Figure 6. 10: Tenant-residents should be involved in housing management and maintenance

6.4.2 Descriptive Statistics of Residential Satisfaction Dimensions

Three dimensions of residential satisfaction—dwelling satisfaction, neighbourhood satisfaction and satisfaction with neighbours—are used in this survey to explain the respondents' evaluation of their residential environment. Looking at Table 6.16 below, both groups responded highest means score that 'satisfaction with neighbours is important to good housing management' (owner-occupants: mean=5.52: chairperson: mean=6.03). Chairpersons responded 'very strongly agree', whilst owner-occupants only agree with this statement.

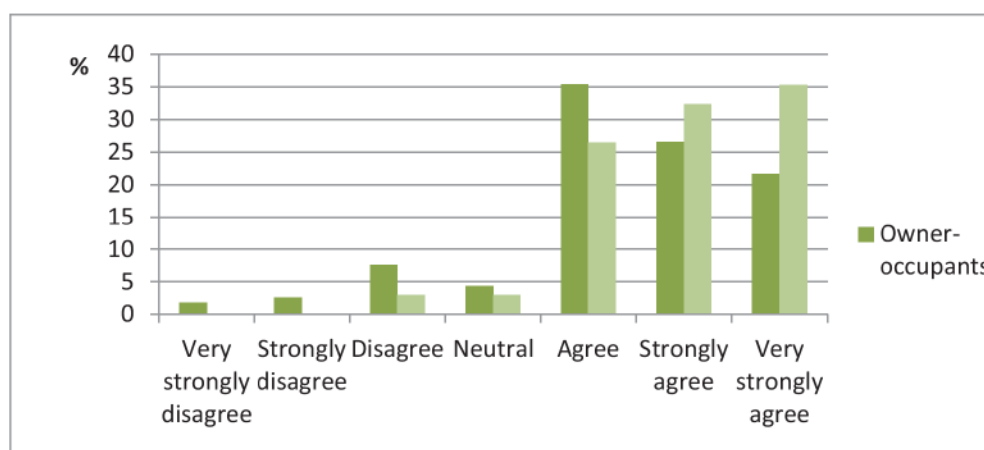
Table 6. 16: Descriptive statistics of residential satisfaction dimensions variable

	Owner-occupants (n = 618)	Chairpersons (n = 34)
	Mean	Mean
Residential satisfaction dimensions		
Satisfaction with individual dwellings is important to good housing management.	5.35	5.94
Satisfaction with the neighbourhood is important to good housing management.	5.47	5.91
Satisfaction with neighbourliness is important to good housing management.	5.52	6.03

^a Multiple modes exist. The smallest value is shown.

Source: This study's analysis of survey data.

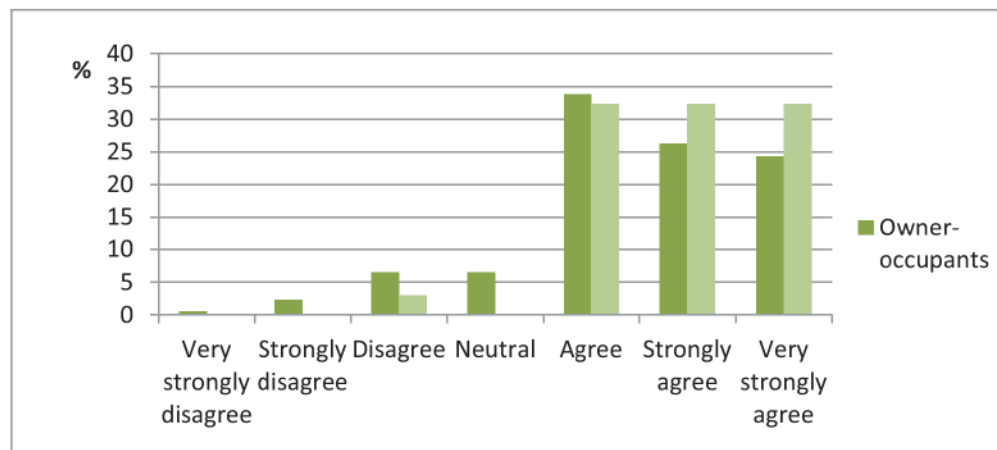
Figures 6.11, 6.12 and 6.13 show levels of agreement with variables relating to residential satisfaction for chairpersons and owner-occupants. As illustrated in Figure 6.11, dwelling satisfaction appears to be considered highly important to chairpersons (35.3 per cent very strongly agree, 32.4 per cent strongly agree), whilst 35.4 per cent of owner-occupants merely agree with the statement. 12 per cent of owner-occupants disagree with the statement (disagreeing to very strongly disagreeing).



Source: This study's data analysis.

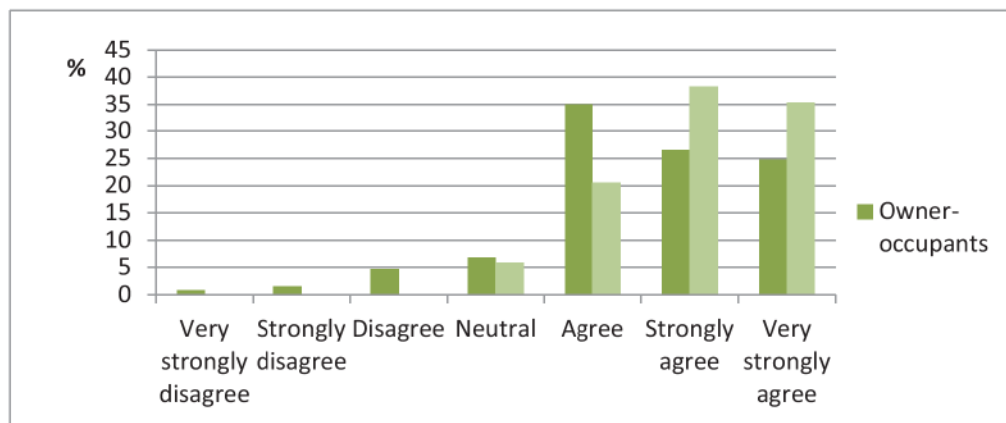
Figure 6. 11: Satisfaction with individual dwellings is important to good housing management

Figure 6.12 illustrates that chairpersons are evenly split—‘very strongly agree’ (32.4 per cent), ‘strongly agree’ (32.4 per cent) and ‘agree’ (32.4 per cent)—on whether owners’ satisfaction with their dwelling could influence the effective running of housing management. The majority of owner-occupants ‘agree’ (33.8 per cent) with neighbourhood satisfaction as a factor, whilst a small number dissent (9.2 per cent). The satisfaction with neighbours (Figure 6.13) shows that a high percentage of chairpersons ‘very strongly agree’ (38.2 per cent) or ‘strongly agree’ (35.3 per cent) with the factor, owner-occupants mostly just ‘agree’. A number of owner-occupants, however, disagree with the statement (seven per cent disagreeing to very strongly disagreeing).



Source: This study’s data analysis.

Figure 6. 12: Satisfaction with the neighbourhood is important to good housing management



Source: This study's data analysis.

Figure 6. 13: Satisfaction with neighbourliness is important to good housing management

6.4.3 Descriptive Statistics of Owner-occupants' Competency Variable

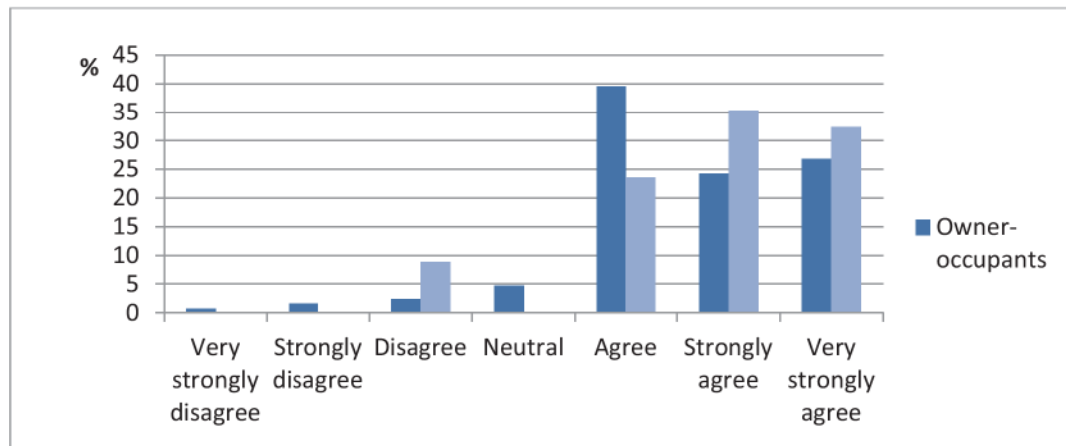
Five items were used to explain the owner-occupants' competency variable (i.e., the importance of owners): (i) to have appreciation for the multi-storey living style, (ii) to have awareness of maintenance needs, (iii) to have awareness of the costs of maintenance, (iv) to have understanding of the Acts relating to housing management and maintenance and (v) to have knowledge of housing management and maintenance. Table 6.17 indicates that the response of both groups surveyed are on the positive side of the scale (owner-occupants: mean >5.00; chairperson: mean>5). Chairpersons 'strongly agree' with 'owners to have awareness of maintenance needs' and 'agree' with high mean score (5.97) with 'owners to have awareness of the costs of maintenance' and 'owners to have understanding of Acts relating to housing management' factors. Whilst owner-occupants responded that 'owners to have awareness of maintenance needs' factor as the most important factor (mean=5.72) to good housing management.

Table 6. 17: Descriptive statistics of owners-occupants' competency variable

	Owner-occupants (n=618)	Chairpersons (n=34)
	Mean	Mean
<i>Owner-occupants' competency variable</i>		
<i>To have appreciation of multi-storey living style</i>	5.61	5.82
<i>To have awareness of maintenance needs</i>	5.72	6.06
<i>To have awareness of the costs of maintenance</i>	5.60	5.97
<i>To have understanding of the Acts relating to housing management and maintenance</i>	5.47	5.97
<i>To have knowledge of housing management and maintenance</i>	5.52	5.44

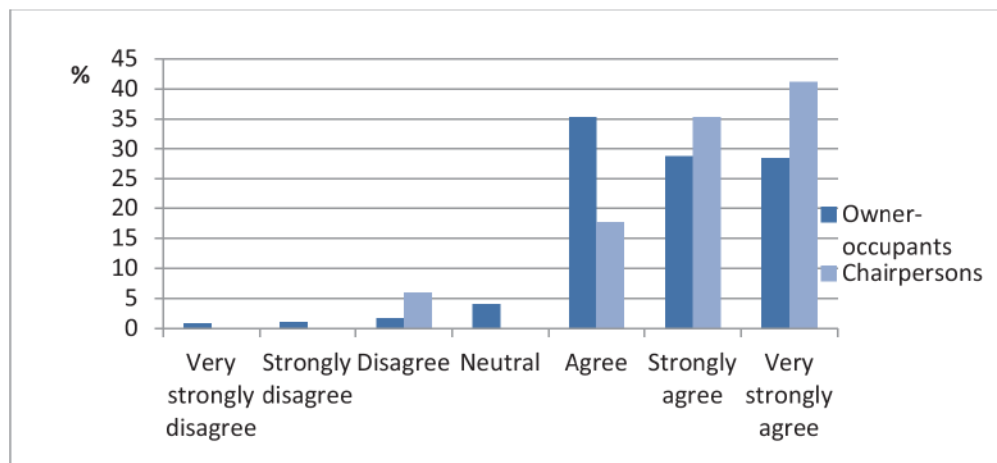
Source: This study's data analysis.

Bar charts illustrate the five factors representing the owner-occupants' competency variable (Figures 6.14 to 6.18). As shown in Figure 6.14, a large percentage (39.5 per cent) of owner-occupants 'agrees' that 'owner-occupants to have appreciation awareness of multi-living style' is a factor to enhance housing management with a few dissenting opinions. Meanwhile, many chairpersons (35.3 per cent) 'very strongly agree' with this factor. Figure 6.15 shows clearly the difference in the level of agreement between the two groups of respondents. While chairpersons mostly (41.2 per cent) 'very strongly agree' with the requirement for 'owner-occupants to have awareness of maintenance needs' factor affecting their housing management, owner-occupants merely 'agree' (35.3 per cent).



Source: This study's data analysis.

Figure 6. 14: Importance of owner-occupants' appreciation of multi-storey living style

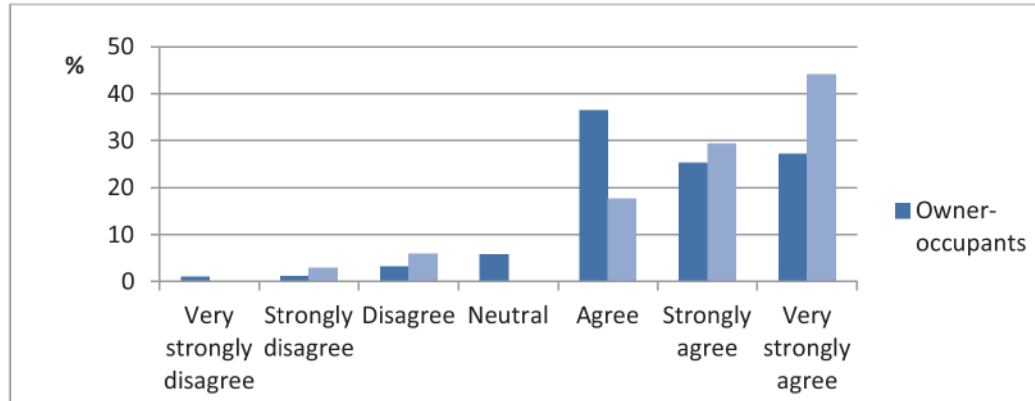


Source: This study's data analysis.

Figure 6. 15: Importance of owner-occupants' awareness of maintenance needs

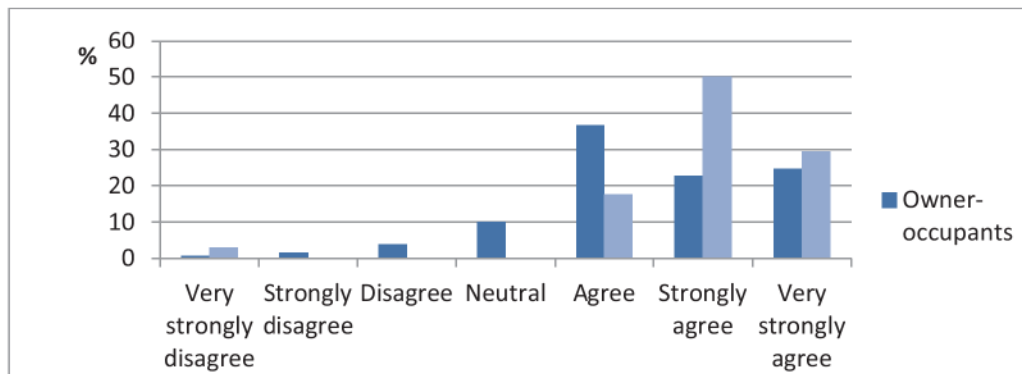
Figure 6.16 shows that a large portion of the chairpersons (44.1 per cent) 'strongly agree' with the 'owners to have awareness of the costs of maintenance' factor affecting their housing management compared to a slightly smaller percentage of owner-occupants (36.4 per cent) who only 'agree'. Finally, Figures 6.17 and 6.18 indicate quite similar patterns. It is clear that while most chairpersons 'very strongly agree' (44.1 per cent) or 'strongly agree' (50 per cent) with the factors, a majority of owner-occupants (36.6 per cent and 26.5 per cent, respectively) only 'agree' with

them. Again, several owners (6.1 per cent and 5.7 per cent, respectively) disagree with the statements as do as chairpersons (2.9 per cent and 8.8 per cent, respectively).



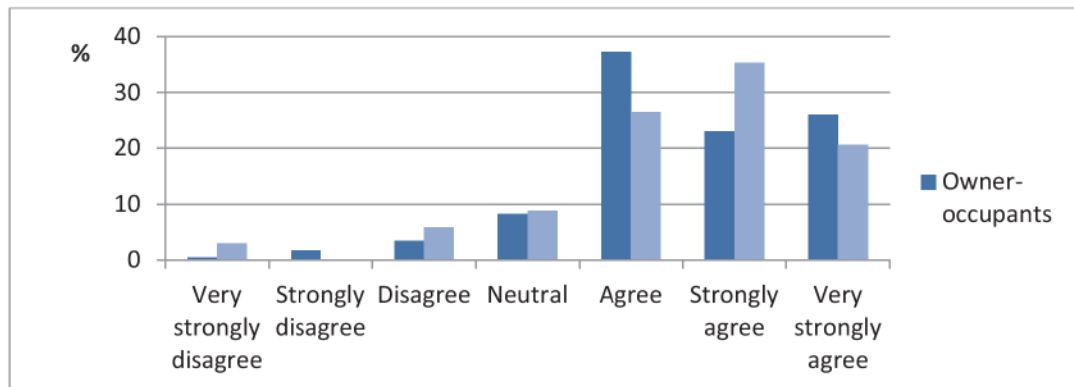
Source: This study's data analysis.

Figure 6. 16: Importance of owner-occupants' awareness of the costs of maintenance



Source: This study's data analysis.

Figure 6. 17: Importance of owner-occupants' understanding of the acts relating to housing management and maintenance



Source: This study's data analysis.

Figure 6. 18: Importance of owner-occupants' knowledge of housing management and maintenance

6.4.4 Descriptive Statistics of Owners' Organisational Competency Variable

Table 6.18 shows three factors that explain the owners' organisational competency variable. In general, both owner-occupants and chairpersons 'agree' with all the factors as shown by the mean score between 5.48 and 5.88. However, in detail, the mean values of chairpersons is higher compared to owner-occupants (chairpersons mean=5.88, 5.85 and 5.82; owners: mean=5.64, 5.54, 5.48).

Table 6. 18: Descriptive statistics of owners' organisational competency variable

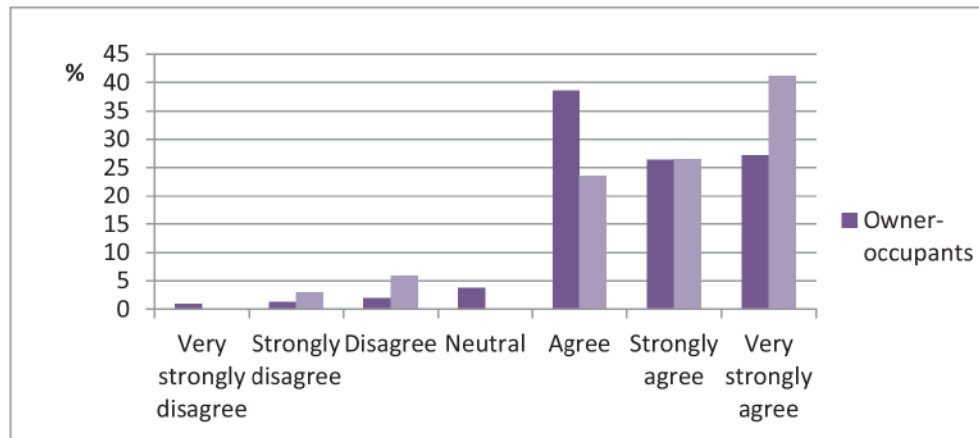
	Owner-occupants (n=618)	Chairpersons (n=34)
	Mean	Mean
Owners' Organisational Competency		
<i>To have a strong commitment</i>	5.65	5.88
<i>To have a leadership skill</i>	5.54	5.85
<i>To have adequate knowledge and skill</i>	5.48	5.82

^a. Multiple modes exist. The smallest value is shown

Source: This study's data analysis.

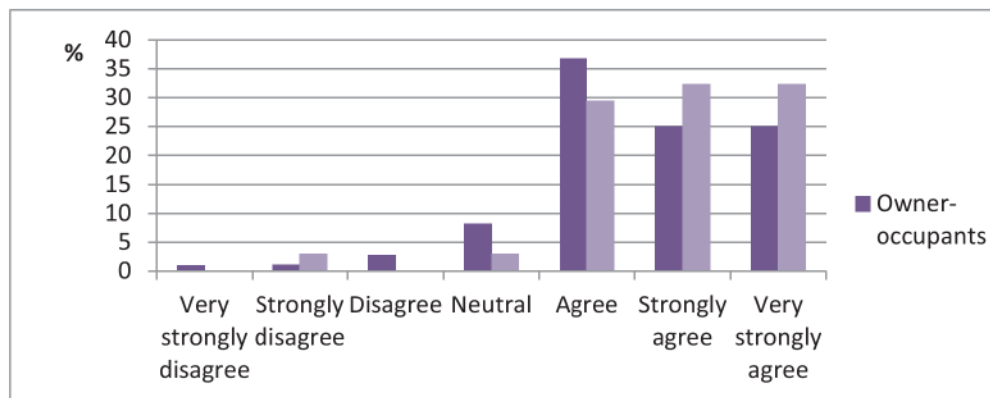
In general, both groups of respondents agreed with the three factors for adequate housing management. However, Figures 6.19 to 6.21 clearly show that a number of owner-occupants are unsure about the validity of the statement, with some owner-occupants (4.2 per cent, 4.9 per cent and 6.6 per cent, respectively) and chairpersons (8.8 per cent, 2.2 per cent and 5.9 per cent, respectively) disagreeing. The majority of

the chairpersons (41.2 per cent, 32.4 per cent and 35.3 per cent, respectively) ‘very strongly agree’ with the factors; however, a high percentage of owner-occupants (38.5 per cent, 36.7 per cent and 35.4 per cent, respectively) only ‘agree’ with the factors.



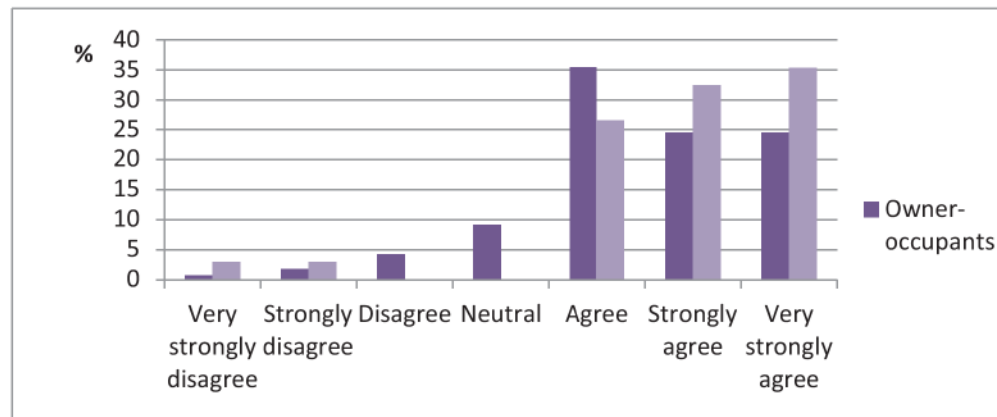
Source: This study’s data analysis.

Figure 6. 19: Importance of owners’ organisation to have a strong commitment



Source: This study’s data analysis.

Figure 6. 20: Importance of owners’ organisation to have leadership skill



Source: This study's data analysis.

Figure 6. 21: Importance of owners' organisation to have adequate knowledge and skill

6.4.5 Descriptive Statistics of Managing Agents' Competency Variable

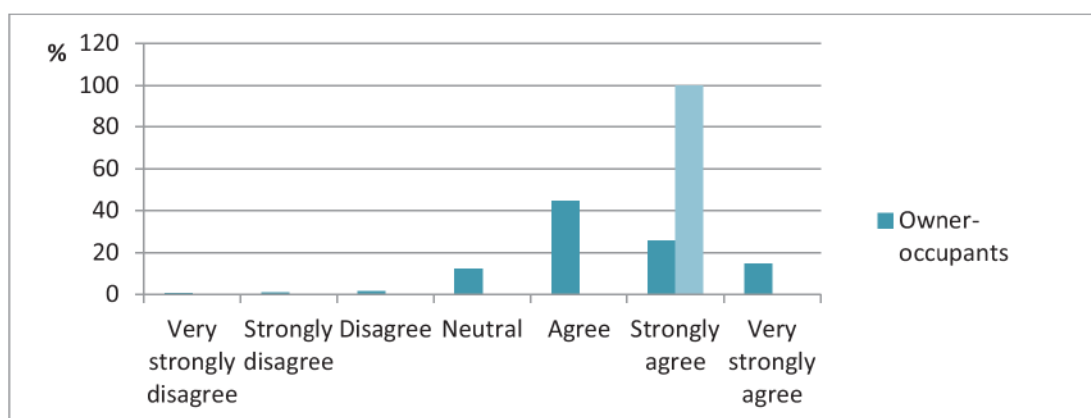
Table 6.19 examines three factors that explain the managing agents' competency variable. Only respondents from three Residents' Associations responded to these questions. The others were not required, because their developments are being managed without the involvement of managing agents. The descriptive analysis indicates that owner-occupants mainly 'agree' with all the items. This is shown by the mean values of 5.35, 5.34 and 5.37. Meanwhile, Chairpersons on average 'strongly agree' with all factors that explain the Managing agent's competency [mean= 6.00, 6.00, 6.33). Detail examination demonstrated that both groups responded that 'to be customer-oriented' factor as the important criteria for competent managing agents.

Table 6. 19: Descriptive statistics of managing agents' competency variable

	Owner-occupants (n = 199)	Chairpersons (n = 3)
	Mean	Mean
Managing agents' competency		
<i>To have strong technical knowledge and skill of housing management and maintenance</i>	5.35	6.00
<i>To have strong administrative knowledge and skill associated with housing management and maintenance</i>	5.34	6.00
<i>To be customer-oriented</i>	5.37	6.33

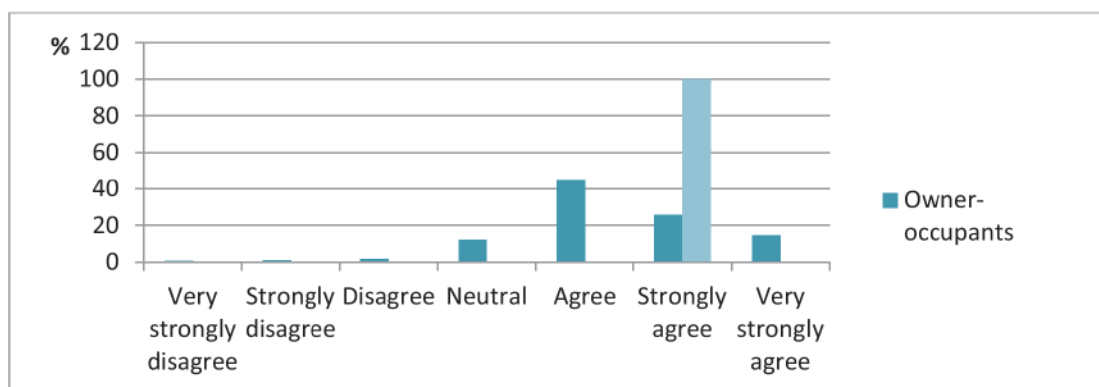
Source: This study's data analysis.

As shown in Figures 6.22, 6.23 and 6.24, the outcome reveals that a majority of the chairpersons ‘strongly agree’ (100 per cent, 100 per cent and 66.7 per cent, respectively) with all three statements. In contrast, whilst the majority of owner-occupants agreed, there were some respondents who were unsure (12.1 per cent, 12.1 per cent and 9.0 per cent, respectively) or who disagreed (3.0 per cent, 3.0 per cent and 5 per cent, respectively) with the statements.



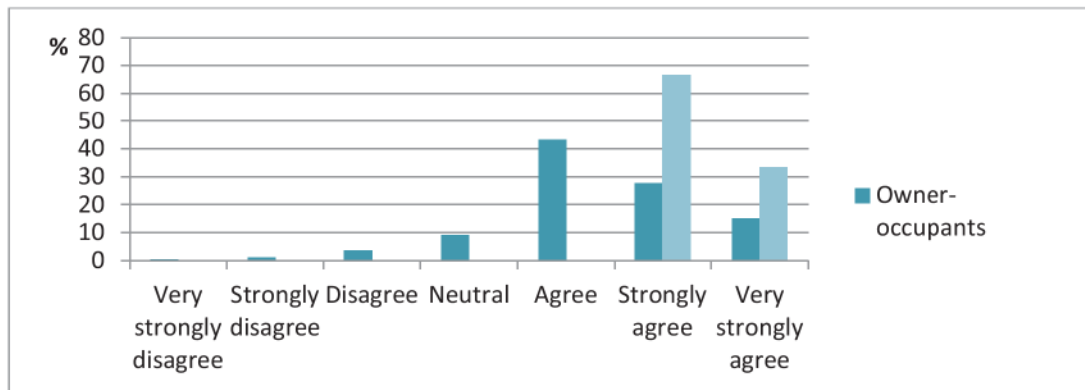
Source: This study’s data analysis.

Figure 6. 22: Importance of managing agents to have strong technical knowledge and skill of housing management and maintenance



Source: This study’s data analysis.

Figure 6. 23: Importance of managing agents to have strong administrative knowledge and skill associated with the housing management and maintenance



Source: This study's data analysis.

Figure 6. 24: Importance of managing agents to be customer-oriented

6.5 Analysis of Final Survey-Part C: The Influence of Objective Independent Variables on the Dependent Variable of Effective Stakeholders' Relationships

This section reports the testing of this study's hypotheses, which are H1, H2, H3, H4 and H5 (see section 4.8.1). These hypotheses predict the influence of the proposed objective independent variables on the dependent variable of effective stakeholders' relationships. As mentioned earlier, H1 aimed to see if there is a distinction between owner-occupants and chairpersons. H2 and H3 predict the effects of the objective independent variable, Owners-occupants' characteristics, on the dependent variable. As proposed, the owners-occupants' characteristics variable has been divided into two. H2 represents the socio-demographic characteristics, while H3 represents the socio-economic and participant characteristics.

H4 involves the variable of chairpersons' characteristics, and the final proposed testable hypothesis is the housing characteristic variable (H5). For H5, two items that explain housing characteristics variables—'type of development' (TYPE) and 'the age of development' (AGE)—have been removed from the analysis because only one estate can be categorised as high-density housing, while the remaining developments

are medium density, and more than 90 per cent of the housing is over 20 years old (see Table 6.11).

The analyses of this section's hypotheses are based on Univariate Analysis of Variance (ANOVA).

6.5.1 Respondents' Categories: Hypothesis 1

Table 6.20 illustrates that the ANOVA's result shows that there is no significant difference in the level of satisfaction with stakeholders' relationships by respondents' categories ($p>0.05$). Thus, it indicates that respondent's categories has no influence on the level of satisfaction with stakeholders' relationships.

Table 6. 20: The relationships between satisfaction with stakeholders' relationship and respondents' category

Variables differences	ANOVA's result		
	<i>P</i>	Mean Score	Std.
<i>Category of respondents</i>	$p>0.05$		
Owner-occupants		5.07	1.38
Chairpersons		4.75	1.11

Source: This study's data analysis.

6.5.2 Owner-occupants' Characteristics: Hypothesis 2 and Hypothesis 3

6.5.2.1 Owner-occupants' Socio-demographic Characteristics: Hypothesis 2

As described in Chapter 4, seven items were identified as owner-occupants' socio-demographic characteristics. Only two items are found to be significant in influencing respondents' satisfaction with stakeholders' relationships. As shown in Table 6.21, the two items are number of children living together (CHILDREN) and the length of residency in current unit (RESIDENCY). Both items' p values are significant $p<0.05$.

Carrying out Bonferroni post hoc test (Table 6.22) found that families with more than 5 children were more satisfied than households with no children and with less

than 5 children (mean for > 5 children = 5.26; mean for 1 to 5 children = 5.13 and mean for no children = 4.88). However, there was no significant difference in the level of satisfaction between household without children and household with less than 5 children.

Similarly, Bonferroni post hoc test in Table 6.23 shows that respondents residing in the housing development between one and five years (mean=5.31) (RESIDENCY) had the highest satisfaction with stakeholders' relationships compared to other groups. On the other hand, there were no significant difference in the level of satisfaction between other groups ($p < 0.05$).

Table 6. 21: The relationships between satisfaction with stakeholders' relationships and owners' socio-demographic characteristics

Variables differences	ANOVA's result		
	<i>P</i>	Mean	Std.
AGE	<i>p</i> >0.05		
20–30		5.08	1.25
31–40		5.06	1.20
41–50		5.11	0.96
Over 50		5.02	1.14
GENDER	<i>p</i> >0.05		
Male		5.09	1.13
Female		5.04	1.10
MARITAL	<i>p</i> >0.05		
Married		5.10	1.07
Not Married		4.94	1.30
Single Parent		4.80	1.44
PEOPLE	<i>p</i> >0.05		
1 to 5		5.07	1.12
6 to 10		5.05	1.12
>10		5.42	0.50
CHILDREN	<i>p</i> <0.05		
None		4.88	1.15
1 to 5		5.13	1.12
>5		5.26	0.76
RESIDENCY	<i>p</i> <0.05		
<1 year		5.25	0.83
1 years to 5 years		5.31	1.07
5 years to 10 years		5.05	1.13
10 years to 15 years		5.27	0.90
>15 years		4.89	1.21
MOBILITY	<i>p</i> >0.05		
2 years or less		5.04	1.13
3 years to 10 years		4.92	1.24
11 or more years		5.14	0.92
Always		5.11	1.10

Source: This study's data analysis.

Table 6.22: Result of Bonferroni test for number of CHILDREN

Category (I)	Category (J)	Mean Difference (I-J)	<i>p</i>
> 5 children	No children	0.38	<i>p</i> <0.05
	1 to 5 children	0.13	<i>p</i> <0.05

Source: This study's data analysis.

Table 6.23: Result of Bonferroni test for RESIDENCY

Category (I)	Category (J)	Mean Difference (I-J)	p
1 to 5 years	< 1 year	0.06	$p<0.05$
	5 to 10 years	0.26	$p<0.05$
	10 to 15 years	0.04	$p<0.05$
	>15 years	0.42	$p<0.05$

Source: This study's data analysis.

6.5.2.2 Owners' Socio-Economic and Participation Characteristics: Hypothesis 3

As shown in Table 6.24, satisfaction with stakeholders' relationships are not influenced by owner-occupants' socio-economic characteristics ($p>0.05$ for EDUCATION and INCOME). However, participation (Part_activites and Part_meeting) variables indicate a significant influence on stakeholders' relationships, as proven by the p value; $p<0.05$.

A closer examination of mean differences for EDUCATION statistically found respondents with a primary school qualification had the highest satisfaction level with stakeholders' relationships (mean=5.13). However, the most educated respondents (with diploma and higher achievement) showed the least satisfaction level (mean=4.69). The INCOME variable indicates inverse results: the lesser the respondents' household income (mean=5.09), the more satisfied they are with stakeholders' relationships. The least satisfied group with the stakeholders' relationships are households earning between RM1501 and RM2000.

Respondents' participation in activities (Part_activites) and meetings (Part_meeting) organised by owners' organisations indicate the same results pattern. The 'quite active' respondents involved in both 'activities' (mean=5.25) and 'meetings' (mean=5.31) have the significant highest satisfaction with stakeholders' relationships compared to other active groups as supported by Bonferroni test shown in Table 6.25 and Table 6.26 . Other groups were found to be not significant.

Table 6. 24: The Relationships between satisfaction with stakeholders' relationships and owner-occupants' socio-economic and participation characteristics

Variables differences	ANOVA's result		
	<i>P</i>	Mean	Std.
EDUCATION	<i>p</i> >0.05		
Secondary school		5.08	1.18
Primary school		5.13	1.11
Certificate		4.89	1.13
Diploma and above		4.96	1.08
INCOME	<i>p</i> >0.05		
<RM1000		5.19	1.12
RM1001 to RM 1500		5.03	1.14
RM1501 to RM2000		4.96	1.01
>RM2001		5.15	1.16
Part_activities	<i>p</i> <0.05		
Very active		5.11	0.97
Quite active		5.25	1.03
Somewhat active		4.99	1.07
Not active		4.47	1.41
Part_meetings	<i>p</i> <0.05		
Very active		5.08	0.89
Quite active		5.31	1.04
Somewhat active		4.90	1.11
Not active		4.44	1.20

Source: This study's data analysis.

Table 6.25: Result of Bonferroni test for Part_activities variable

Category (I)	Category (J)	Mean Difference (I-J)	<i>p</i>
Quite active	Very active	0.14	<i>p</i> <0.05
	Somewhat active	0.26	<i>p</i> <0.05
	Not active	0.78	<i>p</i> <0.05

Source: This study's data analysis.

Table 6.26: Result of Bonferroni test for Part_meetings variable

Category (I)	Category (J)	Mean Difference (I-J)	<i>p</i>
Quite active	Very active	0.23	<i>p</i> <0.05
	Somewhat active	0.41	<i>p</i> <0.05
	Not active	0.87	<i>p</i> <0.05

Source: This study's data analysis.

6.5.3 Chairpersons' Characteristics: Hypothesis 4

As shown in Table 6.27, none of the chairpersons' characteristics demonstrate significant differences with satisfaction of stakeholders' relationships (all $p>0.05$). Therefore, it could be concluded that the category of chairpersons (Chairperson_category), years of holding the current position (Chairperson_duration), experience in other community organisations (Chairperson_other_organisations), and their level of experience in housing management and maintenance (Chairperson_experience) do not influence owner-occupants' satisfaction with stakeholders' relationships.

Meanwhile, closer examination of mean scores for Chairperson_category indicate that chairpersons of residents' associations (mean=5.62) have a higher satisfaction score with stakeholders' relationships compared to chairpersons from MCs (mean=4.62). In addition, chairperson's duration for holding the current position (Chairperson_duration) indicates the longer they hold the position, the more satisfied owner-occupants are with stakeholders' relationships. This is proven by mean score of 6.33 for chairpersons who have held the position for more than five years compared to a mean of 3.83 for those with less than five months of experience.

Chairpersons with experience in other community organisations (Chairperson_other_organisations) garner higher satisfaction levels (mean=5.03) than those who do not commit to other organisations (mean=4.36). In terms of Chairperson_experience, while chairpersons with high levels of experience in housing management and maintenance experience (mean=6.00) receive the highest satisfaction score of the groups, chairpersons with limited experience exhibit a lower satisfaction level (mean=4.47).

Table 6. 27: The relationships between satisfaction with stakeholders' relationships and chairpersons' characteristics

Variables differences	ANOVA's result		
	<i>P</i>	Mean	Std.
<i>Chairpersons category</i>	<i>p</i> >0.05		
Residents' Association		5.62	0.89
Management Corporation		4.62	1.41
<i>Chairperson_duration</i>	<i>p</i> >0.05		
< 5 months		3.83	1.18
5 months to 3 years		4.67	1.42
3 years to 5 years		4.97	1.28
> 5 years		6.33	-
<i>Chairperson_other_organisations</i>	<i>p</i> >0.05		
No		4.36	1.38
Yes		5.03	1.34
<i>Chairperson_experience</i>	<i>p</i> >0.05		
Very experienced		6.00	0.33
Quite experienced		4.63	1.61
Somewhat experienced		4.72	1.20
Limited experienced		4.47	1.17

Source: This study's data analysis.

6.5.4 Housing Characteristics: Hypothesis 5

The ANOVA's results presented in Table 6.28 indicates that differences in satisfaction with stakeholders' relationships by LOCATION (*p*>0.05) is insignificant. Conversely, OCCUPANCY RATES show a significant relationship with satisfaction on stakeholders' relationship differences (OCCUPANCY RATES; *p*<0.05).

Referring to Table 6.29, the Bonferroni test indicates that those respondents with occupancy rates between 91 to 100 percent were more satisfied than other groups of occupancy rates. Meanwhile, there is no significant difference between other groups.

Table 6. 28: The relationships between satisfaction with stakeholders' relationships and housing characteristics

Variables differences	ANOVA's result		
	<i>P</i>	Mean	Std.
LOCATION	<i>p>0.05</i>		
Shah Alam City Council Male		5.05	1.15
Petaling Jaya Municipal Council		5.20	0.98
Ampang Jaya Municipal Council		4.99	1.13
OCCUPANCY RATES (owner-occupancy)	<i>p<0.05</i>		
<30%		5.11	1.16
31% to 50%		5.06	1.06
51% to 70%		5.08	1.13
71% to 90%		4.28	1.06
91% to 100%		5.52	0.95

Source: This study's data analysis.

Table 6.29: Result of Bonferroni test for OCCUPANCY RATES

Category (I)	Category (J)	Mean Difference (I-J)	<i>p</i>
91% to 100%	< 30%	0.23	<i>p<0.05</i>
	31% to 50%	0.41	<i>p<0.05</i>
	51% to 70%	0.44	
	71% to 90%	1.24	<i>p<0.05</i>

Source: This study's data analysis.

6.6 Analysis of Final Survey-Part C: The Influence of Objective Independent Variables on Residential Satisfaction Dimensions

As discussed in Chapter 4, the objectives of the independent variables tested above, were also modelled and predicted to give an effect on the proposed residential satisfaction dimensions, namely dwelling satisfaction (DwellSat), neighbourhood satisfaction (NbhoodSat) and satisfaction with neighbours (NboursSat). As outlined in section 4.8.8 of Chapter 4, the hypotheses involved are H6 (respondents' category), H7 (owner-occupants' socio-demographic characteristics), H8 (owner-occupants' socio-economic and participation characteristics), H9 (chairpersons' characteristics) and H10 (housing characteristics). The analysis of the results is based on the mean scores for each dimension and characteristic, which were analysed using the univariate analysis of variance (ANOVA).

6.6.1 Respondents' Categories: Hypothesis 6

As shown in Table 6.30, the univariate ANOVA indicates that there are significant differences on the dwelling satisfaction [$F(1, 649) = 5.399, p < 0.05$]. In contrast, the differences are not significant for the neighbourhood satisfaction [$F(1, 649) = 1.530, p > 0.05$] and satisfaction with neighbours [$F(1, 649) = 2.238, p > 0.05$],

A closer mean examination of the residential satisfaction dimensions by respondents' categories shows that owner-occupants have a higher satisfaction with all residential satisfaction dimensions than the chairpersons do. This is confirmed by the mean score results for dwelling satisfaction [mean value for owner-occupants=4.98 and chairpersons=4.50], neighbourhood satisfaction [mean value for owner-occupants=5.17 and chairpersons=4.94] and satisfaction with neighbours [mean value for owner-occupants= 4.99 and chairpersons= 4.69].

Concerning mean score values, the satisfaction levels are not too different. While the owner-occupants' mean scores are at the 'satisfy' level, the chairpersons' mean values are mostly 'neutral' (based on the seven-point likert scale of satisfaction level used in the survey).

Table 6. 30: The relationships between residential satisfaction dimensions and respondents' category

Residential satisfaction	Statistics	Chairman	Owners
Dwelling (DwellSat)	Mean	4.50	4.98
	Std. Deviation	1.40	1.15
	$F(\text{univariate})$	$F(1,649) = 5.399$	
	$p(\text{univariate})$	$P < 0.05$	
Neighbourhood (Nbhd00d_Sat)	Mean	4.94	5.17
	Std. Deviation	1.11	1.09
	$F(\text{univariate})$	$F(1,649) = 1.530$	
	$p(\text{univariate})$	$p > 0.05$	
Satisfaction with neighbours (NboursSat)	Mean	4.69	4.99
	Std. Deviation	1.09	1.12
	$F(\text{univariate})$	$F(1,649) = 2.238$	
	$p(\text{univariate})$	$p > 0.05$	

Source: This study's data analysis.

6.6.2 Owner-occupants' Characteristics: Hypothesis 7 and Hypothesis 8

6.6.2.1 Owner-occupants' Socio-demographic Characteristics: Hypothesis 7

In Table 6.31, the univariate ANOVA computation comparing AGE (respondents' age groups) and residential satisfaction dimensions indicate a non significant relationships [DwellSat: $f(3,611) = 0.947$, $p > 0.05$, NbhdSat: $f(3,611) = 0.251$, $p < 0.05$ and NboursSat: $f(3,611) = 1.830$, $p > 0.05$].

Although none of the above results are significant, an examination of the means shows that respondents who are over 50 years old recorded the highest satisfaction score (mean=5.07) on the dwelling satisfaction, and 20–30 year old respondents had the lowest score (mean=4.85). For neighbourhood satisfaction, the highest satisfaction is recorded by 31–40 year old respondents (mean=5.22), and 20–30 year old respondents recorded the lowest score (mean=5.12). Finally, on satisfaction with neighbours dimension, respondents between 20 and 30 years old have the highest

satisfaction (mean=5.23), while the lowest is respondents over 50 years old (mean=4.90).

The univariate ANOVA computation on the GENDER factor indicates a non significant results [DwellSat: $f(1,614) = 2.615, p < 0.05$, NbhoodSat: $f(1,614) = 0.243, p < 0.05$, and NboursSat: $f(1,614) = 2.267, p > 0.05$]. On the dwelling satisfaction, male respondents reported higher satisfaction (mean=5.05) than females (mean=4.90). Female respondents indicated higher satisfaction on neighbourhood satisfaction (mean=5.20) than males (mean=5.15). Moreover, females showed higher satisfaction with the satisfaction with neighbours (mean=5.06) than males (mean=4.92).

The influence of respondents' marital status (MARITAL) on residential satisfaction, dimensions presented in Table 6.26, is significant for the dwelling satisfaction [$F(2,614) = 4.147, p < 0.05$]; however, it is not significant for the remaining dimensions [NbhoodSat: $F(2,614) = 1.427, p > 0.05$ and NboursSat: $F(2,614) = 1.466, p > 0.05$].

Married respondents have the highest satisfaction level with dwelling satisfaction (mean=5.03), compared with single parents (mean=4.72) and unmarried (mean=4.64) respondents, and this is confirmed with the *post hoc* Scheffe test ($p < 0.05$). This outcome is repeated in both the neighbourhood satisfaction and satisfaction with neighbours, in which married respondents indicate higher satisfaction levels than those not married and single-parent respondents. This is confirmed by the mean results for neighbourhood satisfaction [married respondents (mean=5.20), unmarried respondents (mean=5.04), and single-parent respondents (mean=4.62)] and the means for satisfaction [married respondents: mean=5.01, unmarried respondents: mean=4.95 and single-parent respondents: mean=4.62].

Table 6. 31: The relationships between residential satisfaction dimensions and owner-occupants' socio-demographic characteristics

Variables differences	Residential satisfaction dimensions									
	Dwelling satisfaction (DwellSat)					Neighbourhood satisfaction (NbhoodSat)				
	Mean	Std.	<i>F</i> (<i>uni</i>)	<i>p</i> (<i>uni</i>)		Mean	Std.	<i>F</i> (<i>uni</i>)	<i>p</i> (<i>uni</i>)	
AGE			<i>F</i> (3,611)=0.947	<i>p</i> >0.05				<i>F</i> (3,611)=0.251	<i>p</i> >0.05	
20 -30 yrs old	4.85	1.35				5.12	1.17			5.23
31-30 yrs old	4.90	1.27				5.22	1.13			4.96
41-50 yrs old	5.00	1.03				5.14	1.00			4.97
> 50 yrs old	5.07	1.05				5.20	1.13			4.90
GENDER			<i>F</i> (1,614)=2.615	<i>p</i> >0.05				<i>F</i> (1,614)= 0.243	<i>p</i> >0.05	
Male	5.05	1.15				5.15	1.10			4.92
Female	4.90	1.15				5.20	1.09			5.06
MARITAL			<i>F</i> (2,614)=4.147	<i>p</i> <0.05				<i>F</i> (2,614)= 1.427	<i>p</i> >0.05	
Married	5.03	1.11				5.20	1.08			5.01
Not married	4.64	1.37				5.04	1.11			4.95
Single parent	4.72	1.12				4.91	1.30			4.62
PEOPLE			<i>F</i> (2,606)=0.082	<i>p</i> >0.05				<i>F</i> (2,606)= 0.235	<i>p</i> >0.05	
1 to 5	4.97	1.16				5.16	1.12			4.95
6 to 10	4.96	1.10				5.20	1.03			5.07
More than 10	5.19	0.38				4.85	0.72			5.06

Source: This study's data analysis.

In regard to PEOPLE's influence on residential satisfaction dimensions, the univariate ANOVA found none of the dimensions to have significant differences [DwellSat: ($F(2,606) = 0.082, p > 0.05$), NbhoodSat ($F(2,606) = 0.235, p > 0.05$), and NboursSat: ($F(2,606) = 0.596, p > 0.05$)].

Even though the result is insignificant, mean assessment of residential satisfaction using the PEOPLE category shows that respondents residing with more than ten people recorded higher satisfaction with the dwelling (mean=5.19) than others. Meanwhile respondents' households with six to ten people recorded the highest satisfaction on neighbourhood (mean=5.20) and neighbours (mean=5.07) compared to the other residency groups.

