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**FACTORS INFLUENCING DEMAND FOR
CONDOMINIUM IN JOHOR BAHRU, MALAYSIA**

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Abstract

In recent years, condominium living has gained popularity among Malaysians. Many Malaysians have invested in this development because of its product attributes. It has become the mode of living for the country's middle and upper class families. Condominium developments have mushroomed in all parts of cities in Malaysia particularly in Kuala Lumpur, Penang and Johor Bahru. The residents can enjoy the convenience of having the facilities at their doorsteps, the abundance of greenery and open space.

Demand for condominiums in Johor Bahru is not certain and so this is a main problem to the developers. The developers are in doubt about which factor and how much weight should be considered to come up with a condominium project. What are the real factors that influence the demand or what are the real factors that attract people to buy the condominiums? Based on theories and literature review, several factors have been identified which make up the demand factors for condominium. Among the factors are location, price, surrounding development, scenery, available loan and others. Once these factors are known, it is easier for the developers to consider these factors before they proceed with the condominium development effectively and efficiently.

1.0 Statement Of The Problems

Due to the demand for condominiums in Johor Bahru is not certain i.e the demand for property has been cyclic, it is very important for the developers and the buyers in the property market that there is a time to buy and a time to sell to be financially viable. It is very important especially for the small and medium developers to know what are the real factors that encourages people to buy before they proceed with the condominium development. This is because to avoid the project from being abandoned.

2.0 The Methodology

There were four steps taken to assess the demand factors for condominiums in Johor Bahru. The steps were (i) to identify relevant demand factors from the literature review, (ii) to conduct a questionnaire survey to the people living in condominiums in the study area and this survey would provide specific and detailed information of the people in the study area and surface their concerns and opinions, (iii) punching in data into the computer by using SPSS (Stistical Package For Social Science) and (iv) the data collected were analyzed and the results were presented.

3.0 Defination Of Condominium

The term "condominium" is couched with differing interpretations and it seems that any article on the subject of condominiums has to begin with a definition of the term.

The term condominium is capable of a far wider application. Condominiums have existed for centuries and writers have even traced them to the times of the Romans. It refers to a form of ownership in which more than one owner is involved in a specific way.

Condominium is a Latin word meaning joint ownership or control. When applied to housing, it denotes individual ownership with unrestricted right of disposal of one or more units in a multi unit project, with land and all other parts of the project held in common with owners of other units.

According to Black's Law Dictionary, a condominium is a system of separate ownership of individual units in a multi-unit building. A single real property parcel with all the unit owners having a right in common to use the common elements with separate ownership confined to the individual units which are serially designated.

From the above statements, condominiums can be defined as a form of co-ownership over a multi-unit property where the owner-occupier has individual ownership of one unit but common ownership of the grounds and common areas with other unit owners. The purchaser of a condominium in other words receives a separate title deed for a specific unit and a pro-rated interest in the common property.

In Malaysia, there is hardly any distinguished definition between flat, apartment and condominium. In the layman point of view, condominium is the most high-priced between them. The additional attributes which distinguish condominium to flat and apartment are better facilities offered and well planned design to suit the taste of high income people. Nevertheless, at current scenario, the difficulties of differentiating between an apartment and condominium is exacerbated by better facilities added to typical apartment so that it can be called a condominium. With this perplexing definition, condominium hereinafter in this study is referred to as multi-unit residential development. The special facilities that can be found in most of the condominium are swimming pool and children's pool, gymnasium, 24 -hour security service, launderette service, jogging track, squash and tennis court, function room, poolside barbecue pit, and landscaped. Condominium living portrays a cosier, more prestigious and luxurious life-style with the incorporation of services, facilities and amenities enabling comfortable, enjoyable and convenient living.

From the literature review, condominium has its origin and chief utilisation in meeting the need for shelter in land scarce areas. It enables more intensive use of land resources. As such it lowers the cost of housing and gives home-ownership opportunity for more people in areas where land cost is high and this is especially true in United States of America and Australia.

The concept of condominium living in Johor Bahru, Malaysia is the same to those in United States of America and Australia. Condominiums in Malaysia seems to be the alternative of providing housing to the people but not for the lower income group which earns below RM1,300 per month. There are three different type of condominium market that is above RM250,000 per unit is the up-market condominium, RM120,000 - RM250,000 per unit is the medium market and below RM120,000 is the lower market. Condominium living emphasis as the gracious lifestyle manifested in the provision of recreational amenities and facilities amidst an enclosed environment of land scaped greenery.

