RESIDENTIAL SATISFACTION IN LOW-COST HOUSING IN MALAYSIA

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ABSTRACT

Residential satisfaction is an important indicator of housing condition which affects individuals' quality of life. It determines the way they respond to their residential neighbourhood and environment. The factors which determine their satisfaction are essential inputs in monitoring the success of housing policies. This study investigates the factors, such as dwelling units, housing services and neighbourhood facilities and environment, which affect individuals' satisfaction in private low-cost housing in a fast growing state of Penang and in a slow growing state of Terengganu in Malaysia. The data were obtained from a random sample of 572 households living in 17 low-cost housing projects developed by private housing developers in Penang and a random sample of 223 households living in 5 low-cost housing projects developed by private housing developers in Terengganu. Descriptive and factor analyses were applied to the data. The findings of the study indicate that the levels of residential satisfaction are generally higher with dwelling units and services provided by the developers than neighbourhood facilities and environment. The contributing factors for the low levels of satisfaction with the neighbourhood facilities and environment are poor public transportation and lack of children playgrounds, community halls, car parks, security and disability facilities. As private developers are profit motivated, less attention has been given to the provision of neighbourhood facilities and environment. This implies the government should monitor the implementation of low-cost policies closely in order to improve quality of life of the residents.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

Low-cost housing development in Malaysia is undertaken by both the public and private sectors. The government's commitment towards low-cost housing started during the First Malaysia Plan (1966-1970) while the private sector's involvement was in the Second Malaysia Plan (1971-1975) when the government realised the need and importance of the role of the private sector in ensuring an adequate supply of low-cost housing for the country (Ghani and Lee, 1997).

Under public sector, the government is involved in the implementation of:

a) Public Housing programmes
b) Housing in Land and Regional Development Authority area
c) Government and Institutional Quarters
d) State Economic Development Corporation.

The public low-cost housing programmes are undertaken by the state governments with the supervision and monitoring of the Ministry of Housing and Local Government.

Private sector housing consists of private developers, co-operative societies and individuals or a group of individuals. Amongst them, private developers account for almost all private-sector housing delivery accounting for 97% of the overall private sector housing achievement in the Seventh Malaysia Plan (1996-2000). Private housing developers are

involved in high, medium and low-cost housing. They are governed by the Housing Developers' Act (Control and Licensing) 1996.

Private sector participation has increased since the Second Malaysia Plan, when the government sought the co-operation of private developers in the provision of low-cost houses through its policy of making it mandatory for developers to build at least 30% low-cost houses in their housing projects (Ghani and Lee, 1997). The private sector has performed quite well in the Seventh Malaysia Plan period by building 68% of the total of 190,597 low-cost housing units.

However, the success of housing programmes does not only depend on merely provision of housing units but also on other factors that affect the needs of residents. The failure of many housing projects may be attributed to the lack of knowledge on the determinants of residential satisfaction. Residential satisfaction reflects the degree to which individuals' housing needs are fulfilled. Therefore, it acts a guide to policy makers to monitor the implementation of housing policies.

1.2 Purpose of the Study

Since no study of residential satisfaction in private low-cost housing estates in Malaysia is available, the study hopes to fill the gap in this area. The purpose of this study is to examine the level of residential satisfaction in private low-cost housing estates in Malaysia using case studies of Penang and Terengganu. The results of the study will help in understanding of overall satisfaction with planned housing estates and monitoring the implementation of housing policy in the country.

The relationships of the independent variables, which are grouped into three components, namely dwelling units (variety of housing features), services provided by developers and neighbourhood facilities and environment. They are examined with the dependent variable (overall

residential satisfaction). The principal components of the factors affecting the residential satisfaction are also examined.

The general hypothesis tested in the study is based on the fact that overall residential satisfaction is directly related to the dwelling units, services provided by the developers and neighbourhood facilities and environment.

1.3 Scope of the Study

To achieve the objective stated above, the study will first review theories and concepts of residential satisfaction and empirical evidence from previous studies to form the basis for the conceptual framework of the study.

The main focus of the study would be to analyse the level of residential satisfaction of private low-cost housing in a fast growing state of Penang and a slow growing state of Terengganu. This will be done by examining the level of satisfaction and the factors affecting it.

Finally, the study discusses the implications of its findings on housing policies and makes recommendations to improve the existing strategies of low-cost housing development.

CHAPTER 2

RESIDENTIAL SATISFACTION: A THEORETICAL FRAMEWORK

1.1 Introduction

Residential satisfaction has been a major and popular research topic for the following reasons. First, residential satisfaction is recognised as important component of individuals' quality of life. Second, individuals' evaluations of housing and neighbourhood determine the way they respond to residential environment and form the basis for public policy feedback. Therefore, the knowledge about factors that shape residential satisfaction is critical for a better understanding of household mobility decision process (Lu, 1999). This chapter aims at examining the factors affecting residential satisfaction and review relevant theories and concepts which explain the relationship.

1.2 Concept of Residential Satisfaction

Theories of residential satisfaction are based on the notion that residential satisfaction measures the difference between households' actual and desired housing and neighbourhood situations (Galster and Hesser, 1981). They make their judgements about residential conditions based on their needs and aspirations. Satisfaction with their residential conditions indicates the absence of complaints as their needs meet hteir aspirations. On the other hand, they are likely to feel dissatisfied if their

housing and neighbourhood do not meet their residential needs and aspirations.

Morris and Winter (1978) introduced the notion of 'housing deficit' to conceptualise residential satisfaction. Their housing adjustment theory contends that if a household's current housing meets the norms, the household is likely to express a high level of satisfaction with housing and neighbourhood. An incongruity between the actual housing situation and housing norms results in a housing deficit, which gives rise to residential dissatisfaction. As a result, they are likely to consider some form of housing adjustment.

1.2 Literature Review

Previous studies on residential satisfaction have analysed many variables such as housing, neighbourhood, and users' characteristics that affect residential satisfaction (Galster, 1987; Lu, 1999; Alison et al., 2000). Building features, such as number of bedrooms, size and location of kitchen and quality of housing units, are strongly related to residential satisfaction. Satisfaction with neighbourhood has been noted to be an important factor of housing satisfaction. It includes neighbourhood facilities, such schools, clinics, shops, community halls, etc.

A number of studies in developing countries have analysed three main components of the variables: dwelling units, facilities and services, and neighbourhood. A study by Husna and Nurizan (1987) indicates that the residents of low-cost flats provided Kuala Lumpur City Hall, Malaysia were generally satisfied with their housing conditions and environment. Among the predictor variables that contribute to overall housing satisfaction, neighbourhood satisfaction contributed the most. Dwellers in Private low-cost housing in and around Bangkok, Thailand were generally satisfied with the dwelling units and the neighbourhood (Savasdisara et

al., 1989). However, a study by Ukoha and Beamish (1997) has found out that the residents in public housing in Abuja, Nigeria were dissatisfied with their overall housing situation but satisfied with the neighbourhood facilities.

More recent studies on residential satisfaction focus on a more reliable approach in measuring the variables affecting housing satisfaction using logit regression model (Varady and Carrozza, 2000) and ordered logit regression model (Lu, 1999).

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

The validity of the findings of the study depends on how the data are collected and analysed. This chapter describes a research strategy and methodology. It explains the study approach and methods of data collection and analysis.

3.2 Research Strategy

Study approaches on residential satisfaction vary with according to the focus of the investigation. Varady and Carrozza (2000) analysed residential satisfaction in public housing by looking a trend rather at one point in time. William (1997) carried out a comparative study of residential satisfaction of housing in urban and suburban areas. Alison et al. (2002) focussed their study on the effect of neighbourhood factors, such as community spirit, social interaction, friendliness and relatives in the area, on residential satisfaction.