As for CHILDREN, as shown in Figure 6.32, dimensions have significant differences when calculating the univariate ANOVA, [DwellSat: $F(2,606) = 0.575, p > 0.05$, NbhoodSat: $F(2,606) = 1.33, p > 0.05$ and NboursSat: $F(2,606) = 0.342, p > 0.05$].

An examination of the means shows that respondents having more than five children residing with them recorded the highest satisfaction for all residential satisfaction dimensions (mean score for DwellSat=5.08, NbhoodSat= 5.42 and NboursSat=5.13), followed by respondents with one to five children (mean score for DwellSat=5.00, NbhoodSat= 5.18 and NboursSat=4.97), and finally respondents with no children living with them (mean score for DwellSat=4.90, NbhoodSat= 5.09 and NboursSat=4.99).

Table 6. 32: The relationships between residential satisfaction dimensions and owner-occupants' socio-demographic characteristics (continued)

Variables differences	Residential satisfaction dimensions											
	Dwelling satisfaction (DwellSat)				Neighbourhood satisfaction (NbhoodSat)				Satisfaction with neighbours (NboursSat)			
	Mean	Std.	<i>F(uni)</i>	<i>P(uni)</i>	Mean	Std.	<i>F(uni)</i>	<i>P(uni)</i>	Mean	Std.	<i>F(uni)</i>	<i>P(uni)</i>
CHILDREN												
None	4.90	1.14	F(2,606)=0.575	<i>p</i> >0.05			F(2,606)=1.33	<i>p</i> >0.05			F(2,606)=0.342	<i>p</i> >0.05
1 to 5	5.00	1.16			5.09	0.99			4.99	1.03		
> than 5	5.08	0.92			5.18	1.16			4.97	1.17		
					5.42	0.74			5.13	0.85		
RESIDENCY												
< than a year	4.99	0.83	F(4,605)=.189	<i>p</i> >0.05			F(4,605)=0.810	<i>p</i> >0.05			F(4,605)=2.112	<i>p</i> >0.05
1 to 5 years	5.15	1.24			5.36	0.90			5.19	0.84		
5 to 10 years	4.82	1.16			5.28	1.20			5.23	1.14		
10 to 15 years	5.06	1.03			5.13	1.09			4.89	1.21		
> than 15 years	4.93	1.19			5.24	0.93			5.05	1.08		
					5.11	1.14			4.89	1.11		
MOBILITY												
2 years or less	4.69	1.43	F(3,611)=3.094	<i>p</i> <0.05			F(3,611)=3.165	<i>p</i> <0.05			F(3,611)=2.114	<i>p</i> >0.05
3 to 10 years	4.83	1.29			5.00	1.38			5.06	1.37		
11 or more years	4.84	1.10			5.00	1.21			4.92	1.11		
Forever	5.08	1.06			5.01	0.84			4.70	1.10		
					5.28	1.04			5.05	1.07		

Source: This study's data analysis.

The influence of RESIDENCY on residential satisfaction dimensions is not significant. None residential satisfaction dimensions proving significant [DwellSat: $F(4,605) = .189, p>0.05$, NbhoodSat: $F(4,605)= 0.810, p>0.05$ and NboursSat: $F(4,605)= 2.112, p>0.05$]. However, examination of the means for residential satisfaction dimensions by length of residency in the current unit (RESIDENCY) shows that respondents residing in the current unit for less than 5 years have the highest satisfaction with residential satisfaction for neighbourhoods (mean=5.36). Moreover, respondents residing in units for a period between one and five years indicate the highest satisfaction with the dwelling (mean=5.15) and neighbours (mean=5.19). As for respondents who have been residing in the developments for more than fifteen years, they indicate less satisfaction on the neighbourhood (mean=5.11) and neighbours (mean=4.89).

Finally, as seen in Table 6.32, MOBILITY shows significant influence on residential satisfaction dimensions. The ANOVA analysis reveals that dwelling satisfaction [$F(3, 611) = 3.094$] and neighbourhood satisfaction [$F(3, 611) = 3.165$] show significant differences on the MOBILITY factor. However, there is no significant difference in satisfaction with neighbours according to the differing expectations of future length of stays in the current unit [$F(3, 611) = 2.114$]. Mean differences show that respondents who plan to live permanently at their unit have the highest satisfaction level with dwelling (mean=5.08) and neighbourhood (mean=5.28). Satisfaction with neighbours is dominated by respondents expecting to live at their current unit less than 2 years (mean=5.06); however they also indicated less satisfaction with dwelling (mean=4.69) and neighbourhood (mean=5.00).

6.6.2.2 Owner-occupants' Socio-economic and Participation Characteristics: Hypothesis 8

As shown in Figure 6.33, the ANOVA's results of EDUCATION recorded dwelling satisfaction [$F(3,608) = 2.368, p > 0.05$] and neighbourhood satisfaction [$F(3,608) = 0.703, p > 0.05$] as not significant. However, the univariate analysis for the satisfaction with neighbours is significant [$F(3,608) = 2.699, p < 0.05$]. An examination of means reveals that owner-occupants who have attained a secondary school level (mean=5.04) or primary school level (mean = 5.04) have a higher satisfaction with the dwelling satisfaction than the other respondent education groups. However, highest neighbourhood satisfaction is recorded by respondents who attained their secondary education (mean=5.25). Finally, for the satisfaction with neighbours, primary school-educated respondents demonstrate the highest satisfaction level (mean=5.06) compared to the others. Respondents with a certificate qualification are less satisfied with the overall residential satisfaction dimensions (mean value for DwellSat=4.64, NbhoodSat=5.00 and NboursSat=4.58).

Table 6. 33: The relationships between residential satisfaction dimensions and owner-occupants' socio-economic and participation characteristics

Variables differences	Residential satisfaction dimensions											
	Dwelling satisfaction (DwellSat)				Neighbourhood satisfaction (NbhoodSat)				Satisfaction with neighbours (NboursSat)			
	Mean	Std.	<i>F(uni)</i>	<i>P(uni)</i>	Mean	Std.	<i>F(uni)</i>	<i>P(uni)</i>	Mean	Std.	<i>F(uni)</i>	<i>P(uni)</i>
EDUCATION			<i>F</i> (3,608)=2.368	<i>p</i> >0.05			<i>F</i> (3,608)=0.703	<i>p</i> >0.05			<i>F</i> (3,608)=2.699	<i>p</i> <0.05
Secondary school	5.04	1.11			5.25	1.20			5.00	1.05		
Primary school	5.04	1.11			5.20	1.08			5.06	1.13		
Certificate	4.64	1.26			5.00	0.91			4.58	1.13		
Diploma & above	4.85	1.23			5.12	1.13			4.93	1.10		
INCOME			<i>F</i> (3,606)=0.940	<i>p</i> >0.05			<i>F</i> (3,606)=0.663	<i>p</i> >0.05			<i>F</i> (3,606)=1.479	<i>p</i> >0.05
Below RM 1000	5.05	1.14			5.19	1.25			4.96	1.20		
RM 1001 to RM 1500	5.07	1.02			5.14	1.11			5.03	1.07		
RM 1501 to RM 2000	4.87	1.06			5.12	0.95			4.86	1.06		
Above RM 2001	4.99	1.29			5.27	1.09			5.10	1.13		
Part activities			<i>F</i> (3,609)=3.828	<i>p</i> <0.05			<i>F</i> (3,609)=0.754	<i>p</i> >0.05			<i>F</i> (3,609)=0.354	<i>p</i> >0.05
Very active	5.05	1.35			5.54	1.13			4.91	1.48		
Quite active	5.12	1.02			5.20	1.02			5.01	1.06		
Somewhat active	4.85	1.21			5.14	1.10			4.98	1.04		
Not active	4.71	1.38			5.11	1.33			4.87	1.49		
Part meeting			<i>F</i> (3,610)=6.234	<i>p</i> <0.05			<i>F</i> (3,610)=3.141	<i>p</i> <0.05			<i>F</i> (3,610)=1.402	<i>p</i> >0.05
Very active	5.03	1.18			5.29	1.15			4.89	1.52		
Quite active	5.16	1.02			5.30	1.02			5.07	1.08		
Somewhat active	4.81	1.24			5.03	1.17			4.91	1.10		
Not active	4.65	1.27			5.03	1.07			4.82	1.19		

Source: This study's data analysis.

The subsequent ANOVA analysis for INCOME shows none of the residential satisfaction dimensions as significant. This is confirmed by results that indicate $F(3,606) = 0.940, p > 0.05$ for the DwellSat, $F(3,606) = 0.663, p > 0.05$ for NbhoodSat and $F(3,606) = 1.479, p > 0.05$ for NboursSat. The mean analysis indicates respondents with household income ranging between RM1001 and RM1500 (mean=5.07) have the highest satisfaction with regards to dwelling satisfaction compared to households earning below RM1000 (mean = 5.05), above RM2001 (mean=4.99), or between RM1501 and RM2000 (mean=4.87). Respondents with household earnings above RM2001 reported the highest satisfaction level (mean=5.27) with neighbourhood satisfaction, followed by income levels below RM1000 (mean = 5.19), RM1001 to RM1500 (mean=5.14) and RM15001 to RM2000 (mean=5.12). Finally, with regard to satisfaction with neighbours, households earning above RM2001 confirmed the highest satisfaction level (mean=5.10), followed by RM1001 to 1500 (mean=5.03), below RM1000 (mean=4.96), and respondents with a household income between RM1501 and RM2000 (mean=4.86).

Owner-occupants' participation characteristics involve the level of owner-occupants participation in management activities (Part_activities) and meetings (Part_meeting). The univariate analysis (ANOVA) for Part_activities indicates that only dwelling satisfaction is significant [$F(3,609)=3.828, p < 0.05$]. The other dimensions are found to be insignificantly influenced by owners' participation in meetings [NbhoodSat: $F(3,609)=0.754, p > 0.05$ and NboursSat: $F(3,609)=0.354, p > 0.05$]. The mean statistic indicates that inactive respondents have less satisfaction on every residential satisfaction dimension (mean value for DwellSat=4.71, NbhoodSat=5.11 and NboursSat=4.87). However, respondents who claimed to be very active participants seem to have the highest satisfaction level with the neighbourhood (mean=5.54). The highest satisfaction with dwellings (mean=5.12) and neighbours (mean=5.01) are dominated by quite active respondents.

Meanwhile, for Part_meeting, the ANOVA's results indicate only the differences in satisfaction with neighbours are insignificant [$F(3,610)=1.402, p>0.05$]. However, dwelling satisfaction [$F(3,610)=6.234, p<0.05$] and neighbourhood satisfaction [$F(3,610)=3.141, p<0.05$] are found to be significantly relevant. The mean differences indicate consistent results as inactive respondents who attended the meetings have less satisfaction with overall residential satisfaction dimensions (mean value for DwellSat=4.65, NbhoodSat=5.03 and NboursSat=4.82). In contrast, quite active respondents reveal the highest satisfaction level in all residential satisfaction dimensions (mean value for DwellSat=5.16, NbhoodSat=5.30 and NboursSat=5.07).

6.6.3 Chairperson's Characteristics: Hypothesis 9

Unlike a few of the items pertaining to owner-occupants' characteristics that have been demonstrated to have influenced the residential satisfaction dimensions, the chairpersons' characteristics were statistically confirmed as not having any significant impact.

As shown in Figure 6.34, the univariate analysis (ANOVA) for the Chairperson_category found none of the Residential Satisfaction dimensions and categories for Chairperson to be significant [DwellSat: $F(1, 32) = 0.721, p>0.05$; NbhoodSat: $F(1, 32) = 1.646, p>0.05$; and NboursSat: $F(1, 32) = 0.055, p>0.05$]. However, the means do show differences in satisfaction. Chairpersons for residents' associations statistically indicate the highest satisfaction score on all residential satisfaction dimensions compared to chairpersons of MCs. For example, the outcome for dwelling satisfaction indicated chairpersons for residents' associations have a higher satisfaction score than chairpersons of MCs, with means of 5.06 and 4.43, respectively. For neighbourhood satisfaction, chairpersons for residents' associations recorded a 5.60 mean score, while the mean for chairpersons of MCs is 4.85. Finally, the score for chairpersons for residents' associations on satisfaction with neighbours is 4.81 and for chairpersons of MCs, 4.67.

Table 6. 34: The relationships between residential satisfaction dimensions and chairpersons' characteristics

Variables differences	Residential satisfaction dimensions									
	Dwelling satisfaction (DwellSat)			Neighbourhood satisfaction (NbhoodSat)			Satisfaction with neighbours			
	Mean	Std.	<i>F(uni)</i>	<i>p(uni)</i>	Mean	Std.	<i>F(1,32)</i>	<i>F(uni)</i>	Mean	Std.
Chairperson_category										
CRA	5.06	1.04	$F(1,32) = 0.721$	$p > 0.05$	5.60	0.71	$F(1,32) = 1.646$	$p > 0.05$	4.81	0.43
CMA	4.43	1.44			4.85	1.14			4.68	1.15
Chairperson_duration										
< 5 months	5.63	0.53	$F(3,29) = 0.977$	$p > 0.05$	5.10	0.14	$F(3,29) = 0.576$	$p > 0.05$	4.00	1.77
5 months to 3 yrs	4.24	1.32			4.80	1.15			4.67	1.07
3 to 5 years	4.85	1.92			5.12	1.24			4.90	1.31
> than 5 years	5.50	-			6.20	-			5.25	-
Chairperson_other_org										
Yes	4.54	1.44	$F(1,32) = 0.015$	$p > 0.05$	5.11	0.88	$F(1,31) = 0.607$	$p > 0.05$	4.63	1.10
No	4.48	1.41			4.81	1.26			4.74	1.11
Chairperson_experience										
Very experienced	4.83	2.57	$F(3,30) = 0.147$	$p > 0.05$	4.80	2.42	$F(1,31) = 0.092$	$p > 0.05$	6.42	1.01
Quite experienced	4.59	1.41			5.00	0.91			4.55	1.05
Not really experienced	4.38	1.14			4.98	1.08			4.53	0.87
Less experienced	4.25	1.54			4.72	1.22			4.45	1.01

Source: This study's data analysis.

Subsequent univariate analysis ANOVA for all residential satisfaction dimensions with duration of current position (Chairperson_duration) are not significant. As shown in Table 6.35, the results are: DwellSat: $F(3, 29) = 0.977, p > 0.05$; NbhoodSat: $F(3, 29) = 0.576, p > 0.05$; and NboursSat: $F(3, 29) = 0.385, p > 0.05$. Comparison of means indicate mean differences in satisfaction. For the dwelling satisfaction, new chairpersons with less than five months experience recorded the highest satisfaction level with a mean of 5.63. However, they recorded less satisfaction in satisfaction with neighbours (mean=4.00). Meanwhile, chairpersons in office for more than five years have the highest neighbourhood satisfaction (mean=6.20) and satisfaction with neighbours (mean=5.25). Less satisfaction with dwelling (mean=4.24) and neighbourhood (mean=4.80) are recorded by chairpersons who have held the position for between five months and three years.

Chairpersons' experience in other organisations (Chairperson_other_organisations) and the univariate ANOVA computation on residential satisfaction dimensions failed to find statistical significance. None of the relationships between all residential satisfaction dimensions and chairpersons' experience in other community's organisation is significant [DwellSat: $F(1, 32) = 0.015, p > 0.05$; NbhoodSat: $F(1, 31) = 0.607, p > 0.05$; and NboursSat: $F(1, 31) = 0.085, p > 0.05$].

Conversely, mean scores indicate mean differences in satisfaction. Inexperienced chairpersons in other community organisations recorded higher satisfaction levels with the dwelling (mean=4.54) and neighbourhood (mean=5.11) dimensions than those with experience. This trend, however, is the opposite of that on the satisfaction with neighbours. Chairpersons with experience in other community organisations recorded higher satisfaction (mean=4.74) than inexperienced chairpersons (mean = 4.63), as shown in Table 6.35.

With regards to the univariate ANOVA computation on Chairperson_experience and residential satisfaction dimensions, the results show a non-significant relationships for all the residential satisfaction dimensions and chairpersons' experience level in

housing management and maintenance [DwellSat: $F(3, 30) = 0.147, p > 0.05$; NbhoodSat: $F(1, 31) = 0.092, p > 0.05$; and NboursSat: $F(1, 31) = 3.356, p > 0.05$].

A comparison of means indicates differences in satisfaction. Very experienced chairpersons recorded the highest satisfaction levels with dwelling (mean=4.83) and Neighbourhood (mean=6.42). For neighbourhood satisfaction, experienced chairpersons in housing management and maintenance had the highest level of satisfaction (mean=5.00). However, less experienced chairpersons had the highest dissatisfaction in all residential satisfaction dimensions (mean value for DwellSat=4.25, NbhoodSat=4.72 and NboursSat=4.45).

6.6.4 Housing Characteristics: Hypothesis 10

This study's samples were selected from three urban areas in the state of Selangor (See Methodology Chapter 5). As shown in Table 6.35, the analysis of ANOVA indicated no significant differences on all the residential satisfaction dimensions by respondents' housing developments location (LOCATION) [DwellSat: $F(2,648) = 1.414, p > 0.05$, NbhoodSat: $F(2,648) = 2.287, p > 0.05$, NboursSat: $F(2,648) = 1.821, p > 0.05$ for the].

A mean examination for residential satisfaction dimensions by LOCATION shows that respondents from Petaling Jaya reported the highest satisfaction with all residential satisfaction dimensions. Petaling Jaya's respondents recorded the highest satisfaction with dwelling satisfaction (mean= 5.10) compared to Ampang Jaya (mean=4.92) and Shah Alam (mean=4.90) respondents. For the neighbourhood satisfaction, Petaling Jaya returned the highest mean score (mean=5.33) compared to Ampang Jaya (mean=5.14) and Shah Alam (mean=5.10). On the satisfaction with neighbours, Petaling Jaya recorded the highest satisfaction (mean score of 5.13), followed by Shah Alam (mean=4.95) and Ampang Jaya (mean=4.90).

Table 6. 35: The relationships between residential satisfaction dimensions and housing characteristics

Variables differences	Residential satisfaction dimensions											
	Dwelling satisfaction (DwellSat)				Neighbourhood satisfaction (NbhoodSat)				Satisfaction with neighbours			
	Mean	Std.	<i>F(uni)</i>	<i>P(uni)</i>	Mean	Std.	<i>F(uni)</i>	<i>P(uni)</i>	Mean	Std.	<i>F(uni)</i>	<i>P(uni)</i>
LOCATION												
Shah Alam	4.90	1.16	<i>F(2,648)=1.414</i>	<i>p>0.05</i>	5.10	1.10	<i>F(2,648)=2.287</i>	<i>p>0.05</i>	4.95	1.16	<i>F(2,648)=1.821</i>	<i>p>0.05</i>
Petaling Jaya	5.10	1.05			5.33	0.97			5.13	1.12		
Ampang Jaya	4.92	1.24			5.14	1.16			4.90	1.04		
OCCUPANCY RATES			<i>F(4,646)=4.357</i>	<i>p<0.05</i>			<i>F(4,646)=4.325</i>	<i>p<0.05</i>			<i>F(4,646)=3.701</i>	<i>p<0.05</i>
<30%	4.96	1.16			5.15	1.10			4.94	1.21		
31% to 50%	5.04	1.12			5.20	1.02			4.95	1.06		
51% to 70%	4.94	1.16			5.14	1.12			4.99	1.12		
71% to 90%	4.30	1.18			4.75	1.09			4.61	0.98		
91% to 100%	5.49	1.31			5.96	0.85			5.75	0.77		

Source: This study's data analysis.

The final item in Housing characteristics is OCCUPANCY RATES. ANOVA reveals that there is a significant relationship between OCCUPANCY RATES and the overall residential satisfaction dimensions. As shown in Table 6.8.5, the results are: for DwellSat: $F(4,646)=4.357$, $p<0.05$, NbhoodSat: $F(4,646)=4.325$, $p<0.05$ and NboursSat: $F(4,646)=3.701$, $p<0.05$.

The mean result reveals that respondents residing in developments with the highest owner-occupancy rate (91 per cent to 100 per cent) are the most satisfied on all residential satisfaction dimensions (mean value for DwellSat=5.49, NbhoodSat=5.96 and NboursSat=5.75). Surprisingly, respondents residing in the developments with a 71 to 90 per cent owner-occupancy rate indicated less satisfaction in all residential satisfaction dimension (mean value for DwellSat=4.30, NbhoodSat=4.75 and NboursSat=4.61)

6.7 Analysis of Final Survey-Part D: Internal Consistency of the Scale

The measurement of internal consistency estimates how consistently an individual responds to items within a scale, and the most commonly used method is Cronbach's Alpha (Nardi 2006). The Alpha measures the extent to which item responses obtained at the same time correlate highly with each other. The widely accepted social sciences cut-off is that Alpha should be 0.70 or higher for a set of items to be considered a scale. Thus, in this study, the Cronbach's Alpha was used to determine the degree of consistency for each variable being studied. The results of the reliability analysis are summarised in Table 6.36. As shown in the table, Cronbach's Alpha values are all above the recommended threshold of 0.70, thus implying the internal consistency for variable measurement in a summated scale. This also indicates that the questionnaire is reliable in measuring the variables for the study.

Table 6. 36: Reliability coefficients

Variable	No. of items	Cronbach's Alpha
1. Owner-occupants' competency	20	0.918
2. Owners' organisational competency	12	0.904
3. Managing agents' competency	11	0.980
4. Dwelling satisfaction (DwellSat)	4	0.942
5. Neighbourhood satisfaction (NbhoodSat)	5	0.931
6. Satisfaction with neighbours (NboursSat)	4	0.885
7. Satisfaction with stakeholders' relationships	7	0.792

Source: This study's data analysis.

6.8 Analysis of Final Survey-Part D: Estimating Measurement

Models

It is important to assess the scale used through the estimation of a measurement model before testing the hypothesised relationships in the structural conceptual model. Unidimensionality is an important element that needs to be considered in determining the overall fit of a measurement model. It is an assumption underlying the calculation of reliability and is demonstrated when the indicators (variables) of a construct have acceptable fit on a single-factor (one-dimensional) model (Hair et al. 2006). Unidimensionality is demonstrated by internal and external consistency (Anderson & Gerbing 1984).

In others words, unidimensionality refer to a single construct that underlies a set of scales items. A construct cannot be measured directly and perfectly but must be measured by multiple indicators or observed variables in the model. Multiple indicators that explained a single construct must be strongly associated with each other and represent a single construct in a single measure. Using multiple indicators reduce the reliance on a single respond and thus can reduce measurement error. Unidimensionality can be assessed with either exploratory factor analysis or confirmatory factor analysis (Hair et al. 2006).

Thus, in addition to using a Cronbach's Alpha coefficient to determine the internal consistency and reliability of the scales, a confirmatory factor analysis (CFA) was conducted to evaluate the unidimensionality of the variables. CFA was

performed to ensure the robustness of the relationships as hypothesised in the proposed conceptual model. The literature suggested that standardised regression weight, which is one output of CFA, be considered as an appropriate index to determine unidimensionality (for example, see Hair et al. 2006). Research suggests the minimum values of 0.30 to 0.70 are acceptable for the standardised regression weights in social research (Byrne 1998). However, this study followed the guideline suggested by Byrne (1998) in which the values with the lowest standardised regression weights (less than 0.50) are dropped and the model re-estimated. The estimated model is then evaluated through the chi-square statistic.

However, the chi-square is sensitive to sample sizes; this is not desirable because it may lead to the model being rejected even when the model fits the data relatively well (Hu & Bentler 1995). The sample size is a major concern in Structural Equation Modelling (SEM) because small samples are more likely to yield unreliable results (Hair et al. 2006). According to Hair et al. (2006) even if statistical non-significance is achieved, it does not guarantee that the correct model has been identified. The issue of sample size remains an active debate within SEM literature. Less stringent prescriptions have been offered by Ding, Velicer and Harlow (1995, p.141), which suggested that as a rule of thumb a minimum of 100 samples would be sufficient and would provide an adequate analysis, but the best sample size would be at least 200 (Boosma 1987, p.176). According to Anderson and Gerbing (1984, p.171), there is a danger in smaller sample sizes ($n < 150$) of obtaining non-convergent solutions. Another issue concerning the sample size is that for a small sample, chi-square may not be distributed equally and therefore may not be correct for model evaluations in practical situations (Hu & Bentler 1995; Schumacker & Lomax 1996).

Since the sample size for the present study is 652, there is no problem in applying SEM. However, according to Hu and Bentler (1995), when the standard chi-square test may not be a sufficient guide to a model's adequacy, other various goodness-of-fit tests should be examined. To avoid any fit-related problems, this study used indices that are not easily affected by sample size and that provide a more robust fit evaluation of the model. The indices are (i) goodness-fit index (GFI), (ii) incremental-fit index (IFI), (iii) normed-fit index (NFI) and (iv)

comparative-fit index (CFI). GFI is only moderately related to sample size (Marsh, Balla & McDonald 1988); however, it is acceptable because it carries an intuitive interpretation and is analogous to the familiar R^2 value, which is often associated with multiple regressions. IFI was chosen because it is more consistent in maximum likelihood situations compared to the Tucker-Lewis index (TLI) or non-normed fit (NNFI) (Hoyle & Panter 1995). CFI has been found to be more appropriate when a small sample is available (Hair et al. 2006). NFI is one of the more popular measures with no absolute value indicating an acceptable level of fit, but a value close to 0.90 or greater is commonly recommended (Hair et al. 2006).

The proposed model to be evaluated via confirmatory factor analysis encompasses three subjective independent variables, three intervening variables, and a single dependent variable. The subjective independent variables are owner-occupants' competency, owners' organisational competency and managing agents' competency. The intervening variables consist of satisfaction with dwelling, neighbourhood and neighbours. Lastly, the dependent variable is the satisfaction with stakeholders' relationships. The following section presents the results of the confirmatory factor analysis for each variable.

6.8.1 Owner-occupants' Competency

Originally, there were 20 items measured for the subjective independent variable of owner-occupants' competency. Based on the CFA, four items were taken out due to poor standardised regression weights. As a result, fourteen indicators were found to be acceptable with all goodness-of-fit indices at the acceptable level (Chi-square/df = 1.455, $p = 0.233$, GFI = 0.991, IFI = 0.955, NFI = 0.947, CFI = 0.987).

The removed items are associated with the 'owner-occupants to have understanding of the Acts related to housing management and maintenance'. The items removed are: (i) understanding of strata title act 1985 (act 318), (ii) understanding of Building Maintenance and Common Facilities Act (Maintenance and Management) Act 663, (iii) understanding the definition of common

properties and facilities as stated for both of the above Acts and (iv) understanding the roles and responsibilities as an owner of a parcel/unit as stated in the above Act.

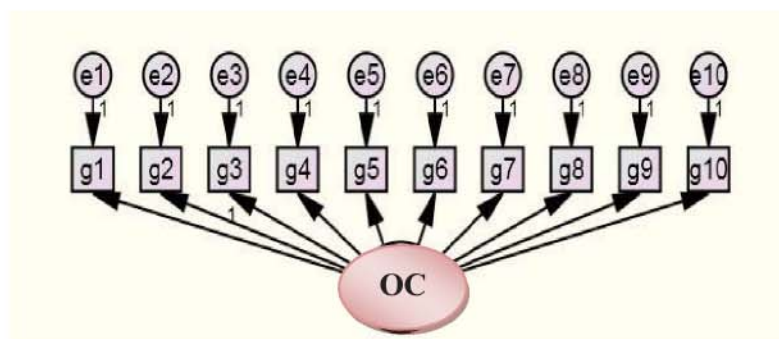


Figure 6.25: Confirmatory factor analysis of owner-occupants' competency variable (OC)

These results indicate uncorrelated relationship between the observed variable and the items that explained it. The owner-occupant needs to understand the provision of Acts related to housing management in order for her/him to be competent in housing management is less important. Lack of the literature review measured this relationship, resulting in this study assumed the existence of the relationship between these factors. However, the results of CFA analysis rejected this hypothesis. It is possible that the relationship between the neighbourhood and sense of belonging to their residential environment could develop their awareness of the needs related to housing management.

6.8.2 Owners' Organisational Competency

The initial model for owners' organisational competency contained twelve items. However, after carrying out CFA, one item was found to have a poor standardised regression weight; thus, the item was dropped from the model. The single factor model was re-estimated and thereafter the CFA model was found to fit better (chi-square/df = 1.455, $p = 0.233$, GFI = 0.991, IFI = 0.955, NFI = 0.947, CFI = 0.987). The removed item, 'encouraging the residents to participate in activities organised by the owners' organisation', is related to the owners' organisational competency.

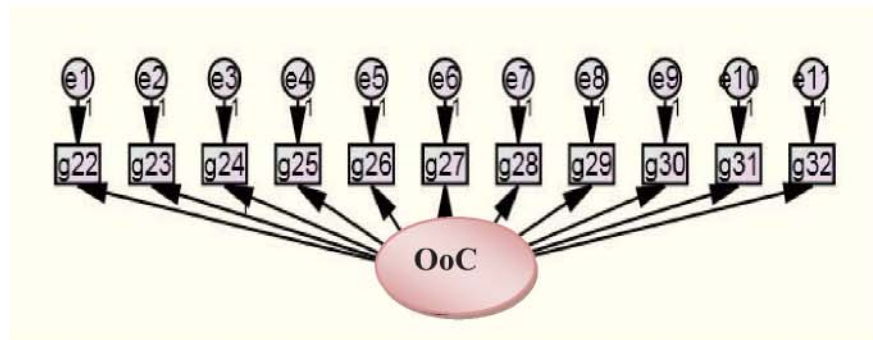


Figure 6.26: Confirmatory factor analysis of owners' organisational competency variable (OoC)

6.8.3 Managing Agents' Competency

There were eleven items in this variable. Based on CFA, none of the items has a poor standardised regression weight. Moreover, all the goodness-of-fit indices were in the acceptable fit level (chi-square/df = 7.457, $p = 0.001$, GFI = 0.991, IFI = 0.885, NFI = 0.869, CFI = 0.884). Therefore, the single factor was retained with eleven items.

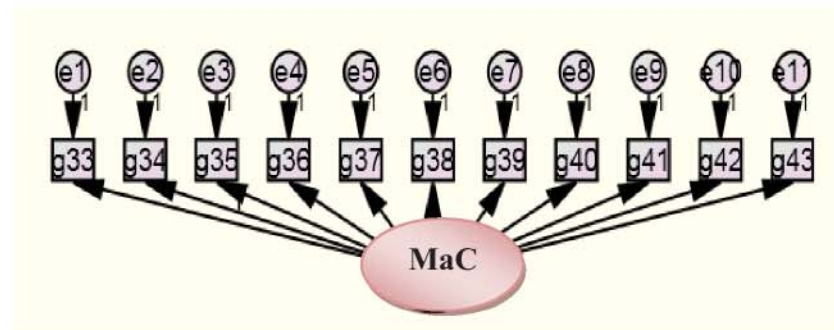


Figure 6.27: Confirmatory factor analysis of managing agents' competency variable (MaC)

6.8.4 Dwelling Satisfaction

There were four items explaining dwelling satisfaction. Based on CFA, all items showed standardised regression weights above 0.50. All the goodness-of-fit indices were found to be acceptable (chi-square/df = 15.325, $p = 0.001$, GFI = 0.979, IFI = 0.988, NFI = 0.988, CFI = 0.988). Therefore, the model was retained with these four items.

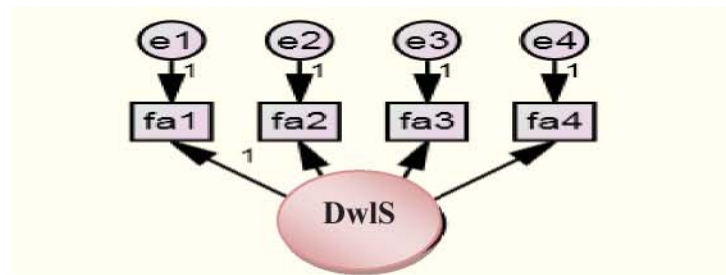


Figure 6.28: Confirmatory factor analysis of dwelling satisfaction variable (DwIS)

6.8.5 Neighbourhood Satisfaction

This variable was measured by five items. CFA verified that none of these items indicated poor standardised regression weight, and the model fit was acceptable (chi-square/df = 8.726, $p = 0.001$, GFI = 0.972, IFI = 0.987, NFI = 0.985, CFI = 0.987).

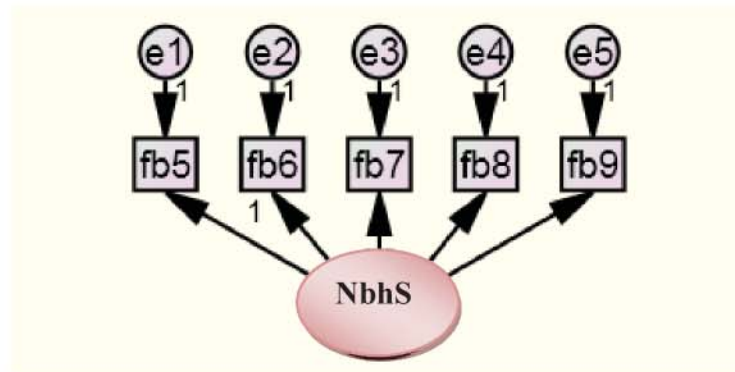


Figure 6.29: Confirmatory factor analysis of neighbourhood satisfaction variable (Nbhs)

6.8.6 Satisfaction with Neighbours

Satisfaction with neighbours was explained by four items. Based on CFA, none of the items has poor standardised regression coefficients. All the goodness-of-fit calculations showed satisfactory results; thus, the model was retained with four items (chi-square/df = 99.270, $p = 0.001$, GFI = 0.877, IFI = 0.882, NFI = 0.881, CFI = 0.882).

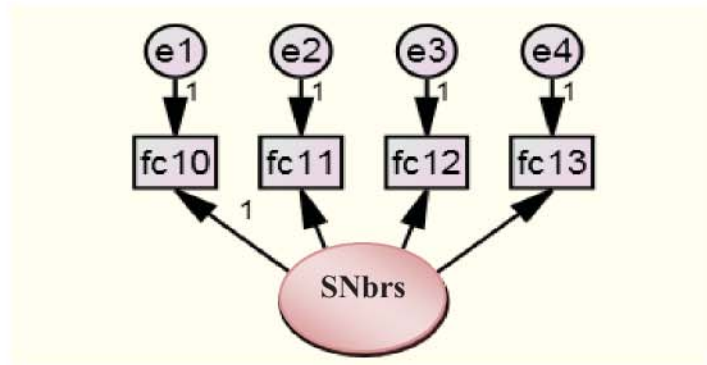


Figure 6.30: Confirmatory factor analysis of satisfaction with neighbours variable (SNbrs)

6.8.7 Satisfaction with Stakeholders' Relationships

This variable was measured by seven items. After running CFA, one item was taken out due to poor standardised regression weights. The remaining items' standardised regression were above the threshold of 0.5 and CFA model was found to fit better ($\chi^2/df = 4.827$, $p = 0.001$, GFI = 0.890, IFI = 0.985, NFI = 0.981, CFI = 0.985). The removed item was concerning satisfaction level: 'tenant-residents should be involved in the housing management and maintenance'.

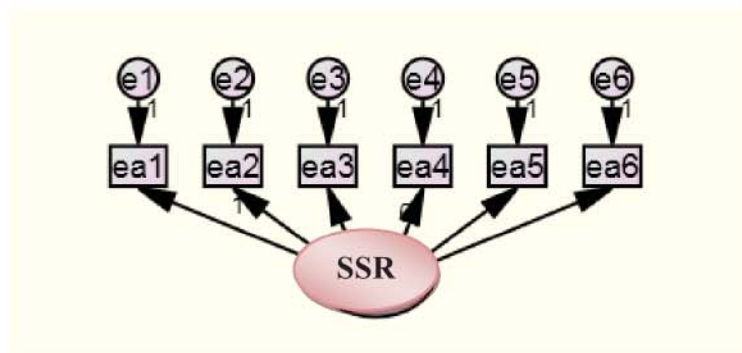


Figure 6.31: Confirmatory factor analysis of satisfaction with stakeholders' relationships variable (SSR)

The removed item support the literature review that there is a conflict between the homeowners and tenants of stratified residential building in respect to their housing management matters (Easthope & Randolph 2009; Guilding et al. 2005; Randolph 2006).

Compared to the homeowners, tenants have no interest in the management of

housing as they will not continue to enjoy the economic benefits for the improvement upon leaving their unit (Glaster 1987; Rohe, McCarthy & Zandt 2001; Saunder 1990; Stewart, Clayton & Ruston 2006). Past studies have also demonstrated the relationship between upkeep behaviour and homeownership rate in one neighbourhood. Neighbourhoods that have high rate of homeowners show a high level of dwelling maintenance awareness (Haurin, Dietz & Weinberg 2002).

The different interest, causing the homeowners and tenants do not have a consensus on the maintenance of their residential environment (in the case of stratified residential buildings) and this may affect the residents' behaviour and attitudes towards each other (Randolph 2006). This condition can be caused by the absence of provisions in the act that requires direct involvement by the tenants, for example, the Strata Title Act 1983 [18] and the Building and Common Property Act (Maintenance and Management) [Act 663] used in Malaysia (Muhamad Ariff & Davies 2009a).

In summary, the absence of the removed items for variables; managing agent's competency, dwelling satisfaction, neighbourhood satisfaction and satisfaction with neighbours explain that the items theorised in this study's model accurately represent the variables. As the CFA is used to confirm or reject the measurement theory, the removed items of remaining variables; owner-occupants' competency, owners' organisational competency and satisfaction with stakeholders' relationships are not required as it cannot measure the proposed variables.

The aforementioned findings demonstrate that all the measurement models are unidimensional at an acceptable level and supported by acceptable values of the standardised regression weights and reliability. The acceptance for these measurements is further supported by several absolute statistics fit indices. As such, the measurement models can be used to evaluate the structural model in the next step of SEM.

6.9 Analysis of Final Survey-Part D: Testing of Hypotheses Involving Subjective Independent Variables

As stated in Chapter 4, in addition to the objective independent variables, this study also suggested three subjective independent variables (see section 4.7.1.2). The three variables are owner-occupants' competency, owners' organisational competency and managing agents' competency. All three variables were tested to see their effect on the dependent variable and on the residential satisfaction dimensions. Further, before reporting the outcome of the intervening effects, this study also tested the relationship between the residential satisfaction dimensions and the dependent variable.

Based on the developed conceptual framework, this section presents the results of SEM for testing the hypotheses that have been outlined in section 4.8.3 of Chapter 4. The main hypotheses predict: (i) the relationship between subjective independent variables and the dependent variable [H11], (ii) the relationship between subjective independent variables and residential satisfaction dimensions [H12], (iii) the relationship between residential satisfaction dimensions and the dependent variable [H13] and (iv) the intervening effects of residential satisfaction dimensions on the relationships between subjective independent variables and the dependent variable [H14, H15 and H16].

6.9.1 Exploring the Relationships between the Variables

Prior to SEM analysis, bivariate correlation analyses were employed to explore the relationship strength between the independent variables, the intervening variables and the dependent variable. The measurement technique of Pearson's correlation coefficient was used, and the results are shown in Table 6.37.

Table 6.37: The Pearson's correlation coefficient results

	OC	OO	MAC	DwellSat	NbhodSat	NboursSat	SR_SAT
Owner-occupants' competency (OC)	1.00						
Owners' organisational competency (OO)	0.54*	1.00					
Managing agents' competency (MAC)	0.09*	0.23*	1.00				
Dwelling satisfaction (DwellSat)	0.44*	0.40*	0.10*	1.00			
Neighbourhood satisfaction (NbhodSat)	0.55*	0.43*	0.08*	0.63*	1.00		
Satisfaction with neighbours (NboursSat)	0.57*	0.45*	0.08	0.54*	0.68*	1.00	
Satisfaction with stakeholders' relationships (SR_SAT)	0.57*	0.55*	0.12*	0.63*	0.59*	0.63*	1.00

* Significant at 0.01 level of significance

Source: This study's data analysis.

The outcome of the correlation reveals that satisfaction with stakeholders' relationships has a moderately positive significant relationship with owner-occupants' competency ($r = 0.57$), owners' organisational competency ($r = 0.55$), dwelling satisfaction ($r = 0.63$), neighbourhood satisfaction ($r = 0.59$) and satisfaction with neighbours ($r = 0.63$). However, the results show a weak significant relationship between satisfaction with stakeholders' relationships and managing agents' competency ($r = 0.12$).

6.9.2 Relationships between Subjective Independent Variables and the Dependent Variable: Hypothesis 11

Referring to Table 6.38, the results indicate that owner-occupants' competency and owners' organisational competency significantly influenced satisfaction with stakeholders' relationships. Owners' organisational competency ($\hat{\beta} = 0.281$) indicated a greater effect on satisfaction with stakeholders' relationships than owner-occupants' competency ($\hat{\beta} = 0.201$).

Table 6. 38: Summary of SEM results for relationships between subjective variables on dependent variable of satisfaction with stakeholders' relationships

Exogenous		Endogenous	$\hat{\beta}$	Std. Error	p -value	Conclusion
Owner-occupants' competency	→	Satisfaction with Stakeholders' Relationships	0.201	0.049	$p < 0.05$	Significant
Owners' organisational competency	→	Satisfaction with Stakeholders' Relationships	0.281	0.049	$p < 0.05$	Significant
Managing agents' competency	→	Satisfaction with Stakeholders' Relationships	0.071	0.045	0.114	Not significant

Source: This study's data analysis.

6.9.3 Relationships between Subjective Independent Variables and Residential Satisfaction dimensions: Hypothesis 12

6.9.3.1 Relationships between Subjective Independent Variables and Dwelling Satisfaction

Referring to Table 6.39, the outcome demonstrates that dwelling satisfaction has significant relationships with owner-occupants' competency and owners' organisational competency. Based on the path coefficients (unstandardised regression weights), owner-occupants' competency ($\hat{\beta} = 0.425$) has a greater influence on dwelling satisfaction compared to owners' organisational competency ($\hat{\beta} = 0.291$). However, managing agents' competency has no significant influence on dwelling satisfaction ($p > 0.05$).

Table 6.39: Summary of SEM results for relationships between subjective independent variables and dwelling satisfaction

Exogenous		Endogenous	$\hat{\beta}$	Std. Error	p-value	Conclusion
Owner-occupants' competency	→	DwellSat	0.425	0.054	$p < 0.05$	Significant
Owners' organisational competency	→	DwellSat	0.291	0.064	$p < 0.05$	Significant
Managing agents' competency	→	DwellSat	0.082	0.06	0.169	Not significant

Source: This study's data analysis.

6.9.3.2 Relationships between Subjective Independent Variables and Neighbourhood Satisfaction

The results in Table 6.40 show that neighbourhood satisfaction is significantly influenced by owner-occupants' competency and owners' organisational competency. The owner-occupants' competency variable ($\hat{\beta} = 0.584$) has a greater effect on neighbourhood satisfaction than the owners' organisational competency variable ($\hat{\beta} = 0.273$). However, managing agents' competency is not significantly related to neighbourhood satisfaction ($p > 0.05$).

Table 6. 40: Summary of SEM results for relationships between subjective independent variables and neighbourhood satisfaction

Exogenous		Endogenous	$\hat{\beta}$	Std. Error	p-value	Conclusion
Owner-occupants' competency	→	NbhoodSat	0.584	0.053	$p < 0.05$	Significant
Owners' organisational competency	→	NbhoodSat	0.273	0.056	$p < 0.05$	Significant
Managing agents' competency	→	NbhoodSat	0.030	0.052	0.583	Not significant

Source: This study's data analysis.

6.9.3.3 Relationships between Subjective Independent Variables and Satisfaction with Neighbours

As demonstrated in Table 6.41, owner-occupants' competency and owners' organisational competency statistically confirmed a significant relationship with satisfaction with neighbours. The owner-occupants' competency variable ($\hat{\beta} = 0.612$) has a larger effect on satisfaction with neighbours compared to owners' organisational competency ($\hat{\beta} = 0.255$). However, managing agents' competency has no effect on satisfaction with neighbours ($p > 0.05$).

Table 6. 41: Summary of SEM results for relationships between subjective independent variables and satisfaction with neighbours

Exogenous		Endogenous	$\hat{\beta}$	Std. Error	p-value	Conclusion
Owner-occupants' competency	→	NboursSat	0.612	0.048	$p < 0.05$	Significant
Owners' organisational competency	→	NboursSat	0.255	0.053	$p < 0.05$	Significant
Managing agents' competency	→	NboursSat	-0.007	0.05	0.895	Not significant

Source: This study's data analysis.

6.9.4 Relationships between Residential Satisfaction Dimensions and the Dependent Variable: Hypothesis 13

The results presented in Table 6.42 indicate that dwelling satisfaction and satisfaction with neighbours significantly affect the satisfaction with stakeholders'

relationships. Referring to the coefficient path, satisfaction with neighbours ($\hat{\beta} = 0.343$) has a larger satisfaction effect on stakeholders' relationships than dwelling satisfaction ($\hat{\beta} = 0.336$). Meanwhile neighbourhood satisfaction shows no significant relationship with stakeholders' relationships.

Table 6. 42: Summary of SEM results for relationships between residential satisfaction dimensions and the dependent variable

Exogenous		Endogenous	$\hat{\beta}$	Std. Error	p-value	Conclusion
DwellSat	→	Satisfaction with stakeholders' relationships	0.336	0.039	p<0.05	Significant
NbhoodSat	→	Satisfaction with stakeholders' relationships	-0.008	0.051	0.881	Not significant
NboursSat	→	Satisfaction with stakeholders' relationships	0.343	0.059	p<0.05	Significant

Source: This study's data analysis.

6.9.5 Intervening Effects of Residential Satisfaction Dimensions on the Relationships between Subjective Independent Variables and the Dependent Variable: Hypothesis 14, Hypothesis 15 and Hypothesis 16

This section presents the results of the statistical analysis of the intervening effects caused by the intervening variables—dwelling satisfaction, neighbourhood satisfaction and satisfaction with neighbours —on the relationships between (i) satisfaction with stakeholders' relationships and subjective independent variables of owner-occupants' competency, (ii) satisfaction with stakeholders' relationships and owners' organisational competency and (iii) satisfaction with stakeholders' relationships and managing agents' competency.

The tests were done using the method proposed by Barron and Kenny (1986), who developed a procedure for testing the statistical significance of intervening variables. Their approach utilised ordinary least-squares multiple regression and involved three steps. The first step requires the intervening variables to regress on the independent variables. The second step is to regress on the dependent variable on the same set of independent variables. Lastly, the third step involves regression of the dependent variable on the intervening variables and independent variables.

According to Hair et al. (2006), the regression allocated three types of intervening or mediation outcomes: no mediation, partial mediation and full mediation. No mediation exists if the regression coefficient for an independent variable is insignificant in Step 1 or if the regression coefficient for an intervening variable in Step 3 is insignificant. Partial mediation exists if the regression coefficient for an independent variable is significant in Steps 1 and 3. Full mediation exists if the regression coefficient for an independent variable is significant in Step 1 but not in Step 3. Agarwal and Teas (1997) stated that this procedure produces evidence of intervening when an independent variable is statistically significant in the estimates of Steps 1 and 2 and the mediator variable is statistically significant in the estimation of Step 3. The results of testing the mediation effects for dwelling satisfaction, neighbourhood satisfaction and satisfaction with neighbours follow.

Referring to Table 6.43, the intervening variable of dwelling satisfaction is statistically significant, showing evidence of an intervening or mediation effect. Apparently dwelling satisfaction partially mediated the relationship between satisfaction on stakeholders' relationships and owner-occupants' competency, and owners' organisational competency. However, there is no mediation effect of dwelling satisfaction on the relationship between satisfaction with stakeholders' relationships and managing agents' competency.

Table 6. 43: Testing the intervening effect of dwelling satisfaction [H14]

Subjective independent variables	Dependent variable			Conclusion
	Step 1	Step 2	Step 3	
	DwellSat	Satisfaction with stakeholders' relationships	Satisfaction with stakeholders' relationships	
Owner-occupants' competency	0.324 ($p < 0.05$)	0.387 ($p < 0.05$)	0.251 ($p < 0.05$)	Partial mediation
Owners' organisational competency	0.224 ($p < 0.05$)	0.344 ($p < 0.05$)	0.251 ($p < 0.05$)	Partial mediation
Managing agents' competency	0.025 (n.s)	0.007 (n.s)	-0.003 (n.s)	No mediation
<i>DwellSat</i>	-	-	0.418 ($p < 0.05$)	

Note: (n.s) = not significant at 0.05 level of significance

Source: This study's analysis of survey data.