4.0 Condominium Development In Johor Bahru

The first condominium project in Johor Bahru was Indera Putra which was built in 1984. It consisted of 48 units and was located at Jalan Indera Putra. This first condominium project and endorsed by the Government in the Fifth Malaysian Plan (1981 - 1985) as a measure to optimise land use and enhance the standard of living.

It is now more favoured as an alternative form of housing in the urban areas. Demand for condominium units have been good ever since the country recovered from the recession period (1984 - 1987). When the economy recovered, the offer of cheaper labour costs plus the inflow of foreign investments in the manufacturing sector has resulted in an influx of expatriates from Japan, Korea, Taiwan and Singapore, increased the demand for condominiums in Johor Bahru.

In 1997, Malaysia started to face recession again. Despite the previous year's stellar Malaysian performance of 8.5% GDP growth and low inflation figures of 2.8%, the Asia-Pacific regional crisis, had made the situation financially untenable. Real GDP had contracted by 2.8% against a growth of 8.6% for the same period in 1997. This is due to the slowdown in domestic demand (Refer Table 9 for the GDP percentage growth per annum from 1990 - 1997).

In 1998, the economy growth shows a negative trend. To improve the economy situation, Bank Negara Malaysia (BNM) is continuing a tight monetary policy. Loan credit growth towards the purchase of property has slowed down. This is because more loans are being channelled to the production and manufacturing sectors. Malaysia's loan growth slowed down at 26.9% in November from 28.4% in October last year.

On the 1998 budget, the government had announced several fiscal initiatives to ensure macroeconomic stability (especially in the balance of payments, inflation and the financial stability of the public and private sectors).

5.0 Supply Of Condominiums

In 1998 alone, there was 2,980 units and the cumulative supply of condominiums in the market up to 1997 was 6,352 units. There has been an increased of 46.91% since 1997.

Table 1: Supply Of Condominium Units, Johor Bahru (1984 - 1996, 1997, 1998)

Year	No. Of Projects	No. Of Units
1984-1996	20	1536
1997	10	1836
1998	24	2980
Total	54	6352

Source: Own Analisis, 1998.

6.0 Condominium Demand

Demand, as interpreted here is effective demand which refers to demand for the purchase of condominiums by individuals or companies for purposes of either owner-occupation or investment. It excludes those projects which are wholly retained by the developers as investments since these cater exclusively to rental demand. Condominiums that been retained by the developers for investments are known as servicing apartments.

For a successful recovery, there is a need to increase effective demand to enable the quick translation of property needs to property transactions (Mani Usilappan, 1998). Despite all the factors mention, there is still a demand for housing. This is because the Malaysian population is increasing, the household formation is

lower and more people will be in the income earning age. Hence more housing units will be required.

The demand for housing is generated by the following influences:

a. **Overall population growth:** present and future housing requirements arise out of the total population growth by way of net natural increase, immigration, family formation, size of households and changing age distribution.

Backed by a government policy of achieving a population target of 70 million by the year 2020 (Tracey Vincent, 1993), the annual average population growth rate for the country from 1980 to 1990 was 2.64 per cent which is high compared to the annual growth rate in the Asia-Pacific for the period 1985 to 1990 which is 1.8 per cent, and it is below replacement growth of some of the European countries. In mid 1993, the population of Malaysia was 19.05 million (Statistics Department, 1993).

In Johor Bahru, the annual population growth rate will be increased from 4.6% in 1985 to 16.5% in the year 2000 (Table 2). An increasing population means demand for more houses.

Table 2: Projection Population Growth In Johor Bahru (1980 - 2000).

Year	Population	Annual Growth Rate (%)
1980	415,200	-
1985	520,000	4.6
1990	651,300	4.6
1995	840,700	5.2
2000	1,805,100	16.5

Source: Johor Bahru Structure Plan

Household size in Johor Bahru is getting smaller i.e. in 1991 the household average size is 5.0. Overall, average household size for apartment is 4.2 and 97.0% makes-up of one household (Department of Statistics, 1995). This shows that there is an increase in demand for condominium because in Johor Bahru, smaller families normally prefer to stay in condominium with all the facilities nearby. Age

Table 3 shows the population growth of Malaysia and Johor Bahru. There has been an increased in the population growth rate and this increases the demand for houses.

Table 3: Population Growth Rate

Year	Malaysia ('000)	Yearly Growth Rate (%)	Johor Bahru	Yearly Growth Rate (%)
1980	10,944	-	407	-
1985	12,231	2.25	522	5.10
1990	13,704	2.30	670	5.12
1991	14,128	3.10	705	5.22

Source: Statistic Department Malaysia & Rahim & CO. Research Sdn. Bhd.