Most of the studies stated above focussed on public housing except the study by Savasdisara et al., (1989). Housing policy in the country requires 30% of housing development to be of low-cost housing. Most of the new housing estates are developed by private housing developers. As

such, the study focuses on residential satisfaction of low-cost housing in private housing estates in the country. Due to the shortage of research fund and time, only two states, i.e. Penang, representing a fast growing state and Terengganu, representing a slow growing state, have been chosen as case studies.

3.3 Data Collection and Analysis

Data for the study come from primary source collected through a personal interview technique. Using this technique, set questions were asked by the interviewer to elicit information from the respondents. Field surveys were conducted during the period of June to December in 2005. The sample of 575 households were randomly selected from households living in 10, 500 units of low-cost houses built by private developers in Penang and 223 households were selected from 2,600 low-cost houses built by private developers in Terengganu. The sampling frame was based on the total number of low-cost housing units built and completed since 1990.

Data were analysed using descriptive statistics and factor analysis from Statistical Package for the Social Sciences (SPSS). Descriptive statistics generated frequencies and percentages of respondent characteristics and mean scores of satisfaction. Principal components of factors affecting residential satisfaction identified using factor analysis.

3.4 Questionnaire Design

Structured questions were used in preparing the questionnaire for the survey. To avoid bias resulting from questionnaire design, the

questions were constructed in such a way that they were direct, simple and familiar to the respondents. Nevertheless, some explanations by the interviewers were expected to clarify certain points so that certain level of consistency could be achieved in the interview.

The questionnaire is divided into six sections as follows:

a) Head of household's background

b) Household information

c) House ownership information

d) Level of satisfaction with dwelling units

e) Level of satisfaction with services by developers

f) Level of satisfaction with neighbourhood facilities and environment.

The last section of the questionnaire is an open-ended question on whether the respondents plan to move out from the current dwelling. The level of satisfaction of housing is measured in a five-point Likert scale ranging from "1" for very unsatisfied, "2" for unsatisfied, "3" for neutral, "4" for satisfied and "5" for very satisfied.

Figure 4.1: Taman Mutiara Indah Batu Maung

Figure 4.2: Taman Seri Delima

CHAPTER 4

RESIDENTIAL SATISFACTION IN PENANG

4.1 Introduction

The study has conducted a field survey of 17 private low-cost housing estates in Penang, 10 in Seberang Perai and 7 in Penang Island. Most parts of Penang were represented in the survey. A total of 575 questionnaires were administered and collected. There were two types of low-cost housing built by private developers, flats and terrace houses in the study area. From the survey, flats accounted for 93.04% and terrace houses accounted for 6.96% of the private low-cost housing in Penang. The only one-storey terrace houses were found in Taman Bertam Indah, Kepala Batas.

Figure 4.5: Taman Bertam Indah

Figure 4.6: Taman Permai Jaya

Figure 4.7: Taman Inderawasih

Figure 4.8: Taman Jawi Jaya

4.2 Household Profile

There is a large percentage of the heads of household in the age bracket of 30-39 (45.2%) and 84.7% of them had married. 72% of them stayed near to the place their work (0-10km). Being low income earners, their average income were mostly between RM500-RM2000 per month (76.01%). As for their educational status, 40.8% of them finished the SPM/MCE and 20.7% had finished SRP/PMR/LCE. As for the household size, the number of household members of 2 to 4 persons accounted 81.4% of the respondents. There are 7.83% of them who had more than five members.

For the expenses for the household, there are 11 types of expenses. The type of expenses and the amount spent are shown in Table 4.1. From the table, it can be observed that most of their expenses were for food, clothing, rent, housing loan instalment and vehicle loan instalment. The rental expenditure for the low-cost housing at Seberang Perai was in between RM100-300. On the other hand, the rental expenditure at Penang Island was in between RM200-400. 61% of the residents were house owners who paid RM200-400 for their house loan instalments. The details are shown in Table 4.2. The infrastructure cost in the study area is below RM100. Almost 50% of them do the saving each month. In the 291 people who save the money every month, 112 of them plan to move out.

Most of the residents had their own transport, either cars or motorcycles. However, the percentage of residents who owned cars was less than the percentage of residents that own motorcycles. From the survey, 63.7% of the residents had cars while 73.4% of them owned motorcycles.

Table 4.1: Total and Type of Expenditure

Type of Expenditure	Total Expenditure RM (%)						
	Nil	1-100	101-200	201-300	301-400	401-500	501>
Food	0	1.91	15.65	43.48	25.91	9.04	4
Clothing include shoes	32.87	34.43	12.35	8.35	5.22	5.04	1.74
Rent	56	0.87	18.78	16.52	7.3	0.52	>
Housing loan installment	52.17	0.17	10.09	23.13	12.35	1.74	0.35
Vehicle loan installment	39.83	1.22	9.57	11.3	19.13	10.96	8
Education	45.04	57.74	12.87	3.83	>	>	>
Electric, water & telephone bills	-	88.87	8.9	2.26	>	>	>
Transportation	18.26	57.94	16.87	7.13	>	>	>
Health treatment	95.83	2.61	1.57	>	>	>	>
Recreation, entertainment & sports	94.43	3.3	2.26	>	>	>	>
Saving	49.22	30.26	13.04	4.52	2.96	>	>

Table 4.2: Housing Loan Instalment and House Ownership Status

Housing loan Installment	House ownership status		
	Own house	%	Rent
Nil	57	17.54	242
RM101-200	57	17.54	1
RM201-300	131	40.31	2
RM301-400	68	20.92	2
RM401-500	10	3.08	0
RM501 & above	2	0.62	0
Total	325	100.00	247

4.3 House Ownership

As for the house ownership, four questions were asked on the following information: the house ownership status, the duration of stay in the house, housing price when purchase and number of bedrooms in the house.

Slightly more than half of the residents were house owners. 56.5% of them owned their houses, while 43.5% of them rented their houses. According to the data, 64.2% of the Malay residents owned their houses while the Chinese and Indian house ownership accounted for 21.2% and 13.4% respectively.

The low-cost houses in the study area were recently built within less than 5 years of age. The housing price for the one-storey terrace house was in between RM25000-35000. For the low-cost flat, the price was below RM35000, but there are four housing estates where the low-cost houses were sold above RM35000. The prices for the houses are shown in the Table 4. 3.

Table 4.3: Housing Estate and House Price

Housing Estate	House Price		
	RM35000-RM45000	RM 45001-RM55000	RM55001-RM65000
Tmn Sri Pinang, Sg Puyu, SPU	32	0	0
Hunzaland Block H, Jln Besi	0	22	1
Tmn Desa Ria, DBD	0	28	0
Tmn Sri Bayan, DBD	0	7	9

The low-cost houses in the selected housing estates can divided into two different groups, i.e., houses with 2 bedrooms and houses with 3 bedrooms. Generally, there are more houses with two bedrooms than with three bedrooms as shown in Table 4.4.

Table 4.4: Number of Bedrooms According to Housing Estates.