Correspondingly, the results in Table 6.44 also show a mediation effect of neighbourhood satisfaction as statistically significant. The results confirm that neighbourhood satisfaction has a partial effect on the relationship between satisfaction with stakeholders' relationships and owner-occupants' competency. Further, the relationship between satisfaction with stakeholders' relationships and owners' organisational competency is partially mediated by neighbourhood satisfaction. Conversely, neighbourhood satisfaction indicates an inverse relationship, as there is no mediation effect on the relationship between satisfaction with stakeholders' relationships and managing agents' competency.

Table 6. 44: Testing the intervening effect of neighbourhood satisfaction [H15]

Subjective independent variables	Dependent variable			Conclusion
	Step 1	Step 2	Step 3	
	NbhoodSat	Satisfaction with stakeholders' relationships	Satisfaction with stakeholders' relationships	
Owner-occupants' competency	0.451 ($p < 0.05$)	0.387 ($p < 0.05$)	0.232 ($p < 0.05$)	Partial mediation
Owners' organisational competency	0.185 ($p < 0.05$)	0.342 ($p < 0.05$)	0.279 ($p < 0.05$)	Partial mediation
Managing agents' competency	-0.002 (n.s)	0.007 (n.s)	0.008 (n.s)	No mediation
<i>NbhoodSat</i>	-	-	0.344 ($p < 0.05$)	

Note: (n.s) = not significant at 0.05 level of significance

Source: This study's data analysis.

The results in Table 6.45 reveal the evidence of a mediation effect for satisfaction with neighbours, as it is statistically significant in Step 3. An examination of each independent variable finds that satisfaction with neighbours partially mediated the relationship between satisfaction with stakeholders' relationships and both owner-occupants' competency and owners' organisational competency. However, there is no mediation effect of satisfaction with neighbours on the relationship between satisfaction with stakeholders' relationship and managing agents' competency.

Table 6. 45: Testing the intervening effect of satisfaction with neighbours [H16].

Subjective independent variables	Dependent variable			Conclusion
	Step 1	Step 2	Step 3	
	NboursSat	Satisfaction with stakeholders' relationships	Satisfaction with stakeholders' relationships	
Owner-occupants' competency	0.469 ($p<0.05$)	0.387 ($p<0.05$)	0.204 ($p<0.05$)	Partial mediation
Owners' organisational competency	0.198 ($p<0.05$)	0.342 ($p<0.05$)	0.269 ($p<0.05$)	Partial mediation
Managing agents' competency	-0.012 (n.s)	0.007 (n.s)	0.012 (n.s)	No mediation
<i>NboursSat</i>	-	-	0.388 ($p<0.05$)	

Note: (n.s) = not significant at 0.05 level of significance

Source: This study's data analysis.

6.9.6 Evaluating the Structural Conceptual Framework

The proposed conceptual framework has been evaluated through several fit indices, namely, the GFI, IFI, NFI and CFI. The proposed model encompassed seven variables with three subjective independent variables (represented by the owner-occupants' competency, owners' organisational competency and managing agents' competency), three intervening variables of residential satisfaction dimensions (dwelling satisfaction, neighbourhood satisfaction and satisfaction with neighbours) and one dependent variable (effective stakeholders' relationships).

These variables were analysed individually through reliability analysis and confirmatory factor analysis to determine their unidimensionality. Table 6.46 summarises the fit indices used to evaluate the proposed conceptual framework. As shown in this table, the proposed conceptual framework demonstrates a good model as all the fit indices were in the range of acceptable levels.

Table 6. 46: Summary of fit indices of structural conceptual framework

Fit indices	Acceptance level	Proposed Model
Goodness-fit index (GFI)	≥ 0.90	0.931
Incremental-fit index (IFI)	≥ 0.90	0.946
Normed-fit index (NFI)	≥ 0.90	0.920
Comparative-fit index (CFI)	≥ 0.80	0.946

Source: This study's data analysis.

6.10 Chapter Conclusion

This chapter reported the empirical results of two surveys, the preliminary survey and the final survey. The preliminary survey's results were based on data collected through interviews with stakeholders in housing management: three chairpersons of management corporations, two chairpersons of residents' associations and two representatives from two managing agent companies. The data were analysed manually. Several issues were identified and then categorised based on the research themes that were identified through the literature review in this study. These results and the literature review allowed the development of a conceptual framework that informed the design of a questionnaire for owner-occupants and those persons managing housing development maintenance (with or without strata title). The analysis of this second data collection phase has been reported here in four main sections.

Part A refers to the first research question of this study, which focuses on identifying the current housing management situation of low-cost housing developments in Selangor. This information is crucial, because at the time of the survey there was no social data, despite the fact that such low-cost housing developments have been occupied for more than 20 years. Therefore, before recommending any proposed improvements to housing management, it is essential to understand the background of current low-cost housing in Selangor, especially those that have obtained strata title. Several important issues have been identified. For example, nearly 45 per cent of respondents (owner-occupants) have occupied their current residential units for more than fifteen years, and more than 60 per cent of respondents intend to continue living in their units. This study also shows that several developments are dominated by tenant-residents.

To answer the second research question, which centres on identifying the factors that could affect the housing management's performance, Part B reported the owner-occupants' and chairpersons' level of agreement on the proposed variables. The statistical results have shown general agreement between these two stakeholders on those factors, as all mean scores values from a seven point likert-scale are above 5.0. Chairpersons generally highly agree on the variables proposed, but the owner-occupants show lower levels of agreement.

Of the 21 factors measured, the chairperson responded 'strongly agree' for the ten factors. Factors that have the highest mean score are 'Owners should have a good relationship with their managing agents' personnel', ' Owners' organisation committee should have a good inter-relationship with their managing agent ' and ' Managing agents should be involved in owners' organisation activities ' (all mean scores = 6.33). For the owner-occupants respondents, they just 'agree' with all the proposed factors. 'To have awareness of maintenance needs ' recorded the highest mean score of 5.72, while ' Owners' organisation committee should have a good inter-relationship with their managing agent' recorded the lowest mean score of 5.18

The divergent opinions show each stakeholder group has different expectations, and highlights the possibility of conflict between them. Do these different expectations affect their level of satisfaction? Part C presented the results of this analysis using univariate (ANOVA) statistic method. Part C is aimed at answering the third research question of identifying the significant objective variables (owner-occupants' characteristics, chairpersons' characteristics and housing characteristics) that could influence the effective stakeholders' relationships proposed in the conceptual model. Based on the respondents' satisfaction level, the analysis found that the number of children, the length of residency, and level of participation in meetings and owners' organisational activities and the rates of occupancy are the determinant factors of effective stakeholders' relationships.

The final part, Part D, showed the results that aimed to answer the last research question focused on identifying the significant predicted relationships involving subjective independent variables (owner-occupants' competency, owners'

organisational competency and managing agents' competency) derived from the proposed conceptual framework. This section first showed how consistently individuals respond to the items within the scale used in the survey. The model was also evaluated via CFA to identify any items of variables that have poor standardised regression. The bivariate correlation analysis confirmed a moderately positive, significant relationship between satisfaction with stakeholders' relationship and those variables. An exception was the managing agents' competency, which recorded a weak positive relationship. Based on the SEM results, the variables of owners' organisational competency and owner-occupants' competency are found to be significant predictors of effective stakeholders' relationships and satisfaction with residential satisfaction dimensions. Satisfaction with the stakeholders' relationships variable is only influenced by the satisfaction with dwelling and neighbours variable.

On the intervening effect on the proposed relationships, all the residential satisfaction dimensions recorded no mediation effect on any relationships that involved the managing agents' competency variable. Conversely, partial mediation was found on the relationships between the owner-occupants' competency and owners' organisational competency and the satisfaction on the stakeholders' relationships. Finally, the tested and evaluated conceptual framework demonstrated a good model, as the fit indices were all in the range of acceptable levels; thus, this study's objective to develop a conceptual framework of effective stakeholders' relationship of low-cost housing management has been achieved.

The next chapter (Chapter 7) will discuss these results by making comparisons with the literature discussed earlier in Chapter 2, Chapter 3 and Chapter 4 in order to determine the contribution of this study. This chapter will also discuss the conceptual model that has been evaluated in this Chapter 6. In the discussions, the objective independent variables will be incorporated into the conceptual model, so the model can demonstrate the variables network that should be addressed in order to achieve effective relationships among the stakeholders.

Chapter 7: Discussion

7.1 Introduction

As described earlier, this study aims to develop a valid conceptual framework that can improve the management of multi-owner low-cost housing in Selangor, Malaysia. This study suggests a conceptual framework of ‘Effective Stakeholders’ Relationships’ as one way to achieve better housing management. Therefore, this chapter discusses and interprets the main findings presented in the previous chapter based on academic theories, previous studies’ findings and management practices. Discussions will be supported by data that were obtained through interview sessions with the chairpersons and the managing agents and through researcher observation.

The discussion in this chapter is divided into four main parts. Part A discusses the descriptive findings of the characteristics of owner-occupants, housing developments and housing management. Part B interprets Part 1 of the final survey, which endeavours to examine the stakeholders’ responses to the proposed factors that are likely to influence the effectiveness of housing management. Emphasis is given to discussion of the agreement pattern between the main stakeholders, the owners and the owners’ organisations. The patterns of agreement that have been expressed by all stakeholders, namely the owner-occupants and the chairpersons are highlighted.

Part C interprets the statistical relationship between (i) the objective variables (owner-occupants’ characteristics, chairpersons’ characteristics and housing characteristics) and the dependent variable of satisfaction with stakeholders’ relationships and residential satisfaction dimensions (dwelling satisfaction, neighbourhood satisfaction and satisfaction with neighbours). In this part, the accepted and rejected null hypotheses will also be clearly summarised.

The final discussion (Part D) is the main discussion that interprets the results concerning the development of the final conceptual framework of 'Effective Stakeholders' Relationships'. The discussion begins with an exploration of the variables' relationship, as hypothesised in Chapter 4, which has been generated from Pearson's Correlation analysis and Structural Equation Modeling (SEM analysis). The discussion consists of seven variables: three subjective independent variables (owner-occupants' competency, owners' organisational competency and the managing agents' competency), three intervening variables of residential satisfaction dimensions (dwelling satisfaction, neighbourhood satisfaction and satisfaction with neighbours) and one dependent variable (satisfaction with stakeholders' relationships). This chapter ends with interpretation of the tested and evaluated conceptual framework of 'Effective Stakeholders' Relationships'. Figure 7.1 summarises the outline of the discussions in Chapter 7.

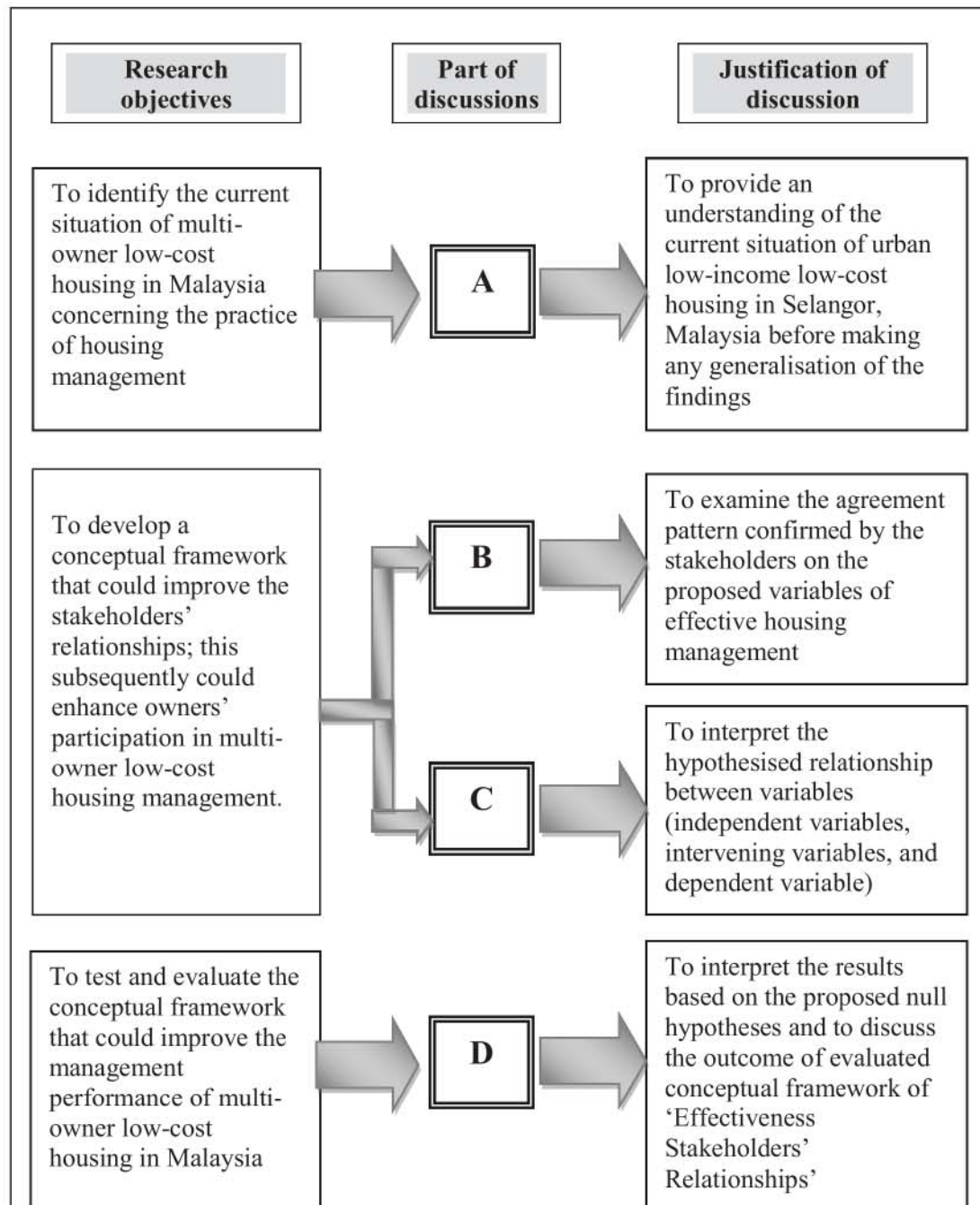


Figure 7.1: Outline of discussions.

7.2 Part A: Understanding Selangor's Urban Multi-owner Low-cost Housing Management

This chapter aims to provide an understanding of the facts surrounding multi-owner low-cost housing developments in Malaysia that have already obtained the

strata title, in particular, housing developments that have taken over housing management from the developer. Based on the descriptive results presented in Chapter 6, this discussion is divided into three sections: (i) owner-occupants' characteristics, (ii) housing characteristics and (iii) housing management characteristics. Discussion will also be supported by data obtained through interview sessions with the chairpersons and managing agents.

7.2.1 Owner-occupants' Characteristics

7.2.1.1 Socio-demographic Characteristics

As shown in Table 6.8 (see Chapter 6), over 60 per cent of the respondents are owner-occupants aged 41 years and above. Almost half of them are aged 50 and over. To ascertain if any of these groups have been residents in the developments longer than the others, a cross tabulation analysis was carried out (see Table A7.1 in Appendix 7). The analysis clearly shows that the group aged 40 years and above have been living in the developments longer than the other age groups. Given that more than 90 per cent of selected housing units are more than 20 years old (see Table 6.11 in Chapter 6), they are the first purchasers or subsequent purchasers who purchased the units at the beginning of the occupation of the development. Furthermore, more than 60 per cent of the respondents choose to live in the current residential units throughout their lives and most of them are more than 40 years of age (see Table A7.2 in Appendix 7). Based on the above findings, it is not a surprise that many chairpersons who were involved in this study's survey have retired and can now be classified as senior citizens.

Do the above findings support the statement made in previous studies that homeownership could reduce homeowners' mobility (see Cox 1982; Rohe 2001; Rossi & Weber 1996; Tan 2008; Wan Abd Aziz, Azriyanti & Hanif 2007)? To answer this question, reference to housing occupancy rates should be made. Although many respondents are long-term residents and plan to continue their occupancy, they are a minority in their housing development. This study found that nearly 50 per cent of housing units are occupied by tenant-residents. Therefore, the claim that homeowners will remain in residence may not hold true

for the low-income homeowners of multi-owner low-cost housing. This is because they will move to better housing when they can afford it.

For those who choose to remain living at their current unit, some assumptions can be made. Although Abdul Karim and Sariman (2007) believe that low-income households mainly have no choice and cannot afford to move to more upscale housing, researcher observation revealed an additional reason that should be taken into account. All the selected housing developments are convenient - they are located in urban areas, near the main road and close to industrial areas where there are job opportunities. The developments also have good access to urban facilities such as schools, shops, public transportation and so on (although not all facilities are available at the early stage of the occupation of the housing).

The chairpersons interviewed asserted that length of residency contributes to strong community cohesion within their neighbourhood. Again, this significant outcome is consistent with previous international and local studies on determinants of homeownership (see section 2.3 in Chapter 2). The longer the duration of residency, the more the occupants contribute to a greater socialisation within neighbourhood communities (for example, see Abdul Karim & Sariman 2007; Tan 2008). This study intends to prove the connection between length of residency and housing management. To date, no local study has observed the effect of length of residency on the various aspects of relationships between the stakeholders in housing management. The details of this examination will be explained in section 7.3 onward.

For the younger group of respondents aged less than 40 years old, over 60 per cent of them are between 31 to 40 years old. This group (< 40 years old) comprises two main subgroups. The first subgroup is second-generation occupants, who either are still living with their parents or who have taken over the unit from their parents (inherited or bought). For those who still live with their parents, they mainly took over the affairs of housing management from their parents. Meanwhile, the second subgroup includes those who have purchased or moved into the unit. Within this second subgroup, in terms of future planning (as shown in cross tabulation Table A7.3 in Appendix 7), the group of respondents aged

between 31 to 40 years old shows a desire to stay longer in the current units compared to the youngest group of respondents (aged between 20 and 30 years). This youngest group of respondents (aged between 20 and 30 years) plans to move within the next ten years.

As presented in Table 6.8 (see Chapter 6), almost 80 per cent describe their units as occupied by one to five people. All categories in every age group show that more than 70 percent of households are occupied with between 1 to 5 people (see Table A7.4 in Appendix 7). Taking into consideration that the majority of the units have two to three bedrooms, the average occupancy density for each unit is considered appropriate (not crowded).

In terms of number of children living together, Chapter 6 has shown that the majority of the households contain between 1 to 5 children. A closer analysis shows that even those aged over 50 years still report having between 1-5 children living with them as extended family (see Table A7.4 in Appendix 7).

7.2.1.2 Socio-economic Characteristics

In regard to socio-economic data, the majority of respondents have a full-time job (52 per cent). The majority (59 per cent) have only received education up to the secondary school level. In terms of household income, the distribution is almost even between the scales used in this study, with only a small difference. Respondents ranging in age from 31 to 50 years have the highest household incomes (more than RM2001). A closer examination found that those aged more than 50 years dominated the lowest household income category (above RM1000) (see Table A7.5 in Appendix 7). This is because most of them are retired, and some are not working.

7.2.2 Housing Characteristics

7.2.2.1 Housing Development Background

The majority of the housing selected for this study's survey has been occupied for more than 20 years; most developments were built between 1970 and 1985. Between 1970 and 1985, Selangor concentrated on industrial activities, and dealing with housing shortages, particularly for low-income households, the majority of whom were made up of rural emigrants. Further, the selected urban areas in this study, such as Petaling Jaya, were initially developed to overcome the overcrowded population of Kuala Lumpur. During this period, the public sector was the most active sector providing housing for urban low-income households; only later did the government seek active participation from the private sector (Tan & Sendut 1983). The survey data confirms this background, as more than 50 per cent of the housing units were built by the public sector (including joint-venture with the private sector).

Rapid economic development proved to be associated with urbanisation. The effect of expensive land prices and construction costs in urban areas has influenced the development of Malaysia's multi-owner low-cost housing. This study's data has shown that Selangor has been building multi-storey low-cost housing in urban areas since as early as the 1970s to overcome the affordable housing shortage. Seventy-one identified housing developments in this study's sample can be categorised as medium high-rise and medium-density buildings, and the remaining two are high-rise, high-density buildings. The two high-rise buildings (thirteen storeys), are located in prime areas, and are under the administration of Petaling Jaya Municipal Council.

7.2.2.2 Facilities

Regarding the facilities provided in housing areas, the majority of the chairpersons stated that their housing developments have access to community facilities such as multi-purpose halls, prayer rooms, children's playgrounds and playing courts. These facilities are either a stand-alone structure or located at the

ground floor of their blocks, and were built either by the developers or by the respective local authority or agencies. Some housing areas are provided with kindergarten facilities by the respective agency to cater to children within nearby neighbourhoods. The kindergartens are mainly under the respective agencies' responsibility. According to the chairpersons, most of the facilities were not built in the early stages of the housing development but have been provided in several stages. This finding supports the findings of an earlier local study by Tan and Sendut (1983), who claimed that most of the urban low-cost housing during that time suffered from inadequate community facilities.

Through the researcher's observation, a number of facilities such as kindergartens, multi-purpose halls, and children's playgrounds are not as old as the housing units are. This suggests that some improvements have been made by the respective state authorities or agencies to enhance the low-cost housing occupants' well-being.

7.2.2.3 Individual Units

In respect to individual units, the researcher found that the majority of the units located on the ground floor have been extended by the unit owners (see Figures 7.2 and 7.3). Based on conversations with the chairpersons, a number of unit owners have illegally invaded the common property (such as perimeter apron and walkway), and some have drastically extended beyond the boundaries of the original strata plan of their housing. They have illegally extended the unit or built additional structures on the land that does not belong to their MC.



Photo: The researcher (2009)

Figure 7.2: Illegal and unsafe building extensions by the units' owners.



Photo: The researcher (2008)

Figure 7.3: Illegal structures built on the MC's common properties (parameter apron and drain)

Surprisingly, the unit owners of first storey level have also extended their units (especially the end units). According to the chairpersons, the unit owners mainly tend to make an extension after the unit owners on the ground floor have extended their unit (with a payment to the unit owners below); in other situations, the unit owners of the ground floor and first floor will embark on a joint-venture of extension work. According to the chairpersons, most of these illegal extensions were made as soon as they set up the MC. This is because owners were no longer under the control of the developer (most of the developers in this study were the state agencies). The unit owners seemed to have the freedom to renovate their

units, despite the fact that actions such as intruding into common property areas are illegal and may not be structurally safe.

Most of the chairpersons indicated that they have difficulty controlling such illegal actions. The irresponsible unit owners assumed that other owners who lodged complaints were merely envious of their advantages. A few chairpersons did complain to their respective local authority. The local authority normally demolished any illegal structures built on the property that did not belong to the MC. With regard to the misuse of the MCs' common property, as stated by the relevant Acts, the MC has the power to take action because they are required by the law to control, manage and administer the common properties for the benefit of all (Legal Research Board of Malaysia 2007a, p. 123). However, as mentioned by some chairpersons, considering the cost of such action and the strong neighbourhood ties, they preferred to keep silent about the structures as long as the situation did not cause harm to the residents.

7.2.3 Housing Managements' Characteristics

7.2.3.1 The Structure

In general, all 34 owners' organisations of the housing developments selected have been issued a Strata Title. However, at the time of survey, only 30 owners' organisations had officially set up the MC and taken over the housing management matters from the developers within the past several months to a year. The remaining organisations were still in the process of establishing MCs. Three of them, at the time of survey, were being managed by the developers. Meanwhile, the others managed their own housing without the developer (through the residents' association), due to conflict between the unit owners and the developer. However, none of these housing developments had established a Joint Management Body (JMB) as set out in the new Act 663. This may have been due to the fact that at the time of survey, the implementation of Act 663 was still in the early stages, whilst these developments were in the process of establishing MCs.

The above situations confirm the claims that the process of obtaining the Strata Title and the strata transfer are often time consuming, thus delaying the formation of the MC (Tiun 2003; Yahya & Hashim 2001). However, with the implementation of the new Act 663, the formation of MCs has been expedited. This has been proven because in early 2008, the researcher was informed by the Selangor Strata Title Department that prior to December 2007, no low-cost housing development had formed a MC. However, when the pilot study was carried out at the end of 2008, as reported by the local authorities and land offices, several low-cost housing developments had successfully established their MCs. This is because the new act does not require a low-cost development to achieve a 100 per cent complete transfer of strata to form the MC.

7.2.3.2 The Housing Management Practice

7.2.3.2.1 Housing Management Approach

In the context of housing management practised by the selected housing developments, as stated previously, the approach can be divided based on two situations: a development has not yet established a MC or a development has established the MC. In the first situation, a Pre-MC has been established. The developers are in the process of transferring the strata title to the individual purchasers, so that a MC can be established. At the time of survey, there are no developments in this study that had established a JMB.

In the first situation, the developer appoints a managing agent who collects maintenance funds, records owners' complaints, performs daily maintenance and monitors on-site contractors appointed by the developer. Meanwhile, the residents' association represents the unit owners and acts as an intermediary between the developer and owners. The developer is responsible for any decisions and policies but can be influenced by the residents' association.

In the second situation, the MC—a corporate body having perpetual succession and a common seal, which may sue and be sued—plays a major role in housing management (Legal Research Board of Malaysia 2007a, p. 54). This study focuses

more on the second situation, because the buildings and common property are completely transferred to the owners through their MC. This study's findings are consistent with the theory of housing management by Wekerle et al. (1980) that distinguished housing management modes based on the extent of owners' participation in policy and decision making and implementation. The foremost reason for owner participation is to avoid excessive increases in monthly maintenance charges. This outcome is consistent with the preliminary findings of Muhamad Ariff and Davies (2009a) that some chairpersons employ a third party's services because they feel that housing management is a very demanding task, while others engage residents in the maintenance requirements.

According to the chairpersons, their MC plays a dominant role in policy and decision making. The implementation of the policy, however, varies. For example, there are several MCs that outsource the maintenance tasks to small contractors on either a planned or *ad hoc* basis. However, no planned or scheduled inspections are involved. The planned basis mainly involves daily routines such as sweeping the corridor and the stairs. An *ad hoc* basis is normally required when there is damage or a defect in the elements of the building or common property that needs to be repaired or replaced. The MC acts as a decision control agent that monitors the performance and rectifies problems on a regular basis. This management strategy meets the criteria of partnership of Wekerle et al.'s (1980) theory of housing management, where members are expected to interact with their management company.

In contrast, there are MCs that not only make the policy and decisions, but also implement several policies that have been agreed. Daily routine maintenance such as sweeping the corridors and stairs is done by the individual owners, but not voluntarily. They are paid by the MC and the quality of their work is monitored by the MCs. Meanwhile, skills and required equipment determine the *ad hoc* work. Major works that require special skills and expensive equipment are mainly outsourced to contractors. Minor works, such as changing the light bulbs at the corridor and stairs or repairing broken cement render or perimeter drain, are often performed by the residents.

Some residents have the necessary technical skills, and some of them even have a technical license such as an electrical wiring or carpentry license. Materials are provided by the MC. Meanwhile, the residents do the repair or replacement work, either voluntarily or paid by the corporation. This is very economical as the rate charged is low when compared with the rate charged by the contractors. This approach is common, as many of the residents are industrial workers and normally have certain basic skills and certificates. In such situations, the MCs assume the policy and decision making as well as the implementation.

Based on this practice of simple repairs and basic maintenance being undertaken by residents, this meets the criteria for 'resident-management' according to Wekerle et al. (1980), where both the functions of decision control and decision management would be assumed by the owners, with owners performing the majority of the routine tasks. However, the degree of partnership involved is less, because daily routine tasks are carried out by the owners themselves (voluntarily or paid). Therefore, the approach used by the selected developments in this study can be placed between the partnership and resident-management modes, as the owners' participation is slightly different.

What factors affect the housing management approach taken by the MC? A study conducted by Yip, Chang and Hung (2007) found that housing price, age and density have significant impacts on the choice of management mode in Hong Kong and Taiwan. Moreover, they found that housing development type in Taiwan also influences the management choice. In Hong Kong, though not in Taiwan, community cohesion was found to have a significant influence on the housing management mode. However, these findings cannot be directly compared or generalised in the case of low-cost housing in Malaysia.

In this study, almost all the selected housing developments have the same criteria in terms of location (urban), unit prices (standard and controlled) and density (medium-rise and medium density). Therefore, this study's findings cannot be compared with Yip, Chang and Hung's (2007) approach as the later involved different categories of housing costs. This study has only focused on medium density low-cost housing developments, because currently only such

developments have been issued with strata title. Perhaps in the future other studies could incorporate developments with higher numbers of floor levels and density.

In identifying the appropriate approach for the Malaysian context, this study shows that the owner-managed mode is the preferred mode mainly for reasons of cost control. Interviews with chairpersons revealed that the desire to maintain low maintenance charges is the main reason for this choice.

The key finding of this study is consistent with the preliminary findings of Muhamad Ariff and Davies (2009a) that there is likelihood that the MCs of low-cost housing will in future manage their own housing environment. Research from other countries clearly indicated the desirability of government or non-profit organisations' involvement (refer Chapter 2), in ensuring the maintenance and well-being of their low-income households, and this study argues that Malaysia should also consider this approach. This is because this study confirmed that MCs of low-cost housing in Malaysia are having difficulty maintaining their residential environment with the low funding regime being adopted. Future recommendations will be discussed in Chapter 8.

7.2.3.2.2 Maintenance Fund

This study found that 60 per cent of the monthly maintenance charges are under RM30 for each residential unit. This rate, according to a few chairpersons, has been imposed for many years. Some maintain the same rate as charged by the developer before the housing management was taken over by their corporations. Several chairpersons claimed that their maintenance charges have not increased for many years.

Will the rates be sufficient to meet the needs of management and maintenance? The chairpersons are fully aware that their management funds can only cover basic maintenance work and consciously ignore repair work temporarily if it is not urgent and does not endanger residents (see Muhamad Ariff & Davies 2009a). As stated by one of the chairperson:

Our buildings are over 20 years old. We are dealing with a high maintenance and repair works. We cannot afford it continuously. Every month, only 50 to 60 percent of the residents make their payments on time. The current maintenance charges can only cover for basic routine maintenance and utilities bills for the common spaces. For other expensive repair works, we have to make instalment payment plan to the contractors. Some repair works needed to be delayed. For example, to fix the broken ceiling under the roof (outside), the repair cost charged by the contractors is high as it involves expensive crane hire (Chairperson of MC of development 'C').

According to the chairpersons, some owners pay according to their ability. For example, early in the year, the collection rate is low due to owners needing to spend more money for their children's schooling. Increases in maintenance charges will add to the potential for a greater operating deficit, since chairpersons are concerned that increasing the maintenance charge may make some of the owners more reluctant to pay.

Limited funds affect the residential environment, as any improvement work and repairs cannot be done comprehensively. Not surprisingly, a few of the selected housing developments in this study demonstrate signs of dilapidation, such as faded external building paint, broken perimeter drains and so forth. The situation is exacerbated by a large number of the developments having no sinking fund. A sinking fund is used for costs other than routine expenses such as to repaint any part of the common property or to replace any common properties such as re-plumbing work or roofing repairs.

Of the 34 organisations, only five have a sinking fund. One of the main reasons for not imposing a sinking fund is to avoid increasing residents' monthly payments. One of the chairpersons of a MC that has a sinking fund claimed that they received strong cooperation from the residents. In the near future, they aim to replace their old leaking plumbing system. The chairperson claimed:

I got a quotation from the contractor to replace the plumbing stack. RM4000 is required for each stack. We have two stacks, thus will cost us RM8000. We are really looking forward to replace the old plumbing system. Residents who occupied units on the ground floor are suffering with the leaking problem. At the moment individual owners are

temporarily fixing the problem, while waiting for us to obtain enough sinking funds. Luckily, the roof had been repaired by the developer before the MC took over and the building has also been repainted by the state government before the last election (Chairperson of MC of development 'B').

From the researcher's observation and through discussions with the chairpersons, some housing elements are becoming dilapidated. The most critical element is the roof system. A leaking roof and broken ceiling, especially under the roof overhang, are the main problems encountered. One chairperson of a residents' association mentioned that:

I have an experience [of being] called by the residents at 2.00 am in the early morning when the top floor's units were flooded by rainwater due to heavy rain over the night. A few residents help[ed] the affected residents to dry their unit. We reported this matter to the developer and they fixed it. However, the repair quality was only for short term. We are very concerned about the roof, especially when we are about to form our MC soon. Replacing the roofing system is very expensive. We are begging the developer to replace the roof before they transfer the housing to us. At the moment, we are still in the discussion process. We are willing to share the replacement cost (Chairperson of residents' association of development 'A').

Financial problems are often an issue for chairpersons. Due to the long process involved in completing the transfer of strata title, often the buildings already show signs of dilapidation by the time the residents are ready to accept the responsibility of managing their housing. The maintenance charge is assessed according to the residents' ability to pay, but this is unlikely to meet the total maintenance requirements. The fund's management becomes more complicated when there are problems with arrears from the owners. It is not surprising that there are often reports from the media about low-cost housing seeking assistance from the government and asking council members for help.

7.2.3.3 The Residents

7.2.3.3.1 The Owner-occupants

All selected housing developments have a small strata boundary (which only includes perimeter drains around buildings), which means there is little common property to be managed and since the developments are medium rise and medium density, there are a relatively small number of residents to be dealt with by the MC (mostly less than 100 units). Therefore, according to Olson's theory of groups, should have few problems (Olson 1971) since Olson (1971) emphasised that small groups, relative to larger groups, offer greater effectiveness in collective action and decisions. However, it does not mean that this medium scale low-cost housing is free from conflict. According to Olson's theory of groups, the existence of free riders is often a problem for the group in addition to each organisation or group facing different cost pressures (Olson 1971).

Several approaches have been taken by the chairpersons to increase the participation of their residents. For example, one chairperson claimed that he gave monthly remuneration to each appointed sub-committee, such as the floor leaders. In another case, a MC reduced a monthly maintenance charge to the owners who are the corporations' committee members. There is no doubt that housing management is a demanding task, but not all of the main committee members are able to spend much time and energy carrying out their duties. Some of them are working in the manufacturing sector, which requires them to work in shifts, and many are self-employed. Thus, a few corporations appointed retired owners to hold key positions such as treasurer because they do not work anymore and therefore can be easily accessible to other residents. In return, they are given a monthly salary by the corporations. In addition for being responsible to manage the fund, this full-time treasurer is also responsible for receiving complaints from residents.

Section 7.2.1 identified that most respondents have resided in their units for a long time (over 15 years). It can be assumed that this group has gone through various phases of housing management, with their housing having been maintained by the developer before their corporations took over the responsibility. Are they concerned about their residential environment? A cross-tabulation analysis (see Table A7.6 in Appendix 7) between the length of residency and participation shows clearly that respondents who have resided in the development for a long

time, are very and quite actively taking part compared to those who have more recently settled there. Overall, only a few owner-occupants claimed they were inactive. These findings are consistent with the statements made by several chairpersons. They asserted that although only a few owner-occupants are not interested in participating (attending social activities and meetings), they have never failed to pay the monthly maintenance charges. The non interested owner-occupants surrender the affairs of housing management entirely to the MC. They are free-riders who benefit from the participation of others (Olson 1971).

In terms of gender differences, there is no significant difference, because the distributions of the level of involvement for each scale for each gender are similar. However, the age factor has a direct impact. The young (age below 40) respondents' show less active participation (see Table A7.7 in Appendix 7). The finding is paralleled by some of the comments made by the chairpersons. They claimed that young people are less concerned with matters of housing management and sometimes do not attend the meetings out of fear of the possibility that they might be appointed to hold important positions.

Being homeowners of multi-owner low-cost housing does not ensure greater owner participation, although previous studies ascertained the positive relationship between housing tenure and community attachment. According to the chairpersons, strong social ties among the residents made it difficult to carry out enforcement against defaulters or residents who disobey the laws. As a result, the chairpersons would prefer to compromise with the residents. As stated by one of the chairpersons:

I am very satisfied with the neighbourhood cohesion in this residential area. We have long been neighbours and friends. Our children grew up together. Thus, it makes it very hard for us to demand higher commitment in housing management (such as to pay the monthly charges on schedule or not and illegally extending their unit) (Chairman of MC of development 'B').

In general, this study's finding is similar to the findings by Rohe and Stegman (1994b). Just as in Baltimore, low-income households selected in this study also participate in their housing corporation. This study has identified the factors of

age and length of residency as affecting the level of homeowner participation. These factors also contribute to neighbourhood cohesion, consistent with the claim by Rohe, McCarthy and Zandt (2001). However, active participation by the occupants does not mean the housing management is free from problems. Participation that is only intended to express dissatisfaction or just to complain only troubles the management. One chairperson of a MC mentioned that:

There are some residents who just like to protest and give out their opinions. However, when the MC holds Annual General Meetings, these people are not present, because they are worried that they might be elected as a member of the MC committee (Chairmen of MC of development 'D').

Conflicts may happen when some residents extend their units illegally, or other residents take over common space as a private garden (see Figures A8.1 and A8.2 in Appendix 8). Although it makes the surroundings more attractive, from a legal perspective, it is still invading the common property. This shows how homeowners act outside the concept of collective housing. They want control and freedom over their residential environment. Despite a number of benefits that can be derived from homeownership, in reality not everybody attains those benefits (Rohe & Stewart 1996).

7.2.3.3.2 The Tenant-residents

Previous studies have shown that tenant-residents are able to influence housing management (see Budgen 2005; Chen & Webster 2005; Easthope & Randolph 2009; Randolph 2006), although the majority of these studies have been on publicly owned housing. This study's low-cost housing is dominated by a high rate of tenant-residents (see Table 6.13 in Chapter 6). Although this study shows that the majority of existing owners want to continue living in the neighbourhood, it is necessary to keep in mind that they are a minority of the sampled populations. The finding that many respondents plan to remain in their units for a long time could have negative implications. These respondents may not have the option to move out.

Based on the chairpersons' feedback, the researcher divided the category of tenants into two groups, namely tenants who have a family (family-tenants) and adult tenants. Both groups include both local and foreign tenants. According to the chairpersons, family-tenants normally are more attached to the community, although their participation in housing management is limited. However, family-tenants are more concerned with their living environment as their children and family's well-being is a top priority. As for the second group, the tenants are less attached to the neighbourhood communities. Besides not owning the unit, they are not bothered or simply do not want to be involved in the social activities of the community. This latter group often includes single in-migrant local and migrant foreign workers.

Foreign-tenants, as explained by the chairpersons, contribute to the problems of misunderstanding and miscommunications. One chairperson of a residents' association mentioned that:

The lower rental rates attracted the nearby industrial workers who are mainly the foreigners. They live in a fairly large group. They convert the living room into a bedroom. It's hard to communicate with them because they do not understand our language (Chairperson of residents' association of development 'B').

The foreign-tenants usually reside in units rented by their employer. Thus, they contact their employer about any circumstances concerning their accommodation. In this situation, MCs have difficulty communicating with the many parties involved: the units' owners, the foreign-tenants' employers and the tenants themselves. Most chairpersons will simply keep silent over certain issues as long as the tenants pay the maintenance charge (if not being paid directly by the unit's owners) and do not create problems with others residents or the living environment.

This extended exploration of tenant-residents provides a better understanding of how tenants affect housing management. No past empirical research related to low-cost housing has explored this issue. In this study, generally chairpersons did establish guidelines on tenancy criteria, but claimed they do not have an absolute

power to control or to select the tenants because, in practice, the tenancy contract is between the owners and the tenants only.

Newcomers to the housing developments, both owners and tenants, should officially make themselves known to the respective housing management structure. House rules that have been introduced in the relevant Acts should be extensively used as a common guide to inform and educate all the residents about the concept of multi-owner living, as well as the 'do's and don'ts' of all aspects of their living environment. House rules should simplify the Acts to suit their development. Every resident should have a copy, and the contents should be updated regularly.

7.2.3.3 Investment-owners

As discussed in Chapter 4, investment-owners are the unit owners who rent out their units to tenants (Guilding et al. 2005). Based on interviews with the chairpersons, the investment-owners are: (i) the unit-owners who moved because of economic factors (moved to better housing or moved because of change of work place) or, (ii) due to demographic factors (as an example, the elderly who moved out to live with other family members) or (iii) individuals who inherit the units from family members who have died. With regard to the involvement of this group in housing management, one chairperson noted:

They only pay maintenance charges, whether they pay directly to us, or through the tenants. Most of them are not interested to know about housing management and do not wish to attend the Annual General Meeting (Chairmen of MC of developments B).

This finding is consistent with findings by Budgen (2005), that the investment-owners are mostly more interested in profits from their rental activities.

According to the chairpersons, there are a few individuals who are still interested in the management affairs of their housing developments. This is due to the strong neighborhood relationship that has long been formed with the owner-occupants. In fact, one of the chairpersons selected in this study is an investment-owner. He

has been appointed as chairperson because he is a member of the Council (Resident Representative) at the respective local authority.

In addition to the rental units, there are vacant units. According to chairpersons they have lost contact with the owners of these units. Even the information stored by the developer was no longer valid. Statistical data of this study showed that on average each development has 3 to 4 vacant units. However, detailed observations show that there are two developments having 20% vacant units. For MC of those housing developments, this situation has an impact on their maintenance charges collection.

7.3Part B: Discussion and Interpretation of Part 1: Factors Affecting the Effectiveness of Stakeholders' Relationships

This section discusses the findings of Part 1 of the questionnaire that measured the respondents' (the owner-occupants and chairpersons) level of agreement on the factors expected to affect the housing management. As described in Chapter 4, five variables are involved: the stakeholders' relationships, residential satisfaction dimensions, owner-occupants' competency, owners' organisational competency, and managing agents' competency.

Based on the descriptive results presented in Chapter 6 (see section 6.4), it can be concluded that both categories of respondents, in general, agreed with the proposed factors. A closer examination reveals that while chairpersons mostly recorded 'strongly agree' and 'very strongly agree', owner-occupants mainly registered only 'agree' with the same proposed factors. For example, the chairpersons 'very strongly agree' with the need for a good relationship between owners and owners' organisations. Chairpersons also 'very strongly agree' with the factor that requires active owner participation in housing management.

Owner-occupants, in contrast, assigned less importance to these items. Chairpersons desire more owner participation, but owners are not so committed. This is perhaps not so surprising since the chairpersons are far more involved in

housing management and maintenance. However, both indicated similar responses in one aspect of stakeholders' relationships: they both only 'agree' with factors requiring tenant-residents' involvement in housing management. Chairpersons require active involvement of residents and believe that good relationships between the owners' organisation and residents could improve housing management, but the owner-occupants did not perceive these factors as very important.

This difference in perception indicates that there is a small gap between these two groups of respondents. Certainly this can contribute to the conflicts in any collective action, particularly when collective agreement cannot be achieved or does not meet the needs of those involved. To better understand these results, Part 2 of the survey analysed respondents' satisfaction evaluation of the proposed variables (with greater attributes).

7.4Part C: The Influence of Objective Variables

7.4.1Understanding Satisfaction with Stakeholders' Relationships

7.4.1.1Respondents' Categories: Hypothesis 1

This study statistically proved that satisfaction with stakeholders' relationships is equal across the categories. This outcome supports the null Hypothesis 1, as respondents' category (chairperson and owner-occupants) does not influence satisfaction with stakeholders' relationships.

7.4.1.2Owner-occupants' Characteristics: Hypotheses 2 and 3

7.4.1.2.1Hypothesis 2: Socio-demographic Characteristics

As described in Chapter 6, only two factors of owner-occupants' characteristics have been identified to have significantly influenced satisfaction with stakeholders' relationships: CHILDREN (number of children living together) and

RESIDENCY (length of residency). Households with more than five children indicated higher satisfaction with stakeholders' relationships. Children encourage the development of relationships with other families – children playing together can create extended friendships. Also, the need to provide a safe environment for family members might persuade them to develop good relationships with other stakeholders, and this indirectly encourages participation in housing management.

As for RESIDENCY, while newer households are satisfied with the stakeholders' relationships, existing households recorded the least satisfaction. This result indicates a gap in expectations, as newcomers might accept the current living condition as it is. At the same time, the existing households may experience the deterioration of their living environment and may want some proactive action by the stakeholders. The remaining null hypotheses predicting the influence of other owner-occupants' characteristics on stakeholders' relationships have been accepted. Thus, factors such as age, gender, marital status, number of people living together, and mobility plan does not influence their satisfaction with stakeholders' relationships. Table 7.1 summarises these findings.

Table 7. 1: Supported and rejected null hypotheses on the relationships between owner-occupants' socio-demographic differences and satisfaction with stakeholders' relationships

Univariate Analysis of Variance (ANOVA)	
Null hypotheses rejected	Null hypotheses supported
<ul style="list-style-type: none"> ▪ H2-f₀: Number of children living together (CHILDREN) has no significant influence on stakeholders' relationships. 	<ul style="list-style-type: none"> • H2-a₀: Owner-occupants' age category (AGE) has no significant influence on stakeholders' relationships.
<ul style="list-style-type: none"> ▪ H2-g₀: Owner-occupants' length of residency (RESIDENCY) has no significant influence on stakeholders' relationships. 	<ul style="list-style-type: none"> • H2-b₀: Owner-occupants' gender category (GENDER) has no significant influence on stakeholders' relationships.
	<ul style="list-style-type: none"> • H2-c₀: Owner-occupants' marital status (MARITAL) has no significant influence on stakeholders' relationships.
	<ul style="list-style-type: none"> • H2-d₀: Number of people living together (PEOPLE) has no significant influence on stakeholders' relationships.
	<ul style="list-style-type: none"> • H2-e₀: Owner-occupants' mobility plan (MOBILITY) has no significant influence on stakeholders' relationships.

Source: Summarised from results presented in Chapter 6.

7.4.1.2.2 Hypothesis 3: Socio-economic and Participation Characteristics

As for owner-occupants' socio-economic and participation characteristics, only two null hypotheses are accepted: EDUCATION (owners' highest education level) and INCOME (households' gross income). Both factors statistically are found not to affect respondents' satisfaction with stakeholders' relationships. The insignificant results are likely due to most respondents having low education attainment, (only at secondary and primary school levels). There is little difference in income levels across residents.

The analysis of owner-occupants' participation level differences indicated inverse results, as both factors—participation in activities (Part_activities) and meetings (Part_meetings) organised by the owners' organisation—are found to significantly affect their satisfaction with stakeholders' relationships. As expected, less active and inactive owner-occupants indicate less satisfaction with the relationship among stakeholders. As a conclusion, the rejected and accepted hypotheses are illustrated in Table 7.2.

Table 7. 2: Supported and rejected null hypotheses on the relationships between owner-occupants' socio-economic and participation differences and satisfaction with stakeholders' relationships

Univariate Analysis of Variance (ANOVA)	
Null hypotheses rejected	Null hypotheses supported
<ul style="list-style-type: none"> • H3-c₀: Owner-occupants' participation in activities organised by the owners' organisation (Part_activites) has no significant influence on stakeholders' relationships. 	<ul style="list-style-type: none"> ▪ H3-a₀: Owner-occupants' highest education attainment (EDUCATION) has no significant influence on stakeholders' relationships.
<ul style="list-style-type: none"> • H3-d₀: Owner-occupants' participation in meetings organised by the owners' organisation (Part_meetings) has no significant influence on stakeholders' relationships. 	<ul style="list-style-type: none"> ▪ H3-b₀: Owner-occupants households' gross income (INCOME) has no significant influence on stakeholders' relationship.

Source: Summarised from results presented in Chapter 6.

7.4.1.3 Chairpersons' Characteristics: Hypothesis 4

All factors that represent chairpersons' characteristics suggested in this study are found to insignificantly influence respondents' satisfaction with the stakeholders'

relationships. Therefore, as presented in Table 7.3, the null hypotheses for the following factors are well supported: the chairperson's category (**Chairperson_category**), duration holding the current position (**Chairperson_duration**), chairperson's commitment in other community organisations (**Chairperson_other_organisations**), and chairperson's experience level in housing management and maintenance affairs (**Chairperson_experience**).

Table 7. 3: Supported and rejected null hypotheses on the relationships between chairpersons' characteristics differences on stakeholders' relationships.

Univariate Analysis of Variance (ANOVA)	
Null hypotheses rejected	Null hypotheses supported
	<ul style="list-style-type: none"> ▪ H4-a₀: Chairpersons' category (Chairperson_category) has no significant influence on stakeholders' relationships. • H4-b₀: Chairpersons' duration holding the current position (Chairperson_duration) has no significant influence on stakeholders' relationships. • H4-c₀: Chairpersons' commitment to other community organisations (Chairperson_other_organisations) has no significant influence on stakeholders' relationships.
	<ul style="list-style-type: none"> • H4-d₀: Chairpersons' experience level in housing management and maintenance affairs (Chairperson_experience) has no significant influence on stakeholders' relationships.

Source: Summarised from results presented in Chapter 6.

7.4.1.4Housing Characteristics: Hypothesis 5

As shown in Table 7.4, the null hypothesis concerning the influence of housing location (**LOCATION**) differences on stakeholders' relationships is statistically accepted. This significant result is mainly a result of all the samples being selected from urban areas with adequate access to community facilities. However, as expected, occupancy rate (**OCCUPANCY RATES**) was confirmed by ANOVA analysis to affect the respondents' satisfaction with stakeholders' relationships. Thus, this factor's null hypothesis is rejected. A closer assessment of the mean shows that occupants in housing with an owner-occupant rate greater than 91 per cent indicated the most satisfaction.