Besides the population growth rate, the age structure is also important. There are 56.4% of the people in Johor Bahru is in the category of 15 - 64 years which means that this category has the affordability to buy a house. This increases the demand for housing (Table 4).

Table 4: Age Structure In Johor Bahru.

Age Group (Years)	Percentage 1990
0 - 14	39.9
15 - 64	56.4
65 and above	3.7

Source: Johor Economy Report, 1994.

b. **Urbanisation:** The potential demand becomes more apparent with population growth and also urbanisation. By 2020, Malaysia's population will reach 70 million people and this means that 45 million people living in urban areas i.e. an increase of 264 per cent. Due to this urbanisation, it attracts people coming to the cities. People prefer living in the cities because of a high paying jobs, quality of life and cultural events. This means there will be an increased in demand for housing (Table 5).

Table 5: The Urban Population Growth Trend.

Year	Pop. ('000)	Urban	%
1970	10877	2719	25
1980	13764	2884	21
1990	18010	7744	43
2000f	22615	11353	50
2010f	27621	16645	60
2020f	33015	24403	74

Source: Malaysia Institute Economic Report (1991).

c. **Level Of Income:** income is an important factor. Higher incomes facilitate earlier marriages, and encourage upgrading of housing. Likewise lower incomes discourage early marriage, and could ultimately cause downgrading of housing. Affordability or the capacity to pay the price, the occupancy costs (including mortgage repayment, or the rent) - is a most important factor in the housing market.

The potential demand for housing can be appreciated even more with increasing incomes. Rising incomes also mean growing middle and upper classes group of people with new and higher expectation in the standard of living. In this context condominium living may become more appealing and affordable. 40% of the respondents have their income above RM4,000 per month.

In general, there are 4,600 households earning an income above RM2,500 per month and this group increased to 5,000 households in 1998 (Table 6). It can be said that if income increased, standard of living will also be increased which is due to urbanisation and this indirectly will increase the demand for housing especially condominium which all the facilities is near the "door step".

Table 6: Projected Household Income in Johor Bahru (1997 - 1998).

Monthly Income (RM)	Number of Households	
	1997	1998
2,750	3,900	4,300
3,750	3,300	3,600
4,250	2,100	2,200

Source: Rahim & Co. Research Sdn. Bhd.

Table 7: Projected Household Income Distribution in Johor Bahru (1999-2004).

Monthly Income (RM)	Number of Households					
	1999	2000	2001	2002	2003	2004
2,750	4,700	5,800	6,200	6,800	7,300	7,900
4,000	-	4,200	4,600	4,900	5,200	5,700
4,250	2,400	-	-	-	-	-
4,500	-	1,500	1,600	1,750	1,800	2,000
4,750	-	1,100	1,150	1,260	1,350	1,400

Source: Rahim & Co. Research Sdn. Bhd.

From table 7, it can be seen that there are 4,700 households received an income above RM2,750. This means that more people can afford to buy condominium especially the lower and medium market condominium. Price for lower and medium market condominium is below RM250,000 per unit. This further increased the demand for this type of condominium.

Households income is very important in determining the type of house they can afford to buy. Table 8 shows that households that earns RM2,250 - RM4,500 per month are considered higher income group and they can afford to pay for the housing loan of RM750 - RM1,500 per month.

Table 8: Category Of Households Income And Housing Allocation.

Category	Households Income	Housing Allocation
1. Lower Income	1,125	375
2. Lower Medium Income	1,500 - 2,250	500 - 750
3. Medium Income	2,625 - 3,000	875 - 1,000
4. Medium Lower Income	4,125	1,375
5. Higher Income	2,250 - 4,500	750 - 1,500

Source: National Housing Convention, 1997.

Malaysia's strong economic performance, has increased the employment rate and unemployment rate has been decreasing. This means that real per capita income of the people has been increasing due to the rapid and sustained growth of the Malaysian economy. Gross Domestic Product (GDP) has been expanded by an average of 8.8 per cent per annum since 1988. This rapid growth was attained within an environment of greater price stability i.e. with the increase in Consumer Price Index (CPI) being contained at 3.8 per cent. In addition, the nation's per capita income further increased to reach RM 12,102 in 1997 (Table 9).

Table 9: The Nation's Per Capita Income 1990 - 1997

Indicators	1990	1991	1992	1993	1994	1995	1996	1997
Per Capita National Income RM p.a.	6,176	6,796	7,539	8,126	8,975	10,068	11,239	12,102

Source: Property Market Reports.