3-Room Low -Cost Housing	2-Room Low -Cost Housing
Tmn Bertam Indah Tmn Sri Pinang,Sg Puyu,SPU Taman Sri Delima, Sg Ara Tmn Kota Permai, SPT Tmn Desa Ria, DBD Tmn Sri Bayan, DBD	Tmn Permai Jaya, SPT Tmn Mutiara Indah, Batu Maung Tmn Remis, SPT Tmn Inderawasih,SPT Tmn Tambun Indah,SPS Tmn Tambun Jaya, SPS Tmn Jawi Jaya, SPS Tmn Seruling Emas, SPS Hunzaland Block H, Jln Besi Tmn Sri Indah, Batu Maung Tmn Sg Batu, Teluk Kumbar

4.4 Satisfaction with Dwelling Units

In this section, satisfaction with dwelling features is discussed based on the level of satisfaction of the residents. The residents were generally satisfied with dwelling units except for kitchen area, dining room area, number of socket and clothes-line facilities (Table 4.5). However, their satisfaction varied according to housing areas as shown in Table 4.6. The housing estates having high level of dissatisfaction are Taman Bertam Indah, Taman Sri Pinang, Taman Kota Permai, Taman Sri Indah, Taman Permai Jaya, Taman Tambun Indah, Taman Tambun Jaya And Taman Sri Bayan.

Table 4.5: Satisfaction with Dwelling Units

Dwelling Features	Level of Satisfaction
Living area	3.11
Kitchen area	2.70
Dining room area	2.61
Bedroom area	3.61
Washing room area	3.26
Room arrangement	3.50
Air circulation	3.53
No. of socket	2.84
Level of socket	3.51
Clothes-line facilities	2.07
Garbage line	3.40
Noise	3.30
Total	3.12

Table 4.6: Dissatisfaction with Dwelling Units

Housing Eatate	Living room area	Kitchen area	Dining room area	Washing room area	Clothes-line	Garbage line
Tmn Sri Bayan, DBD					√	√
Tmn Sri Indah			√	√	√	
Tmn Tambun Indah, SPS					√	
Tmn Tambun Jaya, SPS					√	
Tmn Bertam Indah, SPU		√	√		√	
Tmn Sri Pinang	√	√	√		√	
Tmn Permai Jaya, SPT					√	
Tmn Kota Permai, SPT		√				

4.5 Satisfaction with Services by Developers

Services provided by developers include the pipe repairs, electrical wiring, water supply, garbage disposal and safety. The residents were generally satisfied with the services provided by developers except for safety (Table 4.7), which needed improvement. Many residents expressed dissatisfaction with safety in their housing areas. The housing estates having high level of dissatisfaction are Taman Sri Pinang, Taman Inderawasih, Taman Seruling Emas, Taman Sri Indah and Taman Desa Ria. The garbage disposal system for these areas was very satisfactory. The satisfaction level on the others services was generally higher.

Table 4.7: Satisfaction with Services by Developers

Dwelling Features	Level of Satisfaction
Pipe repairs	3.51
Electrical wiring	3.52
Water supply	3.45
Garbage disposal	3.85
Safety	2.71
Total	3.41

4.6 Satisfaction with Neighbourhood Facilities and Environment

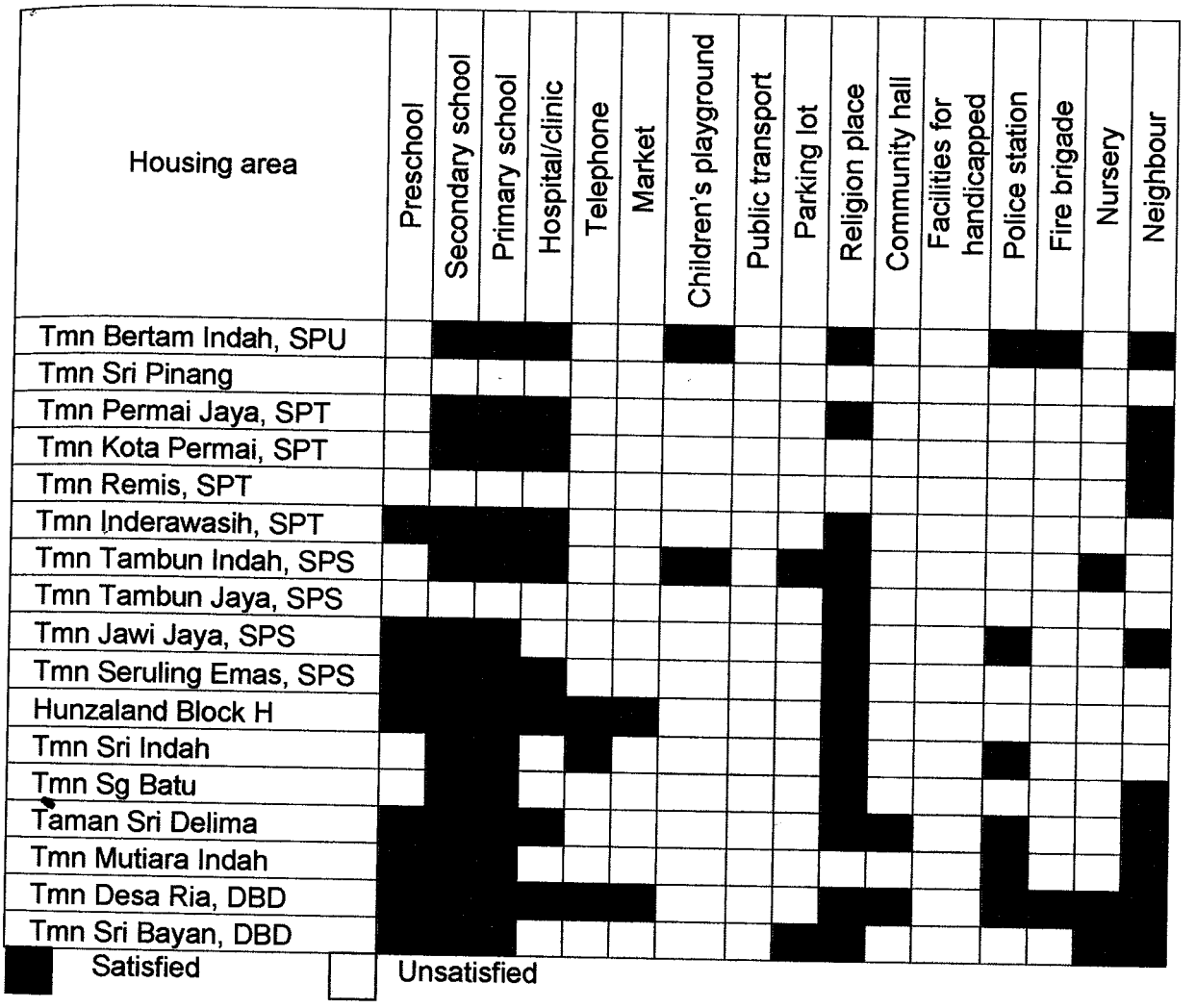
Satisfaction variables on neighbourhood facilities and environment include children playground, public transport, parking lots, community hall, facilities for the handicapped, etc. Generally the residents expressed their satisfaction with most of the facilities, such as preschool, secondary

school and primary school. However, many residents expressed their dissatisfaction with other facilities, such as public transport, parking lots, children's playground and facilities for the handicapped (Table 4.8). However, their satisfaction varies according to housing areas as shown in Table 4.9.

Table 4.8: Satisfaction with Neighbourhood Facilities and Environment

Facilities	Level of Satisfaction
Preschool	3.52
Primary school	3.80
Secondary school	3.82
Clinic/ Hospital	3.56
Telephone	3.00
Market	3.05
Children's playground	2.70
Public transport	2.55
Parking lot	2.85
Place of worship	3.75
Community hall	2.76
Facilities for handicapped	2.47
Police station	3.30
Fire brigade	3.18
Nursery	3.35
Total	3.21

Table 4.9: Satisfaction with Neighbourhood Facilities and Environment



4.7 Factor Analysis

Factor analysis is a method to provide a relatively small number of factor constructs as satisfactory substitutes for a much larger number of variables. Factor analysis with principal component and Varimax rotation methods was used in the study to determine the main factors affecting residential satisfaction. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy for both measurements is higher than the recommended index of 0.60. Besides, it also shows the Barlett's Test of Sphericity. Table 4.10 shows the descriptive statistics, mean and the standard deviation, for each indicator. The factors solution was explained substantially by greater proportion of total item variance. Variance explained by each of the rotated components is shown in Table 4.11.