Table 7. 4: Supported and rejected null hypotheses on the relationships between housing characteristics differences on stakeholders' relationships

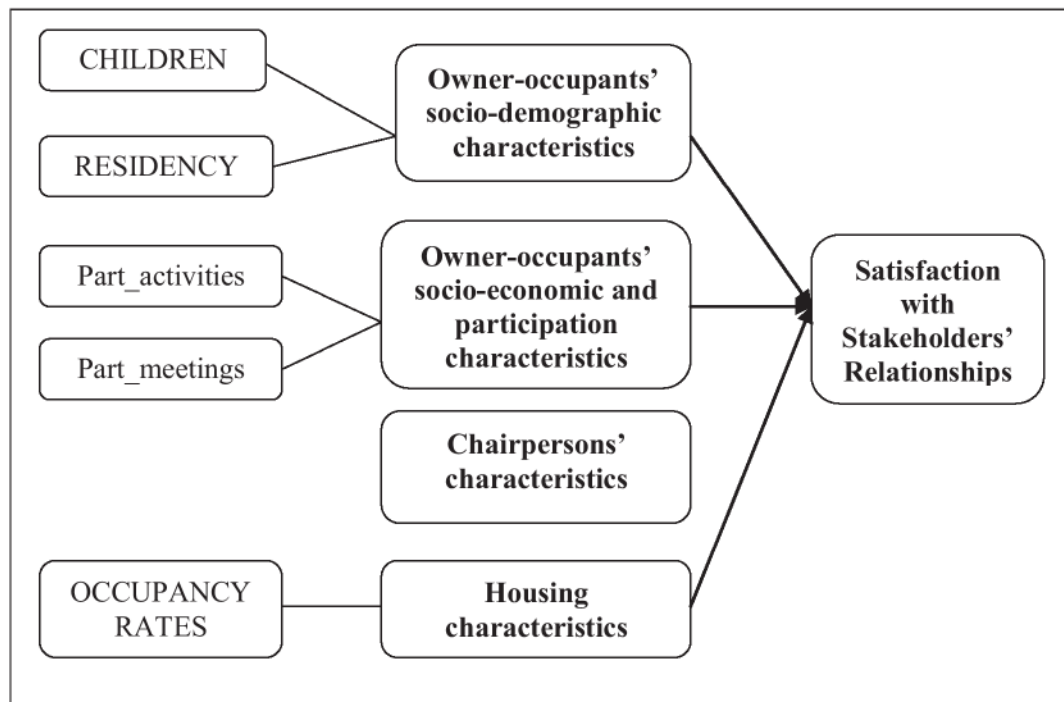
Univariate Analysis of Variance (ANOVA)	
Null hypotheses rejected	Null hypotheses supported
<ul style="list-style-type: none"> • H5-a₀: Owner-occupancy rate (OCCUPANCY) has no significant influence on stakeholders' relationships. 	<ul style="list-style-type: none"> ▪ H5-b₀: Housing location (LOCATION) has no significant influence on stakeholders' relationships.

Source: Summarised from results presented in Chapter 6.

This study clearly suggests that in a collective living arrangement, the owner-occupant rate is very important because it can influence the effectiveness of housing management. High rates of tenant-residency could create problems; previous studies have shown that tenant-residents are not interested in housing management and are not governed by the Acts for compulsory participation in the owners' organisations (for example, see Chen & Webster 2005; Easthope & Randolph 2009; Muhamad Ariff & Davies 2009a).

This study's finding is consistent with the findings of Rohe and Stewart (1996) although they examined the low-income households of single dwellings. Rohe and Stewart believed that a lack of tenants in low-income neighbourhoods in the USA could increase the potential for improved rates of maintenance. This study, furthermore adds evidence to the argument about the relationship between the rates of homeownership and homeowner's behaviour towards property management.

To more easily understand the relationships that have been found to affect the Stakeholders' Relationships, Figure 7.4 summarises findings discussed in this section.



Source: Summarised from results discussed in this chapter

Figure 7.4: Important relationships between the characteristics of owner-occupants, chairpersons and housing, and stakeholders' relationships.

7.4.2 Understanding Residential Satisfaction Dimensions

7.4.2.1. Respondents' Category: Hypothesis 6

The individual variable assessment (ANOVA), as shown in Table 7.5, indicates that only dwelling satisfaction registered a significant difference. The remaining null hypotheses predicting the effect of neighbourhood satisfaction and satisfaction with neighbours supported the null hypothesis, as the means for the groups of a single variable are equal (not statistically different).

Collectively, respondents' evaluations of their residential environment are not influenced by their position in the housing management organisation. A closer examination of each residential satisfaction dimension reveals that owner-occupants are more satisfied with their dwelling than are the chairpersons. However, neither the chairperson nor owner-occupant category influences neighbourhood satisfaction or satisfaction with neighbours.

Table 7. 5: Supported and rejected hypotheses of respondents' category differences on residential satisfaction dimensions

Univariate Analysis of Variance (ANOVA)	
Null hypotheses rejected	Null hypotheses accepted
<ul style="list-style-type: none"> • H6-a₀: There is no significant difference on dwelling satisfaction between the categories of respondents. 	<ul style="list-style-type: none"> • H6-b₀: There is no significant difference on neighbourhood satisfaction between the categories of respondents.
	<ul style="list-style-type: none"> • H6-c₀: There is no significant difference on satisfaction with neighbours between the categories of respondents.

Source: Summarised from results presented in Chapter 6.

The above findings show that satisfaction with the dimensions of neighbourhood and neighbours are not affected by the respondent's background (in terms of experience in housing management). A cohesive neighbourhood relationship is desired, regardless of background. This is consistent with the findings of Glaeser and Sacerdote (2000). They ascertained that reducing the cost of connection (less distance between neighbours) increased the social relations between neighbours (see Chapter 2).

However, differences in experience and commitment in housing management may be the reason for the significant findings for dwelling characteristics. Both chairpersons and owner-occupants categories have different perceptions of the physical aspects and maintenance conditions of the housing developments, the individual units, and the items that explained dwelling satisfaction. This shows there is a gap between these stakeholders.

7.4.2.2.Owner-occupants' Characteristics: Hypothesis 7 and 8

7.4.2.2.1Hypothesis 7: Socio-demographic

Looking at Table 7.6, dwelling satisfaction is found to be significantly influenced by owner-occupants' marital status and mobility plan differences. The outcome shows that married owner-occupants recorded the highest satisfaction with their dwelling followed by the single parents and unmarried respondents. As for a mobility plan, the longer the owner-occupants plan to stay in the current unit, the higher their level of satisfaction with the dwelling. With regard to neighbourhood

satisfaction, only the mobility plan factor indicates a significant influence. Owner-occupants that recorded the highest level of satisfaction with the neighbourhood are those who wanted to stay longer in the current unit. However, the satisfaction with neighbours dimension was not affected by any owners' socio-demographic characteristics.

Table 7. 6: Supported and rejected null hypotheses of owners' socio-demographic differences on residential satisfaction dimensions

Univariate Analysis of Variance (ANOVA)	
Null hypotheses rejected	Null hypotheses accepted
<ul style="list-style-type: none"> • H7-c'₀: There is no significant difference in dwelling satisfaction by owner-occupants' marital status. 	<ul style="list-style-type: none"> • H7-a'₀: There is no significant difference in residential satisfaction dimensions (represented by (i) dwelling satisfaction, (ii) neighbourhood satisfaction and (iii) satisfaction with neighbours) by the owner-occupants' age category.
<ul style="list-style-type: none"> • H7-g'₀: There is no significant difference in dwelling satisfaction by owner-occupants' mobility plan. 	<ul style="list-style-type: none"> • H7-b'₀: There is no significant difference in residential satisfaction dimensions (represented by (i) dwelling satisfaction, (ii) neighbourhood satisfaction and (iii) satisfaction with neighbours) by the owner-occupants' gender category.
<ul style="list-style-type: none"> • H7-g'₀: There is no significant difference in neighbourhood satisfaction by owner-occupants' mobility plan. 	<ul style="list-style-type: none"> • H7-c'₀: There is no significant difference in residential satisfaction dimensions (represented by (i) neighbourhood satisfaction and (ii) satisfaction with neighbours) by owner-occupants' marital status.
	<ul style="list-style-type: none"> • H7-d'₀: There is no significant difference in residential satisfaction dimensions (represented by (i) dwelling satisfaction, (ii) neighbourhood satisfaction and (iii) satisfaction with neighbours) by the number of people living together (PEOPLE).
	<ul style="list-style-type: none"> • H7-e'₀: There is no significant difference in residential satisfaction dimensions (represented by (i) dwelling satisfaction, (ii) neighbourhood satisfaction and (iii) satisfaction with neighbours) by the number of children living together (CHILDREN).
	<ul style="list-style-type: none"> • H7-f'₀: There is no significant difference in residential satisfaction dimensions (represented by (i) dwelling satisfaction, (ii) neighbourhood satisfaction and (iii) satisfaction with neighbours) by the duration living in the current unit (RESIDENCY).
	<ul style="list-style-type: none"> • H7-g'₀: There is no significant difference in Satisfaction with neighbours by owner-occupants' mobility plan.

Source: Summarised from results presented in Chapter 6.

7.4.2.2 Hypothesis 8: Socio-economic and Participation Characteristics

As shown in Table 7.7, the ANOVA analysis of each residential satisfaction dimension shows that owners' participation in both activities and meetings are found to have significant influences on dwelling satisfaction. With respect to neighbourhood satisfaction, this dimension is only affected by the participation-in-meetings factor. This significant relationship is similar to a study by Ioannides (2002) in the USA. Ioannides found that individuals who are satisfied with the neighbourhood will be involved in activities related to property improvement. Ioannides also found the effect of the social interaction factor to be significant, but in this study satisfaction with neighbours is not a predictor. For satisfaction with neighbours, this last dimension is only influenced by EDUCATION. Owner-occupants who attained education up to secondary school level show a high level of satisfaction on this dimension.

Table 7. 7: Supported and rejected null hypotheses of owner-occupants' socio-economic and participation differences on residential satisfaction dimensions

Univariate Analysis of Variance (ANOVA)	
Null hypotheses rejected	Null hypotheses accepted
<ul style="list-style-type: none"> • H8-a'₀: There is no significant difference in satisfaction with neighbours by owner-occupants' highest education attainment (EDUCATION). 	<ul style="list-style-type: none"> • H8-a'₀: There is no significant difference in residential satisfaction dimensions (represented by (i) dwelling satisfaction and (ii) neighbourhood satisfaction) owner-occupants' highest education attainment (EDUCATION).
<ul style="list-style-type: none"> • H8-c'₀: There is no significant difference in dwelling satisfaction by owner-occupants' participation in activities organised by the owners' organisation (Part_activites). 	<ul style="list-style-type: none"> • H8-b'₀: There is no significant difference in residential satisfaction dimensions (represented by (i) dwelling satisfaction, (ii) neighbourhood satisfaction and (iii) satisfaction with neighbours) by households' gross income (INCOME)
<ul style="list-style-type: none"> • H8-d'₀: There is no significant difference in dwelling satisfaction by owner-occupants' participation in meetings organised by the owners' organisation (Part_meetings). 	<ul style="list-style-type: none"> • H8-c'₀: There is no significant difference in residential satisfaction dimensions (represented by (i) neighbourhood satisfaction and (ii) satisfaction with neighbours) by owner-occupants' participation in activities organised by the owners' organisation (Part_activites).
<ul style="list-style-type: none"> • H8-d'₀: There is no significant difference in neighbourhood satisfaction by owner-occupants' participation in meetings organised by the owners' organisation (Part_meetings). 	<ul style="list-style-type: none"> • H8-d'₀: There is no significant difference in residential satisfaction dimensions (represented by satisfaction with neighbours) by owner-occupants' participation in meetings organised by the owners' organisation (Part_meetings).

Source: Summarised from results presented in Chapter 6.

7.4.2.3. Chairpersons' Characteristics: Hypothesis 9

Chairpersons' characteristics have no significant impact on the factors of residential satisfaction. As shown in Table 7.8, the null hypotheses of no significant difference relationship between residential satisfaction dimensions and chairpersons' characteristics are supported in this study's data. The chairpersons' category, their duration holding the position (Chairperson_duration), commitment in other community organisations (Chairperson_other_organisations), and levels of experience (Chairperson_experience) do not influence chairpersons' satisfaction with each dimension of residential satisfaction: dwelling satisfaction, neighbourhood satisfaction and satisfaction with neighbours.

Table 7. 8: Supported and rejected null hypotheses of chairpersons' characteristics differences on residential satisfaction dimensions

Univariate Analysis of Variance (ANOVA)	
Null hypotheses rejected	Null hypotheses accepted
	<ul style="list-style-type: none"> • H9-a': There is no significant difference in residential satisfaction dimensions (represented by (i) dwelling satisfaction, (ii) neighbourhood satisfaction and (iii) satisfaction with neighbours) by chairpersons' category (Chairperson_category).
	<ul style="list-style-type: none"> • H9-b': There is no significant difference in residential satisfaction dimensions (represented by (i) dwelling satisfaction, (ii) neighbourhood satisfaction and (iii) satisfaction with neighbours) by chairpersons' duration holding the current position (Chairperson_duration).
	<ul style="list-style-type: none"> • H9-c': There is no significant difference in residential satisfaction dimensions (represented by (i) dwelling satisfaction, (ii) neighbourhood satisfaction and (iii) satisfaction with neighbours) by chairpersons' commitment in other community organisations (Chairperson_other_organisation).
	<ul style="list-style-type: none"> • H9-c: There is no significant difference in residential satisfaction dimensions (represented by (i) dwelling satisfaction, (ii) neighbourhood satisfaction and (iii) satisfaction with neighbours) by chairpersons' experience level in housing management and maintenance affairs (Chairperson_experience).

Source: Summarised from results presented in Chapter 6.

7.4.2.4. Housing Characteristics: Hypothesis 10

Looking at the results in Table 7.9, the supported hypothesis for no relationship between housing location (LOCATION) and each of residential satisfaction dimensions indicates that housing location is not a factor affecting respondents' satisfaction. All three urban areas' physical characteristics are nearly the same; thus, this finding could be generalised in an attempt to enhance urban multi-owner low-cost housing. The physical characteristics of all three different urban areas involved in this research are similar. One group of housing developments is under the jurisdiction of a town municipality and the remainders are under two different city-councils. While the findings show no difference in term of these three different urban areas, a conceptual framework of effective stakeholders' relationships can be generalised to enhance multi-owner low-cost residential environment. This is explained by the fact that in order to enhance the residential environment, the categories of local authorities are not an absolute factor.

Table 7. 9: Supported and rejected null hypotheses of housings characteristics differences on residential satisfaction dimensions

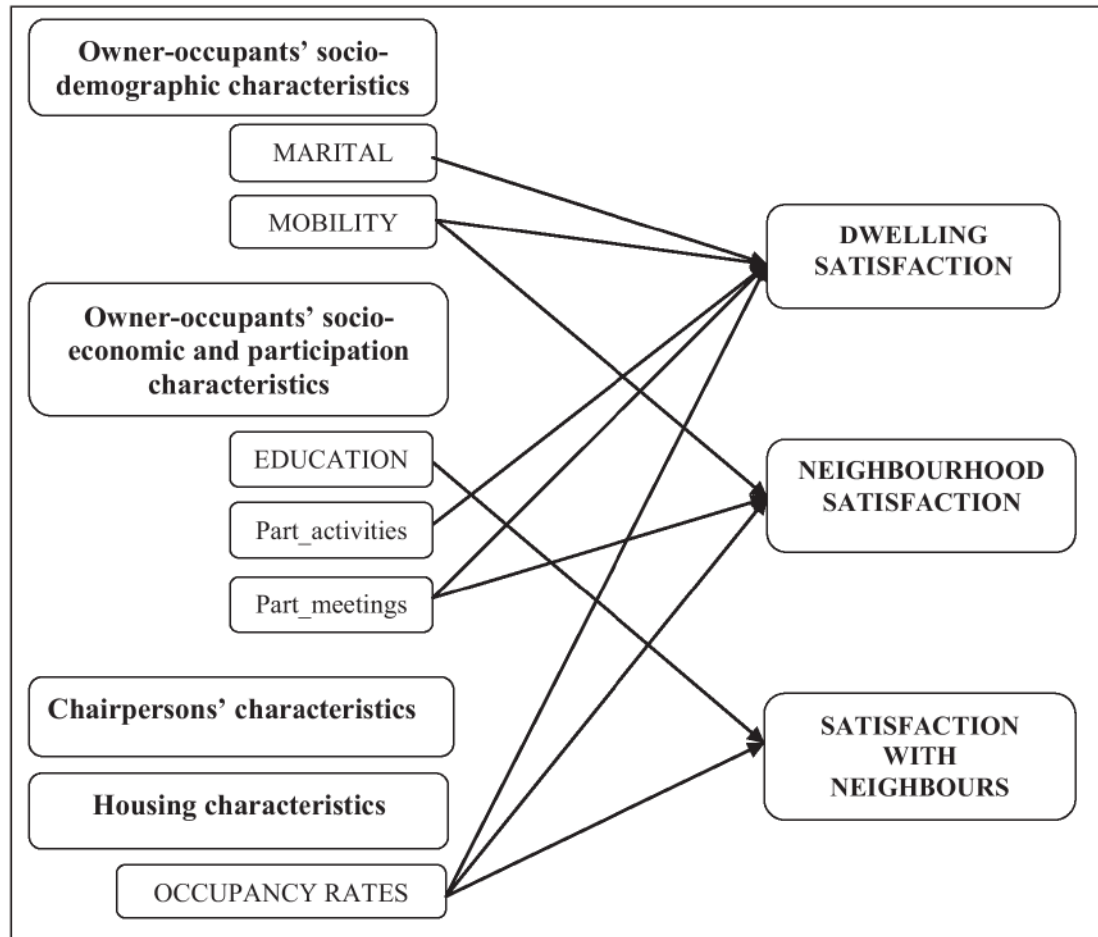
Univariate Analysis of Variance (ANOVA)	
Null hypotheses rejected	Null hypotheses supported
<ul style="list-style-type: none"> • H10-b₀: Housing occupancy rate (OCCUPANCY) has no significant influence on residential satisfaction. 	<ul style="list-style-type: none"> ▪ H10-a₀: Housing location (LOCATION) has no significant influence on residential satisfaction.
Null hypotheses rejected	Null hypotheses accepted
<ul style="list-style-type: none"> • H10-b₀: There is no significant difference in residential satisfaction dimensions (represented by (i) dwelling satisfaction, (ii) neighbourhood satisfaction and (iii) satisfaction with neighbours) by housing occupancy rate (OCCUPANCY). 	<ul style="list-style-type: none"> • H10-a₀: There is no significant difference in residential satisfaction dimensions (represented by (i) dwelling satisfaction, (ii) neighbourhood satisfaction and (iii) satisfaction with neighbours) by housing location (LOCATION).

Source: Summarised from results presented in Chapter 6.

Table 7.9 shows that satisfaction with dwelling, neighbourhood and neighbours are statistically affected by housing developments rates of occupancy variable (**OCCUPANCY RATES**). Thus, the null hypothesis is rejected. The rate of owner-occupancy factor being a predictor of residential satisfaction is consistent with findings by Glaster (1987) and also by Forest, Grange and Yip (2002).

Homeowners are believed to develop long-term common interests (Forest, Grange & Yip 2002). However, this study has identified that many low-cost housing developments are dominated by tenants, so this predictor of satisfaction, whilst accurate, may not achieve high overall levels of satisfaction in low-cost housing as a whole.

Overall, the findings of this study clearly shows that the importance of owner-occupants' marital status, their future plan of residency, education level, participation level and their housing developments' owner-occupancy rates are crucial in developing a conducive residential environment (refer Figure 7.5).



Source: Summarised from results discussed in this chapter.

Figure 7.5: Important relationships between characteristics of owner-occupants, chairpersons and housing, and residential satisfaction dimensions.

7.5Part D: The Conceptual Framework

This section discusses the main contribution of this study, which is the conceptual framework proposed to improve multi-owner low-cost housing management through enhancing stakeholders' relationships. The conceptual framework proposed in Chapter 4 comprises (i) one dependent variable, satisfaction with stakeholders' relationships; (ii) three subjective independent variables, owner-occupants' competency, owners' organisational competency, and managing agents' competency; and (iii) one intervening variable, residential satisfaction dimensions which comprises dwelling satisfaction, neighbourhood satisfaction and satisfaction with neighbours.

In order to evaluate the conceptual framework, this study has examined the direct and indirect associations between the subjective independent variables, the

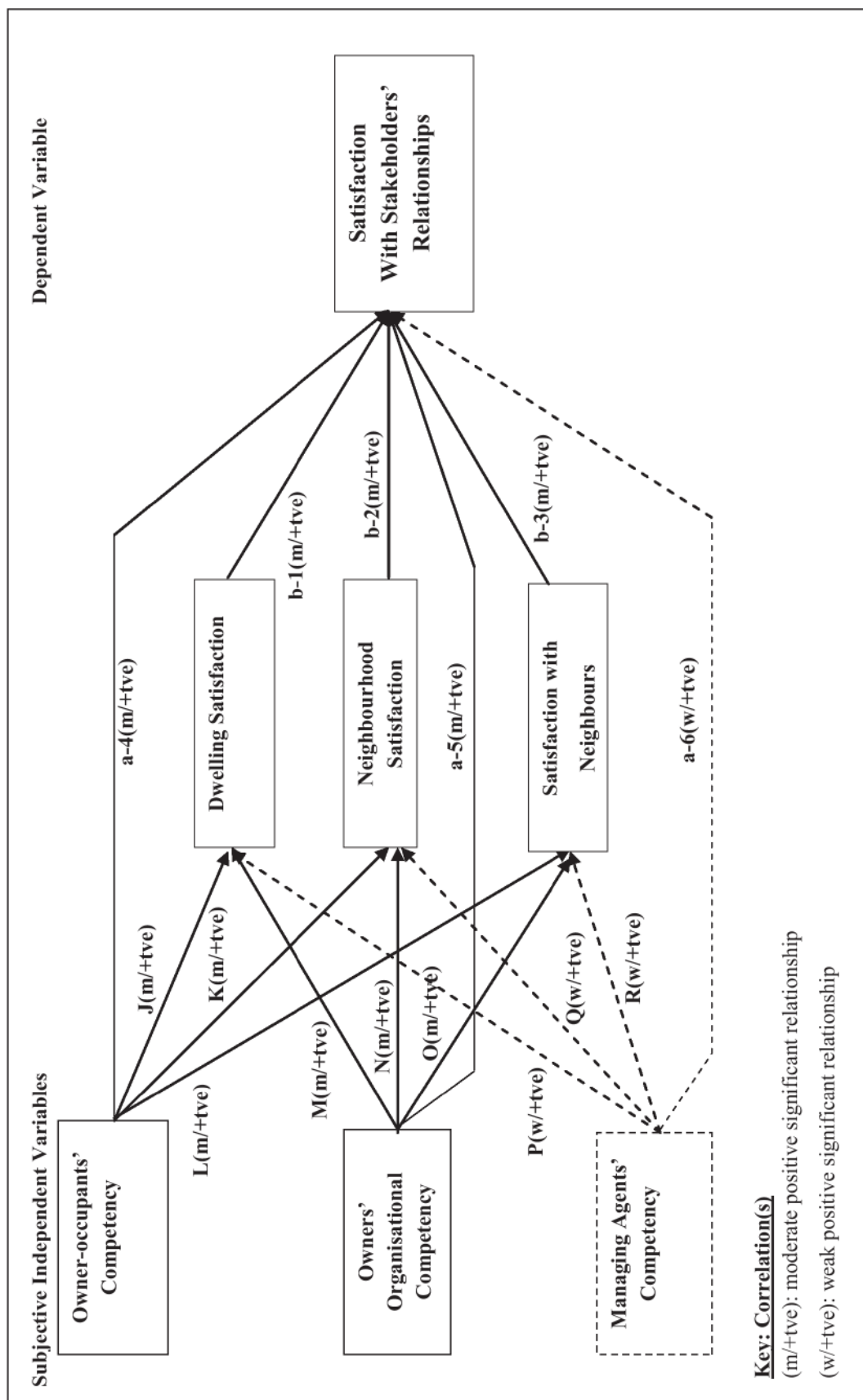
dependent variable and the mediating variable. This section discusses the results of formulated hypotheses and describes the tested conceptual framework.

7.5.1 Exploring the Relationships between Variables

Before discussing the outcomes of the hypotheses, this section discusses the strength of the relationship. As shown in Figure 7.6, only two subjective independent variables are found to be a positive direct predictor of stakeholders' relationships: owner-occupants' competency (Path a-4) and owners' organisational competency (Path a-5). Such results are statistically supported by a moderate positive significant correlation, as described in Chapter 6. This means that as satisfaction with owner-occupants' competency or owners' organisational competency increases, the satisfaction with stakeholders' relationships will also increase.

Both owner-occupants' competency and owners' organisational competency variable are also found to be a moderate positive significant predictor of all the residential satisfaction dimensions (Path J, Path K, Path L, Path M, Path N and Path O). Thus, as satisfaction with owner-occupants' competency or owners' organisational competency increases, the satisfaction with dwelling, neighbourhood and neighbours will also increase.

As for the intervening variables, all the residential satisfaction dimensions are found to be significant, direct predictors of stakeholders' relationships (Path b-1, Path b-2 and Path b-3). The relationships between these variables recorded moderate positive correlation. Thus, as residential satisfaction rating increases, owner-occupants' satisfaction rating of the stakeholders' relationships will also increase. However, the managing agent's competency variable was found to be a weak significant predictor of satisfaction of stakeholders' relationships (Path a-6) and all residential satisfaction dimensions (Path P, Path Q and Path R).



7.5.2 Testing the Hypotheses

Following the determined magnitude (weak to strong) and direction (positive or negative) of the relationships, this section discusses the significant outcomes of the relationships between variables as follows:

- a) The relationships between satisfaction with stakeholders' competency (represented by (i) owner-occupants' competency, (ii) owners' organisational competency and (iii) managing agents competency) and satisfaction with stakeholders' relationships.
- b) The relationships between satisfaction with stakeholders' competency (represented by (i) owner-occupants' competency, (ii) owners' organisational competency and (iii) managing agents' competency) and residential satisfaction dimensions.
- c) The relationships between residential satisfaction dimensions (represented by (i) dwelling satisfaction, (ii) neighbourhood satisfaction and (iii) satisfaction with neighbours) and satisfaction with stakeholders' relationships.

Based on the above relationships, a series of formulated hypotheses were developed and explained in Chapter 4. The results of the tested hypotheses are shown in Table 7.10 and the presumed relationships are illustrated in Figure 7.7.

Table 7. 10: Significant relationships between variables

Significant Relationship (SEM analysis)	
Null hypotheses rejected	Null hypotheses supported
<i>Satisfaction with stakeholders' competency and satisfaction with stakeholders' relationships-H11</i>	
<ul style="list-style-type: none"> • H11-a₀: There is no significant relationship between satisfaction with owner-occupants' competency and satisfaction with stakeholders' relationships. • H11-d₀: There is no significant relationship between satisfaction with owners' organisational competency and satisfaction with stakeholders' relationships. 	<ul style="list-style-type: none"> • H11-c₀: There is no significant relationship between satisfaction with managing agents' competency and satisfaction with stakeholders' relationships.
<i>Satisfaction with stakeholders' competency and satisfaction with dwelling – H12-a</i>	
<ul style="list-style-type: none"> • H12-ab₀: There is no significant relationship between satisfaction with owner-occupants' competency and satisfaction with dwelling. • H12-ad₀: There is no significant relationship between satisfaction with owners' organisational competency and satisfaction with dwelling. 	<ul style="list-style-type: none"> • H12-ac₀: There is no significant relationship between satisfaction with managing agents' competency and satisfaction with dwelling.
<i>Satisfaction with stakeholders' competency and satisfaction with neighbourhood - H12-b</i>	
<ul style="list-style-type: none"> • H12-ba₀: There is no significant relationship between satisfaction with owner-occupants' competency and satisfaction with neighbourhood. • H12-bb₀: There is no significant relationship between satisfaction with owners' organisational competency and satisfaction with neighbourhood. 	<ul style="list-style-type: none"> • H12-bc₀: There is no significant relationship between satisfaction with managing agents' competency and satisfaction with neighbourhood.
<i>Satisfaction with stakeholders' competency and satisfaction with neighbours - H-12c</i>	
<ul style="list-style-type: none"> • H12-ca₀: There is no significant relationship between satisfaction with owner-occupants' competency and satisfaction with neighbours. • H12-cb₀: There is no significant relationship between satisfaction with owners' organisational competency and satisfaction with neighbours. 	<ul style="list-style-type: none"> • H12-cc₀: There is no significant relationship between satisfaction with managing agents' competency and satisfaction with neighbours.
<i>Satisfaction with residential satisfaction dimensions and satisfaction with stakeholders' relationships- H13</i>	
<ul style="list-style-type: none"> • H13-a₀: There is no significant relationship between dwelling satisfaction and satisfaction with stakeholders' relationships. • H13-3c₀: There is no significant relationship between satisfaction with neighbours and satisfaction with stakeholders' relationships. 	<ul style="list-style-type: none"> • H13-b₀: There is no significant relationship between neighbourhood satisfaction and satisfaction with stakeholders' relationships.

Source: Summarised from results presented in Chapter 6.

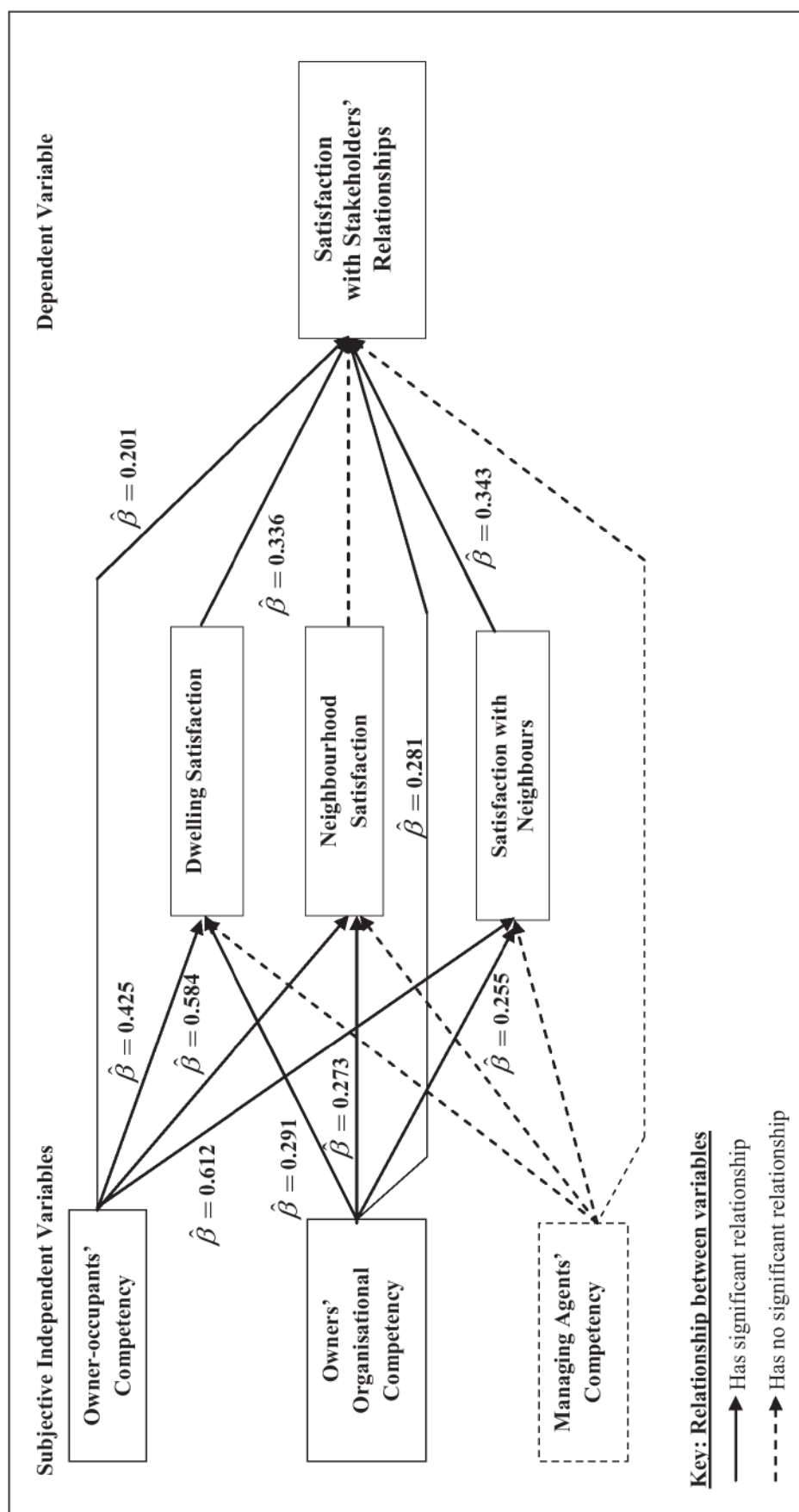


Figure 7.7: Conceptual framework indicates the relationship between variables

Examining the results in Table 7.10 and supported by Figure 7.7, owner-occupants' competency variable has registered as a major direct predictor implicating all the residential satisfaction dimensions. Owners' organisational competency is the main predictor of satisfaction of stakeholders' relationships. However, the managing agents' competency variable has no significant influence on any residential satisfaction dimensions or stakeholders' relationships.

An examination of a direct path between the residential satisfaction dimensions and stakeholders' relationships reveals an interesting outcome. As illustrated in Figure 7.7, satisfaction with neighbours and dwelling satisfaction are confirmed as direct predictors of stakeholders' relationships. Satisfaction with neighbours indicates greater impact than dwelling satisfaction. However, neighbourhood satisfaction seems insignificant in explaining the satisfaction with stakeholders' relationships.

7.5.3 Intervening Effects

Earlier discussions have demonstrated that the degree of satisfaction with stakeholders' relationships ultimately is influenced by satisfaction with the owner-occupants' competency and owners' organisational competency. The impacts are not only direct but also have been modelled to be mediated through a specific assessment of residential environment: dwelling satisfaction, neighbourhood satisfaction and satisfaction with neighbours (as illustrated in Figure 4.10 in Chapter 4).

As for an intervening effect, as shown in Table 7.11, the null hypotheses of H14-c, H15-c and H16-c₀ are supported (Path P to b-1, Path Q to b-2 and Path R to b-3 as shown in Figure 7.8). The remaining relationships record partial mediating significant relationships, because residential satisfaction dimensions do intervene between the dependent variable and the subjective independent variables (Path J to b-1, Path K to b-2, Path L to b-3, Path M to b-1, Path N to b-2 and Path O to b-3). This intervening effect suggests that the correlation of direct relationships between subjective independent variables and the dependent variable is reduced

but remains significant if residential satisfaction dimensions are included as an additional predictor, then partial mediation is supported.

Table 7. 11: Intervening effects of residential satisfaction dimension on the presumed relationships between subjective independent variables and dependent variables

Significant Relationship (SEM analysis)	
Null hypotheses rejected	Null hypotheses supported
<i>Intervening effect of dwelling satisfaction-H14</i>	
<ul style="list-style-type: none"> • H14-a₀: There is no intervening effect of dwelling satisfaction on the relationship between satisfaction with stakeholders' relationships and owner-occupants' competency. 	<ul style="list-style-type: none"> • H14-c₀: There is no intervening effect of Dwelling Satisfaction on the relationship between Satisfaction with stakeholders' relationships and managing agents' competency.
<ul style="list-style-type: none"> • H14-b₀: There is no intervening effect of dwelling satisfaction on the relationship between satisfaction with stakeholders' relationships and owners' organisational competency. 	
<i>Intervening effect of neighbourhood satisfaction- H15</i>	
<ul style="list-style-type: none"> • H15-a₀: There is no intervening effect of neighbourhood satisfaction on the relationship between satisfaction with stakeholders' relationships and owner-occupants' competency. 	<ul style="list-style-type: none"> • H15-c₀: There is no intervening effect of neighbourhood satisfaction on the relationship between satisfaction with stakeholders' relationships and managing agents' competency.
<ul style="list-style-type: none"> • H15-b₀: There is no intervening effect of neighbourhood satisfaction on the relationship between satisfaction with stakeholders' relationships and owners' organisational competency. 	
<i>Intervening effect of satisfaction with neighbours- H16</i>	
<ul style="list-style-type: none"> • H16-a₀: There is no intervening effect of satisfaction with neighbours on the relationship between satisfaction with stakeholders' relationships and owner-occupants' competency. 	<ul style="list-style-type: none"> • H16-c₀: There is no intervening effect of satisfaction with neighbours on the relationship between satisfaction with stakeholders' relationship and managing agents' competency.
<ul style="list-style-type: none"> • H16-b₀: There is no intervening effect of satisfaction with neighbours on the relationship between satisfaction with stakeholders' relationships and owners' organisational competency. 	

Source: Summarised from results discussed in Chapter 6.

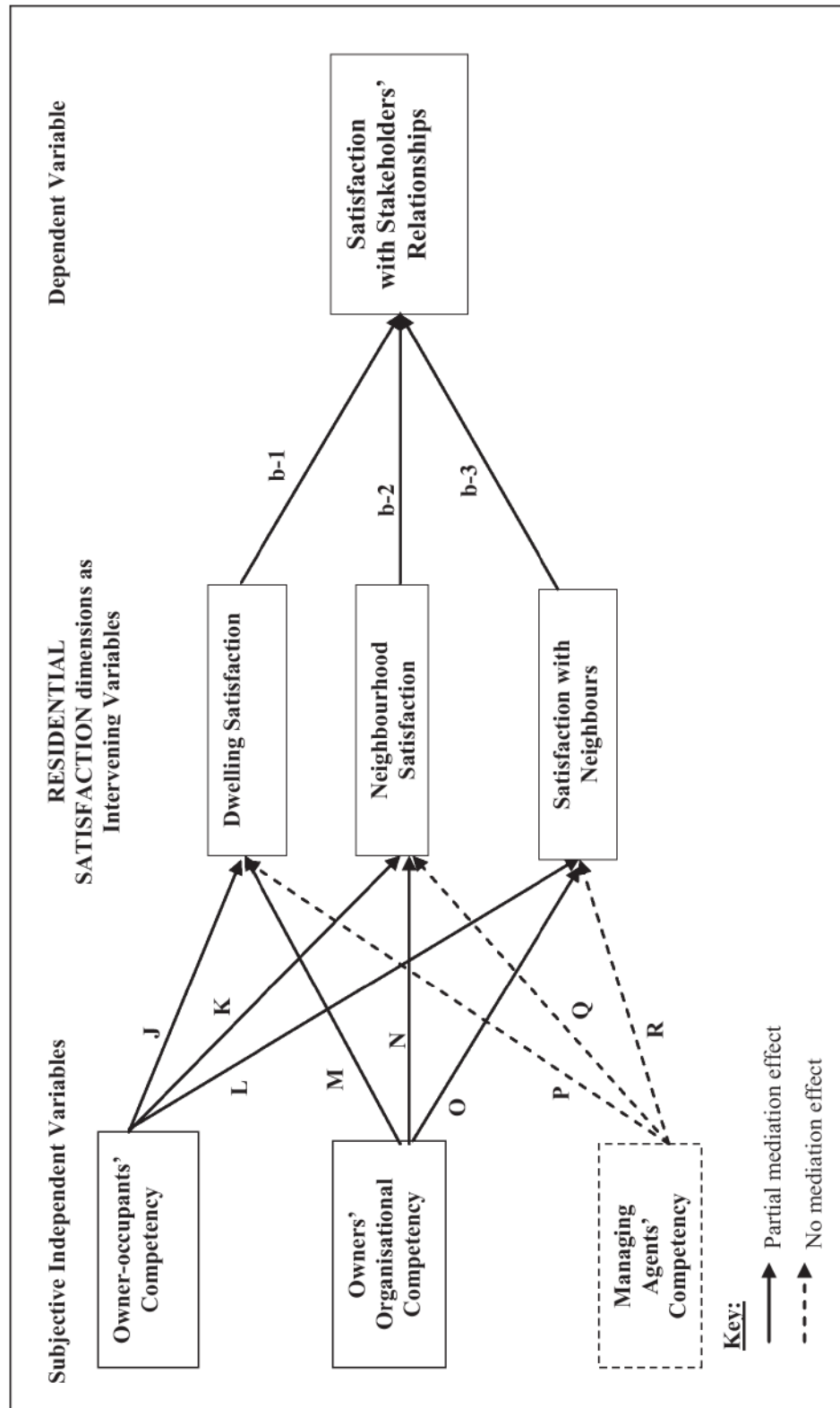


Figure 7.8: Conceptual framework indicates the intervening effects of residential satisfaction dimensions

This study provides new input in housing studies, particularly for multi-owner low-cost housing. Residential satisfaction dimensions, as proven by Galster (1987), were not a prerequisite for the upkeep behaviour of homeowners of single-detached housing in the USA. His empirical study found that residential satisfaction does not have an intervening effect in the presumed relationships. In contrast, residential satisfaction dimensions modelled in this study's conceptual framework is highly recommended in order to enhance stakeholders' relationships. This means that when owner-occupants' competency or owners' organisational competency decreases, the relationship among the stakeholders will be affected; but if the owner-occupants are satisfied with the residential environment, they will likely build a good relationship with other stakeholders.

At the moment, no local studies have considered the residential satisfaction dimensions when examining aspects of housing management. Previous studies mainly emphasised the administration issues such as finances, performance, and owners' participation (see Abdul Talib & Johari 2007; Che Ani 2007; Che Ani et al. 2008; Mohd Tawil et al. 2008; Tiun & Mui 2007). However, they paid no attention to the importance of individual evaluation of the living environment. Apparently, many of Malaysia's previous studies investigated only the performance of managing agents' services; hence, the relationships between human factors and the environment have been ignored. Low-economic resources may prevent low-income households from moving away, even if they are dissatisfied with their present residential environment (Amerigo & Aragonés 1997). Thus, this study statistically and strongly suggests that future studies incorporate a residential environment evaluation when examining housing management.

7.5.4 The Conceptual Framework

The proposed framework was evaluated, and it demonstrated acceptable levels of fit. This is confirmed by the results presented in Table 6.47 (see Chapter 6). The final conceptual framework is graphically illustrated in Figure 7.9. In this framework, the objective variables are included to illustrate the overall identified significant relationships.

The tested framework eliminates the managing agents' competency variable from the conceptual framework, because it was found to be an insignificant predictor of residential satisfaction dimensions and stakeholders' relationships. Thus, two factors explaining the managing agents' competency—satisfaction with managing agents' knowledge and skill (comprising four items) and managing agents' service culture (comprising seven items)—collectively failed to predict satisfaction with the residential environment and the relationship among the stakeholders.

The final framework also eliminates the direct relationship between neighbourhood satisfaction and satisfaction with stakeholders' relationships due to insignificant results. The attributes captured in neighbourhood satisfaction—satisfaction with the overall housing estates' living environment, neighbourhood cohesion, neighbourhood as a safe place to live, neighbourhood as a good place to live, and the community facilities—do not collectively influence satisfaction with stakeholders' relationships.

The next section explores this study's conceptual framework from a theoretical standpoint, which was discussed earlier in this thesis.

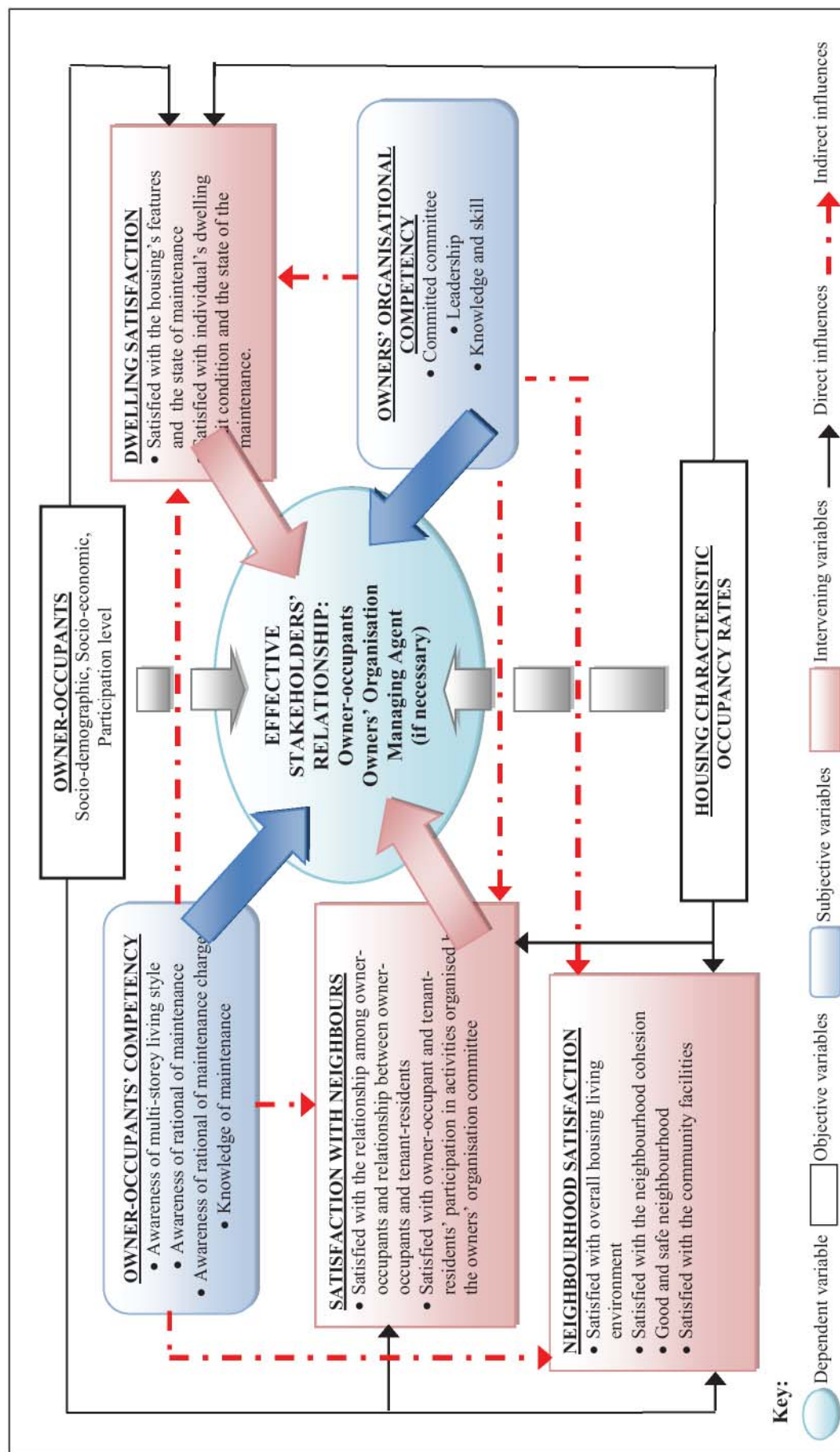


Figure 7.9: Proposed conceptual framework of effective stakeholders' relationships for multi-owner low-cost housing in Malaysia

7.5.4.1 The Stakeholders: Owner-occupants and Owners' Organisations

Looking at Figure 7.9, the elimination of the managing agents' competency variable from the conceptual framework shows that the relationship between owner-occupants and their owners' organisation is tremendously important. Overall, the effectiveness of the relationships among stakeholders is not influenced by the competency of the agent, although the respondents agree that agents need to establish a good relationship with the homeowner and owners' organisation, and that the agents need to be involved in their communities' activities.

A claim by previous studies of the importance of the competence of the managing agent (see Blandy, Dixon & Dupuis 2006; Budgen 2005; Encon 2005) is not supported by this study's findings. Perhaps the background of the respondents in this study can explain this difference. In this study, housing developments that use managing agent services mainly have not yet established a MC, although the strata title has been obtained. Unit owners have limited power over the managing agent appointed by their developer. In contrast, if the unit owners have taken over the management of their housing and prefer to use the managing agent's services, they have power over their appointed agents.

The relationship between the agent and the unit owners can be viewed as similar to the contractual relationship between any service provider and their customers. However, the relationship between unit owners and owners' organisation is different. It is not only a relationship between the committee and ordinary members, but also a relationship of neighbours who share a residential environment. Therefore, collective incentives formulated by Simmons and Birchall (2007) to enhance public housing tenant participation could also be effective in multi-owner low-cost housing developments. They asserted the importance of a sense of community and shared values and goals among the residents as factors that motivate tenant participation.

Consequently, this study suggests that a greater emphasis should be given to the relationships between owner-occupants and owners' organisations. This study has

shown that low-cost housing in Malaysia tends to be owner-managed once a MC is established. Greater involvement by owner-occupants as well as a committed owners' organisation committee are vital to two aspects of housing management, as described by Wekerle et al (1980) - i.e. the policy and decision making stage and policy implementation. Owner-occupants, as illustrated in Figure 7.9, require adequate knowledge about multi-storey living concepts, maintenance tasks and maintenance charge allocations. In contrast, chairpersons and the committee need to be committed, to have good leadership skills, and to have adequate knowledge and skills related to housing management and the residential environment. Thus, this study agrees with Encon's findings (2005) of the need for competent chairpersons and committees to manage housing.

From a collective action perspective, this study confirmed the outcome from Christudason's (1996) work that conflicts in collective-living arrangements are mainly due to the interdependency of the unit owners. Thus, this study supports the argument made by previous researchers that individuals can be motivated by adequate institutional arrangements (Bengtsson 2000; Birchall 1997; Simmons & Birchall 2005; Somerville & Steele 1995). Other studies have based this argument on investigations related to the institutional arrangements of public housing, such as tenant-management associations or tenant-landlord partnerships. Nevertheless, the outcomes from those studies are relevant to this study's context. Collective incentives should be initiated by the owners' organisations in order to motivate effective relationships between the unit owners and the organisation.

It is important to consider the costs and benefits of participation for individual unit owners who are members of such organisations (Olson 1971; Simmons & Birchall 2007). This study found that owner-occupants' participation in social activities and meetings is related to the satisfaction with stakeholders' relationships. Those who are active in social activities and meetings have developed good relationships between stakeholders. According to the chairpersons, the high level of participation however is not a prerequisite for better housing management. Arguments for this finding refer back to the costs and benefits of participation. Can the active participation of these owner-occupants enhance their residential environment or their housing management

practices if their developments are dominated by tenant-residents? Owner-occupants may not feel that the benefits of their participation outweigh their personal costs, in this situation.

Tenants can be categorised as free riders in the context of Olson's (1971) theory of groups. According to Olson, individuals who have a common interests with others, will facilitate the organisation achieve its objective. However, if an individual has personal interests that overcome the common interests, it is possible that they are not interested to participate in the organisation (Olson 1971). In the context of this study (high-rise residential management), tenants are legally not allowed to join the organisation but indirectly receive any benefits at the others' expense. Literature review have shown that tenants are less attached to their units and seldom involve with housing maintenance activity as they will not continue enjoy the economic benefit upon leaving the unit (Glaster 1987; Helderman 2007; Saunders 199), while owner-investors are only interested in 'profits' from their rental units (Guilding et al. 2005).

While tenants do pay maintenance charges (or possibly indirectly through their rent), they do not suffer the costs of participation, though they can reap the benefits of those who do. The cost of participation by the minority could be higher, as some of the benefits of participation are shared by all the residents. If these factors are ignored, the balance between costs of participation and benefits is difficult to be achieved. Conflicts will continue to occur because owner-occupants, owner-investors and tenant-residents do not have the same interest within their residential environment (Chen & Webster 2005; Easthope & Randolph 2009; Guilding et al. 2005; Muhamad Ariff & Davies 2009a).

At the same time, the greater significance of owner-occupants' competency variable compared to the owners' organisational competency indicates that unit owners must be equipped with adequate information related to housing management. They need to develop a greater awareness and knowledge of shared multi-storey living and maintenance management, which will allow them to identify with the need to undertake collective action. Therefore, collective action requires individual competency and strong intervention by owners' organisations

(which can be achieved through competent organisations). Note that the costs and benefits of participation are crucial, making occupancy rate again a factor that should be considered. Adequate housing management does not only benefit the owner-occupants but in general includes everybody within the living environment.

7.5.4.2 Housing Management and Residential Environment

This study suggests that dimensions of residential satisfaction should be taken into account in efforts to improve housing management. In terms of the direct relationship between characteristics of owner-occupants and housing, and residential environment, satisfaction with the dwelling itself is positively connected to the type of owner occupants—in this case, to married owner-occupants, people who plan to continue living in the current unit, those with active participation in meetings and activities, and housing with a higher rate of owner-occupants. Neighbourhood Satisfaction is influenced by owner-occupants' characteristics in a similar way, except that marital status shows no effect. Finally, owner-occupants' education attainment and the housing development's owner-occupancy rates influence the owner-occupants' perceptions of neighbour satisfaction.

Competent owner-occupants and owners' organisations have also been identified as having influence over residential satisfaction. Owner-occupants who are satisfied with their own competency and the competency of their chairpersons are also mostly satisfied with their residential environment. This may be because they have the same goals related to their homes. Satisfaction with dwelling and neighbours are the best predictors of effective stakeholders' relationships.

The relevance of the aforementioned relationships to housing management is shown by the effect of intervening variables on the residential satisfaction dimensions. The stakeholders' relationships can be further enhanced if owner-occupants are concurrently satisfied with the dwelling, the neighbourhood and their neighbours. As shown in Figure 7.9, even though there is no association between neighbourhood satisfaction and satisfaction with stakeholders' relationships, this dimension did have an intervening effect on the relationship

between the owner-occupants' competency and owners' organisational competency and satisfaction with stakeholders' relationships. Thus, this conceptual model finds that an individual's evaluation of the residential environment could likely influence their interest in collective action in multi-owner low-cost housing.

7.6Chapter Conclusion

This chapter interpreted this study's findings by referring back to the theories and previous studies that underpin this study. All the hypotheses that were tested in Chapter 6 were discussed in this chapter to determine the significant relationships within the proposed conceptual framework. The significant factors were identified and discussed to highlight the contribution that this study makes to the field of low-cost housing management.

The interpretations began with a discussion of the background of the owner-occupants, the housing developments, and the housing management practices. Among the key findings is that most of the selected low-cost housing developments are dominated by tenant-residents. Most owner-occupants are over 41 years old and are long-time residents of the developments, with the majority having lived in the unit for more than fifteen years with plans to continue living there. In terms of housing management, the owner-managed approach is the most preferred arrangement for all selected housing developments that have established a MC.

This chapter then further discussed the identified objective criteria in terms of their influence on stakeholder relationships and residential satisfaction. The number of children who live together, length of residency, participation in social activities and meetings, and owner-occupancy rates are the predictors of satisfaction with stakeholders' relationships. As for the residential satisfaction, the dimensions are affected by marital status, mobility plan, educational attainment,

participation in activities and meetings and the rate of owner-occupancy (refer Table 7.12).

In regard to the three subjective variables—the competency of the owner-occupants, chairpersons and managing agents—the first two have moderately positive correlations with the stakeholders' relationships and residential satisfaction dimensions. The managing agent's competency variable provides a weak positive correlation. In terms of the predicted relationships, competent managing agents do not affect owner-occupants' satisfaction on either variable (refer Table 7.13, Table 7.14 and Table 7.15). This clearly shows the importance of competent owner-occupants and to a lesser extent, chairpersons in housing management. This may be because in housing management, both of these stakeholders play an important role in policy and decision making, while the agents are only the implementer of the developed policy.

The final discussion in this chapter examined the conceptual framework and showed how this study has built on and added to previous literature. All the identified significant objective and subjective variables were integrated in the framework diagram showing how the significant relationships between variables can improve the housing management of multi-owner low-cost housing in Malaysia. The next and final chapter of this thesis summarises and discusses how this study's findings fit into the body of knowledge by revisiting the theories that underpin this study. Chapter 8 discusses the implications that the study's findings have for policy and practices and makes recommendations for future research.

Table 7.12: Summary of null hypotheses

Null hypotheses	Rejected	Supported
Predicting significant relationships between objectives independent variable and the dependent variable:	Rejected	Supported
<i>H1: respondents' categories</i>		✓
<i>H 2: owner-occupants' socio-demographic characteristics</i>		
H2-a ₀ : age category		✓
H2-b ₀ : gender category		✓
H2-c ₀ : marital status		✓
H2-d ₀ : number of people living together		✓
H2-e ₀ : mobility plan		✓
H2-f ₀ : number of children living together	✓	
H2-g ₀ : length of residency	✓	
<i>H3: owner-occupants' socio-economic and participation characteristics</i>		
H3-a ₀ : education		✓
H3-b ₀ : income		✓
H3-c ₀ : participation in activities organised by the owners' organisation	✓	
H3-d ₀ : participation in meetings organised by owners' organisation	✓	
<i>H4: chairpersons' characteristics</i>		
H4-a ₀ : chairpersons' category		✓
H4-b ₀ : duration holding the current position		✓
H4-c ₀ : commitment to other community organisation		✓
H4-d ₀ : experience level in housing management and maintenance affairs		✓
<i>H5: housing characteristics</i>		
H5-a ₀ : owner-occupancy rate	✓	
H5-b ₀ : housing location		✓
Predicted significant relationships between objectives independent variables and residential satisfaction dimensions	Rejected	Supported
<i>H6: respondents' category</i>		
H6-a ₀ : dwelling satisfaction	✓	
H6-b ₀ : neighbourhood satisfaction		✓
H6-c ₀ : satisfaction with neighbours		✓
<i>H7: owner-occupants' socio demographic</i>		
H7-a ₀ : age category		
dwelling satisfaction		✓
neighbourhood satisfaction		✓
satisfaction with neighbours		✓
H7-b ₀ : gender category		
dwelling satisfaction		✓
neighbourhood satisfaction		✓
satisfaction with neighbours		✓

Table 7.13: Summary of null hypotheses (continued)

Null hypotheses	Rejected	Supported
H7-c ₀ : marital status		
<i>dwelling satisfaction</i>	✓	
<i>neighbourhood satisfaction</i>		✓
<i>satisfaction with neighbours</i>		✓
H7-d ₀ : number of people living together		
<i>dwelling satisfaction</i>		✓
<i>neighbourhood satisfaction</i>		✓
<i>satisfaction with neighbours</i>		✓
H7-e ₀ : number of children living together		
<i>dwelling satisfaction</i>		✓
<i>neighbourhood satisfaction</i>		✓
<i>satisfaction with neighbours</i>		✓
H7-f ₀ : duration living on the current unit		
<i>dwelling satisfaction</i>		✓
<i>neighbourhood satisfaction</i>		✓
<i>satisfaction with neighbours</i>		✓
H7-g ₀ : mobility plan		
<i>dwelling satisfaction</i>		✓
<i>neighbourhood satisfaction</i>	✓	
<i>satisfaction with neighbours</i>		✓
H8: owner-occupants' socio-economic and participation		
H8-a ₀ : education		
<i>dwelling satisfaction</i>		✓
<i>neighbourhood satisfaction</i>		✓
<i>satisfaction with neighbours</i>	✓	
H8-b ₀ : households' gross income		
<i>dwelling satisfaction</i>		✓
<i>neighbourhood satisfaction</i>		✓
<i>satisfaction with neighbours</i>		✓
H8-c ₀ : participation in activities organised by the owners' organisation		
<i>dwelling satisfaction</i>	✓	
<i>neighbourhood satisfaction</i>		✓
<i>satisfaction with neighbours</i>		✓
H8-d ₀ : participation in meetings organised by the owners' organisation		
<i>dwelling satisfaction</i>	✓	
<i>neighbourhood satisfaction</i>	✓	
<i>satisfaction with neighbours</i>		✓
H9: chairpersons characteristics		
H9-a ₀ : chairpersons category		
<i>dwelling satisfaction</i>		✓
<i>neighbourhood satisfaction</i>		✓

Table 7.14: Summary of null hypotheses (continued)

Null hypotheses	Rejected	Supported
<i>satisfaction with neighbours</i>		✓
H9-b ₀ : duration holding the current position		
<i>dwelling satisfaction</i>		✓
<i>neighbourhood satisfaction</i>		✓
<i>satisfaction with neighbours</i>		✓
H9-c ₀ : commitment in other community organisations		
<i>dwelling satisfaction</i>		✓
<i>neighbourhood satisfaction</i>		✓
<i>satisfaction with neighbours</i>		✓
H9-d ₀ : experience level in housing management and maintenance affairs		
<i>dwelling satisfaction</i>		✓
<i>neighbourhood satisfaction</i>		✓
<i>satisfaction with neighbours</i>		✓
H10: housing characteristics		
H10-a ₀ : location		
<i>dwelling satisfaction</i>		✓
<i>neighbourhood satisfaction</i>		✓
<i>satisfaction with neighbours</i>		✓
H10-b ₀ : owner occupancy rate		
<i>dwelling satisfaction</i>	✓	
<i>neighbourhood satisfaction</i>	✓	
<i>satisfaction with neighbours</i>	✓	

Predicted significant relationships between subjective independent variables and the dependent variable:	Rejected	Supported
H11: stakeholders' competency and stakeholders' relationships		
H11-a ₀ : owner-occupants' competency	✓	
H11-b ₀ : owners' organisational competency	✓	
H11-c ₀ : managing agents' competency		✓
H12a: stakeholders' competency and dwelling		
H12-ab ₀ : owner-occupants' competency	✓	
H12-ab ₀ : owners' organisational competency	✓	
H12-ac ₀ : managing agents' competency		✓
H12b: stakeholders' competency and neighbourhood		
H12-ba ₀ : owner-occupants' competency	✓	
H12-bb ₀ : owners' organisational competency	✓	
H12-bc ₀ : managing agents' competency		✓
H12c: stakeholders' competency and neighbours		
H12-ca ₀ : owner-occupants' competency	✓	
H12-cb ₀ : owners' organisational competency	✓	
H12-cc ₀ : managing agents' competency		✓

Table 7.15: Summary of null hypotheses (continued)

Null hypotheses	Rejected	Supported
<i>H13: residential satisfaction dimensions and stakeholders' relationship</i>		
H13-a ₀ : dwelling satisfaction	✓	
H13-b ₀ : neighbourhood satisfaction		✓
H13-c ₀ : satisfaction with neighbours	✓	
Predicted significant intervening effects of residential satisfaction dimensions on the relationships between subjective independent variables and the dependent variable:	Rejected	Supported
<i>H14: intervening effect of dwelling satisfaction between satisfaction with stakeholders' relationships and :</i>		
H14-a ₀ : owner-occupants' competency	✓	
H14-b ₀ : owners' organisational competency	✓	
H14-c ₀ : managing agents' competency		✓
<i>H15: intervening effect of neighbourhood satisfaction between satisfaction with stakeholders' relationships and :</i>		
H15-a ₀ : owner-occupants' competency	✓	
H15-b ₀ : owners' organisational competency	✓	
H15-c ₀ : managing agents' competency		✓
<i>H16: intervening effect of satisfaction with neighbours between satisfaction with stakeholders' relationships and :</i>		
H16-a ₀ : owner-occupants' competency	✓	
H16-b ₀ : owners' organisational competency	✓	
H16-c ₀ : managing agents' competency		✓

Chapter 8: Summary, Conclusions and Recommendations

8.1 Introduction

This chapter is the last chapter and will conclude this thesis. This chapter begins with a summary of the study, restating the study's main objectives and discusses the limitations and the major findings. The findings will be discussed in terms of their implications for the body of knowledge that underpinned this study and also for other relevant knowledge. Finally, the implications that this research has for policy and housing management practices will be discussed and recommendations for potential future research will be provided.

8.2 Summary of Study

8.2.1 Objectives, Theoretical Underpinning and Method

This study's fundamental objective is to improve the current housing management practices of multi-owner low-cost housing in Malaysia. Chapter 1 has explained that existing knowledge concerning this area is sparse. Most previous research on residential environments of low-income households has examined issues relating to public housing, whether rented or owned, and homeowners of single detached dwellings. In Malaysia, multi-storey, multi-owner low-cost subsidised housing is a key strategy to assist the urban low-income households to become homeowners (private ownership) and has been subject to little examination to date.

This study focuses on issues related to collective action. In this study, the motivation behind the development of a conceptual framework of effective stakeholders' relationships is developing a greater understanding of the potential conflicts in housing management. This study predicts the importance of a good relationship among stakeholders—the owner-occupants, the owners' organisation and the managing agents—to reduce conflicts. It also predicts that a good

relationship among these stakeholders will in turn increase participation of owner-occupants and improve collective action in housing management.

Previous studies have shown that urban low-income households rely on government assistance to obtain access to decent, affordable housing. Therefore, this thesis began with a comprehensive literature review of housing provision for urban low-income households (see Chapter 2). Chapter 2 discussed how homeownership can benefit individual homeowners and the community. However, this study has identified gaps in the benefits proposed in the literature for wealthier households than those achieved by low-income homeowners. Those who own units in multi-owner residential developments are found to face further difficulties in reaping the benefits of homeownership.

Chapter 2 also discussed the experience of Malaysia in overcoming the housing problems of urban low-income households. A comparative study has been conducted with Hong Kong and Singapore to examine how these countries solve their affordable housing problem. The main findings clearly show that government involvement should be comprehensive and continuous. Provision of shelter is not sufficient without any long-term efforts to maintain the well-being of residents.

Chapter 3 reviewed the housing management literature in terms of the importance, practices and problems of housing management. This chapter confirmed that housing management practices depend on the housing tenure and the legal practices of a country. Generalising previous studies' findings should be attempted with caution by considering the national context of a particular country. Housing management practices in Malaysia and other countries were also discussed. Nevertheless, human factors were found to be a major obstacle in the success of housing management, despite the development of the necessary legislative frameworks.

This study's proposed conceptual framework is strengthened by integrating four theoretical propositions, namely homeownership, housing management, participation in collective action and residential satisfaction (see Chapter 4).

Previous studies have shown that the desire for homeownership and the rates of homeownership have an impact on homeowners' behaviours and perceptions in both their living environment and property management. Chapter 4 also demonstrates that the relationship among the stakeholders is triangular. Residents' participation in housing management depends on their housing management practices (owner-managed or employing an agent for example). At the same time, previous studies have shown that each category of residents (owners, tenants, investors) has different experiences and interests related to the dwelling unit and this indirectly affects the housing management. Individual incentives need to be collectively managed through an organisation and participants need to be motivated in order to achieve common agreement for the common good.

Derived from the literature review, three objective variables and three subjective variables have been identified that influence owner-occupants' satisfaction with stakeholders' relationships. The objective variables are the characteristics of owner-occupants, chairpersons and the housing characteristics; the subjective variables are explained by the owner-occupants' competency, the owners' organisational competency and the managing agents' competency. This study was inspired by a recognition of how individual owner-occupants' behaviours toward property management were influenced by their satisfaction with the residential environment (as discussed in Chapter 4). Residential satisfaction dimensions—the dwelling, neighbourhood and neighbours—were modelled in this study's conceptual framework as intervening variables.

As housing studies are unique and findings from one study cannot be simply generalised across other housing situations due to differences in local contexts, a preliminary survey was conducted. Prior to developing the study's conceptual framework, interviews with relevant state agencies, the chairpersons of owners' organisations of multi-owner low-cost housing developments and the managing agents were conducted. The purpose of these interviews was to clearly identify relevant issues within the Malaysian context, so that the proposed conceptual model could represent an accurate portrayal of the current situation in Malaysia.

Finally, the conceptual model was tested in the final survey, which employed combined methods of data collection. The structured questionnaire was used as the primary means of data collection, while the semi-structured interviews provided a secondary source. The survey was conducted in three urban areas in the Selangor state. The study focused on multi-storey, multi-owner low-cost housing developments that had been issued a strata title. Out of 75 developments considered for this study, 34 owners' organisations participated. Thirty-four chairpersons, 618 owner-occupants and three managing agents' representatives were recruited as participants/respondents.

8.2.2 Limitations of the Study

While this study offers many valuable insights into multi-owner low-cost housing management, limitations did surface during the course of this research. Future research endeavours can benefit by understanding these limitations. The researcher found that previous studies on housing management in Malaysia have mainly concentrated on non-low-cost housing. The deteriorating residential environment of low-income homeowners has received no attention and therefore this study provides much needed information. The researcher also found that no official database had been set up by relevant authorities in Malaysia to collect background information about multi-owner low-cost housing. This led to the need for preliminary observation and survey for this study, which also required more time to identify the subjects of the study.

This study focuses on the human relationship factors relating to housing management. Further research, given more time and resources, is recommended to look critically at the specific practices of housing management for these low-cost units compared with the requirements of the legislation. This study found that all selected housing developments that had obtained strata title opted for an owner-managed approach (prior to conducting the survey, no database containing this information had ever been compiled by the respective authorities or in the previous studies). Through interviews, various approaches were identified. Among the differences are the strategy adopted in managing repair works, the task distribution between committee members, control over the tenant-residents, filing

and information management systems, methods of collection for monthly charges and so forth. Therefore, these factors may influence the respondents' perceptions of the state of their residential environment but were not encompassed in this study.

Since the goal of the study was to select a sample that truly represents the multi-owner low-cost housing developments that have obtained the Strata Title in Malaysia, all the samples are located in the state of Selangor. This is because Selangor has the highest number of low-cost housing developments in Malaysia. Prior to the implementation of the Building and Common Property Act (Maintenance and Management) 2007 [Act663], which requires the establishment of the Joint Management Body of homeowners and developers, Selangor first introduced a Pre-Management Corporation (Pre-MC).

As described in Chapter 3, the function of a Pre-MC is similar to a Joint Management Body (JMB) but is not enacted by legislation. Each selected housing development for this study either has acquired experience through a Pre-MC (for developments that have established MC) or at the time of survey is in the Pre-MC phase (for developments that have not completed the transfer of strata title). None of the developments for this study is in the JMB phase as this option has only just been introduced by the new Act, Act663 (2007). Therefore, further work should take this factor into consideration as there may be differences in the findings.

The long time taken to obtain a strata title and to transfer the strata title to the unit owners (over 20 years) has affected all the selected housing developments. The majority of those affected are medium-rise and medium density in generally well-serviced locations. Newer developments of high-rise and high-density housing, which are located some distance from central urban areas, are not included in this study. These factors could have different impacts on homeowners and could indirectly influence their perceptions.

Finally, this study's conclusions may not be directly applicable beyond the described subject matter, because, as with any regional or national study, the setting provides a unique set of factors, and findings must be set in context – in

this case, the urban part of a particular state in Malaysia with its own economic and social conditions. The findings, however, may provide insight for those attempting to promote homeownership among urban low-income households.

8.2.3 Summary and Conclusions of Research Findings

This study supplies a range of information including social data about occupants and the management structures adopted for maintaining their low-cost housing units. This information is crucial because at the time of the survey there was no social data, despite the fact that such low-cost housing developments have been occupied for more than 20 years.

Descriptively, this study had found that most (over 90 per cent) of the selected multi-owner low-cost housing developments are aged buildings (over 20 years old) that can be categorised as among the first available stocks of multi-storey low-cost housing in Selangor, Malaysia. The majority are medium-density, medium-rise buildings. After residing in the unit for more than 20 years, a significant number (nearly 45 per cent) of original homeowners are still occupying units and plan to continue residing in the unit for as long as they live.

These outcomes led to a question of whether homeownership among low-income households in Malaysia could have a positive effect on the stability of the neighbourhood. This study found that respondents from housing developments with high rates of owner-occupants (91 to 100 per cent) recorded the highest satisfaction with the stakeholders' relationships (mean=5.52) and towards the residential environment (mean values; dwelling satisfaction=5.49, neighbourhood satisfaction=5.96 and satisfaction with neighbours=5.75) compared to respondents from housing developments with high rates of tenant-residents.

However, high rates of owner-occupancy are not found overall. This study found that 49 per cent of housing developments have less than a 50 per cent owner-occupancy rate. These findings suggest that in the long term, this homeownership program for low-income households may not be achieving its objectives. Investor-owners of the units rent them out to migrant and foreign workers, making

communication between the residents and the tenants difficult. Indeed, more recent owner-occupiers indicated that they would be likely to move to better housing when they can afford to do so. Those unable to afford to move appear to be content with their current residence. The high rates of tenancy affects housing management participation rates since tenants cannot be involved with housing management by law, leaving reduced numbers of owner-occupiers to take on the necessary tasks.

In terms of housing management practices, the data collected indicate that at the time of the survey, all the established MCs had begun operating within the previous 12 months. This means that the housing developments had been managed by the developers for a long period before the MC took over. However, MCs prefer not to employ professional managing agents for reasons of economy and keeping charges low. With regards to the maintenance charges, the majority (21 out of 34 developments) are within the range of RM20 to RM30 per month per unit. According to the chairpersons, this was only sufficient to cater for the daily maintenance and utility bill payments. With only five developments (14.7 per cent) establishing a sinking fund, the remaining owners' organisations are finding it difficult to make any major repairs (such as replacing the plumbing system) without such a fund.

The main contribution of this study is the conceptual framework of 'Effective Stakeholders' Relationships', which is illustrated with explanation in Chapter 7 (see Figure 7.9). The statistical results have shown that there is general agreement between the MC chairperson and owner-occupants - all mean scores on the seven-point Likert scale being above 4.0. Chairpersons generally showed stronger levels of agreement with the variables proposed, but owner-occupants only largely agreed with the factors proposed. The owner-occupants indicated least agreement with the need to actively participate in owners' organisations and the need for a good relationship with owners' organisations. They also mostly only 'agree' with the need of owners' organisation committees to give a full commitment and to have adequate knowledge and skill associated with housing management. This supports the factors selected as relevant to stakeholders' relationships as being valid to undergo further statistical analysis.

Part 2 of the final survey, which measures the respondents' satisfaction level, revealed that the influence of the managing agents' competency variable is an insignificant predictor of stakeholders' relationships and residential satisfaction (all p values are greater than 0.05) and so it was eliminated from the proposed conceptual framework. Owners' organisational competency ($\hat{\beta} = 0.281$) was found to be a more significant predictor for effective stakeholders' relationships than the owner-occupants' competency ($\hat{\beta} = 0.201$). In contrast, owner-occupants' competency variable was found to be more significant predictor for satisfaction with residential environment (dwelling $\hat{\beta} = 0.425$, neighbourhood $\hat{\beta} = 0.584$ and neighbours $\hat{\beta} = 0.612$) than the owners' organisational competency variable (dwelling $\hat{\beta} = 0.291$, neighbourhood $\hat{\beta} = 0.273$ and neighbours $\hat{\beta} = 0.255$). These significant relationships indicate that both variables are important to the conceptual framework and were therefore included in it.

The above outcome highlights the fact that owner-occupants must be able to adequately appreciate and understand the concepts of collective living, and understand the rationale and need for maintenance and maintenance charges. This study found that knowledge of the relevant Acts is not particularly important. This may be because the management of low-cost housing, physically and administratively, is not too complex. The common property tends to be limited and not technically complex to maintain. Relationships among families that have been neighbours for a long period have allowed the building of trust and common working practices for their residences. Indeed, chairpersons (often retirees who have lived for a long time in the development) do not like to pursue removal of illegal structures that owners of ground floor and first floor units may have erected, in order to maintain harmony. The generally low number of units (less than 100) also allows easier management and collective agreement to develop.

The owners' organisational competency variable is proved to affect stakeholders' relationships. Thus, the chairpersons need to have good leadership skills to engage residents and ensure their participation in the management organisation. They must also have sufficient knowledge about administration, resource management,

technical aspects of the job and human relationships. Chairpersons should perceive housing management as a business entity that requires good planning and, at the same time, as a neighbourhood. Both must be integrated to enhance the participation and cooperation of the owner-occupants.

Owner-occupants' perceptions of the residential environment are closely related to housing management. Homeowners who are satisfied with the dwelling and their neighbours are also satisfied with the relationships among stakeholders, even though the satisfaction with the neighbourhood is not a determining factor. The first two dimensions are more closely related to the individual homeowners, as they live in those particular developments, than the neighbourhood aspect, for which the boundaries are wider. The short distance between one individual unit and another, when compared with single detached dwellings, allows the residents to know one another better.

Significant relationships ($p < 0.05$) were found between owner-occupants' participation and satisfaction with the stakeholders' relationships and the residential environment. About two-thirds of the respondents are not active in community activities/meetings etc. The mean statistic indicates that inactive respondents have less satisfaction with every residential satisfaction dimension (mean value for DwellSat=4.71, NbhodSat=5.11 and NboursSat=4.87) and stakeholders relationships (mean value 4.00). However, respondents who claimed to be very active participants seem to have the highest satisfaction level with the neighbourhood (mean=5.54) whilst the highest satisfaction with dwellings (mean=5.12) and neighbours (mean=5.01) is dominated by 'quite active' respondents. Further, participation (Part_activities and Part_meeting) variables indicate a significant influence on stakeholders' relationships, as proven by the p value; $p < 0.05$.

Finally, the effects of residential satisfaction as an intervening variable have shown a partial mediation effect. This research proves that the residential environment (comprised of dwelling, neighbour and neighbourhood) can positively influence housing management, although it is not a prerequisite. As an example, to increase the effectiveness of housing management, the competency of

owner-occupants is required, so that good relationships among stakeholders can be developed. This relationship can be further enhanced if the owner-occupants are satisfied with the dwelling, have a friendly relationship with neighbours and live in housing that has a good and safe neighbourhood that is supported by acceptable community facilities that are close enough to their homes to allow them to interact and socialise.

While more than half of the null hypotheses proposed in this study are rejected, the conceptual framework is based on well-founded and strong theories. All the proposed variables and relationships are clearly defined and operationalised. The essential terms for the conceptual framework are defined and, where possible, grounded in the literature, and the basis for the assumption behind the hypotheses are expressed.

8.3 Implications for Theory

This study's literature review has shown how homeownership could provide economic and social benefits for individuals, communities and countries. The literature review in Chapter 4 also specifically discussed the relationship between homeownership and homeowners' behaviour toward property management. The discussions led to the question of whether homeownership by low-income households who live in subsidised units of multi-owner low-cost housing could reap the same benefits. This interesting premise needs to be addressed in the homeownership body of knowledge.

This study strengthens the claim that how homeowners receive and enjoy the benefits of homeownership depends on the housing tenure and structure. In the case of Malaysia, the government's housing strategies have made urban low-income households' dream come true—to own a house for the family. However, this study proves that these people are suffering from deterioration of homeownership benefits. Their residential environment is vulnerable to mismanagement and in the near future this environment might deteriorate unless adequate funds are allocated to maintenance, now that management and

maintenance has been passed via a Management Corporation into the hands of the owners instead of the original developer. The concept of living in multi-owner residential developments requires the residents (including the tenant-residents) to have collective goals with respect to their residential environment. A consensus on any action that brings common benefits to the residents should be embraced.

Due to limited economic resources, some of these people are not able to move out or to enter a more upscale housing market. They are trapped in an environment that they cannot alter by acting alone. The situation is likely to worsen if their housing development is dominated by tenant-residents. The benefits of homeownership should be extended beyond an individual household basis. The benefits should be treated as collective benefits. Thus, the policy makers' approach to the benefits of homeownership should be reconsidered.

Extensive economic literature recognises the significant relationship between homeownership and improvement in property maintenance. Homeowners are posited to have economic interest in protecting their investment. In social terms, emotional attachment may develop towards the neighbourhood. These behaviours thus lead to greater homeowners' participation in local community organisations. However, this study does not substantiate the claim, as findings show that satisfied owner-occupants with the neighbourhood dimension do not have an impact on satisfaction with stakeholders' relationships. Descriptive data reveal that nearly 40 per cent of owner-occupants indicated that they are somewhat active and 10 percent claimed they are inactive in participation; therefore, greater neighbourhood satisfaction does not guarantee greater owner-occupant participation in a collective living arrangement.

People in this study feel more attached to their home and their neighbours, than they do to the neighbourhood as a whole. In the context of multi-storey housing, neighbours are closer than in single-family detached housing. However, the above argument must be understood in the context of the residential neighbourhood itself and from the perspective of housing management requirements. In housing management practice in Malaysia and in other countries such as Australia, the provision of the acts (such as Strata Title Act in Malaysia) does not take into

account tenant-residents. Tenant-residents are not owners of the units, yet they share the use of the common property. However, they are not entitled to become members of the corporation (and, as was the case in this study, may be prohibited from doing so by law).

In the collective theory discussed in Chapter 4, a group is formed when an assemblage of individuals have the same goals and interests. Balance between costs and benefits of participation of an individual and a group of people is very important to ensure continuation of participation. This study found that the problems that occur in housing management are associated with the balance between costs and benefits of participation. If previous studies found significant relationships between the homeownership rate (single detached housings) and property management, this study discovered the relationship between owner-occupancy rates (multi-storey housing) and the satisfaction of relationships between stakeholders.

Previous studies show that a development's size, age and location are key predictors of residents' participation in collective action, as is occupancy pattern. This study found that occupancy pattern is extremely important to predicting stakeholder satisfaction. Owner-occupants who live in low-cost housing that has a high rate of tenant-residency have a poorer relationship among stakeholders. This happens due to lack of balance between the costs of participation and its benefits. Owner-occupants feel that the costs of their participation are high because the benefits will be enjoyed by all, including those who do not participate. In contrast, tenant-residents feel their participation gives them no advantage, since they are not the unit owners and thus the benefits of home ownership are not available to them.

Concerning a housing management approach, this study shows that multi-owner low-cost housing developments in Selangor's urban areas tend to be managed without professional services but are instead owner-managed. Though the housing criteria are not specifically given as the reasons for being owner-managed, the housing developments share many characteristics: all are low-cost housing developments, all are walk-up buildings without an elevator, all are located in

urban areas, and all have been occupied for more than fifteen years. The main reason for selecting owner-managed housing rather than choosing professional management is to avoid excessive maintenance fees charged by professional property managers. Without these professional services, owners essentially become part of the policy and decision making team.

The framework that this study used to predict the impact of the owner-occupants' satisfaction with residential environments and the relationship between independent variables and the dependent variable is innovative and unique. Previous studies have applied this approach but only in the context of single detached dwellings. Other researchers have separated housing management and residential satisfaction. Yet housing management, home ownership and residential satisfaction are inter-related. As it is difficult for low-income owners to change housing, they have no choice but to deal with their residential environment. This study suggests that residential satisfaction dimensions—satisfaction with the dwelling and with neighbours—could be included when considering housing management of multi-owner low-cost housing.

In conclusion, the discussion of the implications of this study on the body of knowledge of housing and housing management is more complex, since it involves additional considerations that may be unique for low-income households. Governments in many countries are focusing on these households, since decent housing is considered a right and is a social obligation. Housing policy and provision for low-income households from one country to another country is likely to vary. This is due to the differences in the political systems and economic and social development of each country. As recommended by researchers in the fields of housing and housing management, any action to generalise the findings from other countries should be done carefully, taking into account the context of a country. Thus, overall, this study's findings are not universal contributions. However, this study does contribute valuable empirical evidence for housing research in Malaysia.

8.4 Implications for Policy Practices

In terms of general interdisciplinary implications, this section is divided into two levels: the practical and the policy level. The first level emphasises housing management administration practice. The second discusses the impact on relevant policy makers' organisations.

8.4.1 Practical Implications for Housing Management Organisations

8.4.1.1 The Objective Variables

This study has found significant direct relationships between the number of children living together (CHILDREN), the length of residency (RESIDENCY), the level of owner-occupant participation in social activities (Part_activities) and meetings (Part_meetings) and the rate of owner-occupancy (OCCUPANCY RATES). In regard to the owner-managed approach, the management corporation should consider several factors. Social relations should be strengthened between existing owner-occupants and newcomers, so that both groups will have the same goals for their residential environment.

Undoubtedly, households with children are more sensitive to housing management, as the well-being of their family is their main priority compared to those with fewer or no children. Thus, the costs and benefits of participation among these groups are quite different. MCs should develop strategies to motivate these two groups so that they also can reap benefits from their participation. MCs should plan social activities that involve all ages.

The most critical factor is the rate of occupancy. The total number of tenant-residents is found to be almost equal to the number of owner-occupants and in several housing developments are the dominant group. It may not be possible for the MC to control who can rent the units, but investor-owners have to consider the rights of owner-occupants and screen tenants for suitability. Many of the owner-occupants surveyed perceived that they were facing a loss of their homeownership

benefits because of the high numbers of tenant-residents. One solution could be for MCs to be authorised by the Building and Common Property Act (Maintenance and Management) 2007 [Act 663] to act as leasing agents and in return obtain rewards for the service. Investor-owners should have to pay this service fee in addition to the monthly maintenance charge.

8.4.1.2 The Subjective Variables

This study found that the managing agents' competency variable was not a determining variable and was therefore excluded from further analysis. There was however a direct relationship between owner-occupants' competency and satisfaction with stakeholders' relationships, as well as between owners' organisational competency and satisfaction with stakeholders' relationships. Individuals satisfied with these stakeholders' competencies are likely to report a high-level of satisfaction with stakeholders' relationships. Meanwhile, the intervening effect of residential satisfaction dimensions is confirmed to mediate those direct relationships, indicating partial mediation.

The above outcomes offer an approach to reduce the conflicts occurring in collective living arrangements. Within a housing management structure, the first recommendation is to focus on the MC's organisation. The leader and the committee should develop strong leadership skills and knowledge. Under the owner-managed approach, a high level of commitment from committee members is required. Without professional services, any advice and information on housing management should be conveyed to the residents, regardless of whether they are owner-occupants, investment-owners, or tenant-residents.

Any MC should take full advantage of 'house rules', as a written medium of communication. House rules should include information on the regulations applicable to their residential environment. These should act as manuals and should include legal phrases that are easy to understand (simplifying the Acts' clauses). A copy of housing rules should be given to individual owner-occupants, tenant-residents and investor-owners, and must be constantly updated. The shared goals and values of their housing can then be developed and embraced by all.

Using this method, uniformity can be maintained over time, even if the council changes hands.

To increase the residents' participation, factors associated with residential environmental satisfaction should be improved, based on the significant relationship between the two found in this study. MCs should work to improve the existing sense of belonging among the residents. In addition to house rules, neighbourhood events could be held regularly and should involve all segments of the residents, regardless of age and occupancy status. Community spirit among neighbours was identified as a key factor in improving the relationship among stakeholders and thus affects the effectiveness of housing management. Strong community cohesion could encourage residents' to put emphasis on property maintenance of both individual units and common property. In this way, residents can be motivated to become involved in housing management.

The above recommendations, it should be noted, require relatively strong support from other indirect stakeholders in housing management. The relevant authorities and policy makers need to become involved in some capacity for most effective results. Recommendations for policy makers are discussed in the following section.

8.4.2. Implications for Public Policy

The findings from this study can provide guidelines for orienting policies aimed to avoid the development of future slums while simultaneously fostering inhabitants' well-being. By investigating which objective and subjective factors can give the most satisfaction or dissatisfaction in relation to stakeholders' relationships, studies such as this provide policy-makers with information on where to target their improvement efforts. A comparison of the owner-occupants' views with the ways in which the chairpersons of owners' organisations define and interpret housing management problems and success factors can bring to light any differences of opinion between stakeholders. A fuller picture could then lead to more precise and probably more effective interventions in multi-owner low-cost housing management.

The existing Malaysian policy for the provision of decent affordable housing for urban low-income households should be continued, with an additional policy to sustain and improve residents' well-being. Chapter 2 of this thesis has shown how extensive involvement of the government can ensure continuous well-being of low-income households. As an example, the Singaporean government has shown its commitment not only in housing provision but also in housing management and upgrading. Even in the tenant-managed public housing sector in the US and UK, ongoing support is provided by the local authorities. However, short-term involvement of the government will lead to problems in the future. This is because when a problem (e.g. critical damage to the buildings) cannot be solved by the residents, they have to bring this issue to the attention of government. This is what has happened in Malaysia and is often a concern for politicians, because previous studies have shown a relationship between the well-being of low-income households and political interests.

With regards to this study's tested framework, some key findings of the objective characteristics require the attention of policy makers. The two most important findings involve (i) the owner-managed approach for housing management by the MCs and (ii) the higher rate of tenant-residents compared to owner-occupants. Without professional agents, MCs cannot get the appropriate information and advice related to their housing management needs. Efforts should be made by the relevant authorities to support and educate them. A solution to how to develop systematic owner-managed organisations needs to be formulated. A standard mechanism should be established as a constant reference that can assist the MC to develop a written manual for the processes that are effective for its housing settlement. A manual that is 'committee-friendly' may be transferred from one committee to another. Thus, long-term goals can be achieved through systematic planning.

On the issue of tenant-residents, rental policy should be enacted by policy makers. For example, MCs could be given the power to determine who will become tenants. Rental agreements should be in writing and should enable the MCs to act as leasing agents. A service fee could be charged to the owner-investors. This would provide additional resources to the MCs. MCs should be given the right to

remove any tenant-residents who breach the agreements. This guarantees that the rights of owner-occupants will not be affected. If both Act318 and Act663 provides action that may be taken against owner-occupants who violate the regulations, the tenant-residents are liable to act under the provisions contained in the tenancy agreement. Thus the cost gap of participation and benefits between owner-occupants and tenant-residents can be reduced as tenant-residents indirectly will contribute to housing management. For investor-owners, they should not be solely concerned about their own profit, without taking into account the harmonisation of owner-occupants.

Meanwhile, the significant effect of residential satisfaction dimensions proven by this study should guide policy makers toward improving the current low-cost housing policy, particularly in urban areas. Development should take into account several factors such as safety and community facilities. These efforts must be balanced with efforts to increase residents' awareness of the importance of sharing and maintaining the facilities. If not, without sufficient awareness, facilities will be misused and their maintenance and repair will certainly pose a problem for the MC's.

This study found that low-income homeowners have the desire to manage their own housing properly, but obstacles often prevent their success. Their low income status means that they have few additional resources to fund maintenance needs for the long term through sinking funds. Any problems therefore may force them to seek the help of the authorities; thus, they are often viewed as a problematic segment of society and are often regarded as not good at managing housing. This claim is not substantiated by this study. Housing management is not about short-term goals or simply about collecting money for maintenance. As suggested by Turner (1968), home is not just the physical structure or conditions, its value lies in the relationship between man and environment. Therefore, housing management needs to be understood in both technical and social terms.

Finally, in addition to the existing national housing census, the relevant authorities should develop a comprehensive database concerning housing management. The existing data on the number of multi-owner low-cost housing stock and the

demand rates do not provide enough information to generate improvement plans. A comprehensive database will encourage future research, as many international researchers employ their national housing survey data (sometimes used along with researchers own data collection) in their empirical work. Therefore, a Malaysian government database should incorporate many aspects of low-cost housing population data and not be limited to short-term or one-time data (such as number of housing units developed or household demographic data). The database should cover information related to housing management such as owners' organisation expenditures on housing repairs or replacement works, owner- occupancy rates, maintenance charge rates and other related data.

In summary, affordable housing policy should be extended to include efforts to sustain a desirable residential environment. Malaysian government policy aimed at providing quality affordable housing should be detailed. Definition of a decent low cost housing should take into account aspects of economic, social, physical environment and neighbourhood environment. These aspects should be emphasised for a long period so that stability can be maintained and in need of improvement from time to time. Support is needed from the Government of Malaysia, because this study has shown residents in multi-storey low-cost housing have difficulty in managing their residential environment.

8.5 Implications for Future Research

At the time of writing, this study is the first intensive empirical study in Malaysia to explore issues related to the final phase of housing management of multi-owner low-cost housing. The study is built on a sound theoretical literature review and was supported with a preliminary survey. The findings are a step forward in multi-owner low-cost housing research in Malaysia.

In addition to proposing the conceptual framework to enhance stakeholders' relationships, this study's findings also provide rich background data that had not previously been collected or empirically examined. However, more research is

needed for exploring the issues from sociology, management and technical perspectives. The extension and broadening of this study would validate this study's findings. This study has several implications for future research, including the following:

8.5.1 Implications of the Housing Management Approaches

This study reveals that all the selected MCs chose to manage their housing developments without the use of managing agent services. Other multi-owner low-cost housing developments are expected to follow suit. Further research related to management practices are needed to help these people set up systematic owner-managed organisations in terms of process, structure and strategy. Research should not be limited to technical and management aspects. Rather, it should also include the more important aspect of collective action, because owner participation is needed at all levels of policy and decision making and at the policy implementation level.

8.5.2 Suggested research areas relating to Occupancy Patterns

In terms of occupancy patterns, these research findings have found high numbers of tenant-residents in multi-owner low-cost housing in Malaysia. It is difficult to involve those homeowners who rent out their units (known as investor-owners), as they do not live in the development area. Therefore, this study proposes two main areas for future research.

The first area of research is to investigate the impact of the tenant-residents on housing management. Unfortunately, their roles are not addressed in the two housing management Acts which apply in Malaysia, though in reality they are part of the neighbourhood community. For MCs that use the services of a management agent, the relationship between tenant-residents and neighbours may be limited to social relations. In terms of housing management, tenant-residents will receive benefits of the housing management in the same way as owner-occupants. They are also essentially 'customers' for the agent and for the MC and need to be considered in housing management. .

The second area of research involves examining the sociological impact of the benefits of homeownership perceived by the homeowners. Can housing developments with high rates of tenant-residents decrease or increase the homeownership benefits and affect housing management? Future research should investigate the correlation between these factors. Recommendations on housing provision policy and housing management practices should be provided to policy makers.

8.5.3 Housing Development Types

Future studies intended to generalise this study's findings or to apply the same approach need to consider the physical form of the development. High-rise, high-density urban multi-owner low cost housing development is currently the preferred method of providing sufficient and adequate low-cost housing in Malaysia. High-density housing means more people will be involved in any collective action arrangement and fewer restrictions on boundaries (perimeter areas) means more areas of common property. Both these factors increase the scope of the MCs' duties and responsibilities and pose potentially greater problems in generating the owner-participation needed for successful collective action.

As suggested in Olson's group theory, the larger the group, the more the costs of participation and the more challenges it will pose. Living in high-rise and high-density housing will affect individual behaviour toward housing management as each individual's evaluation of the residential environment might be different. As an example, the unit owner who occupies a unit at level fifteen may have different perceptions of residential satisfaction factors than the unit owner occupying a unit at level two. The perception might be influenced by the distance between the unit and the community facilities, which, in turn, will affect their participation in housing management. Thus, some modifications of the variables' attributes need to be considered.

8.5.4 Implications of the Introduction of the Building and Common Property Act (Maintenance and Management) 2007 [Act 663]

Finally, as the new Act 663 comes into force, two groups of MCs will be distinguishable in the future. The first group is the MCs without the JMB with experiences similar to this study's subjects. (Bear in mind that the samples in this study, however, had gained experience through the Pre-MC introduced by the Selangor state government before the enactment of Act 663). The second group are the future MCs, which are expected to gain more intensive experience and benefits. The second group of MCs is anticipated to be more educated than the first group. Follow-up research should separately tackle these groups in order to determine if the Acts have successfully created a framework that educates chairpersons and residents in the requirements for sustainable long term housing management.

8.5.5 Implications for Research Methodology

This study used statistical methods to test and evaluate the proposed conceptual framework. Quantitative data obtained from the questionnaire survey provides a complete set of data that can be further manipulated, as an example using multivariate analysis of variance (MANOVA). MANOVA analysis can be used if future research intends to measure the differences and relationships between two or more populations that involve more than one variable (Hair et al. 2006). MANOVA is an extension of ANOVA and future research can simultaneously measure more than one variable at one time (for an example, simultaneously measuring satisfaction with neighbourhood, dwelling and neighbours). As for this study purpose, only one variable has been examined for each proposed relationship as the objective of this study is to test and evaluate each variable suggested in the conceptual framework.

A further implication on the research method is an approach to a comprehensive methodology. As suggested by the literature, housing studies should ideally be subject to longitudinal research. Future research that attempts to employ this method can use this study's conceptual framework to observe one housing

development both before and after it establishes a MC. Such a study could determine whether there is continuity or consistency of stakeholders' competency before and after the MC is established.

In conclusion, the literature claims that homeownership could influence individual behaviour related to housing management. This study suggests competent owner-occupants and owners' organisations are the important factors needed to improve stakeholders' relationships. These improvements could enhance participation in collective action. However, the relationships would not be complete without the constraints on residential choice experienced by the owner-occupants. Occupants' evaluation of the residential environment is an important intervening factor that influences these relationships. This theory, which builds on previous research, shows that the management of multi-owner low-cost housing is more complex than the literature suggests and provides a foundation from which future researchers can explore these complex relationships.