The analysis resulted in the extraction of eleven factors with Eigenvalues greater than 1. The eleven factors accounted for 66.932% of total variance across 32 items (Table 4.12 and Table 4.13). First factor identifies a set of related variables of dwelling features, area of dining room, kitchen and living room. Second factor explains a set of related variables of neighbourhood facilities and environment. The important variables of this factor are primary school, secondary school, nursery, preschool and hospital or clinic. Third factor relates to another set of variables of neighbourhood facilities and environment. The important variables of this factor are about the facilities and infrastructure, such as telephone, market, nursery, public transport and preschool. Fourth factor relates to the services by developers. Pipe repairing and electrical wiring are the main components of this factor. Fifth factor relates to safety infrastructure, such as police station and fire brigade. Sixth factor relates to another set of variables of dwelling features. The variables in this factor are bedroom area, washing room area, room arrangement and garbage disposal. Similarly with other variables in the remaining factors, they are shown in Table 4.13.

Table 4.10: Descriptive Statistic of Variable

Variable	Mean	Std. Deviation
Living Area	3.10	1.14
Kitchen Area	2.71	1.12
Dining Room Area	2.63	1.11
Bedroom Area	3.59	0.80
Washing Room Area	3.26	0.95
Room Arrangement	3.49	0.89
Air Circulation	3.52	0.99
No of Socket	2.84	1.11
Level of Socket	3.49	0.88
Clothes-Line Facilities	2.06	1.15
Garbage Line	3.39	1.07
Noise	3.29	0.99
Pipe Repairs	3.52	0.90
Electrical Wiring	3.52	0.90
Water Supply	3.44	0.94
Garbage Disposal	3.85	0.71
Safety	2.69	1.16
Preschool	3.53	0.93
Primary School	3.80	0.59
Secondary School	3.82	0.55
Clinic/ Hospital	3.56	0.79
Telephone	2.99	1.11
Market	3.05	0.95
Children's Playground	2.70	1.19
Public Transport	2.55	1.02
Parking Lot	2.85	1.06
Place of Worship	3.74	0.69
Community Hall	2.75	1.17
Facilities For Handicapped	1.46	0.82
Police Station	3.30	0.88
Fire Brigade	3.18	0.92
Nursery	3.35	0.90
Neighbourhood	3.74	0.76

Table 4.11: Total Variance Explained by Varimax Principal Components

Component	Rotation Sums of Squared Loadings	% of Variance	Cumulative %
1	2.669	8.087	8.087
2	2.621	7.941	16.028
3	2.550	7.727	23.755
4	2.219	6.724	30.479
5	2.159	6.542	37.021
6	1.937	5.869	42.891
7	1.735	5.257	48.148
8	1.688	5.114	53.262
9	1.661	5.034	58.296
10	1.587	4.808	63.104
11	1.263	3.828	66.932

Table 4.12: Varimax Rotated Component Matrix for 11 Factor Solution Using 32 Variables

	Component										
Variable	1	2	3	4	5	6	7	8	9	10	11
Dining Room Area	0.81										
Kitchen Area	0.81										
Living Area	0.73										
Primary School		0.91									
Secondary School		0.91									
Telephone			0.76								
Market			0.70								
Nursery		0.56	0.57								
Public Transport			0.50								
Preschool		0.45	0.47								
Pipe Repairs				0.88							
Electrical Wiring				0.87							
Police Station					0.90						
Fire Brigade					0.82						
Bedroom Area						0.72					
Washing Room Area						0.63					
Room Arrangement						0.56					
Garbage Disposal						0.49	0.07				
Facilities for Handicapped							0.72				
Parking Lot							0.46				
Level of Socket								0.71			
No of Socket	0.43							0.57			
Community Hall							0.40	0.45			
Air Circulation									0.70		
Noise									0.56		
Safety									0.54		
Water Supply									0.45		
Children's Playground										0.78	
Clinic/ Hospital		0.42								0.59	
Place of Worship											0.78
Clothes-Line Facilities								0.44			-0.47
Garbage Line											-0.44

Table 4.13: Factor Analysis: Components of Satisfaction Variables

Factor Name and Items	Factor Loadings	Eigenvalue	% of Variance	Cum. %
Factor 1: Dwelling Units		2.669	8.087	8.087
Dining Room Area	0.81			
Kitchen Area	0.81			
Living Area	0.73			
No Of Socket	0.43			
Factor 2:Neighbourhood Facilities & Environment		2.621	7.941	16.028
Primary School	0.91			
Secondary School	0.91			
Nursery	0.56			
Preschool	0.45			
Clinic/ Hospital	0.42			
Factor 3:Neighbourhood Facilities & Environment		2.550	7.727	23.755
Telephone	0.76			
Market	0.70			
Nursery	0.57			
Public Transport	0.50			
Preschool	0.47			
Factor 4: Services by the Developers		2.219	6.724	30.479
Pipe Repairs	0.88			
Electrical Wiring	0.87			
Factor 5: Neighbourhood Facilities & Environment		2.159	6.542	37.021
Police Station	0.90			
Fire Brigade	0.82			
Factor 6: Dwelling Units		1.937	5.869	42.891
Bedroom Area	0.72			
Washing Room Area	0.63			
Room Arrangement	0.56			
Garbage Disposal	0.49			
Factor 7: Neighbourhood Facilities & Environment		1.735	5.257	48.148
Garbage Disposal	0.07			
Facilities for Handicapped	0.72			
Parking Lot	0.46			
Community Hall	0.40			
Factor 8 :Dwelling Units		1.688	5.114	53.262
Level Of Socket	0.71			
No Of Socket	0.57			
Community Hall	0.45			
Clothes-Line Facilities	0.44			
Factor 9: Dwelling Units		1.661	5.034	58.296
Air Circulation	0.70			
Noise	0.56			
Safety	0.54			
Water Supply	0.45			
Factor 10: Neighbourhood Facilities & Environment		1.587	4.808	63.104
Children's Playground	0.78			
Clinic/ Hospital	0.59			
Factor 11: Dwelling Units		1.263	3.828	66.932
Religious Worship	0.78			
Clothes-Line Facilities	-0.47			
Garbage Line	-0.44			

Kaiser-Meyer-Olkin Measure = 0.734013

Barlett's Test of Sphericity= 6603.732 at df = 528 with a significance of 0.00

4.8 Decision to Move Out

Despite having reasonable level of residential satisfaction, many residents (33.45%) wanted to move out from their houses. The areas that had more than 40% residents wanted to move out are Tmn Permai Jaya, Tmn Tambun Indah, Tmn Sri Indah and Tmn Sg Batu. The main reason to move out was because they were looking to own a more comfortable house. The other reasons given by the residents were to own a house and to get a bigger house. From the 191 households who wanted to move out, 76.96% were Malays, 14.66% Chinese and 6.81% Indians. Most of the families who wanted to move out had 2-4 household members. 116 households from 330 houses (35.2%) that had two rooms, decided to move out. On the other hand, 75 households from 245 houses (30.6%) that had 3 rooms decided to move out. Most of the residents who decided to move out were in age bracket of between 30-39.