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Appendix 1: Questionnaire and Interview Sheet for Preliminary Survey

Table A1.1: English version

SECTION A:	RESPONDENT'S HOUSING DEVELOPMENT PROFILE
1. Name and address of respondent's housing development :	_____
2. Housing estate built by: (please tick)	
<input type="checkbox"/> Government	<input type="checkbox"/> Private <input type="checkbox"/> Joint venture
Details of developer :	_____
3. Name of Maintenance Agent:	_____
<p>Please answer: (i) question 4(a) if management cooperation has been established (if Strata Title application has been issued) or (ii) question 4(b) if Strata Title application has not been issued.</p>	
4(a). Name of Management Corporation:	_____
Establishment period/date	_____
4(b). Name of Resident's Association :	_____
Establishment period/date	_____
5. Age of housing estates:	
<input type="checkbox"/> 0 – 3 years	<input type="checkbox"/> 7 – 10 years
<input type="checkbox"/> 4 – 6 years	<input type="checkbox"/> Above 10 years
6. Location of housing estates within vicinity of:	
<input type="checkbox"/> Shah Alam City Council	<input type="checkbox"/> Selayang Municipal Council
<input type="checkbox"/> Petaling Jaya City Council	<input type="checkbox"/> Sepang Municipal Council
<input type="checkbox"/> Klang Municipal Council	<input type="checkbox"/> Kuala Selangor District Council
<input type="checkbox"/> Ampang Jaya Municipal Council	<input type="checkbox"/> Kuala Langat District Council
<input type="checkbox"/> Subang Jaya Municipal Council	<input type="checkbox"/> Hulu Langat District Council
<input type="checkbox"/> Kajang Municipal Council	<input type="checkbox"/> Sabak Bernam District Council
7. Housing type:	
<input type="checkbox"/> Less than 5 storey	<input type="checkbox"/> More than 5 storey
	Please specify: _____
8. Number of Accommodation Block:	_____

9. Number of units : Accommodation Units : _____
 Commercial Unit: _____

10 Maintenance charges : RM...../sq feet
 (Whichever is appropriate) RM...../unit

11. Sinking fund charges : RM...../sq feet
 (Whichever is appropriate) RM...../unit

12. Existing facilities (respondent's may answer more than one) :
☐ Prayer Hall / surau ☐ Others (please specify):
☐ Childrens' playground • _____
☐ Kindergarten • _____

13. Respondent's category:
☐ Management Corporation ☐ Management agent
☐ Residents' Association

If the respondent is a representative of the Management Corporation or resident's association committee please answer question No 14(a) and 14(b), If the respondent is a representative of the maintenance agent please answer question No 15(a) to 15(d).

14(a) Your designation : _____
 14(b) Designation period : _____

15(a) Your designation : _____
 15(b) Number of employees for this housing estate: _____
 15(c) Designation period : _____
 15(d) Number of years experience in administering
 maintenance management for multi level low cost
 housing: _____

SECTION B:	THE EFFECTIVENESS OF HOUSING MANAGEMENT
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Please answer according to the satisfactory level between 1 to 5. Respondents are required to circle at the desired answer boxes.

Satisfaction level

- 1 = Poor
- 2 = Not satisfied
- 3 = Neutral
- 4 = Satisfied
- 5 = Very satisfied

	How well are you satisfied with the following statements:	Satisfaction level			
16.	The financial aspect / cash flow of your housing estate management.	1	2	3	4
17.	The overall maintenance performance of your housing estate.	1	2	3	4
18.	The residents' co-operation and participation in your housing management affairs.	1	2	3	4

SECTION C:	RESPONDENT'S UNDERSTANDING OF THE CURRENT ACTS RELATING TO MULTI-OWNER LOW-COST HOUSING MANAGEMENT AND MAINTENANCE
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Please answer according to the satisfactory level between 1 to 5. Respondents are required to circle at the desired answer boxes.

Understanding level

- 1 = Poor
- 2 = Do not understand
- 3 = Neutral
- 4 = Understand
- 5 = Fluent

	How well is your understanding with the following Acts:	Satisfaction level			
19.	Your understanding on Strata Title Act 1895 (Act 318).	1	2	3	4
20.	Your understanding on the Building and Common Facilities Act (Maintenance and Management) (Act 663).	1	2	3	4

SECTION D:**INTERVIEW SESSION**

The interview session will discuss further regarding questions number 16 to 20

PART A: SATISFACTION ON THE FINANCIAL ASPECT / CASH FLOW FOR YOUR HOUSING ESTATES.

- a) Based on your answer in question 16, why do you rank it as (the given answer)?
- b) So far what is your maintenance charge collection performance?
- c) What are the factors that contribute to the resident's awareness in paying the maintenance fees and some who don't?
- d) Do you think there is a relationship between collection of maintenance charges and the quality of maintenance performance provided?
- e) Do the residents fully understand the purpose of the maintenance charges?

PART B: SATISFACTION TOWARDS THE MAINTENANCE OF YOUR HOUSING ESTATES

- a) Based on your answer in question 17, why do you rank it as (the given answer)?
- b) What are the factors that contribute to that level of maintenance quality?

Physical factors: Prompts e.g. construction method and materials used for the building. Mechanical system used.

Human factors: Prompts e.g. residents' behaviour such as littering, vandalism; cannot diagnose the cause of defects or how to remedy before the defects becomes major.

Technical and administrative factors: Prompts e.g. not enough funds due to low collection, high expenditure to run the maintenance works, low-rate of maintenance charge etc.

- c) How do you describe the level of awareness for multi-storey living life-style and knowledge on maintenance among the residents?
- d) How do you describe the relationship between the residents and the Residents' Association/Managing Agent? Does this relationship influence the effectiveness and efficiency of management and maintenance of your housing estate?
- e) In your opinion, what should residents do in everyday management and maintenance of your housing estate in order to achieve better living environment.

PART C: SATISFACTION WITH THE CORPERATION BETWEEN RESIDENTS IN YOUR HOUSING ESTATES

- a) Based on your answer in question 18, why do you rank it as (the given answer)?
- b) From your experience, why do some residents participate and some do not?
- c) What activities have your organisation undertaken to encourage residents to participate in the Residents' Association? What degree of success have they had?
- d) Approximately how many, from the total number of residents are owners of the units and how many are tenants of the units? Are there any differences in their involvement and co-operation in paying maintenance charges and participation in residents' activities and in maintaining the housing areas?
- e) How well is the neighbourhood spirit in your local community?
- f) From your point of view, what are the factors that can enhance residents' awareness and participation of sharing and caring for the common properties in your housing estate?
- g) In your opinion, is there any relationship between neighbourhood spirit and living condition of your housing environment?

PART D: UNDERSTANDING ON STRATA TITLE ACT 1895 (ACT 318) AND THE BUILDING AND COMMON FACILITIES ACT (MAINTENANCE AND MANAGEMENT) (ACT 663).

- a) Based on your answer in question 19 and 20, why do you rank it as (the given answer)?
- b) As a committee member for the Residents' Association or Managing agent, how do you acquire your knowledge and understanding about these Acts?
- c) Describe the level of awareness and knowledge among residents in your area about these Acts.
- d) How well do the residents understand about their rights and responsibilities as required by the governance Acts regarding the common properties?
- e) What steps have been taken by your organisation (Residents' Association or managing agent) to explain to the residents about these Acts?
- f) What measures have the Selangor State Government taken to explain to the residents about these Acts to the residents?
- g) What else could be done to explain their responsibilities to the residents?

PART E: GENERAL COMMENTS OR OPINION.

The interviewee will be asked if he/her have additional issues that he/she might be interested to discuss or share regarding this research's topic.

-END OF QUESTIONS -

Table A1.2: Malaysian language version

SEKSYEN A:	PROFAIL PERUMAHAN & RESPONDEN
1. Nama dan Alamat Perumahan :	
2. Perumahan dibina oleh:	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <input style="width: 40px; height: 20px; border: 1px solid black;" type="checkbox"/> Kerajaan </div> <div style="text-align: center;"> <input style="width: 40px; height: 20px; border: 1px solid black;" type="checkbox"/> Swasta </div> <div style="text-align: center;"> <input style="width: 40px; height: 20px; border: 1px solid black;" type="checkbox"/> Usahasama </div> </div>
Sila nyatakan nama pemaju :	
3. Nama Agen Pengurusan:	
<p>Sila jawab: (I) soalan 4(a) jika Perbadanan Pengurusan telah ditubuhkan (jika buku daftar strata telah dibuka) atau (II) soalan 4(b) jika masih belum mendapat daftar strata</p>	
4(a). Nama Perbadanan Pengurusan (Management Corporation) :	
Tempoh penubuhan:	
4(b). Nama Persatuan Penduduk :	
Tempoh penubuhan	
5. Jangkamasa operasi perumahan:	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <input style="width: 40px; height: 20px; border: 1px solid black;" type="checkbox"/> 0 – 3 tahun <input style="width: 40px; height: 20px; border: 1px solid black;" type="checkbox"/> 4 – 6 tahun </div> <div style="text-align: center;"> <input style="width: 40px; height: 20px; border: 1px solid black;" type="checkbox"/> 7 – 10 tahun <input style="width: 40px; height: 20px; border: 1px solid black;" type="checkbox"/> 10 tahun ke atas </div> </div>
6. Lokasi perumahan mengikut pihak berkuasa tempatan:	<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input style="width: 40px; height: 20px; border: 1px solid black;" type="checkbox"/> Dewan Bandaraya Shah Alam <input style="width: 40px; height: 20px; border: 1px solid black;" type="checkbox"/> Majlis Perbandaran Petaling Jaya <input style="width: 40px; height: 20px; border: 1px solid black;" type="checkbox"/> Majlis Perbandaran Kelang <input style="width: 40px; height: 20px; border: 1px solid black;" type="checkbox"/> Majlis Perbandaran Ampang Jaya <input style="width: 40px; height: 20px; border: 1px solid black;" type="checkbox"/> Majlis Perbandaran Subang Jaya <input style="width: 40px; height: 20px; border: 1px solid black;" type="checkbox"/> Majlis Perbandaran Kajang </div> <div style="width: 48%;"> <input style="width: 40px; height: 20px; border: 1px solid black;" type="checkbox"/> Majlis Perbandaran Selayang <input style="width: 40px; height: 20px; border: 1px solid black;" type="checkbox"/> Majlis Daerah Kuala Selangor <input style="width: 40px; height: 20px; border: 1px solid black;" type="checkbox"/> Majlis Daerah Kuala Langat <input style="width: 40px; height: 20px; border: 1px solid black;" type="checkbox"/> Majlis Daerah Hulu Langat </div> </div>
7. Jenis perumahan:	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <input style="width: 40px; height: 20px; border: 1px solid black;" type="checkbox"/> Kurang 5 tingkat </div> <div style="text-align: center;"> <input style="width: 40px; height: 20px; border: 1px solid black;" type="checkbox"/> 5 tingkat & ke atas </div> </div> <p style="text-align: right; margin-top: 5px;">Sila nyatakan: _____</p>
8. Jumlah blok :	
9. Jumlah unit :	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">Unit kediaman :</div> <div style="width: 45%; border-bottom: 1px solid black;"></div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div style="width: 45%;">Unit perniagaan :</div> <div style="width: 45%; border-bottom: 1px solid black;"></div> </div>

10. Bil perkhidmatan yang dikenakan : RM...../kaki persegi
(tanda mana yang berkenaan) RM...../unit
11. Bil 'sinking fund' yang dikenakan : RM...../kaki persegi
(tanda mana yang berkenaan) RM...../unit
12. Kemudahan fasiliti sediaada (anda boleh tanda lebih dari satu jika perlu) :
- | | |
|--|--|
| <input type="checkbox"/> Surau | <input type="checkbox"/> Lain-lain (nyatakan): |
| <input type="checkbox"/> Taman permainan kanak-kanak | • |
| <input type="checkbox"/> Tadika | • |
13. Kategori responden
- | | |
|--|--|
| <input type="checkbox"/> Perbadanan Pengurusan | <input type="checkbox"/> Agen Pengurusan |
| <input type="checkbox"/> Persatuan Penduduk | |

Jika anda adalah Jawatankuasa Perbadanan Pengurusan atau Persatuan Penduduk sila jawab soalan No 14(a) dan 14(b) dan sekiranya anda adalah Agen Pengurusan sila jawab soalan No 15(a) hingga 15(d).

- 14(a) Nyatakan jawatan anda : _____
- 14(b) Tempoh jawatan yang di pegang : _____
- 15(a) Nyatakan jawatan anda : _____
- 15(b) Jumlah pekerja di perumahan ini: _____
- 15(c) Tempoh jawatan yang di pegang di perumahan ini : _____
- 15(d) Tempoh pengalaman anda di dalam pengurusan dan penyelenggaraan perumahan bertingkat kos rendah: _____

SEKSYEN B:	PENGUKURAN KEBERKESANAN PENYELENGGARAAN PERUMAHAN BERTINGKAT KOS RENDAH
-------------------	--

Soalan berikut menggunakan skala 1 hingga 5 sebagai asas penilaian. Responden diminta menggunakan tanda ✓ pada mana-mana petak yang berkenaan.

Tahap kepuasan

- 1 = Sangat Tidak Memuaskan
 2 = Tidak Memuaskan
 3 = Neutral
 4 = Memuaskan
 5 = Sangat Memuaskan

	Sejauhmanakah tahap kepuasan anda terhadap perkara-perkara dibawah:	Tahap Kepuasan			
16.	Aspek kewangan/aliran wang tunai pengurusan perumahan anda.	1	2	3	4
17.	Mutu penyelenggaraan bagi keseluruhan perumahan anda	1	2	3	4
18.	Kerjasama dan penyertaan penduduk perumahan anda di dalam hal ehwal pengurusan dan penyelenggaraan perumahan anda.	1	2	3	4

SEKSYEN C:	PENGUKURAN KEFAHAMAN TERHADAP AKTA YANG DIGUNAPAKAI DI DALAM PENGURUSAN DAN PENYELENGGARAAN PERUMAHAN BERTINGKAT KOS-RENDAH
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Soalan berikut menggunakan skala 1 hingga 5 sebagai asas penilaian. Responden diminta menggunakan tanda ✓ pada mana-mana petak yang berkenaan.

Tahap kefahaman

- 1 = Tidak faham
 2 = Kurang faham
 3 = Neutral
 4 = Faham
 5 = Sangat faham

	Sejauhmanakah tahap kefahaman anda terhadap akta-akta di bawah:	Tahap kefahaman			
19.	Akta Hakmilik Strata 1895 (Akta 318).	1	2	3	4
20.	Akta Bangunan dan Harta Bersama (Penyelenggaraan dan Pengurusan) 2007 (Akta663)	1	2	3	4

SECTION D:**SESI TEMUDUGA**

Sesi temuduga akan membincangkan lebih terperinci soalan-soalan nombor 16 hingga 20.

BAHAGIAN A: KEPUASAN TERHADAP ASPEK KEWANGAN/ALIRAN WANG TUNAI PENGURUSAN PERUMAHAN ANDA:

- f) Berdasarkan jawapan anda bagi soalan 16, kenapa anda memberi jawapan sedemikian?
- g) Sehingga kini, apakah tahap prestasi kutipan caj penyelenggaraan perumahan anda?
- h) Apakah faktor-faktor yang menyumbang kepada kesedaran penduduk untuk membuat bayaran caj penyelenggaraan dan juga kepada mereka yang ingkar?
- i) Pada pendapat anda, adakah terdapat hubungan diantara kutipan caj penyelenggaraan dan mutu penyelenggaraan yang dilakukan?
- j) Adakah penduduk memahami dengan jelas tujuan caj penyelenggaraan?

BAHAGIAN B: KEPUASAN TERHADAP MUTU PENYELENGGARAAN PERUMAHAN ANDA

- f) Berdasarkan jawapan anda bagi soalan 17, kenapa anda memberi jawapan sedemikian?
- g) Apakah faktor-faktor yang menentukan tahap kualiti penyelenggaraan?

Faktor fizikal: seperti contoh teknik pembinaan dan bahan binaan, atau sistem mekanikal yang digunakan dan sebagainya.

Faktor manusia: seperti contoh tingkahlaku penduduk seperti membuang sampah merata-rata, vandalisma, tidak dapat menentukan punca kecacatan pada elemen bangunan atau tidak tahu bagaimana untuk mengatasi kecacatan elemen bangunan sebelum kecacatan yang lebih besar berlaku dan sebagainya.

Faktor teknikal dan pentadbiran: seperti contoh dana tidak mencukupi, perbelanjaan yang tinggi untuk kerja-kerja penyelenggaraan atau caj penyelenggaraan yang rendah dan sebagainya.

- h) Apakah tahap kesedaran penduduk anda terhadap cara hidup kediaman bertingkat dan juga tahap pengetahuan mereka terhadap keperluan penyelenggaraan?
- i) Bagaimanakah hubungan diantara penduduk anda dengan Persatuan Penduduk [Ajen Pengurusan]? Adakah hubungan ini mempengaruhi keberkesanan dan kelancaran pengurusan perumahan dan penyelenggaraan perumahan anda?
- j) Pada pendapat anda, apakah yang perlu dilakukan oleh penduduk di dalam urusan pengurusan dan penyelenggaraan harian perumahan anda bagi mencapai persekitaran kediaman yang lebih baik?

BAHAGIAN C: KEPUASAN TERHADAP KERJASAMA PENDUDUK ANDA

- h) Berdasarkan jawapan anda bagi soalan 18, kenapa anda memberi jawapan sedemikian?
- i) Berdasarkan pengalaman anda, kenapa terdapat penduduk yang turutserta dan sebaliknya?
- j) Apakah aktiviti yang telah dilaksanakan oleh organisasi anda untuk menggalakan penyertaan penduduk di dalam persatuan penduduk? Apakah tahap kejayaan yang telah dicapai?
- k) Berdasarkan anggaran anda. Berapa ramaikah penduduk yang merupakan pemilik unit dan berapa ramaikah pula penyewa? Adakah terdapat perbezaan di dalam kerjasama mereka di dalam membuat bayaran caj penyelenggaraan dan penyertaan mereka di dalam aktiviti penduduk serta di dalam urusan penyelenggaraan kawasan perumahan?
- l) Sejauhmanakah hubungan kejiranan di kawasan anda?
- m) Pada pendapat anda, apakah faktor-faktor yang boleh meningkatkan kesedaran penduduk dan penyertaan mereka di dalam sama-sama berkongsi dan menjaga harta bersama perumahan anda?
- n) Pada pendapat anda, adakah terdapat hubungan diantara semangat kejiranan dan keadaan kediaman perumahan anda?

BAHAGIAN D: KEFAHAMAN TERHADAP AKTA HAKMILIK STRATA 1895 (AKTA 318) DAN AKTA BANGUNAN DAN HARTA BERSAMA (PENYELENGGARAAN DAN PENGURUSAN) 2007 (AKTA663)

- h) Berdasarkan jawapan anda bagi soalan 19 dan 20, kenapa anda memberi jawapan sedemikian?
- i) Sebagai ahlijawatankuasa Persatuan Penduduk [wakil Ajen Pengurusan], bagaimanakah anda mendapatkan kefahaman dan pengetahuan berkenaan akta-akta ini?
- j) Apakah tahap kesedaran dan pengetahuan penduduk anda terhadap akta-akta ini?
- k) Sejauhmanakah penduduk memahami tentang hak dan tanggungjawab mereka seperti yang dinyatakan di dalam akta-akta ini berkenaan harta bersama?
- l) Apakah langkah-langkah yang telah diambil oleh pihak anda untuk menerangkan kepada penduduk berkenaan akta-akta ini?
- m) Apakah tindakan yang telah diambil oleh pihak kerajaan Negeri Selangor untuk menerangkan kepada penduduk berkenaan akta-akta ini?
- n) Apakah lagi yang boleh dilakukan kepada penduduk bagi menerangkan tanggungjawab mereka?

BAHAGIAN E: KOMEN DAN PANDANGAN.

[Penemuduga akan bertanyakan soalan ini sekiranya responden mempunyai isu tambahan yang hendak dibincangkan.]

- SOALAN TAMAT -

Appendix 2: Questionnaire for Final Survey –Chairperson Respondents

Table A2.1: English version

A survey on Housing Management in Malaysia: A Malaysian Context on Multi-owner Low-cost Housing.

The objective of this questionnaire is to measure your agreement level on the issues which are likely or not to influence the effectiveness of multi-owner low-cost housing management.

Your experience as the Chairperson of your current housing's owners' organisation (Residents' Association / Management Corporation / Joint Management Body) of multi-owner low-cost housing in Selangor, Malaysia will be tremendously valuable in order to obtain an insight into the current housing scenario and the need for enhancement on the current practices of low-cost housing management and maintenance.

SPECIFIC INSTRUCTION TO RESPONDENTS

1. The purpose of this questionnaire for academic purposes only. The information that you provide will help us to better understand the current situation and to propose a framework for the effectiveness of multi-owner low-cost housing management. Your experience within your housing management will be invaluable to us in this research.
2. Your response will be kept strictly confidential. Only members of the research team will have access to the information given. The completed questionnaire will not be made available to anyone other than the research team.
3. Please take note that for any unanswered questions, the researchers will consider that the participant does not have any information or has not been involved with that particular item.
4. For any inquiry please do not hesitate to contact the researcher at:
Nor Rima Muhamad Ariff
Hphone: 012 3233025
Email: rimaariff@yahoo.com.sg
5. Please return the complete questionnaire to the researcher by using the enclosed self-addressed envelope within 2 weeks from the date you received the questionnaire.

Thank you very much for your time and cooperation. I greatly appreciate your help in furthering this research endeavour.

Nor Rima Muhamad Ariff
Researcher (PhD candidate)
School of Architecture and Building
Deakin University, Waterfront Campus
Victoria, Australia

-1-

Respondent: Chairpersons

SECTION A:**RESPONDENT'S DEMOGRAPHIC**

For each question kindly **TICK (✓)** only one relevant answer.

1	Category of respondent	2	How long have you been holding your current position?
	<input type="checkbox"/> Chairperson of Residents' Association		<input type="checkbox"/> Less than 5 months
	<input type="checkbox"/> Chairperson of Management Corporation		<input type="checkbox"/> 5 months to 3 years
	<input type="checkbox"/> Chairperson of Joint Management Committee		<input type="checkbox"/> 3 years to 5 years
			<input type="checkbox"/> More than 5 years
3	Have you been in any other committee in any other organisation such as school, mosque, sport club or etc.	4	How do you rate your level of experience in housing management and maintenance?
	<input type="checkbox"/> No		<input type="checkbox"/> Very experienced
	<input type="checkbox"/> Yes (please specify)		<input type="checkbox"/> Quite experienced
		<input type="checkbox"/> Somewhat experienced
			<input type="checkbox"/> Limited experience

SECTION B:**RESPONDENT'S HOUSING CHARACTERISTICS**

For each question kindly **TICK (✓)** only one relevant answer.

5	Category of owners' organisation currently responsible for your housing management	6	Establishment period of the current organisation:
	<input type="checkbox"/> Residents' Association		<input type="checkbox"/> Less than 1 year
	<input type="checkbox"/> Management Corporation		<input type="checkbox"/> 2 - 5 years
	<input type="checkbox"/> Joint Management Body		<input type="checkbox"/> 6 - 10 years
			<input type="checkbox"/> more than 10 years
7	Location of your housing estate within the vicinity of :		
	<input type="checkbox"/> Shah Alam City Council		<input type="checkbox"/> Ampang Jaya Municipal Council
	<input type="checkbox"/> Petaling Jaya City Council		
8	Year obtained Strata Title (please specify):	9	Housing estate built by :
		<input type="checkbox"/> Government
			<input type="checkbox"/> Private
			<input type="checkbox"/> Joint venture
			(Government and Private)
10	Type of housing development:	11	Age of your housing estate:
	<input type="checkbox"/> Below 5 storey		<input type="checkbox"/> Less than 5 years
	<input type="checkbox"/> 6 to 12 storey		<input type="checkbox"/> 5 to 10 years
	<input type="checkbox"/> 13 storey – 20 storey		<input type="checkbox"/> 10 to 15 years
	<input type="checkbox"/> 21 storey or more		<input type="checkbox"/> 15 to 20 years
			<input type="checkbox"/> More than 20 years

12	Number of residential block:	13	Number of bedroom of each unit:
14	Total number of units: Accommodation: Commercial unit:	15	Existing facilities within your housing estate (you may tick more than one): <input type="checkbox"/> Multi purpose hall <input type="checkbox"/> Prayer hall <input type="checkbox"/> Children's playground <input type="checkbox"/> Court <input type="checkbox"/> Others (please specify)
16	Maintenance charges per month: (whichever is appropriate) <input type="text"/> RM...../sq feet or <input type="text"/> RM...../unit	17	Does your housing estate have sinking fund? <input type="checkbox"/> Yes (please go to question 18) <input type="checkbox"/> No
18	Sinking fund charges per month: (whichever is appropriate) <input type="text"/> RM...../sq feet or <input type="text"/> RM...../unit	19	Do you establish and implement any House Rules? <input type="checkbox"/> Yes <input type="checkbox"/> No (why)
20	Rates of occupancy :		
	Unit occupied by owners :		%
	Unit occupied by tenants:		%
	Vacant unit :		%
	Total:		100 %

The answers to the following Sections must satisfy the following definition:

- a) **“Neighbourhood” and “Neighbours” should be within your housing’s area.**
For example ‘Housing A’ consists of 5 blocks. The “Neighbourhood” is therefore within the area of Housing A and the “Neighbours” should be the residents (both owner-occupants and tenant-residents occupying any one of the 5 blocks). The neighbourhood’s common properties are referred to as “common property” provided within your housing and under the management of Management Corporation or the developer (for Residents’ Association) as defined in the Strata Title Act 185 and Building and Common Property Act (Maintenance and Management) 2007 Act 663.
- b) **“Dwelling” refers to physical features of the housing and your individual own unit.**
- c) **“Owners’ organisation” refers to the current organisation of your housing that represent the purchasers as given in answer to question 5.**
- d) **“Owner-occupants” in this questionnaire refers to the units owners that occupied their unit.**
- e) **“Tenant-residents” refers to tenants who rent a unit / parcel from the unit owners.**

- f) "Residents" is a general term used to describe all the owner-occupants and tenant-residents.
- g) For any housing, which does not use the service of management agent, kindly please ignore Question C5, F3.1 and F3.2.

PART 1 SURVEY

Questions in **SECTION C** are the factors which are predicted to likely or not to influence the effectiveness of multi-owner low-cost housing management and maintenance. Based on your experience, you are required to give your opinion in **AGREEMENT LEVEL** statement.

Please **CIRCLE** only your best answer which is the most appropriate response to your agreement level on the side of each item, using the scale below.

Score	Agreement Level.	Score	Agreement Level
1	Very strongly disagree	5	Agree
2	Strongly disagree	6	Strongly agree
3	Disagree	7	Very strongly agree
4	Neutral		

SECTION C:	ESSENTIAL FACTORS AFFECTING THE EFFECTIVENESS OF HOUSING MANAGEMENT
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C1: Based on your experience, in order for the housing management to run effectively it is very important for:

		Level of Agreement						
1.	Owner-occupants to have a good relationship with their owners' organisation.	1	2	3	4	5	6	7
2.	Owner-occupants to have a good relationship with their managing agent's personnel.	1	2	3	4	5	6	7
3.	Owners' organisation committee to have good inter - relationship with their managing agent.	1	2	3	4	5	6	7
4.	Owner-occupants to co-operate and actively participate in the owners' organisation	1	2	3	4	5	6	7
5.	Owners' organisation to be co-operate acting on behalf of the residents.	1	2	3	4	5	6	7
6.	Managing agent to be involved in owners' organisation activities.	1	2	3	4	5	6	7
7.	Tenant-residents to be involved in the housing management and maintenance.	1	2	3	4	5	6	7

C2: Based on your experience, in order for the housing management to run effectively it is very important for the owner-occupants to be

		Level of Agreement						
		1	2	3	4	5	6	7
1.	Satisfied with their dwelling condition	1	2	3	4	5	6	7
2.	Satisfied with their neighbourhood environment	1	2	3	4	5	6	7
3.	Satisfied with their neighbours relationship	1	2	3	4	5	6	7

C3: Based on your experience, in order for the housing management to run effectively it is important for the owner-occupants to:

		Level of Agreement						
		1	2	3	4	5	6	7
1.	Have an appreciation of multi-storey living style	1	2	3	4	5	6	7
2.	Have an awareness of maintenance needs	1	2	3	4	5	6	7
3.	Have an awareness of the costs of maintenance	1	2	3	4	5	6	7
4.	Have understanding of the Acts relating to housing management and maintenance	1	2	3	4	5	6	7
5.	Have knowledge of housing management and maintenance.	1	2	3	4	5	6	7

C4: Based on your experience, in order for the housing management to run effectively it is important that the Owners' organisation is able to:

		Level of Agreement						
		1	2	3	4	5	6	7
1.	Give full commitment in their housing management and maintenance.	1	2	3	4	5	6	7
2.	Have developed leadership skill	1	2	3	4	5	6	7
3.	Have technical knowledge and skills of housing management and maintenance.	1	2	3	4	5	6	7
4.	Have an adequate knowledge and skill associated with housing management and maintenance.	1	2	3	4	5	6	7

C5: Based on your experience, in order for the housing management to run effectively, it is important that the Managing agent's personnel are able to:

		Level of Agreement						
		1	2	3	4	5	6	7
1.	Have strong technical knowledge and skill of housing management and maintenance.	1	2	3	4	5	6	7
2.	Have strong administrative knowledge and skill associated with the housing management and maintenance i.e. legal requirements.	1	2	3	4	5	6	7
3.	Have a working culture towards people i.e. customer-oriented	1	2	3	4	5	6	7

PART 2 SURVEY

For SECTION D, E AND F, the questions are related to your daily living experience on issues related to your housing's management. For each question, you are required to respond in **SATISFACTION LEVEL** statement.

Please **CIRCLE** only your best answer which is the most appropriate response to your satisfaction level on the side of each item, using the scale below.

Score	Satisfaction Level.	Score	Satisfaction Level
1	Very strongly dissatisfied	5	Satisfied
2	Strongly dissatisfied	6	Strongly satisfied
3	Dissatisfied	7	Very strongly satisfied
4	Neutral		

SECTION D:	THE EFFECTIVENESS OF HOUSING MANAGEMENT
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D1: Satisfaction with Stakeholders' Relationships

	How do you describe your satisfaction level with the following issues:	Level of Satisfaction						
1.	Relationship between the owner-occupants and the Owners' organisation.	1	2	3	4	5	6	7
2.	Relationship between the owner-occupants and the managing agent's personnel.	1	2	3	4	5	6	7
3.	Relationship between the Owners' organisation committee and the managing agent.	1	2	3	4	5	6	7
4.	Owner-occupants' co-operation and participation in activities organised by the Owners' organisation	1	2	3	4	5	6	7
5.	Owners' organisation acting on behalf of the owner-occupants.	1	2	3	4	5	6	7
6.	Managing agent's participation in activities organised by the Owners' organisation.	1	2	3	4	5	6	7
7.	Tenant-residents' participation in the housing management and maintenance.	1	2	3	4	5	6	7

SECTION E:	OWNER-OCCUPANTS' SATISFACTION WITH DWELLING, NEIGHBOURHOOD AND NEIGHBOURS.
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E1: Owner-occupants' Satisfaction with Dwelling

	How well are you satisfied with the following :	Level of Satisfaction						
1.	The overall features of your housing estate.	1	2	3	4	5	6	7
2.	The overall state of maintenance of your housing.	1	2	3	4	5	6	7
3.	The physical condition of your dwelling unit	1	2	3	4	5	6	7
4.	The overall state of maintenance of dwelling unit	1	2	3	4	5	6	7

E2: Owner-occupants' Satisfaction with Neighbourhood Environment

	How well are you satisfied with the following :	Level of Satisfaction						
5.	The overall housing's living environment	1	2	3	4	5	6	7
6.	Your neighbourhood cohesion	1	2	3	4	5	6	7
7.	Your neighbourhood as a good place to live	1	2	3	4	5	6	7
8.	Your neighbourhood as a safe place to live	1	2	3	4	5	6	7
9.	The community facilities (such as playground and seating area) in your housing.	1	2	3	4	5	6	7

E3: Owner-occupants' Satisfaction with Neighbours.

	How well are you satisfied with the following :	Level of Satisfaction						
10.	Interaction and relationship between the owner-occupants.	1	2	3	4	5	6	7
11.	Interaction and relationship between the owner-occupants and the tenant-residents	1	2	3	4	5	6	7
12.	Owner-occupants participation in social activities organised by your Owners' Organisational committee.	1	2	3	4	5	6	7
13.	Tenant-residents' participation in social activities organised by your Owners' Organisation committee.	1	2	3	4	5	6	7

SECTION F: VARIABLES FOR EFFECTIVE HOUSING MANAGEMENT**F1.0: OWNER-OCCUPANTS' COMPETENCY****F1.1: Owner-occupants' appreciation of multi-storey living style**

	How well do you feel satisfied with your awareness of the following:	Level of Satisfaction						
1.	Owner-occupants need to share the common properties and facilities available in your housing estate.	1	2	3	4	5	6	7
2.	Owner-occupants having collective responsibilities as required by Acts to take good care of the common properties and facilities within your housing estate.	1	2	3	4	5	6	7
3.	Owner-occupants having to participate in the Owners' Organisation activities with regards to housing management and maintenance.	1	2	3	4	5	6	7
4.	Each individual owner-occupant has their responsibility to maintain on his/her individual unit	1	2	3	4	5	6	7

F1.2: Owner-occupants' awareness of maintenance needs

	How well are you satisfied with your awareness of the following:	Level of Satisfaction						
5.	Maintenance is important to keep housing estate's living environment safe for habitation.	1	2	3	4	5	6	7
6.	Maintenance is important to preserve the overall physical condition of your housing estate from decaying.	1	2	3	4	5	6	7
7.	Maintenance is important to retain the value of -7- ing estate.	1	2	3	4	5	6	7

F1.3: Owner-occupants' awareness of the costs of maintenance

	How well are you satisfied with your awareness of the following:	Level of Satisfaction						
8.	Without enough funds, maintenance works cannot be undertaken.	1	2	3	4	5	6	7
9.	Without enough funds, quality of maintenance will be affected.	1	2	3	4	5	6	7
10.	Maintenance charge is a different issue from quit rent imposed by the local authority.	1	2	3	4	5	6	7

F1.4: Owner-occupants' understanding of the Acts relating to housing management and maintenance.

	How well are you satisfied with your understanding on the following:	Level of Understanding						
11.	Understanding of Strata Title Act 1985 (Act318)	1	2	3	4	5	6	7
12.	Understanding of Building Maintenance and Common Facilities Act (Maintenance and Management) Act 663	1	2	3	4	5	6	7
13.	Understanding of the definition on common properties and facilities as stated in both of the above Acts.	1	2	3	4	5	6	7
14.	Understanding the roles and responsibilities as an owner of a parcel/unit as stated in the above Acts.	1	2	3	4	5	6	7

F1.5: Owner-occupants' knowledge of housing management and maintenance

	How well are you satisfied with your knowledge of the following:	Level of Satisfaction						
15.	The purpose of the maintenance charge	1	2	3	4	5	6	7
16.	Good maintenance requires planning and scheduling in order to avoid unplanned maintenance works.	1	2	3	4	5	6	7
17.	Maintenance cost is likely to be influenced by the cost of labour and material, and are likely to change time to time.	1	2	3	4	5	6	7
18.	Age of building is likely to influence the maintenance cost.	1	2	3	4	5	6	7
19.	Delay in maintenance works can worsen the condition and will then require extra funds to fix.							
20.	Vandalism is the common factor affecting and deteriorating the quality or performance of common properties and facilities.	1	2	3	4	5	6	7

F2.0 : OWNERS' ORGANISATIONAL COMPETENCY**F2.1: Owners' Organisational commitment**

	How well are you satisfied with your Owners' Organisational commitment on:	Level of satisfaction						
21.	Encouraging the residents to participate in activities organized by the owners' organisation.	1	2	3	4	5	6	7
22.	Acting on behalf of the residents in addressing residential concern.	1	2	3	4	5	6	7
23.	Accountability to the residents.	1	2	3	4	5	6	7
24.	Sharing the organisation's common values and goals with residents	1	2	3	4	5	6	7

F2.2: Owners' Organisational leadership

	How well are you satisfied with your Owners' Organisational leadership on:	Level of satisfaction						
25.	Ability in handling meetings	1	2	3	4	5	6	7
26.	Availability and willingness to talk to the residents	1	2	3	4	5	6	7
27.	Ability to influence residents	1	2	3	4	5	6	7
28.	Ease of communication with residents	1	2	3	4	5	6	7
29.	Sharing information and knowledge with residents on issues regarding their housing management and maintenance.	1	2	3	4	5	6	7

F2.3: Owners' Organisational knowledge and skill

	How well are you satisfied with your Owners' Organisational leadership knowledge and skill on:	Level of satisfaction						
30.	Understanding the Acts associated with housing maintenance and management.	1	2	3	4	5	6	7
31.	Responding and advising resident for any matters related to housing maintenance and management.	1	2	3	4	5	6	7
32.	Providing guidance to the resident on any matters related to the Acts and housing management and maintenance.	1	2	3	4	5	6	7

F3.0 : MANAGING AGENT'S COMPETENCY**F3.1: Managing agent's knowledge and skill**

	How well are you satisfied with your managing agent's knowledge and skill on:	Level of satisfaction						
33.	Handling meetings	1	2	3	4	5	6	7
34.	Promoting resident participation	1	2	3	4	5	6	7
35.	Providing guidance and skill to residents on issues related to housing management and maintenance.	1	2	3	4	5	6	7
36.	Providing guidance and skill to resident on issues related to the Acts associated with housing management and maintenance.	1	2	3	4	5	6	7

F3.2: Managing agent's service culture

	How well are you satisfied with your managing agent's service culture on:	Level of satisfaction						
37.	Committed providing quality services	1	2	3	4	5	6	7
38.	Front-line staff adapting professionalism	1	2	3	4	5	6	7
39.	Front-line staff adapting friendliness attitude towards the residents.	1	2	3	4	5	6	7
40.	Adapting people and customer oriented culture	1	2	3	4	5	6	7
41.	Committed to listen and understand the needs and expectations of the residents.	1	2	3	4	5	6	7
42.	Transparency in any issue associated with housing management and maintenance.	1	2	3	4	5	6	7
43.	Sharing and transferring knowledge and skill about housing management and maintenance to the residents and Owners' Organisation.	1	2	3	4	5	6	7

SECTION G:**COMMENTS AND OPINIONS**

If you have any comment or opinion regarding housing management and maintenance, kindly please specify:

.....

.....

.....

.....

.....

.....

THANK YOU FOR COMPLETING THIS QUESTIONNAIRE.

I sincerely appreciate your time and cooperation. Please check to make sure that you have not skipped any question inadvertently.

Please post this questionnaire by using the enclosed reply-paid envelope

Table A2.2: Malaysian language version

**Kajiselidik Pengurusan Penyenggaraan di Malaysia :
Pandangan Malaysia dari prespektif Perumahan
Pangsapuri Kos Rendah**

Objektif soalan kajiselidik ini adalah bertujuan untuk mengukur **TAHAP KEPUASAN** dan **TAHAP PERSETUJUAN** anda atas perkara-perkara yang dijangka mempengaruhi keberkesanan pengurusan perumahan Pangsapuri Kos Rendah.

Pengalaman anda sebagai **Pengerusi organisasi penduduk** (samada Persatuan Penduduk atau Perbadanan Pengurusan [Management Corporation] atau Badan Pengurusan Bersama [Joint Management Body] atau Pra-Perbadanan Pengurusan [Pre-MC]) di kawasan perumahan anda amat dihargai dan diperlukan dalam usaha untuk mendapatkan gambaran semasa dan keperluan untuk menambahbaik amalan paraktik semasa pengurusan perumahan Pangsapuri Kos Rendah di Malaysia.

ARAHAN KEPADA RESPONDEN

1. Tujuan kajiselidik ini adalah untuk tujuan akademik sahaja. Maklumat yang anda berikan akan membantu kami untuk lebih memahami gambaran semasa dan juga untuk mencadangkan model keberkesanan pengurusan perumahan Pangsapuri Kos Rendah. Pengalaman anda dalam pengurusan perumahan anda adalah amat berharga di dalam kajian ini.

2. Maklumbalas anda adalah rahsia dan sulit. Hanya ahli kumpulan penyelidikan sahaja yang berhak untuk melihat jawapan yang diberi. Soalan kajiselidik yang telah dijawab tidak akan didedahkan kepada sesiapa melainkan ahli kumpulan penyelidik sahaja.

3. Sila ambil perhatian bahawa bagi mana-mana soalan yang tidak dijawab, kumpulan penyelidik akan menganggap bahawa anda tidak mempunyai informasi atau tidak terlibat dengan soalan berkenaan.

Terima kasih atas kerjasama dan masa yang diluangkan. Kami amat menghargai sokongan anda melengkapkan kajiselidik ini.

Nor Rima Muhamad Ariff

Penyelidik (Pelajar PhD)

School of Architecture and Building

Deakin University, Waterfront Campus

Victoria Australia. Responden: Pengerusi

SEKSYEN A :	DEMOGRAFI RESPONDEN
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Bagi setiap soalan sila tandakan (/) bagi satu jawapan sahaja.

<p>1. Anda adalah Pengerusi kepada:</p> <table style="width: 100%;"> <tr><td><input type="checkbox"/></td><td>Persatuan Penduduk</td></tr> <tr><td><input type="checkbox"/></td><td>Perbadanan Pengurusan (MC)</td></tr> <tr><td><input type="checkbox"/></td><td>Jawatankuasa Pengurusan Bersama (Joint Management Committee-JMC)</td></tr> <tr><td><input type="checkbox"/></td><td>Pra-Perbadanan Pengurusan (Pre-MC)</td></tr> </table>	<input type="checkbox"/>	Persatuan Penduduk	<input type="checkbox"/>	Perbadanan Pengurusan (MC)	<input type="checkbox"/>	Jawatankuasa Pengurusan Bersama (Joint Management Committee-JMC)	<input type="checkbox"/>	Pra-Perbadanan Pengurusan (Pre-MC)	<p>2. Berapa lamakah anda telah menjawat jawatan sekarang?</p> <table style="width: 100%;"> <tr><td><input type="checkbox"/></td><td>Kurang dari 5 bulan</td></tr> <tr><td><input type="checkbox"/></td><td>5 bulan hingga 3 tahun</td></tr> <tr><td><input type="checkbox"/></td><td>3 tahun hingga 5 tahun</td></tr> <tr><td><input type="checkbox"/></td><td>Lebih dari 5 tahun</td></tr> </table>	<input type="checkbox"/>	Kurang dari 5 bulan	<input type="checkbox"/>	5 bulan hingga 3 tahun	<input type="checkbox"/>	3 tahun hingga 5 tahun	<input type="checkbox"/>	Lebih dari 5 tahun
<input type="checkbox"/>	Persatuan Penduduk																
<input type="checkbox"/>	Perbadanan Pengurusan (MC)																
<input type="checkbox"/>	Jawatankuasa Pengurusan Bersama (Joint Management Committee-JMC)																
<input type="checkbox"/>	Pra-Perbadanan Pengurusan (Pre-MC)																
<input type="checkbox"/>	Kurang dari 5 bulan																
<input type="checkbox"/>	5 bulan hingga 3 tahun																
<input type="checkbox"/>	3 tahun hingga 5 tahun																
<input type="checkbox"/>	Lebih dari 5 tahun																
<p>3. Pernahkah anda menyertai mana-mana persatuan seperti di sekolah, masjid, kelab sukan dan lain-lain.</p> <table style="width: 100%;"> <tr><td><input type="checkbox"/></td><td>Tidak</td></tr> <tr><td><input type="checkbox"/></td><td>Ya (sila nyatakan nama organisasi dan jawatan)</td></tr> <tr><td colspan="2">.....</td></tr> </table>	<input type="checkbox"/>	Tidak	<input type="checkbox"/>	Ya (sila nyatakan nama organisasi dan jawatan)		<p>4. Bagaimanakah tahap pengalaman anda dalam pengurusan perumahan?</p> <table style="width: 100%;"> <tr><td><input type="checkbox"/></td><td>Sangat berpengalaman</td></tr> <tr><td><input type="checkbox"/></td><td>Berpengalaman</td></tr> <tr><td><input type="checkbox"/></td><td>Sederhana</td></tr> <tr><td><input type="checkbox"/></td><td>Kurang berpengalaman</td></tr> </table>	<input type="checkbox"/>	Sangat berpengalaman	<input type="checkbox"/>	Berpengalaman	<input type="checkbox"/>	Sederhana	<input type="checkbox"/>	Kurang berpengalaman		
<input type="checkbox"/>	Tidak																
<input type="checkbox"/>	Ya (sila nyatakan nama organisasi dan jawatan)																
.....																	
<input type="checkbox"/>	Sangat berpengalaman																
<input type="checkbox"/>	Berpengalaman																
<input type="checkbox"/>	Sederhana																
<input type="checkbox"/>	Kurang berpengalaman																

SEKSYEN B :	CIRI – CIRI PERUMAHAN RESPONDEN
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Bagi setiap soalan sila tandakan (/) bagi satu jawapan sahaja

<p>5. Kategori Organisasi Penduduk semasa yang bertanggungjawab dalam pengurusan perumahan anda</p> <table style="width: 100%;"> <tr><td><input type="checkbox"/></td><td>Persatuan Penduduk</td></tr> <tr><td><input type="checkbox"/></td><td>Perbadanan Pengurusan (MC)</td></tr> <tr><td><input type="checkbox"/></td><td>Badan Pengurusan Bersama (Joint Management Body – JMB)</td></tr> </table>	<input type="checkbox"/>	Persatuan Penduduk	<input type="checkbox"/>	Perbadanan Pengurusan (MC)	<input type="checkbox"/>	Badan Pengurusan Bersama (Joint Management Body – JMB)	<p>6. Jangkamasa penubuhan organisasi berkenaan</p> <table style="width: 100%;"> <tr><td><input type="checkbox"/></td><td>Kurang dari satu tahun</td></tr> <tr><td><input type="checkbox"/></td><td>2 hingga 5 tahun</td></tr> <tr><td><input type="checkbox"/></td><td>6 hingga 10 tahun</td></tr> <tr><td><input type="checkbox"/></td><td>Lebih dari 10 tahun</td></tr> </table>	<input type="checkbox"/>	Kurang dari satu tahun	<input type="checkbox"/>	2 hingga 5 tahun	<input type="checkbox"/>	6 hingga 10 tahun	<input type="checkbox"/>	Lebih dari 10 tahun
<input type="checkbox"/>	Persatuan Penduduk														
<input type="checkbox"/>	Perbadanan Pengurusan (MC)														
<input type="checkbox"/>	Badan Pengurusan Bersama (Joint Management Body – JMB)														
<input type="checkbox"/>	Kurang dari satu tahun														
<input type="checkbox"/>	2 hingga 5 tahun														
<input type="checkbox"/>	6 hingga 10 tahun														
<input type="checkbox"/>	Lebih dari 10 tahun														
<p>7. Lokasi perumahan anda berada di bawah pentadbiran pihak berkuasa:</p> <table style="width: 100%;"> <tr> <td><input type="checkbox"/></td> <td>Majlis Bandaraya Shah Alam</td> <td><input type="checkbox"/></td> <td>Majlis Perbandaran Ampang Jaya</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Majlis Bandaraya Petaling Jaya</td> <td></td> <td></td> </tr> </table>	<input type="checkbox"/>	Majlis Bandaraya Shah Alam	<input type="checkbox"/>	Majlis Perbandaran Ampang Jaya	<input type="checkbox"/>	Majlis Bandaraya Petaling Jaya									
<input type="checkbox"/>	Majlis Bandaraya Shah Alam	<input type="checkbox"/>	Majlis Perbandaran Ampang Jaya												
<input type="checkbox"/>	Majlis Bandaraya Petaling Jaya														
<p>8. Tahun perumahan anda memiliki Hakmilik Strata (Sila nyatakan)</p> <p>.....</p>	<p>9. Kawasan Perumahan anda dibina oleh</p> <table style="width: 100%;"> <tr><td><input type="checkbox"/></td><td>Kerajaan</td></tr> <tr><td><input type="checkbox"/></td><td>Swasta</td></tr> <tr><td><input type="checkbox"/></td><td>Gabungan Kerajaan dan Swasta (usahasama)</td></tr> </table>	<input type="checkbox"/>	Kerajaan	<input type="checkbox"/>	Swasta	<input type="checkbox"/>	Gabungan Kerajaan dan Swasta (usahasama)								
<input type="checkbox"/>	Kerajaan														
<input type="checkbox"/>	Swasta														
<input type="checkbox"/>	Gabungan Kerajaan dan Swasta (usahasama)														

10.	Jenis Perumahan	11.	Usia kawasan perumahan anda
	<input type="checkbox"/> Kurang 5 tingkat		<input type="checkbox"/> Kurang dari 5 tahun
	<input type="checkbox"/> 6 hingga 12 tingkat		<input type="checkbox"/> 5 hingga 10 tahun
	<input type="checkbox"/> 13 hingga 20 tingkat		<input type="checkbox"/> 10 hingga 15 tahun
	<input type="checkbox"/> 21 tingkat ke atas		<input type="checkbox"/> 15 hingga 20 tahun
			<input type="checkbox"/> lebih dari 20 tahun
12.	Bilangan blok perumahan :	13.	Bilangan bilik tidur untuk setiap unit

14.	Jumlah unit:	15.	Fasiliti sediaada di kawasan perumahan anda (anda boleh menandakan lebih dari satu jawapan)
	Perumahan :..... unit		<input type="checkbox"/> Dewan serbaguna
	Komersial :..... unit		<input type="checkbox"/> Dewan solat / Surau
			<input type="checkbox"/> Taman permainan kanak-kanak
			<input type="checkbox"/> Court (seperti badminton)
			<input type="checkbox"/> Lain-lain (sila nyatakan)
		
16.	Caj penyenggaraan setiap bulan (yang mana berkenaan)	17.	Adakah perumahan anda mempunyai wang penjelas (sinking fund)
	<input type="checkbox"/> RM...../ kaki persegi		<input type="checkbox"/> Ya (sila ke soalan No. 18)
	Atau		<input type="checkbox"/> Tidak
	<input type="checkbox"/> RM...../ unit		
18.	Caj wang penjelas (sinking fund) setiap bulan. (yang mana berkenaan)	19.	Adakah anda membentuk dan melaksanakan kaedah-kaedah dalaman (house rules)?
	<input type="checkbox"/> RM...../ kaki persegi		<input type="checkbox"/> Ya
	Atau		<input type="checkbox"/> Tidak (kenapa)
	<input type="checkbox"/> RM...../ unit	
		
		
20.	Kadar peratusan penghunian: :		
	Unit diduduki pemilik:		%
	Unit diduduki penyewa:		%
	Unit kosong:		%
	JUMLAH		100%

Sila rujuk arahan di bawah sebelum menjawab soalan-soalan berikutnya:

- a) **“Kejiranan” dan “jiran” hendaklah bermaksud di dalam kawasan perumahan anda.**
Seperti contoh, Jika “Perumahan A” terdiri daripada 5 blok kediaman, “Kejiranan” hendaklah terhad di dalam lingkungan kawasan “Perumahan A” sahaja. Definasi “Jiran” pula merujuk kepada penghuni kelima-lima blok berkenaan (pemilik unit dan juga penyewa). Manakala harta bersama adalah merujuk kepada terma “harta bersama” sepertimana yang tertakluk didalam Akta Bangunan dan Harta Bersama (Penyenggaraan dan Pengurusan) 2007 (Act 663).
- b) **“Tempat tinggal” merujuk kepada fizikal kediaman perumahan dan unit individu.**
- c) **“Organisasi penduduk” merujuk kepada organisasi semasa perumahan anda yang mewakili pembeli dan penduduk keseluruhannya di dalam pengurusan perumahan sepertimana jawapan yang telah anda berikan kepada Soalan 13.**
- d) **“Pemilik” di dalam kajian ini merujuk kepada pemilik unit yang mendiami unit yang dibeli.**
- e) **“Penyewa” merujuk kepada penghuni yang menyewa unit dari pemilik unit.**
- f) **“Penduduk” adalah terma umum yang merujuk kepada pemilik unit yang mendiami kediaman mereka dan juga penyewa.**
- g) **Bagi perumahan yang tidak menggunakan khidmat agen pengurusan, sila abaikan Soalan C5, F3.1 dan F.3.2.**

PENGUKURAN BAHAGIAN 1

Soalan-soalan **SEKSYEN C**, adalah berkaitan dengan pengalaman dan penglibatan anda dalam pengurusan perumahan Pangsapuri Kos Rendah. Anda dikehendaki memberi pandangan berdasarkan soalan-soalan yang dijangka akan atau tidak mempengaruhi keberkesanan pengurusan perumahan Pangsapuri Kos Rendah.