4.9 Conclusion

As a conclusion, the residents were generally satisfied with dwelling units, services by developers and neighbourhood facilities and environment. However, the levels of satisfaction varied according to some indicators and housing estates. The residents were particularly dissatisfied with kitchen area, dining room area, number of socket and clothes line facilities in their dwelling units, safety service by developers and neighbourhood facilities and environment such as public transport, parking lots, children's playground and facilities for the handicapped.

It can be concluded from factor analysis that six main factors can be identified to explain the residential satisfaction in descending order, as follows:

a) Main activity areas of dwelling units – Dining room, living room and kitchen.

b) Educational facilities in the neighbourhood - primary school, secondary school and nursery.

c) Market facilities in the neighbourhood – Market and telephone.

d) Technical services by developers – Pipe repairs and electrical wiring.

e) Safety infrastructure in the neighbourhood - Police station and fire brigade.

f) Design of dwelling units – Bedroom area, washing room area and room arrangement.

CHAPTER 5

RESIDENTIAL SATISFACTION IN TERENGGANU

5.1 Introduction

The study has conducted a field survey of 5 private low-cost housing estates in Terengganu. The five housing estates are Perumahan Bukit Mentuk Kemaman, Rumah Murah Paka, Perumahan Kos Rendah Gong Pasir Dungun, Kondo Rakyat Kuala Ibai and Taman Semarak Bukit Tunggal. A total of 223 questionnaires were administered and collected. There were two types of low-cost housing built by private developers, flats and terrace houses in the study area. From the survey, terrace houses accounted for 61% and flats accounted for 39% of 223 units of private low-cost housing in Terengganu. Flats, known as Kondo Rakyat, are only found in Kuala Ibai in the suburb of Kuala Terengganu.

Figure 5.1: Perumahan Bukit Mentuk Kemanan

Figure 5.2: Perumahan Kos Rendah Gong Pasir Dungun

Figure 5.3: Kondo Rakyat Kuala Ibai

Figure 5.4: Taman Semarak Bukit Tunggal

5.2 Household Profile

Almost all the house owners were Malays (98.65%) and 94% of the heads of household were male. A large majority (87.89%) of the heads of household were married and 4.93% of them were singles. They were young and middle age with the average age of 38 years old. As for their educational status, 51.57% of them completed the SPM/MCE, 19.73% had completed SRP/PMR/LCE and 13.46% of them completed their study in university or college. As for the household size, the average number of household members was 3 persons.

The economic background of the residents was slightly better than that of low-income group with an average monthly income of RM1384. However, their incomes were just able to meet their expenses with average monthly expenditure of RM1156. Most of the residents worked in service, production and transport sectors as operators, labourers and professional, technical and sales workers (see Table 5.1). A significant number of them were involved in the "unknown activities" as "self-workers" (*kerja sendiri*).

Monthly house rental for 65 households who rented their houses was between RM150 to RM200. For the house owners, they paid RM200 monthly as housing loan instalments. They spent generally on food, clothing, rent, housing loan instalments, vehicle loan instalments, education, electricity, water and telephone bills. Table 5.2 shows the mean monthly household expenditure. It can be observed that most of them spent more in food, followed by housing and vehicle loan instalments. They also spent on education for their children around RM100 each month. As for transportation, 65.47% of the resident owned cars, 67.7% of them owned motorcycles and 5.83% of them did not own either cars or motorcycles.

Table 5.1: Occupation of Head of Household

Occupation	Frequency	Percent
Professional, Technical	33	14.80
Admin & Managerial	12	5.38
Clerical	6	2.69
Sales Worker	29	13.00
Service Worker	61	27.35
Agricultural, Forestry, Fisherman	1	0.45
Production, Transport, Equipment Operator & Labourers	44	19.73
Activities Inadequately	4	1.79
Activities Unknown	26	11.66
Retired	7	3.14
Total	223	100.00

Table 5.2: Mean Monthly Household Expenditure

Type of Expenditure	Mean
Food	341.01
Clothing include shoes	69.3
Rent	173
Housing loan instalment	223.15
Vehicle loan instalment	240.79
Education	110.43
Electric, water & telephone bills	74.17

5.3 House Ownership

A large majority of the residents (70%) were house owners while 30% of them rented their houses. Most of them lived in the housing estates less than 5 years ago. The housing estates were relatively new as most of them were developed less than 7 years ago (Table 5.3).

Table 5.3: Length of Stay of the Residents

Length of Stay	Frequency	Percent
Less Than 1 Year	71	31.84
1-3 years	86	38.57
3-5 years	49	21.97
5-7 years	12	5.38
7 years and above	5	2.24
Total	223	100

Table 5.4 shows the time-period for the residents moving to the house by housing areas. Some of the residents lived in Rumah Murah Paka for more than 7 years. The Kondo Rakyat Kuala Ibai was completed within 7 years ago. Perumahan Kos Rendah Gong Pasir Dungun was recently developed as new housing estate and their residents just moved in within 3 years ago. This is followed by Taman Semarak Bukit Tunggal and Perumahan Bukit Mentuk Kemaman.

Table 5.4: Length of Stay by Housing Estate

Location	Length of Stay					Total
	Less than 1 year	1-3 years	3-5 years	5-7 years	7 years and above	
Perumahan Bukit Mentuk Kemaman	3	28	7	0	0	38
Rumah Murah Paka	8	10	9	3	5	35
Tmn Semarak Bukit Tunggal	4	14	1	0	0	19
Perumahan Kos Rendah Gong Pasir	35	9	0	0	0	44
Kondo Rakyat Kuala Ibai	21	25	32	9	0	87
Total	71	86	49	12	5	223

All the houses had three bedrooms. Table 5.5 shows that 47.98% of the houses were sold between RM25000-3000, 21.08% of the houses sold in RM30001-35000. Table 5.6 shows house prices according location of housing estates. The low-cost houses in Kemaman, Paka and Kondo Rakyat Kuala Ibai were sold between RM25000-30000. The low-cost houses in Taman Semarak Bukit Tunggal and Perumahan Kos Rendah Gong Pasir Dungun were sold between RM30001-35000 as they are respectively located near the towns of Kuala Terengganu and Dungun. Some of the houses in these areas were sold more than RM3500 due larger land area.

Table 5.5: Price of Low-Cost Housing

Price	Frequency	Percent
RM25000-30000	107	47.98
RM30001-35000	47	21.08
RM35001-40000	10	4.48
RM40000 above	10	4.48
Total	223	100

Table 5.6: House Price According to Location

Location	Price of house				
	RM25000-30000	RM30001-35000	RM35001-40000	RM40000 above	Total
Perumahan Bukit Mentuk Kemaman	25	0	0	6	31
Rumah Murah Paka	17	0	7	1	25
Tmn Semarak Bukit Tunggal	5	10	3	0	18
Perumahan Kos Rendah Gong Pasir	1	37	0	3	41
Kondo Rakyat Kuala Ibai	59	0	0	0	59
Total	107	47	10	10	174

5.4 Satisfaction with Dwelling Units

In this section, satisfaction with dwelling features is discussed based on the level of satisfaction of the residents. The residents were generally satisfied with dwelling units except for kitchen area, dining room area and clothes line facilities (Table 5.7).

Table 5.7: Satisfaction with Dwelling Units

Dwelling Features	Level of Satisfaction
Living area	3.16
Kitchen area	2.15
Dining room area	1.96
Bedroom area	3.82
Washing room area	3.30
Room arrangement	3.82
Air circulation	3.30
No. of socket	3.04
Level of socket	3.37
Clothes-line facilities	1.65
Garbage line	3.45
Noise	3.70
Total	3.06

5.5 Satisfaction with Services by Developers

Services provided by developers include the pipe repairs, electrical wiring, water supply, garbage disposal and safety. The residents were generally satisfied with the services provided by developers except for safety and pipe repairs, which needed improvement. Many residents expressed dissatisfaction with safety and pipe repairs in their housing areas.

Table 5.8: Satisfaction with Services by Developers

Services	Level of Satisfaction
Pipe repairs	2.94
Electrical wiring	3.15
Water supply	3.70
Garbage disposal	3.63
Safety	2.77
Total	3.24

5.6 Satisfaction with Neighbourhood Facilities and Environment

Satisfaction variables on neighbourhood facilities and environment include children playground, public transport, parking lots, community hall, facilities for the handicapped, etc. Generally the residents expressed their satisfaction with most of the facilities, such as preschool, secondary school and primary school. However, many residents expressed their dissatisfaction with other facilities, such as children playground, public

transport, parking lot, community hall, market, police station and facilities for the handicapped (Table 5.9).

Table 5.9: Satisfaction with neighbourhood facilities and environment

Facilities	Level of Satisfaction
Preschool	3.25
Primary school	3.22
Secondary school	3.09
Clinic/ Hospital	3.30
Telephone	3.53
Market	2.74
Children playground	2.00
Public transport	1.38
Parking lot	2.45
Place of worship	3.69
Community hall	2.54
Facilities for handicapped	2.15
Police station	2.94
Fire brigade	3.02
Nursery	3.14
Total	2.76

5.7 Factor Analysis

Factor analysis with principal component and Varimax rotation methods was used in the study to determine the main factors affecting residential satisfaction. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy for both measurements is higher than the

recommended index of 0.60. Besides, it also shows the Barlett's Test of Sphericity. Table 5.10 shows the descriptive statistics, mean and the standard deviation, for each indicator. The factors solution was explained substantially by greater proportion of total item variance. Variance explained by each of the rotated components is shown in Table 5.11.

The analysis resulted in the extraction of ten factors with Eigenvalues greater than 1. The ten factors accounted for 65.78% of total variance across 32 items (Table 5.12 and Table 5.13). First factor identifies a set of related variables of neighbourhood facilities & environment which include police station, parking lot, fire brigade and facilities for handicapped. Second factor also explains another set of related variables of neighbourhood facilities and environment. The important variables of this factor are primary school, secondary school and hospital or clinic. Third factor relates to a set of variables of services by developers. The important variables of this factor are electrical wiring, safety, pipe repairs, no. of socket. Fourth factor relates to dwelling features. Kitchen area, living area and dining room area are the main components of this factor. Fifth factor relates to another set of variables of services by developers, which are garbage line, garbage disposal and water supply. Sixth factor relates to another set of variables of dwelling features. The variables in this factor are washing room area and air circulation. Similarly with other variables in the remaining factors, they are shown in Table 5.13.

Table 5.10: Descriptive Statistic of Variable

Variable	Mean	Std. Deviation
Living Area	3.16	0.98
Kitchen Area	2.15	0.94
Dining Room Area	1.98	0.99
Bedroom Area	3.84	0.52
Washing Room Area	3.31	0.98
Room Arrangement	3.89	0.43
Air Circulation	3.33	0.94
No of Socket	3.06	1.12
Level of Socket	3.41	0.95
Clothes-Line Facilities	1.66	0.98
Garbage Line	3.47	0.91
Noise	3.70	0.73
Pipe Repairs	2.98	1.09
Electrical Wiring	3.19	1.05
Water Supply	3.70	0.72
Garbage Disposal	3.63	0.80
Safety	2.79	1.15
Preschool	3.28	0.94
Primary School	3.23	0.91
Secondary School	3.09	0.94
Clinic/ Hospital	3.28	0.95
Telephone	2.55	1.10
Market	2.72	1.05
Children's Playground	2.01	0.97
Public Transport	1.38	0.74
Parking Lot	2.42	1.26
Religious Worship	3.68	0.82
Community Hall	2.59	1.30
Facilities For Handicapped	2.15	0.98
Police Station	2.95	1.01
Fire Brigade	3.00	1.03
Nursery	3.15	0.95

Table 5.11: Total Variance Explained by Varimax Principal Components

Component	Rotation Sums of Squared Loadings	% of Variance	Cumulative %
1	3.042	9.505	9.505
2	3.040	9.500	19.005
3	2.441	7.627	26.632
4	2.055	6.422	33.054
5	2.018	6.306	39.360
6	1.871	5.848	45.208
7	1.857	5.804	51.012
8	1.682	5.255	56.267
9	1.539	4.808	61.076
10	1.508	4.711	65.787

Table 5.12: Varimax Rotated Component Matrix for 11 Factor Solution Using 32 Variables

	Component									
Variable	1	2	3	4	5	6	7	8	9	10
Police Station	0.89									
Parking Lot	0.79									
Fire Brigade	0.78									
Facilities For Handicapped	0.60									
Primary School		0.87								
Secondary School		0.84								
Clinic/ Hospital		0.72								
Market		0.45								
Electrical Wiring			0.66							
Safety			0.66							
Pipe Repairs			0.62							
Level Of Socket			0.54							
Nursery			0.53							
Kitchen Area				0.73						
Living Area				0.71						
Dining Room Area				0.70						
Clothes-Line Facilities				0.46						
Garbage Line					0.83					
Garbage Disposal					0.72					
Water Supply					0.58					
Washing Room Area						0.70				
Air Circulation						0.53				
Place of Worship							0.74			
Community Hall							0.64			
Preschool							0.64			
Children's Playground								0.71		
No of Socket								-0.59		
Bedroom Area									0.72	
Room Arrangement									0.66	
Public Transport										0.68
Telephone										-0.64
Noise										0.47

Table 5.13: Factor Analysis: Components of Satisfaction Variables

Scale Item	Factor loadings	Eigenvalue	% of Variance	Cum. %
Factor 1: Neighbourhood Facilities & Environment		3.042	9.505	9.505
Police Station	0.89			
Parking Lot	0.79			
Fire Brigade	0.78			
Facilities For Handicapped	0.60			
Factor 2: Neighbourhood Facilities & Environment		3.040	9.500	19.005
Primary School	0.87			
Secondary School	0.84			
Clinic/ Hospital	0.72			
Market	0.45			
Factor3: Services by Developers		2.441	7.627	26.632
Electrical Wiring	0.66			
Safety	0.66			
Pipe Repairs	0.62			
Level Of Socket	0.54			
Nursery	0.53			
Factor 4: Dwelling Units		2.055	6.422	33.054
Kitchen Area	0.73			
Living Area	0.71			
Dining Room Area	0.70			
Clothes-Line Facilities	0.46			
Factor 5: Dwelling Units		2.018	6.306	39.360
Garbage Line	0.83			
Garbage Disposal	0.72			
Water Supply	0.58			
Factor 6: Dwelling Units		1.871	5.848	45.208
Washing Room Area	0.70			
Air Circulation	0.53			
Factor 7: Neighbourhood Facilities & Environment		1.857	5.804	51.012
Religious Worship	0.74			
Community Hall	0.64			
Preschool	0.64			
Factor 8: Neighbourhood Facilities & Environment		1.682	5.255	56.267
Children's Playground	0.71			
No Of Socket	-0.59			
Factor 9: Dwelling Units		1.539	4.808	61.076
Bedroom Area	0.72			
Room Arrangement	0.66			
Factor10: Neighbourhood Facilities & Environment		1.508	4.711	65.787
Public Transport	0.68			
Telephone	-0.64			
Noise	0.47			

Kaiser-Meyer-Olkin Measure =0.680658
Bartlett's Test of Sphericity = 2339.132 at df=496 with a significance of 4.4E-236

5.8 Decision to Move Out

Despite having reasonable level of residential satisfaction, many residents (37.67%) wanted to move out from their houses. 42.43% of the residents decided to move out were staying in the flat at Kondo Rakyat Kuala Ibai. The reasons to move out were due to distance was far to work place and school and they were looking to own a more comfortable house than the present one because many problems. The problems were floods, leaks, poor quality building materials, poor public transport and community facilities, and safety and neighbourhood problems.