Sila **BULATKAN** skor anda di sebelah kanan setiap soalan berdasarkan respon anda terhadap **TAHAP PERSETUJUAN** anda bagi setiap soalan dengan menggunakan skala di bawah.

Skor	Tahap Persetujuan
1	Sangat tidak setuju
2	Tidak setuju
3	Kurang setuju
4	Tidak pasti

Skor	Tahap Persetujuan
5	Setuju
6	Amat setuju
7	Sangat amat setuju

SEKSYEN C :**FAKTOR – FAKTOR PENTING MEMPENGARUHI KEBERKESANAN PENGURUSAN PERUMAHAN**

C1: Berdasarkan pengalaman anda bagi memastikan pengurusan perumahan dijalankan dengan efektif, adalah amat penting untuk:

		TAHAP PERSETUJUAN						
1.	Pemilik mempunyai hubungan yang baik dengan organisasi penduduk	1	2	3	4	5	6	7
2.	Pemilik mempunyai hubungan yang baik dengan kakitangan agen pengurusan.	1	2	3	4	5	6	7
3.	AJK organisasi penduduk mempunyai hubungan yang baik dengan agen pengurusan.	1	2	3	4	5	6	7
4.	Pemilik bergiat aktif dan menyertai aktiviti yang diadakan oleh organisasi penduduk.	1	2	3	4	5	6	7
5.	Organisasi penduduk bergiat aktif bertindak sebagai orang tengah kepada pemilik.	1	2	3	4	5	6	7
6.	Ajen pengurusan melibatkan diri di dalam aktiviti yang diadakan oleh organisasi penduduk.	1	2	3	4	5	6	7
7.	Penyewa melibatkan diri dalam pengurusan perumahan	1	2	3	4	5	6	7

C2: Berdasarkan pengalaman anda bagi memastikan pengurusan perumahan dijalankan dengan efektif, adalah amat penting bagi PEMILIK untuk:

		TAHAP PERSETUJUAN						
1.	Berpuashati dengan keadaan tempat tinggal	1	2	3	4	5	6	7
2.	Berpuashati dengan persekitaran kejiranan	1	2	3	4	5	6	7
3.	Berpuashati dengan hubungan sesama jiran	1	2	3	4	5	6	7

C3: Berdasarkan pengalaman anda bagi memastikan pengurusan perumahan dijalankan dengan efektif, adalah amat penting bagi PEMILIK untuk:

		TAHAP PERSETUJUAN						
1.	Menghargai gaya hidup di perumahan bertingkat	1	2	3	4	5	6	7
2.	Mempunyai kesedaran tentang keperluan penyenggaraan	1	2	3	4	5	6	7
3.	Mempunyai kesedaran tentang kos caj penyenggaraan	1	2	3	4	5	6	7
4.	Memahami Akta berkaitan dengan pengurusan dan penyenggaraan perumahan	1	2	3	4	5	6	7
5.	Mempunyai pengetahuan dan kemahiran (teknikal dan pentadbiran) berkenaan pengurusan perumahan	1	2	3	4	5	6	7

C4: Berdasarkan pengalaman anda bagi memastikan pengurusan perumahan dijalankan dengan efektif, adalah amat penting bagi ORGANISASI PENDUDUK mempunyai keupayaan untuk:

		TAHAP PERSETUJUAN						
		1	2	3	4	5	6	7
1.	Memberi kerjasama sepenuhnya dalam pengurusan perumahan.							
2.	Membentuk kemahiran memimpin.							
3.	Memahami Akta berkaitan dengan pengurusan perumahan							
4.	Mempunyai pengetahuan dan kemahiran (teknikal dan pentadbiran) berkenaan pengurusan perumahan							

C5: Berdasarkan pengalaman anda bagi memastikan pengurusan perumahan dijalankan dengan efektif, adalah amat penting bagi KAKITANGAN AJEN PENGURUSAN untuk:

		TAHAP PERSETUJUAN						
		1	2	3	4	5	6	7
1.	Mempunyai pengetahuan dan kemahiran teknikal berkenaan pengurusan perumahan.							
2.	Mempunyai pengetahuan dan kemahiran pentadbiran yang kukuh berkenaan pengurusan (seperti contoh berkenaan peruntukan undang-undang).							
3.	Mempunyai budaya kerja berorientasikan pelanggan (penduduk).							

PENGUKURAN BAHAGIAN 2

Soalan-soalan Seksyen D, E dan F adalah berkaitan dengan pengalaman anda sebagai penduduk berkaitan dengan hal-ehwal pengurusan dan penyenggaraan perumahan anda. Untuk setiap soalan, anda dikehendaki memberi maklumbalas anda dalam bentuk **TAHAP KEPUASAN**

Sila **BULATKAN** skor anda di sebelah kanan setiap soalan berdasarkan respon anda terhadap TAHAP KEPUASAN bagi setiap soalan dengan menggunakan skala di bawah.

Skor	Tahap kepuasan
1	Sangat tidak berpuas hati
2	Tidak berpuas hati
3	Kurang berpuas hati
4	Tidak pasti

Skor	Tahap kepuasan
5	Berpuas hati
6	Amat berpuas hati
7	Sangat amat berpuas hati

SEKSYEN D :	KEBERKESANAN PENGURUSAN PERUMAHAN
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D1: Kepuasan Terhadap Hubungan Pihak-pihak Berkenaan

(Pemilik, Organisasi Penduduk dan Ajen Pengurusan)

	Apakah tahap kepuasan anda terhadap perkara-perkara di bawah:	TAHAP KEPUASAN						
		1	2	3	4	5	6	7
1.	Hubungan antara pemilik dengan organisasi penduduk.	1	2	3	4	5	6	7
2.	Hubungan antara pemilik dengan kakitangan ajen pengurusan.	1	2	3	4	5	6	7
3.	Hubungan antara AJK organisasi penduduk dengan kakitangan ajen pengurusan.	1	2	3	4	5	6	7
4.	Kerjasama dan penglibatan pemilik dalam aktiviti anjuran organisasi penduduk.	1	2	3	4	5	6	7
5.	Organisasi penduduk bertindak bagi pihak penduduk.	1	2	3	4	5	6	7
6.	Kerjasama dan penglibatan ajen pengurusan dalam aktiviti anjuran organisasi penduduk.	1	2	3	4	5	6	7
7.	Kerjasama dan penglibatan penyewa dalam pengurusan perumahan.	1	2	3	4	5	6	7

SEKSYEN E:	KEPUASAN TERHADAP TEMPAT TINGGAL, KAWASAN KEJIRANAN DAN JIRAN TETANGGA
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E1: Kepuasan terhadap TEMPAT TINGGAL.

	Apakah tahap kepuasan anda terhadap perkara-perkara di bawah:	TAHAP KEPUASAN						
		1	2	3	4	5	6	7
1.	Keseluruhan ciri-ciri kawasan perumahan anda.	1	2	3	4	5	6	7
2.	Tahap penyenggaraan secara keseluruhan kawasan perumahan anda.	1	2	3	4	5	6	7
3.	Keadaan fizikal unit kediaman anda.	1	2	3	4	5	6	7
4.	Tahap penyenggaraan secara keseluruhan unit-unit kediaman penduduk.	1	2	3	4	5	6	7

E2: Kepuasan terhadap PERSEKITARAN KEJIRANAN.

	Apakah tahap kepuasan anda terhadap perkara-perkara di bawah:	TAHAP KEPUASAN						
		1	2	3	4	5	6	7
5.	Persekitaran kejiranan di kawasan perumahan anda.	1	2	3	4	5	6	7
6.	Keakraban hubung kejiranan anda.	1	2	3	4	5	6	7
7.	Kawasan kejiranan sebagai tempat yang baik untuk didiami.	1	2	3	4	5	6	7
8.	Kawasan kejiranan sebagai tempat yang selamat untuk didiami.	1	2	3	4	5	6	7
9.	Fasiliti komuniti di kawasan perumahan anda (contoh : taman permainan kanak-kanak, kawasan rehat dan lain-lain)	1	2	3	4	5	6	7

E3: Kepuasan terhadap JIRAN TETANGGA.

	Apakah tahap kepuasan anda terhadap perkara-perkara di bawah:	TAHAP KEPUASAN						
10.	Interaksi dan hubungan sesama pemilik unit.	1	2	3	4	5	6	7
11.	Interaksi dan hubungan antara pemilik dengan penyewa.	1	2	3	4	5	6	7
12.	Penglibatan pemilik dalam aktiviti kemasyarakatan anjuran AJK organisasi penduduk.	1	2	3	4	5	6	7
13.	Penglibatan penyewa dalam aktiviti kemasyarakatan anjuran AJK organisasi penduduk.	1	2	3	4	5	6	7

SEKSYEN F :**FAKTOR-FAKTOR PENGURUSAN PERUMAHAN YANG EFEKTIF****F1.0: KOMPETENSI PEMILIK****F1.1: Penghargaan pemilik terhadap gaya hidup di perumahan bertingkat**

	Apakah tahap kepuasan anda terhadap penghargaan pemilik mengenai perkara-perkara di bawah:	TAHAP KEPUASAN						
1.	Pemilik perlu berkongsi fasiliti dan harta bersama yang disediakan di kawasan perumahan	1	2	3	4	5	6	7
2.	Pemilik perlu mempunyai tanggungjawab bersama untuk menjaga fasiliti dan harta bersama seperti yang tertakluk dalam Akta.	1	2	3	4	5	6	7
3.	Pemilik perlu menyertai aktiviti-aktiviti anjuran organisasi penduduk.	1	2	3	4	5	6	7
4.	Setiap individu pemilik perlu mempunyai tanggungjawab untuk menanggung unit masing-masing.	1	2	3	4	5	6	7

F1.2: Kesedaran pemilik terhadap keperluan penyenggaraan

	Apakah tahap kepuasan anda terhadap kesedaran pemilik mengenai perkara-perkara di bawah:	TAHAP KEPUASAN						
5.	Pentingnya penyenggaraan untuk memastikan kawasan perumahan selamat untuk didiami.	1	2	3	4	5	6	7
6.	Pentingnya penyenggaraan untuk memelihara keadaan fizikal perumahan dari masalah keusangan.	1	2	3	4	5	6	7
7.	Pentingnya penyenggaraan untuk mengekalkan atau meningkatkan nilai harta kawasan perumahan	1	2	3	4	5	6	7

F1.3: Kesedaran pemilik terhadap kos caj penyenggaraan

	Apakah tahap kepuasan anda terhadap kesedaran pemilik mengenai perkara-perkara di bawah:	TAHAP KEPUASAN						
8.	Tanpa dana yang mencukupi, kerja-kerja penyenggaraan tidak dapat dilakukan dengan teratur.	1	2	3	4	5	6	7
9.	Tanpa dana yang mencukupi, kualiti kerja penyenggaraan akan terjejas.	1	2	3	4	5	6	7
10.	Caj penyenggaraan adalah berbeza dengan cukai pintu yang dikenakan oleh pihak berkuasa tempatan.	1	2	3	4	5	6	7

F1.4: Kefahaman pemilik terhadap akta-akta berkaitan pengurusan dan penyenggaraan perumahan

	Apakah tahap kepuasan anda terhadap kefahaman pemilik mengenai perkara-perkara di bawah:	TAHAP KEPUASAN						
11.	Memahami Akta 1985 Hakmilik Strata (Akta 318)	1	2	3	4	5	6	7
12.	Memahami Akta Penyenggaraan Bangunan dan Harta Bersama (Akta 663)	1	2	3	4	5	6	7
13.	Memahami definasi fasiliti dan harta bersama seperti yang dinyatakan di dalam kedua-dua akta di atas.	1	2	3	4	5	6	7
14.	Memahami tugas dan tanggungjawab sebagai pemilik unit seperti yang dinyatakan di dalam kedua-dua akta di atas.	1	2	3	4	5	6	7

F1.5: Pengetahuan penduduk berkenaan pengurusan dan penyenggaraan perumahan

	Apakah tahap kepuasan anda terhadap pengetahuan pemilik mengenai perkara-perkara di bawah:	TAHAP KEPUASAN						
15.	Tujuan adanya caj penyenggaraan	1	2	3	4	5	6	7
16.	Penyenggaraan yang baik memerlukan perancangan berjadual.	1	2	3	4	5	6	7
17.	Kos penyenggaraan dipengaruhi oleh kos tenaga kerja dan bahan yang akan berubah dari masa kesemasa.	1	2	3	4	5	6	7
18.	Umur sesuatu bangunan boleh mempengaruhi kos penyenggaraan	1	2	3	4	5	6	7
19.	Kerja-kerja penyenggaraan yang tertangguh boleh memburukkan lagi keadaan dan akan meningkatkan kos senggara.	1	2	3	4	5	6	7
20.	Vandalisma adalah faktor utama yang memberi kesan dan akan memburukkan kualiti fasiliti dan harta bersama.	1	2	3	4	5	6	7

F2.0: KOMPETENSI ORGANISASI PENDUDUK**F2.1: Komitmen Organisasi Penduduk.**

	Apakah tahap kepuasan anda terhadap komitmen organisasi penduduk anda di dalam:	TAHAP KEPUASAN						
21.	Menggalakkan penyertaan penduduk di dalam aktiviti-aktiviti anjuran organisasi penduduk.	1	2	3	4	5	6	7
22.	Bertindak bagi pihak penduduk dalam mengetengahkan masalah yang dikenalpasti	1	2	3	4	5	6	7
23.	Bertanggungjawab kepada penduduk.	1	2	3	4	5	6	7
24.	Berkongsi visi dan misi bersama penduduk	1	2	3	4	5	6	7

F2.2: Kepimpinan Organisasi Penduduk

	Apakah tahap kepuasan anda terhadap kepimpinan organisasi penduduk anda di dalam:	TAHAP KEPUASAN						
25.	Mengadakan mesyuarat	1	2	3	4	5	6	7
26.	Meluangkan masa untuk berbincang dengan penduduk	1	2	3	4	5	6	7
27.	Mempengaruhi penduduk	1	2	3	4	5	6	7
28.	Berkomunikasi dengan penduduk	1	2	3	4	5	6	7
29.	Berkongsi informasi dan pengetahuan dengan penduduk mengenai perkara berkaitan pengurusan dan penyenggaraan perumahan.	1	2	3	4	5	6	7

F2.3: Pengetahuan dan kemahiran Organisasi Penduduk.

	Apakah tahap kepuasan anda terhadap pengetahuan dan kemahiran organisasi penduduk anda di dalam:	TAHAP KEPUASAN						
30.	Memahami akta-akta berkaitan pengurusan dan penyenggaraan perumahan.	1	2	3	4	5	6	7
31.	Memberi panduan kepada penduduk berkenaan akta-akta dan perkara-perkara berkaitan pengurusan dan penyenggaraan perumahan.	1	2	3	4	5	6	7
32.	Memberi tindak balas dan nasihat kepada penduduk tentang hal-hal yang berkaitan pengurusan dan penyenggaraan perumahan.	1	2	3	4	5	6	7

F3.0: KOMPETENSI AJEN PENGURUSAN (*jika berkenaan*)**F3.1: Pengetahuan dan kemahiran Ajen Pengurusan**

	Apakah tahap kepuasan anda terhadap pengetahuan dan kemahiran agen pengurusan anda di dalam:	TAHAP KEPUASAN						
33.	Menguruskan mesyuarat	1	2	3	4	5	6	7
34.	Menggalakkan penglibatan penduduk	1	2	3	4	5	6	7
35.	Menyediakan panduan dan kemahiran kepada penduduk dalam isu-isu pengurusan dan penyenggaraan perumahan	1	2	3	4	5	6	7
36.	Memberi panduan dan kemahiran kepada penduduk berkaitan dengan akta-akta pengurusan dan penyenggaraan perumahan.	1	2	3	4	5	6	7

F3.2: Budaya kerja Ajen Pengurusan

	Apakah tahap kepuasan anda terhadap budaya kerja ajen pengurusan anda di dalam:	TAHAP KEPUASAN						
37.	Komited memberi perkhidmatan yang berkualiti	1	2	3	4	5	6	7
38.	Mengamalkan sikap profesional di dalam menjalankan tugas.	1	2	3	4	5	6	7
39.	Mengamalkan sikap mesra pelanggan (terhadap organisasi penduduk dan penduduk)	1	2	3	4	5	6	7
40.	Mengamalkan budaya berorientasikan pelanggan.	1	2	3	4	5	6	7
41.	Komited di dalam mendengar dan prihatin dengan keperluan dan kehendak penduduk.	1	2	3	4	5	6	7
42.	Telus dalam menangani sebarang isu berkenaan pengurusan perumahan.	1	2	3	4	5	6	7
43.	Berkongsi informasi dan menyalurkan pengetahuan dan kemahiran mengenai pengurusan perumahan kepada organisasi penduduk dan penduduk	1	2	3	4	5	6	7

SEKSYEN G:**KOMEN DAN CADANGAN**

Sila nyatakan jika anda mempunyai sebarang komen dan cadangan berkenaan pengurusan perumahan Pangsapuri Kos Rendah.

TERIMA KASIH KERANA MELENGKAPKAN BORANG KAJISELIDIK INI.

Kami amat menghargai masa dan kerjasama yang telah anda beri.

Diharap anda dapat membuat semakan semula untuk memastikan tiada soalan yang tidak di jawab.

Sila poskan Borang Kajiselidik ini dengan menggunakan sampul surat yang disediakan.

Appendix 3: Questionnaire for Final Survey - Owner-Occupant Respondents

Table A3.1: English version

<p style="text-align: center;">A survey on Housing Management in Malaysia: A Malaysian Context on Multi-owner Low-cost Housing.</p> <hr/> <p>The objective of this questionnaire is to measure your AGREEMENT AND SATISFACTION LEVEL on the issues which are likely or not to influence the effectiveness of multi-owner low-cost housing management.</p> <p>Your experience living in multi-owner low-cost housing in Selangor, Malaysia will be tremendously valuable in order to obtain an insight into the current scenario and the need for enhancement on the current practices of multi-owner low-cost housing management.</p> <p><u>SPECIFIC INSTRUCTION TO RESPONDENTS</u></p> <ol style="list-style-type: none"> 6. The purpose of this questionnaire is for academic purposes only. The information you provide will help us to better understand the current situation and propose possible changes to housing management practice of multi-owner low-cost housing. Therefore we would appreciate if you could answer the questions based on your experience and knowledge. 7. This questionnaire should be completed by the person who is responsible for their housing management. Head of the family or owner of the unit is eligible to participate. 8. Your response will be kept strictly confidential. Only members of the research team will have access to the information given. The completed questionnaire will not be made available to anyone other than the research team. 9. Please take note that for any unanswered questions, the researcher will consider that the participant does not have any experience with that particular item. 10. For any inquiry please do not hesitate to contact the researcher at: Nor Rima Muhamad Ariff Hphone: 012 3233025 Email: rimaariff@yahoo.com.sg 6. Please return the complete questionnaire to the researcher by using the enclosed self-addressed envelope within 2 weeks from the date you received the questionnaire. <p>Thank you very much for your time and cooperation. I greatly appreciate your help in furthering this research endeavour.</p> <p>Nor Rima Muhamad Ariff Researcher (PhD candidate) School of Architecture and Building Deakin University, Waterfront Campus Victoria, Australia</p>	
-1-	Respondent: Owner-occupants

SECTION A:	RESPONDENT'S DEMOGRAPHIC
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For each question kindly TICK (✓) only one relevant answer.

<p>1. Age:</p> <table style="width: 100%;"> <tr><td><input type="checkbox"/></td><td>20-30</td></tr> <tr><td><input type="checkbox"/></td><td>31-40</td></tr> <tr><td><input type="checkbox"/></td><td>41-50</td></tr> <tr><td><input type="checkbox"/></td><td>over 50</td></tr> </table>	<input type="checkbox"/>	20-30	<input type="checkbox"/>	31-40	<input type="checkbox"/>	41-50	<input type="checkbox"/>	over 50	<p>2. Sex:</p> <table style="width: 100%;"> <tr><td><input type="checkbox"/></td><td>Male</td></tr> <tr><td><input type="checkbox"/></td><td>Female</td></tr> </table>	<input type="checkbox"/>	Male	<input type="checkbox"/>	Female								
<input type="checkbox"/>	20-30																				
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<input type="checkbox"/>	41-50																				
<input type="checkbox"/>	over 50																				
<input type="checkbox"/>	Male																				
<input type="checkbox"/>	Female																				
<p>3. Marital status:</p> <table style="width: 100%;"> <tr><td><input type="checkbox"/></td><td>Married</td></tr> <tr><td><input type="checkbox"/></td><td>Not married</td></tr> <tr><td><input type="checkbox"/></td><td>Single Parent</td></tr> </table>	<input type="checkbox"/>	Married	<input type="checkbox"/>	Not married	<input type="checkbox"/>	Single Parent	<p>4. Number of people living with you:</p> <table style="width: 100%;"> <tr><td><input type="checkbox"/></td><td>1 to 5</td></tr> <tr><td><input type="checkbox"/></td><td>6 to 10</td></tr> <tr><td><input type="checkbox"/></td><td>More than 10</td></tr> </table>	<input type="checkbox"/>	1 to 5	<input type="checkbox"/>	6 to 10	<input type="checkbox"/>	More than 10								
<input type="checkbox"/>	Married																				
<input type="checkbox"/>	Not married																				
<input type="checkbox"/>	Single Parent																				
<input type="checkbox"/>	1 to 5																				
<input type="checkbox"/>	6 to 10																				
<input type="checkbox"/>	More than 10																				
<p>5. Number of children living with you:</p> <table style="width: 100%;"> <tr><td><input type="checkbox"/></td><td>None</td></tr> <tr><td><input type="checkbox"/></td><td>1 to 5</td></tr> <tr><td><input type="checkbox"/></td><td>More than 5</td></tr> </table>	<input type="checkbox"/>	None	<input type="checkbox"/>	1 to 5	<input type="checkbox"/>	More than 5	<p>6. Length of residence in your current unit:</p> <table style="width: 100%;"> <tr><td><input type="checkbox"/></td><td>Less than a year</td></tr> <tr><td><input type="checkbox"/></td><td>1 year to 5 years</td></tr> <tr><td><input type="checkbox"/></td><td>5 years to 10 years</td></tr> <tr><td><input type="checkbox"/></td><td>10 years to 10 years</td></tr> <tr><td><input type="checkbox"/></td><td>More than 15 years</td></tr> </table>	<input type="checkbox"/>	Less than a year	<input type="checkbox"/>	1 year to 5 years	<input type="checkbox"/>	5 years to 10 years	<input type="checkbox"/>	10 years to 10 years	<input type="checkbox"/>	More than 15 years				
<input type="checkbox"/>	None																				
<input type="checkbox"/>	1 to 5																				
<input type="checkbox"/>	More than 5																				
<input type="checkbox"/>	Less than a year																				
<input type="checkbox"/>	1 year to 5 years																				
<input type="checkbox"/>	5 years to 10 years																				
<input type="checkbox"/>	10 years to 10 years																				
<input type="checkbox"/>	More than 15 years																				
<p>7. Your previous accommodation before moving to this housing estate:</p> <table style="width: 100%;"> <tr><td><input type="checkbox"/></td><td>Squatter (own or rent)</td></tr> <tr><td><input type="checkbox"/></td><td>Renting (other than squatter)</td></tr> <tr><td><input type="checkbox"/></td><td>Stay with family</td></tr> <tr><td><input type="checkbox"/></td><td>Others (please specify):</td></tr> <tr><td></td><td>.....</td></tr> </table>	<input type="checkbox"/>	Squatter (own or rent)	<input type="checkbox"/>	Renting (other than squatter)	<input type="checkbox"/>	Stay with family	<input type="checkbox"/>	Others (please specify):		<p>8. Your current employment</p> <table style="width: 100%;"> <tr><td><input type="checkbox"/></td><td>Full-time employment</td></tr> <tr><td><input type="checkbox"/></td><td>Part-time employment</td></tr> <tr><td><input type="checkbox"/></td><td>Self-employment</td></tr> <tr><td><input type="checkbox"/></td><td>Retired</td></tr> <tr><td><input type="checkbox"/></td><td>Unemployed</td></tr> </table>	<input type="checkbox"/>	Full-time employment	<input type="checkbox"/>	Part-time employment	<input type="checkbox"/>	Self-employment	<input type="checkbox"/>	Retired	<input type="checkbox"/>	Unemployed
<input type="checkbox"/>	Squatter (own or rent)																				
<input type="checkbox"/>	Renting (other than squatter)																				
<input type="checkbox"/>	Stay with family																				
<input type="checkbox"/>	Others (please specify):																				
																				
<input type="checkbox"/>	Full-time employment																				
<input type="checkbox"/>	Part-time employment																				
<input type="checkbox"/>	Self-employment																				
<input type="checkbox"/>	Retired																				
<input type="checkbox"/>	Unemployed																				
<p>9. Your highest education attainment</p> <table style="width: 100%;"> <tr><td><input type="checkbox"/></td><td>Secondary School</td></tr> <tr><td><input type="checkbox"/></td><td>Primary School</td></tr> <tr><td><input type="checkbox"/></td><td>Certificate</td></tr> <tr><td><input type="checkbox"/></td><td>Diploma and above</td></tr> </table>	<input type="checkbox"/>	Secondary School	<input type="checkbox"/>	Primary School	<input type="checkbox"/>	Certificate	<input type="checkbox"/>	Diploma and above	<p>10. Your gross household income:</p> <table style="width: 100%;"> <tr><td><input type="checkbox"/></td><td>Below RM1000</td></tr> <tr><td><input type="checkbox"/></td><td>RM1001 to RM 15000</td></tr> <tr><td><input type="checkbox"/></td><td>RM15001 to RM2000</td></tr> <tr><td><input type="checkbox"/></td><td>Above RM2001</td></tr> </table>	<input type="checkbox"/>	Below RM1000	<input type="checkbox"/>	RM1001 to RM 15000	<input type="checkbox"/>	RM15001 to RM2000	<input type="checkbox"/>	Above RM2001				
<input type="checkbox"/>	Secondary School																				
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<input type="checkbox"/>	RM1001 to RM 15000																				
<input type="checkbox"/>	RM15001 to RM2000																				
<input type="checkbox"/>	Above RM2001																				
<p>11. The period you expect to continue living in this housing estate.</p> <table style="width: 100%;"> <tr> <td><input type="checkbox"/></td> <td>2 years or less</td> <td><input type="checkbox"/></td> <td>11 or more years</td> </tr> <tr> <td><input type="checkbox"/></td> <td>3 years to 10 years</td> <td><input type="checkbox"/></td> <td>Always</td> </tr> </table>		<input type="checkbox"/>	2 years or less	<input type="checkbox"/>	11 or more years	<input type="checkbox"/>	3 years to 10 years	<input type="checkbox"/>	Always												
<input type="checkbox"/>	2 years or less	<input type="checkbox"/>	11 or more years																		
<input type="checkbox"/>	3 years to 10 years	<input type="checkbox"/>	Always																		

SECTION B:	RESPONDENT'S HOUSING DEVELOPMENT DEMOGRAPHIC
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For each question kindly TICK (✓) only one relevant answer.

12. Location of your housing estate within vicinity of : <table style="width: 100%;"> <tr> <td style="width: 50%;"><input type="checkbox"/> Shah Alam City Council</td> <td style="width: 50%;"><input type="checkbox"/> Ampang Jaya Municipal Council</td> </tr> <tr> <td><input type="checkbox"/> Petaling Jaya City Council</td> <td></td> </tr> </table>	<input type="checkbox"/> Shah Alam City Council	<input type="checkbox"/> Ampang Jaya Municipal Council	<input type="checkbox"/> Petaling Jaya City Council						
<input type="checkbox"/> Shah Alam City Council	<input type="checkbox"/> Ampang Jaya Municipal Council								
<input type="checkbox"/> Petaling Jaya City Council									
13. Owners' organisation currently responsible for your housing management. <table style="width: 100%;"> <tr><td><input type="checkbox"/> Residents' Association</td></tr> <tr><td><input type="checkbox"/> Management Corporation</td></tr> <tr><td><input type="checkbox"/> Joint Management Body</td></tr> <tr><td><input type="checkbox"/> Not sure</td></tr> </table>	<input type="checkbox"/> Residents' Association	<input type="checkbox"/> Management Corporation	<input type="checkbox"/> Joint Management Body	<input type="checkbox"/> Not sure	14. Are you currently a committee member of the above organisation? <table style="width: 100%;"> <tr> <td><input type="checkbox"/> Yes (please specify your position)</td> <td>.....</td> </tr> <tr> <td><input type="checkbox"/> No</td> <td></td> </tr> </table>	<input type="checkbox"/> Yes (please specify your position)	<input type="checkbox"/> No	
<input type="checkbox"/> Residents' Association									
<input type="checkbox"/> Management Corporation									
<input type="checkbox"/> Joint Management Body									
<input type="checkbox"/> Not sure									
<input type="checkbox"/> Yes (please specify your position)								
<input type="checkbox"/> No									
15. How do you rate your participation of activities organised by your owners' organisation? <table style="width: 100%;"> <tr><td><input type="checkbox"/> Very active</td></tr> <tr><td><input type="checkbox"/> Quite active</td></tr> <tr><td><input type="checkbox"/> Somewhat active</td></tr> <tr><td><input type="checkbox"/> Not active</td></tr> </table>	<input type="checkbox"/> Very active	<input type="checkbox"/> Quite active	<input type="checkbox"/> Somewhat active	<input type="checkbox"/> Not active	16. How do you rate your attendance for meetings organised by your owners' organisation? <table style="width: 100%;"> <tr><td><input type="checkbox"/> Very active</td></tr> <tr><td><input type="checkbox"/> Quite active</td></tr> <tr><td><input type="checkbox"/> Somewhat active</td></tr> <tr><td><input type="checkbox"/> Not active</td></tr> </table>	<input type="checkbox"/> Very active	<input type="checkbox"/> Quite active	<input type="checkbox"/> Somewhat active	<input type="checkbox"/> Not active
<input type="checkbox"/> Very active									
<input type="checkbox"/> Quite active									
<input type="checkbox"/> Somewhat active									
<input type="checkbox"/> Not active									
<input type="checkbox"/> Very active									
<input type="checkbox"/> Quite active									
<input type="checkbox"/> Somewhat active									
<input type="checkbox"/> Not active									

The answers to the following Sections must satisfy the following definition:

a) "Neighbourhood" and "Neighbour" should be within your housing estate.

For example 'Housing A' consists of 5 blocks. The "Neighbourhood" is therefore within the area of Housing A and the "Neighbours" should be the residents (both owner-occupants and tenant-residents occupying any one of the 5 blocks. The neighbourhood's common properties are referred to as "common property" provided within your housing and under the management of Management Corporation or the developer (for Residents' Association) as defined in the Strata Title Act 185 and Building and Common Property Act (Maintenance and Management) 2007 Act 663.

b) "Dwelling" refers to physical features of the housing and your individual own unit.

c) "Owners' organisation" refers to the current organisation of your housing that represent the purchasers as given in answer to question 5.

d) "Owner-occupants" in this questionnaire refers to the units owners that occupied their unit.

e) "Tenant-residents" refers to tenants who rent a unit / parcel from the unit owners.

f) "Residents" is a general term used to describe all the owner-occupants and tenant-residents.

g) For any housing, which does not use the service of management agent, kindly please ignore Question C5, F3.1 and F.3.2.

PART 1 SURVEY

Questions in **SECTION C** are the factors which are predicted to likely or not to influence the effectiveness of multi-owner low-cost housing management and maintenance. Based on your experience, you are required to give your opinion in **AGREEMENT LEVEL** statement.

Please **CIRCLE** only your best answer which is the most appropriate response to your agreement level on the side of each item, using the scale below.

Score	Agreement Level.	Score	Agreement Level
1	Very strongly disagree	5	Agree
2	Strongly disagree	6	Strongly agree
3	Disagree	7	Very strongly agree
4	Neutral		

SECTION C:	ESSENTIAL FACTORS AFFECTING THE EFFECTIVENESS OF HOUSING MANAGEMENT
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C1: Based on your experience, in order for the housing management to run effectively it is very important for:

		Level of Agreement						
1.	Owner-occupants to have a good relationship with their owners' organisation.	1	2	3	4	5	6	7
2.	Owner-occupants to have a good relationship with their managing agent's personnel.	1	2	3	4	5	6	7
3.	Owners' organisation committee to have good inter - relationship with their managing agent.	1	2	3	4	5	6	7
4.	Owner-occupants to co-operate and actively participate in the Owners' organization	1	2	3	4	5	6	7
5.	Owners' organisation to be co-operate acting on behalf of the residents.	1	2	3	4	5	6	7
6.	Managing agent to be involved in owners' organisation activities.	1	2	3	4	5	6	7
7.	Tenant-residents to be participated in the housing management and maintenance.	1	2	3	4	5	6	7

C2: Based on your experience, in order for the housing management to run effectively it is very important for the owner-occupants to be

		Level of Agreement						
1.	Satisfied with their dwelling condition	1	2	3	4	5	6	7
2.	Satisfied with their neighbourhood environment	1	2	3	4	5	6	7
3.	Satisfied with their neighbours relationship	1	2	3	4	5	6	7

C3: Based on your experience, in order for the housing management to run effectively it is important for the owner-occupants to:

		Level of Agreement						
1.	Have an appreciation of multi-storey living style	1	2	3	4	5	6	7
2.	Have an awareness of maintenance needs	1	2	3	4	5	6	7
3.	Have an awareness of the costs of maintenance.	1	2	3	4	5	6	7
4.	Have understanding of the Acts relating to housing management and maintenance	1	2	3	4	5	6	7
5.	Have knowledge about housing management and maintenance.	1	2	3	4	5	6	7

C4: Based on your experience, in order for the housing management to run effectively it is important that the Owners' organisation is able to:

		Level of Agreement						
1.	Give full commitment in their housing management and maintenance.	1	2	3	4	5	6	7
2.	Have developed leadership skill	1	2	3	4	5	6	7
3.	Have technical knowledge and skills of housing management and maintenance.	1	2	3	4	5	6	7
4.	Have an administrative knowledge and skill associated with housing management and maintenance.	1	2	3	4	5	6	7

C5: Based on your experience, in order for the housing management to run effectively, it is important that the Managing agent's personnel are able to:

		Level of Agreement						
1.	Have strong technical knowledge and skill of housing management and maintenance.	1	2	3	4	5	6	7
2.	Have strong administrative knowledge and skill associated with the housing management and maintenance i.e. legal requirements.	1	2	3	4	5	6	7
3.	Have a working culture towards people i.e. customer-oriented	1	2	3	4	5	6	7

PART 2 SURVEY

For SECTION D, E AND F, the questions are related to your daily living experience on issues related to your housing's management. For each question, you are required to respond in **SATISFACTION LEVEL** statement.

Please **CIRCLE** only your best answer which is the most appropriate response to your satisfaction level on the side of each item, using the scale below.

Score	Satisfaction Level.	Score	Satisfaction Level
1	Very strongly dissatisfied	5	Satisfied
2	Very dissatisfied	6	Strongly satisfied
3	Dissatisfied	7	Very strongly satisfied
4	Neutral		

SECTION D:	THE EFFECTIVENESS OF HOUSING MANAGEMENT
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D1: Satisfaction with Stakeholders' Relationships

	How do you describe your satisfaction level with the following issues:	Level of Satisfaction						
1.	Relationship between the owner-occupants and the Owners' organisation.	1	2	3	4	5	6	7
2.	Relationship between the owner-occupants and the managing agent's personnel.	1	2	3	4	5	6	7
3.	Relationship between the Owners' organisation committee and the managing agent.	1	2	3	4	5	6	7
4.	Owner-occupants' co-operation and participation in activities organised by the Owners' organization	1	2	3	4	5	6	7
5.	Owners' organisation acting on behalf of the owner-occupants.	1	2	3	4	5	6	7
6.	Managing agent's participation in activities organised by the Owners' organisation.	1	2	3	4	5	6	7
7.	Tenant-residents' participation in the housing management and maintenance.	1	2	3	4	5	6	7

SECTION E:	OWNER-OCCUPANTS' SATISFACTION WITH DWELLING, NEIGHBOURHOOD AND NEIGHBOURS.
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E1: Owner-occupants' Satisfaction with Dwelling

	How well are you satisfied with the following :	Level of Satisfaction						
1.	The overall features of your housing estate.	1	2	3	4	5	6	7
2.	The overall state of maintenance of your housing.	1	2	3	4	5	6	7
3.	The physical condition of your dwelling unit	1	2	3	4	5	6	7
4.	The overall state of maintenance of dwelling unit	1	2	3	4	5	6	7

E2: Owner-occupants' Satisfaction with Neighbourhood Environment

	How well are you satisfied with the following :	Level of Satisfaction						
5.	The overall housing's living environment	1	2	3	4	5	6	7
6.	Your neighbourhood cohesion	1	2	3	4	5	6	7
7.	Your neighbourhood as a good place to live	1	2	3	4	5	6	7
8.	Your neighbourhood as a safe place to live	1	2	3	4	5	6	7
9.	The community facilities (such as playground and seating area) in your housing.	1	2	3	4	5	6	7

E3: Owner-occupants' Satisfaction with Neighbours.

	How well are you satisfied with the following :	Level of Satisfaction						
10.	Interaction and relationship between the owner-occupants.	1	2	3	4	5	6	7
11.	Interaction and relationship between the owner-occupants and the tenant-residents	1	2	3	4	5	6	7
12.	Owner-occupants participation in social activities organised by your Owners' Organisational committee.	1	2	3	4	5	6	7
13.	Tenant-residents' participation in social activities organised by your Owners' Organisation committee.	1	2	3	4	5	6	7

SECTION F:**VARIABLES FOR EFFECTIVE HOUSING MANAGEMENT****F1.0: OWNER-OCCUPANTS' COMPETENCY****F1.1: Owner-occupants' appreciation of multi-storey living style**

	How well do you feel satisfied with your appreciation of the following:	Level of Satisfaction						
1.	Owner-occupants need to share the common properties and facilities available in your housing estate.	1	2	3	4	5	6	7
2.	Owner-occupants having collective responsibilities as required by Acts to take good care of the common properties and facilities within your housing estate.	1	2	3	4	5	6	7
3.	Owner-occupants having to participate in the Owners' Organisation activities with regards to housing management and maintenance.	1	2	3	4	5	6	7
4.	Each individual owner-occupant has their responsibility to maintain on his/her individual unit	1	2	3	4	5	6	7

F1.2: Owner-occupants' awareness of maintenance needs

	How well are you satisfied with your awareness of the following:	Level of Satisfaction						
5.	Maintenance is important to keep housing estate's living environment safe for habitation.	1	2	3	4	5	6	7
6.	Maintenance is important to preserve the overall physical condition of your housing estate from decaying.	1	2	3	4	5	6	7
7.	Maintenance is important to retain the value of the housing estate.	1	2	3	4	5	6	7

F1.3: Owner-occupants' awareness of the costs of maintenance

	How well are you satisfied with your awareness of the following:	Level of Satisfaction						
8.	Without enough funds, maintenance works cannot be undertaken.	1	2	3	4	5	6	7
9.	Without enough funds, quality of maintenance will be affected.	1	2	3	4	5	6	7
10.	Maintenance charge is a different issue from quit rent imposed by the local authority.	1	2	3	4	5	6	7

F1.4: Owner-occupants' understanding of the Acts relating to housing management and maintenance.

	How well are you satisfied with your understanding on the following:	Level of Understanding						
11.	Understanding of Strata Title Act 1985 (Act318)	1	2	3	4	5	6	7
12.	Understanding of Building Maintenance and Common Facilities Act (Maintenance and Management) Act 663	1	2	3	4	5	6	7
13.	Understanding of the definition on common properties and facilities as stated in both of the above Acts.	1	2	3	4	5	6	7
14.	Understanding the roles and responsibilities as an owner of a parcel/unit as stated in the above Acts.	1	2	3	4	5	6	7

F1.5: Owner-occupants' knowledge of housing management and maintenance

	How well are you satisfied with your knowledge of the following:	Level of Satisfaction						
15.	The purpose of the maintenance charge	1	2	3	4	5	6	7
16.	Good maintenance requires planning and scheduling in order to avoid unplanned maintenance works.	1	2	3	4	5	6	7
17.	Maintenance cost is likely to be influenced by the cost of labour and material, and are likely to change time to time.	1	2	3	4	5	6	7
18.	Age of building is likely to influence the maintenance cost.	1	2	3	4	5	6	7
19.	Delay in maintenance works can worsen the condition and will then require extra funds to fix.							
20.	Vandalism is the common factor affecting and deteriorating the quality or performance of common properties and facilities.	1	2	3	4	5	6	7

F2.0 : OWNERS' ORGANISATIONAL COMPETENCY**F2.1: Owners' Organisational commitment**

	How well are you satisfied with your Owners' Organisational commitment on:	Level of satisfaction						
21.	Encouraging the residents to participate in activities organized by the owners' organisation.	1	2	3	4	5	6	7
22.	Acting on behalf of the residents in addressing residential concern.	1	2	3	4	5	6	7
23.	Accountability to the residents.	1	2	3	4	5	6	7
24.	Sharing the organisation's common values and goals with residents	1	2	3	4	5	6	7

F2.2: Owners' Organisational leadership

	How well are you satisfied with your Owners' Organisational leadership on:	Level of satisfaction						
25.	Ability in handling meetings	1	2	3	4	5	6	7
26.	Availability and willingness to talk to the residents	1	2	3	4	5	6	7
27.	Ability to influence residents	1	2	3	4	5	6	7
28.	Ease of communication with residents	1	2	3	4	5	6	7
29.	Sharing information and knowledge with residents on issues regarding their housing management and maintenance.	1	2	3	4	5	6	7

F2.3: Owners' Organisational knowledge and skill

	How well are you satisfied with your Owners' Organisational leadership knowledge and skill on:	Level of satisfaction						
30.	Understanding the Acts associated with housing maintenance and management.	1	2	3	4	5	6	7
31.	Responding and advising resident for any matters related to housing maintenance and management.	1	2	3	4	5	6	7
32.	Providing guidance to the resident on any matters related to the Acts and housing management and maintenance.	1	2	3	4	5	6	7

F3.0 : MANAGING AGENT'S COMPETENCY**F3.1: Managing agent's knowledge and skill**

	How well are you satisfied with your managing agent's knowledge and skill on:	Level of satisfaction						
33.	Handling meetings	1	2	3	4	5	6	7
34.	Promoting resident participation	1	2	3	4	5	6	7
35.	Providing guidance and skill to residents on issues related to housing management and maintenance.	1	2	3	4	5	6	7
36.	Providing guidance and skill to resident on issues related to the Acts associated with housing management and maintenance.	1	2	3	4	5	6	7

F3.2: Managing agent's service culture

	How well are you satisfied with your managing agent's service culture on:	Level of satisfaction						
37.	Committed providing quality services	1	2	3	4	5	6	7
38	Front-line staff adapting professionalism	1	2	3	4	5	6	7
39	Front-line staff adapting friendliness attitude towards the residents.	1	2	3	4	5	6	7
40	Adapting people and customer oriented culture	1	2	3	4	5	6	7
41	Committed to listen and understand the needs and expectations of the residents.	1	2	3	4	5	6	7
42	Transparency in any issue associated with housing management and maintenance.	1	2	3	4	5	6	7
43	Sharing and transferring knowledge and skill about housing management and maintenance to the residents and Owners' Organisation.	1	2	3	4	5	6	7

SECTION G:	COMMENTS AND OPINIONS
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If you have any comment or opinion regarding housing management and maintenance, kindly please specify:

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THANK YOU FOR COMPLETING THIS QUESTIONNAIRE.

I sincerely appreciate your time and cooperation. Please check to make sure that you have not skipped any question inadvertently.

Please post this questionnaire by using the enclosed reply-paid envelope

Table A3.2: Malaysian language version

**Kajiselidik Pengurusan Perumahan di Malaysia :
Pandangan Malaysia dari Perspektif Perumahan
Pangsapuri Kos Rendah**

Objektif soalan kajiselidik ini adalah bertujuan untuk mengukur **TAHAP KEPUASAN** dan **TAHAP PERSETUJUAN** anda atas perkara-perkara yang dijangka mempengaruhi keberkesanan pengurusan perumahan Pangsapuri Kos Rendah.

Pengalaman anda menetap di perumahan Pangsapuri Kos Rendah adalah amat dihargai dan diperlukan dalam usaha untuk mendapatkan gambaran semasa dan keperluan untuk menambahbaik amalan paraktik semasa pengurusan perumahan Pangsapuri Kos Rendah di Malaysia.

ARAHAN KEPADA RESPONDEN

1. Tujuan kajiselidik ini adalah untuk tujuan akademik sahaja. Maklumat yang anda berikan akan membantu kami untuk lebih memahami gambaran semasa dan juga untuk mencadangkan model keberkesanan pengurusan perumahan. Oleh itu kami amat berbesar hati sekiranya anda dapat menjawab soalan-soalan berkenaan berdasarkan pengalaman dan pengetahuan anda.
2. Soalan kajiselidik ini hendaklah dilengkapkan oleh individu yang bertanggungjawab ke atas perkara-perkara yang berkaitan dengan pengurusan perumahan. Ketua keluarga atau pemilik unit layak untuk melengkapkan soalan kajiselidik ini.
3. Maklumbalas anda adalah rahsia dan sulit. Hanya ahli kumpulan penyelidikan sahaja yang berhak untuk melihat jawapan yang diberi. Soalan kajiselidik yang telah dijawab tidak akan didedahkan kepada sesiapa melainkan ahli kumpulan penyelidik sahaja.
4. Sila ambil perhatian bahawa bagi mana-mana soalan yang tidak dijawab, kumpulan penyelidik akan menganggap bahawa anda tidak mempunyai informasi atau tidak terlibat dengan soalan tersebut.
5. Untuk sebarang pertanyaan berkenaan dengan kajian ini, sila hubungi penyelidik:
Nor Rima Muhamad Ariff
No Talifon: 012 3233025 (hp)
Email: rimaariff@yahoo.com.sg
6. Sila kembalikan borang soalan kajiselidik yang telah lengkap kepada penyelidik dengan menggunakan sampul surat beralamat sendiri yang disertakan selewat-lewatnya dua minggu dari tarikh anda menerima soalan kajiselidik ini.