5.9 Conclusion

As a conclusion, the residents were generally satisfied with dwelling units, services by developers and neighbourhood facilities and environment. However, the levels of satisfaction varied according to some indicators and housing estates. The residents were particularly dissatisfaction with kitchen area, dining room area and clothes line facilities in their dwelling units, safety and pipe repair service by developers and neighbourhood facilities and environment such as public transport, parking lots, telephone, market, community hall, police station, children's playground and facilities for the handicapped.

It can be concluded from factor analysis that six factors can be identified to explain the residential satisfaction in descending order, as follows:

a) Safety infrastructure in the neighbourhood - Police station, parking lot, fire brigade and facilities for handicapped.
b) Educational and health facilities in the neighbourhood - Primary school, secondary school and hospital or clinic.

c) Technical services by developers - Electrical wiring, safety, pipe repairs, no. of socket.

d) Main activity areas of dwelling units – Dining room, living room and kitchen.

e) Cleaning services by developers – Garbage line, garbage disposal and water supply.

f) Design of dwelling units – washing room area and air circulation.

CHAPTER 6: CONCLUSION

6.1 Introduction

Residential satisfaction is an important indicator of housing condition which affects individuals' quality of life. The factors which determine their satisfaction are essential inputs in monitoring the success of housing policies. The objectives of the study were to determine the level residential satisfaction in low-cost housing projects developed by private sectors and to identify main factors with significant attributes that satisfy residents' needs. The findings of the study support the findings of earlier studies on satisfaction levels of common attributes of dwelling units, services and neighbourhood facilities. However, they differ in certain attributes due to local and cultural conditions.

6.2 Findings on Residential Satisfaction

The private low-cost housing in Penang comprised 93% flats and 7% one-storey terrace houses while the housing in Terengganu comprised 39% flats and 61% one-storey terrace houses. The difference was mainly due to land cost and the density of development. In terms of ethnic background of the residents, almost all house owners in Terengganu were Malays while in Penang 64% were Malays and 21% were Chinese. Household size was quite similar in both states with 3.43 in Penang and 3.63 in Terengganu. This indicates the new trend of younger families living in low-cost houses with a reasonable level of average monthly household of RM1577 in Penang and RM1383 in Terengganu.

The variables that affect residential satisfaction were categorized in three main groups, dwelling units, services by the developers, neighbourhood facilities and environment. The level of satisfaction was calculated by the average satisfaction of the residents. There were 32 indicators within these three groups.

The residents in both states were generally satisfied with dwelling units, services by developers and neighbourhood facilities and environment. However, the levels of satisfaction varied according to some indicators and housing estates. The residents were particularly dissatisfied as shown by some indicators. For the study in Penang, there were 10 indicators that the residents felt unsatisfied while there were 13 indicators in Terengganu. The main unsatisfied indicators were related particularly to the neighbourhood facilities and environment, such as public transport, community hall, parking lot and facilities for the handicapped. Besides that, the residents in both states felt that they had problems with safety and their dwelling units regarding dining room area, kitchen and clothesline facilities.

Despite having reasonable level of residential satisfaction, many residents in both states wanted to move out from their houses. The main reasons given by residents in Penang were to own a more comfortable house and to get a bigger house. However, the main reasons given by the residents in Terengganu were due to far distance to work place and school and to own a more comfortable house than the present one because of many problems. The problems were floods, leaks, poor quality building materials, poor public transport and community facilities, and safety and neighbourhood problems

6.3 Factors of Residential Satisfaction

Results of the factor analysis of the data of the study give some insights into items or attributes of factors determining residential satisfaction in private low-cost housing in Penang and Terangganu.

The main factors that determine residential satisfaction in Penang are main activity areas of dwelling units: dining room, living room and kitchen, followed by educational facilities in the neighbourhood: primary school, secondary school and nursery, and market facilities in the neighbourhood: market and telephone. While the main factors identified in Terengganu are safety infrastructure in the neighbourhood: police station, parking lot, fire brigade and facilities for handicapped, followed by educational and health facilities in the neighbourhood: primary school, secondary school and hospital or clinic, and technical services by developers: electrical wiring, safety, pipe repairs, no. of socket.

Thus, it reflects that house quality and building design and educational facilities in the neighbourhood determine residential satisfaction in private low-cost housing in Penang while safety infrastructure, educational and health facilities in the neighbourhood determine residential satisfaction in private low-cost housing in Terengganu.

6.4 Policy Implications

Our government has implemented a number of housing programmes to achieve the goal of providing affordable housing for the low-income group. Besides public sector agencies, private developers have contributed significantly to achieve the goal. As we are aware, simply providing houses does not measure the success of housing programmes and policies. Thus, just meeting the target of housing units for certain time

period is not sufficient effort to achieve the goal of housing policy. The suitability of living environment, services and related facilities to the need of residents is essential for housing programmes to be successful.

Based on the findings of the study, it has found the residents of low-cost housing projects developed by private housing developers expressed their dissatisfaction with certain attributes of dwelling units, services by developers and neighbourhood facilities as discussed above. These problems affected their living environment and quality of life. In order to ensure that housing is not just a home but a home in liveable neighbourhood, the government should monitor low-cost housing programmes developed by private developers to ensure the needs of the low income group are met.

The policy requiring private developers to build 30% of their development with low-cost housing needs to be implemented with necessary requirements, services and neighbourhood facilities. It has found out from the study that the developers did not put much emphasis on these requirements as indicated by the satisfaction levels on these aspects. If they did it was minimal. Therefore, the government should monitor this problem to ensure the residents from low income group are housed in a liveable environment.

Planning for low-cost housing development should be integrated with other land uses so that a good public transportation system could be efficiently implemented to meet the need of low income group. Thus, the development of low-cost houing project should take into account the needs of the residents more than their effective demand for house.

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APPENDIX

APPENDIX

UNIVERSITI SAINS MALAYSIA

Pusat Pengajian Perumahan, Bangunan dan Perancangan

KAJIAN KEPUASAN PENGHUNIAN PERUMAHAN KOS RENDAH DI MALAYSIA

(RESIDENTIAL SATISFACTION OF LOW COST HOUSING IN MALAYSIA)

Kajian ini dijalankan sebagai keperluan penyelidikan yang dibiayai oleh geran penyelidikan USM. Tujuan penyelidikan ini ialah untuk meneliti sejauh mana penyediaan perumahan kos rendah menepati keperluan penghuninya. Segala maklumat yang diberikan akan dirahsiakan.

Nama Penemubual:
(Name of Interviewer): _____ Tarikh*(Date):* _____

Jenis Rumah: i. Flat (*Flat)*
(Type of Houses): ii. Rumah Kluster (*Cluster House)*
iii. Rumah Teres Satu Tingkat (*One Story Terence House)*

Jarak Ke Tempat Kerja: _____ km

A. LATAR BELAKANG KETUA ISIRUMAH (HEAD OF HOUSEHOLD'S BACKGROUND)

Sila bulatkan jawapan yang sesuai dan isi tempat kosong untuk soalan yang tidak mempunyai pilihan.

(Please circle the correct answer and fill in the answers where is applicable).

1. Bangsa *(Race)*:
   i. Melayu *(Malay)*
   ii. Cina *(Chinese)*
   iii. India *(Indian)*
   iv. Lain-lain *(Others)* _____

2. Jantina *(Sex)*:
   i. Lelaki *(Male)*
   ii. Perempuan *(Female)*

3. Umur *(Age)*: _____

4. Status: *(Status)*:
   i. Bujang *(Single)*
   ii. Berkahwin *(Married)*
   iii. Duda *(Widower)*
   iv. Janda *(Widow)*

5. Pekerjaan: *(Occupation)*: _____

6. Pendapatan Sebulan: *(Monthly Income)*: RM _____

7. Tahap pendidikan Tertinggi: *(Highest level of Education)*:
   i. Tidak Bersekolah *(Did not attend any school)*
   ii. Peringkat Sekolah Rendah *(Primary School)*
   iii. SRP/ PMR/ LCE
   iv. SPM/MCE
   v. STPM/STP/HSC
   vi. Kolej *(College)*
   vii. Universiti *(University)*

B. MAKLUMAT MENGENAI ISIRUMAH *(HOUSEHOLD INFORMATION)*

8. Nyatakan jumlah penghuni mengikut umur dan jantina:
(Number of household members according to age and sex):

Umur (Age)	**Jantina (Sex)** 1. Lelaki(Male) 2. Perempuan **1.** (Female)	**Status** ***(Status)*** *1.*Belum Belajar *(Not Studying)* *2.*Belajar *(Studying)* 3. Bekerja *(Working)*	Pendapatan Sebulan ***(Monthly Income)*** **1.1. RM**
2. Jumlah			

9. Nyatakan perbelanjaan bulanan isirumah:
(Household's monthly expenses):

No.	Jenis Perbelajaan *(Type Of Expenses)*	2.1. Jumlah Perbelanjaan Sebulan *(Total Monthly Expenses)* 2.2. RM
a.	Makanan *(Food)*	
b.	Pakaian termasuk kasut *(Clothing include shoes)*	
c.	Sewa *(Rent)*	
d.	Ansuran pinjaman membeli rumah (*Housing loan instalment)*	
e.	Ansuran pinjaman kenderaan *(Vehicle loan instalment)*	
f.	Pendidikan *(Education)*	
g.	Bil elektrik, air & telefon *(Electric, water & telephone bils)*	
h.	Pengangkutan *(Transportation)*	
i.	Rawatan Kesihatan *(Health Treatment)*	
j.	Rekreasi, Hiburan & Sukan *(Recreation, entertaiment & sports)*	
k.	Simpanan *(Saving)*	
l.	Lain-lain *(Others)* _____	
Jumlah Perbelanjaan *(Total Expenses)*		

10. Nyatakan jenis dan bilangan kenderaan yang dimiliki:
(Type and number of vehicle owned):

Jenis Kenderaan *(Type Of Vehicle)*	Bilangan *(Number)*
Basikal *(Bicycle)*	
Motorsikal *(Motorcycle)*	
Kereta *(Car)*	
Van *(Van)*	
Lain-lain *(Others)* _____	

C. MAKLUMAT PEMILIKAN RUMAH *(HOUSE OWNERSHIP INFORMATION)*

11. Status Pemilikan Rumah: *(House ownership status):*
    i. Rumah Sendiri *(Own House)*
    ii. Sewa *(Rent)*
    iii. Lain-lain *(Others)* _____

12. Berapa lamakah anda sudah menetap di rumah ini?
    (How long have you been staying in this house?) _____ tahun *(years)*

13. Harga Rumah semasa dibeli *(Housing Price when purchase)*: RM
    _____

14. Bilangan bilik di dalam rumah *(Number of bedroom in the house)*:
    _____

D. TAHAP KEPUASAN RESPONDEN TERHADAP KEADAAN RUMAH *(LEVEL OF SATISFACTION WITH DWELLING UNITS)*

15. Sila isikan tahap kepuasan anda mengikut peringkat yang telah dinyatakan seperti di bawah:
    (Please rate your satisfaction according to the level given as below):

    5 = Sangat Puas Hati *(Very satisfied)* 4 = Puas Hati *(Satisfied)* 3 = Sederhana *(Neutral)* 2 = Tidak Puas Hati *(Unsatisfied)*
    1 = Sangat Tidak Puas Hati *(Very unsatisfied)*

No	Keadaan Rumah (Dwelling Features)	Tahap Kepuasan *(Level of Satisfaction)*				
		1	2	3	4	5
a.	Keluasan ruang tamu *(Space in the living room)*					
b.	Keluasan ruang dapur *(Space in the kitchen)*					
c.	Keluasan ruang makan *(Space for dinning)*					
d.	Keluasan bilik tidur *(Space in bedroom)*					
e.	Keluasan dalam bilik air *(Space in the toilet)*					
f.	Susunan Bilik *(Room Arrangement)*					
g.	Aliran Udara *(Air circulation)*					
g.	Bilangan plug/soket elektrik *(Number of plug: electrical socket outlets)*					
i.	Ketinggian sink *(Sink height)*					
j.	Kemudahan ampaian *(Clothes line)*					
k.	Kemudahan pembuangan sampah *(Garbage line)*					
l.	Kebisingan *(Noise)*					

E. TAHAP KEPUASAN RESPONDEN TERHADAP KEMUDAHAN PERKHIMATAN OLEH PEMAJU *(LEVEL OF SATISFACTION WITH SERVICES BY THE DEVELOPERS)*

15. Sila isikan tahap kepuasan anda mengikut peringkat yang telah dinyatakan seperti di atas:
(Please rate your satisfaction according to the level given as above):

No.	Kemudahan Perkhidmatan oleh Pemaju *(Services by the Developers)*	Tahap Kepuasan *(Level of Satisfaction)*				
		1	2	3	4	5
a.	Membaiki paip *(Pipe repairs)*					
b.	Pendawaian *elektrik (Electrical wiring)*					
c.	Bekalan air *(Water supply)*					
d.	Pembuangan sampah *(Garbage disposal)*					
e.	Keselamatan *(Safety)*					

F. TAHAP KEPUASAN RESPONDEN TERHADAP KEMUDAHAN KEJIRANAN DAN PERSEKITARAN *(LEVEL OF SATISFACTION NEIGHBOURHOOD FACILITIES AND ENVIRONMENT)*

16. Sila isikan tahap kepuasan anda mengikut peringkat yang telah dinyatakan seperti di atas:
(Please rate your satisfaction according to the level given as above):

No.	Kemudahan Kejiranan dan Persekitaran *(Neighbourhood Facilities and Environment)*	Tahap Kepuasan *(Level of Satisfaction)*				
		1	2	3	4	5
a.	Tadika *(Preschool)*					
b.	Sekolah rendah *(Primary school)*					
c.	Sekolah Menengah *(Secondary school)*					
d.	Klinik/Hospital *(Clinic/Hospital)*					
e.	Telefon *(Telephone)*					
f.	Pasar *(Market)*					
g.	Taman permainan kanak-kanak *(Children's playground)*					
g.	Pengangkutan Awam *(Public Transport)*					
i.	Tempat Letak Kenderaan *(Parking lot)*					
j.	Tempat ibadat: Masjid, Kuil, Tokong & Gereja *(Mosque, Temple & Church)*					
k.	Dewan orang ramai *(Community Hall)*					
l.	Kemudahan orang cacat *(Facilities for handicapped)*					
m.	Stesyen polis *(Police station)*					
n.	Bomba *(Fire brigade)*					
o.	Taska *(Nurseries)*					

17. Adakah anda bercadang untuk berpindah dari rumah yang di diami sekarang? Nyatakan sebab anda. *(Do you plan to move out from your current house? Please state your reason).*

_____

_____

_____

Terima kasih di atas kerjasama anda.