Terima kasih atas kerjasama dan masa yang diluangkan. Kami amat menghargai bantuan anda bagi melengkapkan kajiselidik ini.

Nor Rima Muhamad Ariff

Penyelidik (pelajar PhD)

School of Architecture and Building

Deakin University, Waterfront Campus

Victoria, Australia

-2-

Responden: Penduduk

SEKSYEN A:	DEMOGRAFI RESPONDEN
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Bagi setiap soalan sila tandakan (/) pada satu jawapan sahaja

<p>1 Umur anda</p> <table style="width: 100%;"> <tr><td style="width: 40px;"><input type="checkbox"/></td><td>20 – 30</td></tr> <tr><td><input type="checkbox"/></td><td>31 – 40</td></tr> <tr><td><input type="checkbox"/></td><td>41 – 50</td></tr> <tr><td><input type="checkbox"/></td><td>lebih dari 50</td></tr> </table>	<input type="checkbox"/>	20 – 30	<input type="checkbox"/>	31 – 40	<input type="checkbox"/>	41 – 50	<input type="checkbox"/>	lebih dari 50	<p>2 Jantina anda</p> <table style="width: 100%;"> <tr><td style="width: 40px;"><input type="checkbox"/></td><td>Lelaki</td></tr> <tr><td><input type="checkbox"/></td><td>Perempuan</td></tr> </table>	<input type="checkbox"/>	Lelaki	<input type="checkbox"/>	Perempuan								
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<p>3 Taraf perkahwinan anda</p> <table style="width: 100%;"> <tr><td style="width: 40px;"><input type="checkbox"/></td><td>Berkahwin</td></tr> <tr><td><input type="checkbox"/></td><td>Tidak berkahwin</td></tr> <tr><td><input type="checkbox"/></td><td>Ibu/Bapa Tunggal</td></tr> </table>	<input type="checkbox"/>	Berkahwin	<input type="checkbox"/>	Tidak berkahwin	<input type="checkbox"/>	Ibu/Bapa Tunggal	<p>4 Bilangan penghuni tinggal bersama anda</p> <table style="width: 100%;"> <tr><td style="width: 40px;"><input type="checkbox"/></td><td>1 – 5 orang</td></tr> <tr><td><input type="checkbox"/></td><td>6 – 10 orang</td></tr> <tr><td><input type="checkbox"/></td><td>lebih dari 10 orang</td></tr> </table>	<input type="checkbox"/>	1 – 5 orang	<input type="checkbox"/>	6 – 10 orang	<input type="checkbox"/>	lebih dari 10 orang								
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<p>5 Bilangan anak tinggal bersama anda (sekiranya telah berkahwin).</p> <table style="width: 100%;"> <tr><td style="width: 40px;"><input type="checkbox"/></td><td>Tiada</td></tr> <tr><td><input type="checkbox"/></td><td>1 – 5 orang</td></tr> <tr><td><input type="checkbox"/></td><td>lebih dari 5 orang</td></tr> </table>	<input type="checkbox"/>	Tiada	<input type="checkbox"/>	1 – 5 orang	<input type="checkbox"/>	lebih dari 5 orang	<p>6 Tempoh anda menetap di unit sekarang.</p> <table style="width: 100%;"> <tr><td style="width: 40px;"><input type="checkbox"/></td><td>Kurang dari 1 tahun</td></tr> <tr><td><input type="checkbox"/></td><td>1 hingga 5 tahun</td></tr> <tr><td><input type="checkbox"/></td><td>5 hingga 10 tahun</td></tr> <tr><td><input type="checkbox"/></td><td>10 hingga 15 tahun</td></tr> <tr><td><input type="checkbox"/></td><td>Lebih dari 15 tahun</td></tr> </table>	<input type="checkbox"/>	Kurang dari 1 tahun	<input type="checkbox"/>	1 hingga 5 tahun	<input type="checkbox"/>	5 hingga 10 tahun	<input type="checkbox"/>	10 hingga 15 tahun	<input type="checkbox"/>	Lebih dari 15 tahun				
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<input type="checkbox"/>	Kurang dari 1 tahun																				
<input type="checkbox"/>	1 hingga 5 tahun																				
<input type="checkbox"/>	5 hingga 10 tahun																				
<input type="checkbox"/>	10 hingga 15 tahun																				
<input type="checkbox"/>	Lebih dari 15 tahun																				
<p>7 Tempat tinggal anda sebelum berpindah ke perumahan sekarang</p> <table style="width: 100%;"> <tr><td style="width: 40px;"><input type="checkbox"/></td><td>Setinggan (pemilik atau penyewa)</td></tr> <tr><td><input type="checkbox"/></td><td>Menyewa (selain setinggan)</td></tr> <tr><td><input type="checkbox"/></td><td>Tinggal bersama keluarga</td></tr> <tr><td><input type="checkbox"/></td><td>Lain-lain (sila nyatakan</td></tr> <tr><td></td><td>.....</td></tr> </table>	<input type="checkbox"/>	Setinggan (pemilik atau penyewa)	<input type="checkbox"/>	Menyewa (selain setinggan)	<input type="checkbox"/>	Tinggal bersama keluarga	<input type="checkbox"/>	Lain-lain (sila nyatakan		<p>8 Pekerjaan anda sekarang</p> <table style="width: 100%;"> <tr><td style="width: 40px;"><input type="checkbox"/></td><td>Pekerja tetap</td></tr> <tr><td><input type="checkbox"/></td><td>Pekerja separuh masa</td></tr> <tr><td><input type="checkbox"/></td><td>Bekerja sendiri</td></tr> <tr><td><input type="checkbox"/></td><td>Pesara</td></tr> <tr><td><input type="checkbox"/></td><td>Tidak bekerja</td></tr> </table>	<input type="checkbox"/>	Pekerja tetap	<input type="checkbox"/>	Pekerja separuh masa	<input type="checkbox"/>	Bekerja sendiri	<input type="checkbox"/>	Pesara	<input type="checkbox"/>	Tidak bekerja
<input type="checkbox"/>	Setinggan (pemilik atau penyewa)																				
<input type="checkbox"/>	Menyewa (selain setinggan)																				
<input type="checkbox"/>	Tinggal bersama keluarga																				
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<input type="checkbox"/>	Pekerja separuh masa																				
<input type="checkbox"/>	Bekerja sendiri																				
<input type="checkbox"/>	Pesara																				
<input type="checkbox"/>	Tidak bekerja																				
<p>9 Pendidikan tertinggi anda</p> <table style="width: 100%;"> <tr><td style="width: 40px;"><input type="checkbox"/></td><td>Sekolah rendah</td></tr> <tr><td><input type="checkbox"/></td><td>Sekolah menengah</td></tr> <tr><td><input type="checkbox"/></td><td>Sijil</td></tr> <tr><td><input type="checkbox"/></td><td>Diploma keatas</td></tr> </table>	<input type="checkbox"/>	Sekolah rendah	<input type="checkbox"/>	Sekolah menengah	<input type="checkbox"/>	Sijil	<input type="checkbox"/>	Diploma keatas	<p>10 Pendapatan kasar isi rumah anda</p> <table style="width: 100%;"> <tr><td style="width: 40px;"><input type="checkbox"/></td><td>Dibawah RM1000</td></tr> <tr><td><input type="checkbox"/></td><td>RM1001 – RM1500</td></tr> <tr><td><input type="checkbox"/></td><td>RM1501 – RM2000</td></tr> <tr><td><input type="checkbox"/></td><td>Lebih dari RM2001</td></tr> </table>	<input type="checkbox"/>	Dibawah RM1000	<input type="checkbox"/>	RM1001 – RM1500	<input type="checkbox"/>	RM1501 – RM2000	<input type="checkbox"/>	Lebih dari RM2001				
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<input type="checkbox"/>	RM1001 – RM1500																				
<input type="checkbox"/>	RM1501 – RM2000																				
<input type="checkbox"/>	Lebih dari RM2001																				
<p>11 Anggaran tempoh masa untuk anda terus menetap di kawasan perumahan sekarang.</p> <table style="width: 100%;"> <tr><td style="width: 40px;"><input type="checkbox"/></td><td>2 tahun atau kurang</td></tr> <tr><td><input type="checkbox"/></td><td>3 tahun hingga 10 tahun</td></tr> <tr><td><input type="checkbox"/></td><td>Lebih 11 tahun</td></tr> <tr><td><input type="checkbox"/></td><td>Selamanya (sehingga akhir hayat)</td></tr> </table>		<input type="checkbox"/>	2 tahun atau kurang	<input type="checkbox"/>	3 tahun hingga 10 tahun	<input type="checkbox"/>	Lebih 11 tahun	<input type="checkbox"/>	Selamanya (sehingga akhir hayat)												
<input type="checkbox"/>	2 tahun atau kurang																				
<input type="checkbox"/>	3 tahun hingga 10 tahun																				
<input type="checkbox"/>	Lebih 11 tahun																				
<input type="checkbox"/>	Selamanya (sehingga akhir hayat)																				

SEKSYEN B :**DEMOGRAFI PERUMAHAN RESPONDEN**

Bagi setiap soalan sila tandakan (/) pada satu jawapan sahaja

12	Kawasan perumahan anda berada di bawah pentadbiran pihak berkuasa:	
	<input type="checkbox"/> Majlis Bandaraya Shah Alam	<input type="checkbox"/> Majlis Perbandaran Ampang Jaya
	<input type="checkbox"/> Majlis Perbandaran Petaling Jaya	
13	Organisasi penduduk yang bertanggungjawab terhadap pengurusan perumahan anda.	14 Adakah anda pernah menjadi ahli jawatankuasa kepada organisasi berkenaan?
	<input type="checkbox"/> Persatuan Penduduk	<input type="checkbox"/> Ya (sila nyatakan jawatan anda)
	<input type="checkbox"/> Perbadanan Pengurusan (MC)	
	<input type="checkbox"/> Badan Pengurusan Bersama
	<input type="checkbox"/> Tidak Pasti	Tidak
15	Bagaimanakah penyertaan anda di dalam aktiviti-aktiviti kemasyarakatan anjuran Organisasi Penduduk perumahan anda?	16 Bagaimanakah penyertaan anda di dalam mesyuarat anjuran Organisasi Penduduk perumahan anda?
	<input type="checkbox"/> Sangat Aktif	<input type="checkbox"/> Sangat Aktif
	<input type="checkbox"/> Aktif	<input type="checkbox"/> Aktif
	<input type="checkbox"/> Kurang aktif	<input type="checkbox"/> Kurang aktif
	<input type="checkbox"/> Tidak Aktif	<input type="checkbox"/> Tidak Aktif

Sila rujuk arahan di bawah sebelum menjawab soalan-soalan berikutnya:

- a) “Kejiranan” dan “jiran” hendaklah bermaksud di dalam kawasan perumahan anda.

Seperti contoh, Jika “Perumahan A” terdiri daripada 5 blok kediaman, “Kejiranan” hendaklah terhad di dalam lingkungan kawasan “Perumahan A” sahaja. Definasi “Jiran” pula merujuk kepada penghuni kelima-lima blok berkenaan (pemilik unit dan juga penyewa). Manakala harta bersama adalah merujuk kepada terma “harta bersama” sepertimana yang tertakluk didalam Akta Bangunan dan Harta Bersama (Penyenggaraan dan Pengurusan) 2007 (Act 663).

- b) “Tempat tinggal” merujuk kepada fizikal kediaman perumahan dan unit individu.
- c) “Organisasi penduduk” merujuk kepada organisasi semasa perumahan anda yang mewakili pembeli dan penduduk keseluruhannya di dalam pengurusan perumahan sepertimana jawapan yang telah anda berikan kepada Soalan 13.
- d) “Pemilik” di dalam kajian ini merujuk kepada pemilik unit yang mendiami unit yang dibeli.
- e) “Penyewa” merujuk kepada penghuni yang menyewa unit dari pemilik unit.
- f) “Penduduk” adalah terma umum yang merujuk kepada pemilik unit yang mendiami kediaman mereka dan juga penyewa.

- g) Bagi perumahan yang tidak menggunakan khidmat agen pengurusan, sila abaikan Soalan C5, F3.1 dan F.3.2

PENGUKURAN BAHAGIAN 1

Soalan-soalan **SEKSYEN C**, adalah berkaitan dengan faktor-faktor yang dijangka akan atau tidak tidak mempengaruhi keberkesanan pengurusan dan penyenggaraan perumahan Pangsapuri Kos Rendah. Berdasarkan pengalaman, anda dikehendaki memberi pandangan dalam bentuk **TAHAP PERSETUJUAN** anda berdasarkan soalan-soalan berkenaan.

Sila **BULATKAN** skor anda di sebelah kanan setiap soalan berdasarkan respon anda terhadap TAHAP PERSETUJUAN anda bagi setiap soalan dengan menggunakan skala di bawah.

Skor	Tahap Persetujuan	Skor	Tahap Persetujuan
1	Sangat tidak setuju	5	Setuju
2	Tidak setuju	6	Amat setuju
3	Kurang setuju	7	Sangat amat setuju
4	Tidak pasti		

SEKSYEN C :	FAKTOR – FAKTOR PENTING MEMPENGARUHI KEBERKESANAN PENGURUSAN PERUMAHAN
--------------------	---

C1: Berdasarkan pengalaman anda bagi memastikan pengurusan perumahan dijalankan dengan efektif, adalah amat penting untuk:

		TAHAP PERSETUJUAN						
		1	2	3	4	5	6	7
1.	Pemilik mempunyai hubungan yang baik dengan organisasi penduduk							
2.	Pemilik mempunyai hubungan yang baik dengan kakitangan agen pengurusan.							
3.	AJK organisasi penduduk mempunyai hubungan yang baik dengan agen pengurusan.							
4.	Pemilik bergiat aktif dan menyertai aktiviti yang diadakan oleh organisasi penduduk.							
5.	Organisasi penduduk bergiat aktif bertindak sebagai orang tengah kepada pemilik.							
6.	Ajen pengurusan melibatkan diri di dalam aktiviti yang diadakan oleh organisasi penduduk.							
7.	Penyewa melibatkan diri dalam pengurusan perumahan							

C2: Berdasarkan pengalaman anda bagi memastikan pengurusan perumahan dijalankan dengan efektif, adalah amat penting bagi PEMILIK untuk:

		TAHAP PERSETUJUAN						
		1	2	3	4	5	6	7
1.	Berpuashati dengan keadaan tempat tinggal	1	2	3	4	5	6	7
2.	Berpuashati dengan persekitaran kejiranan	1	2	3	4	5	6	7
3.	Berpuashati dengan hubungan sesama jiran	1	2	3	4	5	6	7

C3: Berdasarkan pengalaman anda bagi memastikan pengurusan perumahan dijalankan dengan efektif, adalah amat penting bagi PEMILIK untuk:

		TAHAP PERSETUJUAN						
		1	2	3	4	5	6	7
1.	Menghargai gaya hidup di perumahan bertingkat	1	2	3	4	5	6	7
2.	Mempunyai kesedaran tentang keperluan penyenggaraan	1	2	3	4	5	6	7
3.	Mempunyai kesedaran tentang kos caj penyenggaraan	1	2	3	4	5	6	7
4.	Memahami Akta berkaitan dengan pengurusan dan penyenggaraan perumahan	1	2	3	4	5	6	7
5.	Mempunyai pengetahuan dan kemahiran (teknikal dan pentadbiran) berkenaan pengurusan perumahan	1	2	3	4	5	6	7

C4: Berdasarkan pengalaman anda bagi memastikan pengurusan perumahan dijalankan dengan efektif, adalah amat penting bagi ORGANISASI PENDUDUK mempunyai keupayaan untuk:

		TAHAP PERSETUJUAN						
		1	2	3	4	5	6	7
1.	Memberi kerjasama sepenuhnya dalam pengurusan perumahan.	1	2	3	4	5	6	7
2.	Membentuk kemahiran memimpin.	1	2	3	4	5	6	7
3.	Memahami Akta berkaitan dengan pengurusan perumahan	1	2	3	4	5	6	7
4.	Mempunyai pengetahuan dan kemahiran (teknikal dan pentadbiran) berkenaan pengurusan perumahan	1	2	3	4	5	6	7

C5: Berdasarkan pengalaman anda bagi memastikan pengurusan perumahan dijalankan dengan efektif, adalah amat penting bagi KAKITANGAN AJEN PENGURUSAN untuk

		TAHAP PERSETUJUAN						
		1	2	3	4	5	6	7
1.	Mempunyai pengetahuan dan kemahiran teknikal berkenaan pengurusan perumahan.	1	2	3	4	5	6	7
2.	Mempunyai pengetahuan dan kemahiran pentadbiran yang kukuh berkenaan pengurusan (seperti contoh berkenaan peruntukan undang-undang).	1	2	3	4	5	6	7
3.	Mempunyai budaya kerja berorientasikan pelanggan (penduduk).	1	2	3	4	5	6	7

PENGUKURAN BAHAGIAN 2

Soalan-soalan Seksyen D, E dan F adalah berkaitan dengan pengalaman anda sebagai penduduk berkaitan dengan hal-ehwal pengurusan dan penyenggaraan perumahan anda. Untuk setiap soalan, anda dikehendaki memberi maklumbalas anda dalam bentuk **TAHAP KEPUASAN**

Sila **BULATKAN** skor anda di sebelah kanan setiap soalan berdasarkan respon anda terhadap TAHAP KEPUASAN bagi setiap soalan dengan menggunakan skala di bawah.

Skor	Tahap kepuasan	Skor	Tahap kepuasan
1	Sangat tidak berpuas hati	5	Berpuas hati
2	Tidak berpuas hati	6	Amat berpuas hati
3	Kurang berpuas hati	7	Sangat amat berpuas hati
4	Tidak pasti		

SEKSYEN D : KEBERKESANAN PENGURUSAN PERUMAHAN

D1: Kepuasan Terhadap Hubungan Pihak-pihak Berkenaan

	Apakah tahap kepuasan anda terhadap perkara-perkara di bawah:	TAHAP KEPUASAN						
1.	Hubungan antara pemilik dengan organisasi penduduk.	1	2	3	4	5	6	7
2.	Hubungan antara pemilik dengan kakitangan agen pengurusan.	1	2	3	4	5	6	7
3.	Hubungan antara AJK organisasi penduduk dengan kakitangan agen pengurusan.	1	2	3	4	5	6	7
4.	Kerjasama dan penglibatan pemilik dalam aktiviti anjuran organisasi penduduk.	1	2	3	4	5	6	7
5.	Organisasi penduduk bertindak bagi pihak penduduk.	1	2	3	4	5	6	7
6.	Kerjasama dan penglibatan agen pengurusan dalam aktiviti anjuran organisasi penduduk.	1	2	3	4	5	6	7
7.	Kerjasama dan penglibatan penyewa dalam pengurusan perumahan.	1	2	3	4	5	6	7

SEKSYEN E: KEPUASAN TERHADAP TEMPAT TINGGAL, KAWASAN KEJIRANAN DAN JIRAN TETANGGA

E1: Kepuasan terhadap TEMPAT TINGGAL.

	Apakah tahap kepuasan anda terhadap perkara-perkara di bawah:	TAHAP KEPUASAN						
1.	Keseluruhan ciri-ciri kawasan perumahan anda.	1	2	3	4	5	6	7
2.	Tahap penyenggaraan secara keseluruhan kawasan perumahan anda.	1	2	3	4	5	6	7
3.	Keadaan fizikal unit kediaman anda.	1	2	3	4	5	6	7
4.	Tahap penyenggaraan secara keseluruhan unit-unit kediaman penduduk.	1	2	3	4	5	6	7

E2: Kepuasan terhadap PERSEKITARAN KEJIRANAN.

	Apakah tahap kepuasan anda terhadap perkara-perkara di bawah:	TAHAP KEPUASAN						
5.	Persekitaran kejiranan di kawasan perumahan anda.	1	2	3	4	5	6	7
6.	Keakraban hubung kejiranan anda.	1	2	3	4	5	6	7
7.	Kawasan kejiranan sebagai tempat yang baik untuk didiami.	1	2	3	4	5	6	7
8.	Kawasan kejiranan sebagai tempat yang selamat untuk didiami.	1	2	3	4	5	6	7
9.	Fasiliti komuniti di kawasan perumahan anda (contoh : taman permainan kanak-kanak, kawasan rehat dan lain-lain)	1	2	3	4	5	6	7

E3: Kepuasan terhadap JIRAN TETANGGA.

	Apakah tahap kepuasan anda terhadap perkara-perkara di bawah:	TAHAP KEPUASAN						
10.	Interaksi dan hubungan sesama pemilik unit.	1	2	3	4	5	6	7
11.	Interaksi dan hubungan antara pemilik dengan penyewa.	1	2	3	4	5	6	7
12.	Penglibatan pemilik dalam aktiviti kemasyarakatan anjuran AJK organisasi penduduk.	1	2	3	4	5	6	7
13.	Penglibatan penyewa dalam aktiviti kemasyarakatan anjuran AJK organisasi penduduk.	1	2	3	4	5	6	7

SEKSYEN F:**FAKTOR-FAKTOR PENGURUSAN PERUMAHAN YANG EFEKTIF****F1.0: KOMPETENSI PEMILIK****F1.1: Penghargaan pemilik terhadap gaya hidup di perumahan bertingkat**

	Apakah tahap kepuasan anda terhadap penghargaan anda mengenai perkara-perkara di bawah:	TAHAP KEPUASAN						
1.	Pemilik perlu berkongsi fasiliti dan harta bersama yang disediakan di kawasan perumahan	1	2	3	4	5	6	7
2.	Pemilik perlu mempunyai tanggungjawab bersama untuk menjaga fasiliti dan harta bersama seperti yang tertakluk dalam Akta.	1	2	3	4	5	6	7
3.	Pemilik perlu menyertai aktiviti-aktiviti anjuran organisasi penduduk.	1	2	3	4	5	6	7
4.	Setiap individu pemilik perlu mempunyai tanggungjawab untuk menyanggara unit masing-masing.	1	2	3	4	5	6	7

F1.2: Kesedaran pemilik terhadap keperluan penyenggaraan

	Apakah tahap kepuasan anda terhadap kesedaran anda mengenai perkara-perkara di bawah:	TAHAP KEPUASAN						
5.	Pentingnya penyenggaraan untuk memastikan kawasan perumahan selamat untuk didiami.	1	2	3	4	5	6	7
6.	Pentingnya penyenggaraan untuk memelihara keadaan fizikal perumahan dari masalah keusangan.	1	2	3	4	5	6	7
7.	Pentingnya penyenggaraan untuk mengekalkan atau meningkatkan nilai harta kawasan perumahan	1	2	3	4	5	6	7

F1.3: Kesedaran pemilik terhadap kos caj penyenggaraan

	Apakah tahap kepuasan anda terhadap kesedaran anda mengenai perkara-perkara di bawah:	TAHAP KEPUASAN						
8.	Tanpa dana yang mencukupi, kerja-kerja penyenggaraan tidak dapat dilakukan dengan teratur.	1	2	3	4	5	6	7
9.	Tanpa dana yang mencukupi, kualiti kerja penyenggaraan akan terjejas.	1	2	3	4	5	6	7
10.	Caj penyenggaraan adalah berbeza dengan cukai pintu yang dikenakan oleh pihak berkuasa tempatan.	1	2	3	4	5	6	7

F1.4: Kefahaman pemilik terhadap akta-akta berkaitan pengurusan dan penyenggaraan perumahan

	Apakah tahap kepuasan anda terhadap kefahaman anda mengenai perkara-perkara di bawah:	TAHAP KEPUASAN						
11.	Memahami Akta 1985 Hakmilik Strata (Akta 318)	1	2	3	4	5	6	7
12.	Memahami Akta Penyenggaraan Bangunan dan Harta Bersama (Akta 663)	1	2	3	4	5	6	7
13.	Memahami definasi fasiliti dan harta bersama seperti yang dinyatakan di dalam kedua-dua akta di atas.	1	2	3	4	5	6	7
14.	Memahami tugas dan tanggungjawab sebagai pemilik unit seperti yang dinyatakan di dalam kedua-dua akta di atas.	1	2	3	4	5	6	7

F1.5: Pengetahuan penduduk berkenaan pengurusan dan penyenggaraan perumahan

	Apakah tahap kepuasan anda terhadap pengetahuan anda mengenai perkara-perkara di bawah:	TAHAP KEPUASAN						
15.	Tujuan adanya caj penyenggaraan	1	2	3	4	5	6	7
16.	Penyenggaraan yang baik memerlukan perancangan berjadual.	1	2	3	4	5	6	7
17.	Kos penyenggaraan dipengaruhi oleh kos tenaga kerja dan bahan yang akan berubah dari masa kesemasa.	1	2	3	4	5	6	7
18.	Umur sesuatu bangunan boleh mempengaruhi kos penyenggaraan	1	2	3	4	5	6	7
19.	Kerja-kerja penyenggaraan yang tertangguh boleh memburukkan lagi keadaan dan akan meningkatkan kos senggara.	1	2	3	4	5	6	7
20.	Vandalisma adalah faktor utama yang memberi kesan dan akan memburukkan kualiti fasiliti dan harta bersama.	1	2	3	4	5	6	7

F2.0: KOMPETENSI ORGANISASI PENDUDUK**F2.1: Komitmen Organisasi Penduduk.**

	Apakah tahap kepuasan anda terhadap komitmen organisasi penduduk anda di dalam:	TAHAP KEPUASAN						
21.	Menggalakkan penyertaan penduduk di dalam aktiviti-aktiviti anjuran organisasi penduduk.	1	2	3	4	5	6	7
22.	Bertindak bagi pihak penduduk dalam mengetengahkan masalah yang dikenalpasti	1	2	3	4	5	6	7
23.	Bertanggungjawab kepada penduduk.	1	2	3	4	5	6	7
24.	Berkongsi visi dan misi bersama penduduk	1	2	3	4	5	6	7

F2.2: Kepimpinan Organisasi Penduduk

	Apakah tahap kepuasan anda terhadap kepimpinan organisasi penduduk anda di dalam:	TAHAP KEPUASAN						
25.	Mengadakan mesyuarat	1	2	3	4	5	6	7
26.	Meluangkan masa untuk berbincang dengan penduduk	1	2	3	4	5	6	7
27.	Mempengaruhi penduduk	1	2	3	4	5	6	7
28.	Berkomunikasi dengan penduduk	1	2	3	4	5	6	7
29.	Berkongsi informasi dan pengetahuan dengan penduduk mengenai perkara berkaitan pengurusan dan penyenggaraan perumahan.	1	2	3	4	5	6	7

F2.3: Pengetahuan dan kemahiran Organisasi Penduduk.

	Apakah tahap kepuasan anda terhadap pengetahuan dan kemahiran organisasi penduduk anda di dalam:	TAHAP KEPUASAN						
30.	Memahami akta-akta berkaitan pengurusan dan penyenggaraan perumahan.	1	2	3	4	5	6	7
31.	Memberi panduan kepada penduduk berkenaan akta-akta dan perkara-perkara berkaitan pengurusan dan penyenggaraan perumahan.	1	2	3	4	5	6	7
32.	Memberi tindak balas dan nasihat kepada penduduk tentang hal-hal yang berkaitan pengurusan dan penyenggaraan perumahan.	1	2	3	4	5	6	7

F3.0: KOMPETENSI AJEN PENGURUSAN (jika berkenaan)**F3.1: Pengetahuan dan kemahiran Ajen Pengurusan**

	Apakah tahap kepuasan anda terhadap pengetahuan dan kemahiran agen pengurusan anda di dalam:	TAHAP KEPUASAN						
33.	Menguruskan mesyuarat	1	2	3	4	5	6	7
34.	Menggalakkan penglibatan penduduk	1	2	3	4	5	6	7
35.	Menyediakan panduan dan kemahiran kepada penduduk dalam isu-isu pengurusan dan penyenggaraan perumahan	1	2	3	4	5	6	7
36.	Memberi panduan dan kemahiran kepada penduduk berkaitan dengan akta-akta pengurusan dan penyenggaraan perumahan.	1	2	3	4	5	6	7

F3.2: Budaya kerja Ajen Pengurusan

	Apakah tahap kepuasan anda terhadap budaya kerja ajen pengurusan anda di dalam:	TAHAP KEPUASAN						
37.	Komited memberi perkhidmatan yang berkualiti	1	2	3	4	5	6	7
38.	Mengamalkan sikap profesional di dalam menjalankan tugas.	1	2	3	4	5	6	7
39.	Mengamalkan sikap mesra pelanggan (terhadap organisasi penduduk dan penduduk)	1	2	3	4	5	6	7
40.	Mengamalkan budaya berorientasikan pelanggan.	1	2	3	4	5	6	7
41.	Komited di dalam mendengar dan prihatin dengan keperluan dan kehendak penduduk.	1	2	3	4	5	6	7
42.	Telus dalam menangani sebarang isu berkenaan pengurusan perumahan.	1	2	3	4	5	6	7
43.	Berkongsi informasi dan menyalurkan pengetahuan dan kemahiran mengenai pengurusan perumahan kepada organisasi penduduk dan penduduk	1	2	3	4	5	6	7

SEKSYEN G:**KOMEN DAN CADANGAN**

Sila nyatakan jika anda mempunyai sebarang komen dan cadangan berkenaan pengurusan perumahan Pangsapuri Kos Rendah.

TERIMA KASIH KERANA MELENGKAPKAN BORANG KAJISELIDIK INI.

Kami amat menghargai masa dan kerjasama yang telah anda beri.
Diharap anda dapat membuat semakan semula untuk memastikan
tiada soalan yang tidak di jawab.

Sila poskan Borang Kajiselidik ini dengan menggunakan sampul surat yang disediakan

Appendix 4: Missing Data

Table A4. 1: Summary of cases concerned with missing data (owner-occupants)

Number of missing data per case	Number of cases		Percent of sample	
	All cases	Affected cases only	All cases	Affected cases only
0	562		90.94	
1	44	44	7.12	78.6
2	2	2	0.32	3.57
3	9	9	1.46	16.07
5	1	1	0.16	1.79
Total	618	56 (9.06%)	100%	100%

Table A4. 2: Summary statistics of missing data for original sample

Variables/questions	Number of case	Mean	Standard Deviation	Missing	
				Count	Percent
Objective variables					
Age	616	NA	NA	2	.3
Gender	612	NA	NA	6	1.0
Marital	616	NA	NA	2	.3
No of people living together	610	1.26	.454	8	1.3
No of children living together	610	1.76	.541	8	1.3
Length of residency	611	3.89	1.243	7	1.1
Previous accommodation	607	NA	NA	11	1.8
Employment	617	NA	NA	1	.2
Education	613	2.32	.933	5	.8
Income	611	2.73	1.089	7	1.1
Mobility plan	616	3.28	1.026	2	.3
Committee	605	NA	NA	13	2.1
Part_activities	614	2.57	.714	4	.6
Part_meetings	615	2.54	.709	3	.5
Subjective variables					
fc10	617	5.22	1.133	1	.2
Total missing data				80	

Total questions= 101

Total missing of questions affected = 15

Percentage of questions affected = 14.9%

Appendix 5: Preliminary Survey's Results – The Description of Issues and Themes

ISSUES	DESCRIPTIONS	THEME
1. Knowledge level	<p>This is defined as:</p> <ul style="list-style-type: none"> a) Owners' and Managing Agents' knowledge about the relevant acts pertaining to housing management. According to the Chairmen the support from relevant agencies is inadequate and not continuous. For example, Chairmen from MCs claimed once they have established MC, there is no continuous supports from external agencies to assist them in the administration and technical skill of housing management. They only gain extra knowledge from other Chairmen's experiences. b) In term of owners' knowledge on relevant housing acts, according to the Chairmen and Managing Agents, owners have been explained about the acts by their RA/MC committee, by the developers and also through local authorities and state government's agencies' activities (such as road show organised by the Selangor Housing and Real Property Board). Researcher has attended one of the road show and from researcher's observation; the response was very disappointed and is not as expected when only a few residents who are concerned turn up but the majority do not. This leads to the owners' being ignorance on their rights and responsibilities. For example, Managing Agent LCH I claimed that some of the residents asked them to repair their units' defects which is clearly is not a common property. c) Owners' lack of knowledge on issues related to maintenance such as technical and repair. They cannot diagnose the defects and identify the source of the defects. For example such as blocked plumbing system by food wastes or someone has thrown bulky furniture into the refuse chute system. Furthermore, some don't understand that maintenance works such as lift requires high expenditure. With low maintenance charge collection, the repair works are always delayed. Conversely, residents normally assumed the delay is due to the lack of attention given by MA. As a result, they refused to pay the maintenance charge. 	Stakeholders' competencies
2. Lack of awareness	<p>This refers to the issue concerning lack of awareness living in multi-storey housing that requires shared communal properties and requires collective action by the residents. In addition, this theme referred to owners' responsibility on their own unit. Beside the common properties, they must take good care of their own individual unit by not simply altering their unit such as repainting the external wall, extending their unit especially for those living on the ground floor or leaving their unit in bad condition. Even tough the duty to take care of the individual unit is not in the act but owners' organisations are</p>	Stakeholders' competencies

	<p>encouraged forming the house rules that suit their housing environment. However this house rule is not an act therefore some residents simply ignore or some owners' organisation does not implement the house rule.</p> <p>Residents do not necessarily share the awareness or understand the necessity for housing maintenance and management that exists amongst the Chairmen. According to the Chairmen, some owners expected the same quality and response they received from the previous management without knowing that the developer sometimes subsidised the maintenance cost. The residents continuously question the capability of the Management Corporation's committee but at the same time they do not want to be in the committee or even participate in the activities conducted by the Management Corporation. Some owners will pay the maintenance charges but will not participate in the committee. Others even refuse to pay the maintenance charge. Frequently they ignore their responsibilities.</p>	
3. Lack of understanding	<p>This refers to the owners' attitude that refuses to pay the maintenance charge. Often the reasons given by the owners are not being satisfied with the housing conditions and maintenance performance. They always assume that any defects occur in the housing should be under the responsibility of the local authority while others argue that they have already pay their quit rent¹⁶, why do they need to pay the maintenance charge (this is true during the road show one of the owners' organisation committee issued this question to the local authority's representative)</p>	Stakeholders' competencies
4. Professionalism	<p>This suggests that some MAs lack of professionalism. They do not develop good relationship with the residents. Lack of communication and are not customers oriented. Furthermore the theme refers to the RA/MC committees' competencies which influence the residents' participation and relationship between stakeholders. MA agent claimed that the owners'</p>	Stakeholders' competencies

¹⁶ Quit rent is an amount of money that each property owner (including undeveloped land) needs to pay to the local authority twice a year. The rate is based on the value of the property. This quit rent is one of the income for the local authority and use to the benefit of the local society such as maintenance of the public spaces, drainage etc.

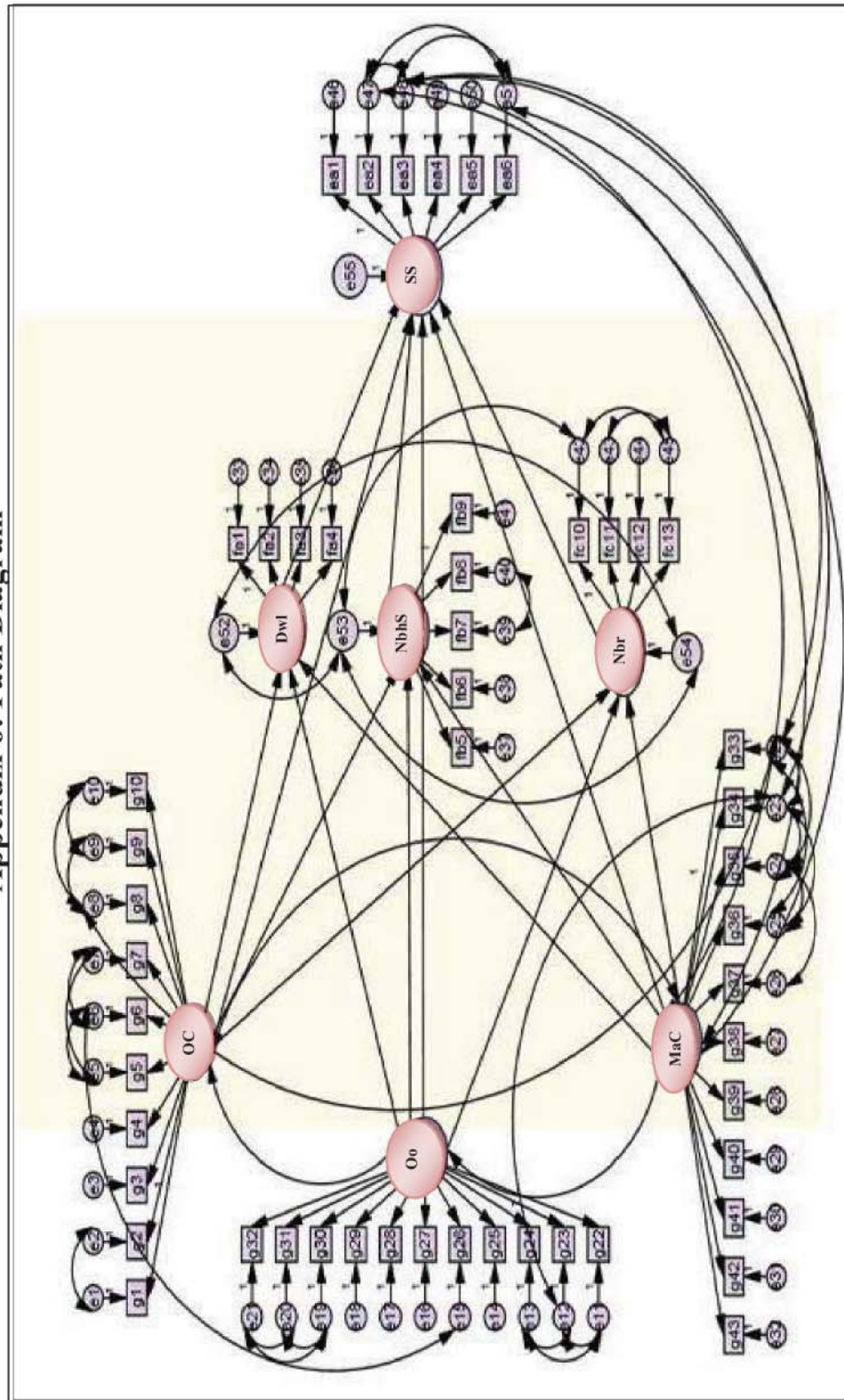
	<p>organisation committee is lacking in effort to reduce the communication gap between the residents and MA.</p> <p>For example Chairman LCH A claimed that they having difficulty when the original developer has sold the development to other developer (since Strata Title not yet issued). Mismanagement has put their housing in a bad condition. Even the lighting system on the common corridors and parking areas were malfunction. Through their Residents' Association they fight to manage the housing by themselves although the strata title application is still in the process. As a result, they are now happier managing the housing by themselves. The Chairman said at the moment they are now negotiating with the water supply provider for their monthly repayment arrears which was not paid by the developer.</p> <p>From the interviews, researcher identified various methods implemented by the Owners' Organisations in administering their housing management. Some use a computer for filing and record, and some just use paper and pen (especially for senior citizen Chairmen). Some cannot afford to employ external auditor to audit their account. Instead being help with the residents who has a little accounting background. In order to get more owners' participation, the organisation has created various positions in the committee and some of them are being paid or get their maintenance charge reduce.</p>	
5. Tenure	<p>This refers to the type of residential tenure mainly owners-occupiers and non owners-occupiers. The second type rents out their unit. Owners of the units are governing by the acts but not the renters. Maintenance charge is normally paid by the owners or by the tenants (depends on owner-tenant arrangement). According to the Chairmen, almost all the non owners-occupiers and renters are not interested to participate in meetings or in social activities organised by their organisation.</p> <p>Data collected demonstrates that the old housings tend to be nearly dominated by the tenants. This shows that there is the possibility of the new housings to be dominated by the tenant in the future. This happens when the original owners become</p>	<p>Neighbourhood cohesion</p> <p>Neighbourhood safety</p> <p>Neighbours</p>

		<p>wealthier and later move to an up-market property or if they are senior citizen, they move to stay with their extended family.</p> <p>A few Chairmen claimed they do not have the control over the tenants. From researcher's on-site observation, a few foreigners (mostly low-skill industrial workers) are seen renting the unit. According to some Chairmen, some of them create discomfort amongst the residents and moreover, the committee having difficulty communicate with them. For those who managed to set the rules, the owners who wish to rent out the units need to inform and get consent from the owners' organisation committees. In general, the foreign tenants are less likely to participate in the community compared to the local tenants.</p> <p>Another problem arises for unoccupied units of unknown owners. A few units have not been occupied for long period and the Owners' Organisations can not indicate who and where the owner is especially when the first owner has sold the unit. This contributes to the low collection of maintenance charge.</p>	relationship
7.	Dwelling and surrounding	<p>This suggests that:</p> <p>a) According to Chairmen, several residents are already satisfied with their current unit. Most of them previously resided in squatters' and slums areas that lacked basic utilities. For them the current unit is good enough and don't bother continue creating better living environment. Thus, this mentality has brought the housing estate to be degraded becoming slums areas.</p> <p>b) Some are concerned with their living environment since their dwelling is their live investment. They want their family to feel secure, comfortable and living happily in the current housing estate. They value highly of their investment and have great economic interest in their properties. This type of owners have two concern; (i) They wish to get better selling or renting value if one day they can afford to enter better up-market property or (ii) Some of the residents are already comfortable with the current unit due to the neighbourhood cohesion developed within the community, location factors which is closed to their workplace and their kid's school, and others supporting facilities. Therefore they don't have attention of moving out.</p> <p>c) This refers to the housings construction methods and material. Low quality and less material durability contributes to rapid building components' deterioration that requires regular repair works. Low maintenance fund delayed the repair</p>	<p>Dwelling satisfaction</p> <p>Owners' socio-demographic characteristics</p>

	works unless the repairs are urgent. Most of the available expenses are prioritised used for cleaning the common properties and pay the electrical and water bill. The old housings have started exhibit building's elements deterioration such as roofing systems, wiring and plumbing.	
8.	<p>Neighbourhood quality</p> <p>This element is contributed by two factors; sense of community and sense of belonging among the residents. These two factors highly influence the residents' participation in management and maintenance of their housing estate. The neighbourhood cohesion can be achieved through social interaction such as social communities' activities and also through informal gathering in common areas such as playground and resting areas.</p> <p>Sense of belonging or pride among the residents are mostly limited to their unit only and not to the housing as a whole. Not all owners shared the same interest. For example young couples with small kids or without kids are less interested to participate compared to the elder couples with grown up kids. Similarly to the residents who are bachelors or foreigners (Most of them are renters). Lack of facilities such as adequate children's playground and common sitting areas for residents to meet and interact with each other attributes to these factors.</p> <p>In addition, some Chairmen claimed that they cannot afford to organise regular community's activities. According to MCs' Chairmen their fund's priority is to pay their due bills. They don't have enough funds to organise regular communities' activities except the annual meeting. The communities' activities are mainly done on voluntary basis with little contribution from the housing management fund.</p>	<p>Neighbourhood satisfaction</p> <p>Owners' socio-demographic characteristics</p>

Source: This study's preliminary survey (2008)

Appendix 6: Path Diagram



Notes: **OoC**-Owner-occupants' competency; **OoC**- Owners' Organisational competency; **MaC**- Managing Agents' competency, **Dwls**-Dwelling Satisfaction; **Nbhs**- Neighbourhood Satisfaction; **NbrS**- Neighbours Satisfaction; **SSR** – Satisfaction with Stakeholders' Relationships

Appendix 7: Cross-tabulation

Table A7. 1: Cross-tabulation of age and length of residency

		Length of Residency					Total
		Less than a year	1 year to 5 years	5 years to 10 years	10 years to 15 years	More than 15 years	
Age	20-30	15	31	4	7	34	91
	31-40	4	43	39	33	29	148
	41-50	1	21	31	59	78	190
	Over 50	1	5	8	27	138	179
Total		21	100	82	126	279	608

Table A7.2: Cross-tabulation of age and mobility plan

		Period expected to continue living in the current unit				Total
		2 years or less	3 years to 10 years	11 or more years	Always	
Age	20-30	20	28	8	35	91
	31-40	11	47	22	73	153
	41-50	12	25	25	128	190
	Over 50	6	12	11	150	179
Total		49	112	66	386	613

Table A7.3: Cross-tabulation of age and the period expected to continue residency

		The period expected to to continue residency				Total
		2 years or less	3 years to 10 years	11 or more years	Always	
Age	20-30	20	28	8	35	91
	31-40	11	47	22	73	153
	41-50	12	25	25	128	190
	Over 50	6	12	11	150	179
Total		49	112	66	386	613

Table A7.4: Cross-tabulation of age and households' size, and number of children living together

		Households' size			Total	Number of children living with together			Total
		1 to 5	6 to 10	More than 10		None	1 to 5	More than 5	
Age	20-30	75	12	0	87	54	30	1	85
	31-40	122	28	1	151	37	109	6	152
	41-50	128	61	1	190	37	139	14	190
	Over 50	128	49	2	179	49	118	13	180
Total		453	150	4	607	177	396	34	607

Source: This study's data analysis

Table A7.5: Cross-tabulation of age and households' income level

		Gross households' income				Total
		Below RM1000	RM1001 to RM1500	RM1501 to RM2000	Above RM2001	
Age	20-30	10	26	23	30	89
	31-40	11	33	43	65	152
	41-50	18	48	61	62	189
	Over 50	68	36	36	38	178
Total		107	143	163	195	608

Source: This study's data analysis

Table A7.6: Cross-tabulation of length of residency and owner-occupants' participation in activities and meeting

	Participation in social activities				Total	Participation in meetings				Total	
	Very active	Quite Active	Least Active	Not active		Very active	Quite Active	Least Active	Not active		
Length of Residency	Less than a year	0	4	11	6	21	0	4	13	4	21
	1 year to 5 years	1	47	40	12	100	0	49	42	9	100
	5 years to 10 years	0	37	32	13	82	0	41	26	15	82
	10 years to 15 years	1	75	45	7	128	4	68	47	9	128
	More than 15 years	12	139	97	27	275	12	148	93	23	276
Total		14	302	225	65	606	16	310	221	60	607

Source: This study's data analysis

Table A7.7: Cross-tabulation of age and owner-occupants' participation in activities and meeting

		Participation in social activities				Total	Participation in meetings				Total
		Very active	Quite Active	Least active	Not active		Very active	Quite Active	Least active	Not active	
Age	20-30	3	24	43	21	91	2	23	37	29	91
	31-40	2	71	66	14	153	1	67	70	15	153
	41-50	5	115	57	12	189	6	113	61	9	189
	Over 50	6	101	58	14	179	5	101	59	13	178
Total		16	311	224	61	612	14	304	227	66	611







Source: This study's data analysis

Appendix 8: Photos of Misuse of Common Property

	
<p>Illegal structures (store) built on land owned by local authorities</p>	<p>Illegal structures erected on a parking lot owned by local authorities. Parking lots should be shared by all residents and should not be owned by any individual.</p>
	
<p>Illegal structures (additional house!) built on land owned by local authorities</p>	<p>Illegal structures (car porches) on land owned by local authorities</p>
	
<p>Illegal extensions not only invade the common property owned by their MC (the parameter apron and drain) but also the authority's properties (the common parking lots)</p>	<p>Misused of waste bin by residents with trash everywhere, including bulky items such as mattresses and couches.</p>

All Images: The researcher (2008, 2009)

Figure A8.1: Photos show misuse of common property owned by MC and local authority

	
<p>Obstacles on the route of other residents due to the attitude of some residents that dried clothes in the middle of the corridor.</p>	<p>Illegal structures extended from the exterior wall of the building have changed the MC's original approved building plan.</p>
	
<p>Illegal and structurally unsafe to the residents</p>	<p>Resident carrying out illegal business activities and abusing common parking lot.</p>
	
<p>Individual owners took over the common space as private garden.</p>	<p>Individuals repainted the external walls which are against the MC's original approved building plan.</p>

All Images: The researcher (2008, 2009)

Figure A8.2: Photos show misuse of common property owned by MC and local authority (continued)