Table 10 shows that GDP has been steadily due to the rapid and sustained growth of the Malaysian economy. This means increasing demand for housing. As been mentioned earlier, the economy growth of Malaysia is negative in 1998 and

government is taking steps to motivate the property market. This can be seen with the housing campaign which have been going on from 12th December 1998 until 12th January 1999. In this campaign the developers give discount to the eligible buyers.

Table 10: GDP (Malaysia And Johor) And Inflation Rate.

Year	Malaysia (%)	Inflation (%)	Johor (%)
1991	8.7	4.4	9.0
1992	7.8	4.7	9.2
1993	8.3	3.6	9.4
1994	9.2	3.8	9.5
1995	9.6	3.5	9.6
1996	8.6	3.6	9.7
1997	7.8	2.6	9.6

Source: Property Market Report, 1991 - 1997.

A recent survey by the National Population and Family Development Board shows that about 42.2 per cent in 1980 of women joining labour force participation has increased to 46.1 percent in 1993. This indirectly shows that most of the families have both husband and wife working. This shows that there is an increasing number of double income families due to more women entering various sectors of the economy (Economic Report, 1994/95). 88% of the spouse living in condominiums are working.

e. **Mortgage finance:** mortgage finance is essential in converting potential demand for housing into actual demand. Therefore the availability of mortgage money at affordable interest rates and acceptable terms is always an important factor in both demand and supply.

Most people bought their houses with the availability of loan. Loans from financial institutions were easy and banks give up to 90 per cent loans. The repayment duration was usually for 10, 15, 20 or 25 years at prevailing interest rates. Base lending rates are low in Malaysia and more people can afford to buy houses (Table 11). This means demand for condominiums has increases. Base lending rates in Malaysia has been quite low if compared to United States of America which is around 12 - 15 per cent.

On the 6th of January 1999, government announced that loan above RM250,000 will not be approved and this can lead to the dampening of the upmarket condominium or in other words this can decrease the demand for condominium. The base lending rate in 1998 is 10.0 and this decreases the demand of condominium. This factor slows down the property market.

All the buyers said that financing do influence the demand for the condominiums and they prefer low rates for borrowing. 1% said that they will buy in cash and 78% said that they will buy condominium if they can be given 100% loan. 83% said that they bought condominium for investment purposes and 17% said for their own resident.

Table 11: Base Lending Rates.

Year	BLR	Year	BLR
1980	9.5	1990	7.5
1981	12.0	1991	8.8
1982	8.5	1992	9.5

1983	10.8	1993	9.0
1984	12.3	1994	8.7
1985	10.8	1995	8.3
1986	10.0	1996	8.0
1987	9.5	1997	8.3
1988	7.0	1998	10.0
1989	7.0		

Source: Bank Negara (various reports).

Beside financing, other factors such as marketing and the developer's reputation do influence the demand of condominiums. 75% said that developer's reputation do influence the demand for condominium. From marketing aspect, 42% said that they bought the condominiums after they have seen the brochures/pamphlet and 47% said that due to the advertisement and 11% due to others such as through friends.

f. **Other aspects of demand for condominium:** demand for condominium is restricted to fairly narrow location limits; also, there is a local real estate market in each urban area which is affected by influences peculiar to that area. Beside these factors, different buyers look for different kinds of condominiums in keeping with their families' social and financial status as well as the kind of living they seek. This kind of demand is conditioned by the qualitative aspects such as the following:

- * accommodation: number of bedrooms, living rooms, bathrooms, storage etc.
- * quality of locality: superior, average or low cost.
- * construction: good quality finishes and facilities.
- * tenancy or ownership.
- * small or large section: build up area.

Price is very important because it can either increase or decrease demand for condominiums. 76% said that price do influence the demand for condominiums. If demand for condominium is to grow and expand, it must become a viable alternative to the traditional form of houses such as terrace, semi-detached and detached houses, as well as being affordable. 68% prefer price below RM250,000 which is equivalent to the built-up area of traditional form of houses (semi-detached or double storey terrace), 8% prefer price above RM250,000 (Table 12). Affordability is dependent on the size of household income, cost and availability of finance, repayment period and the availability of past saving and Employee Provident Fund withdrawal.

Table 12: Condominium Price Preferable

Category	Percentage
RM 250,000 and below per unit	68
RM 251,000 per unit and above	8
Missing	24
Total	100

Source: Own Analysis.

24% said that the reasons why they bought condominiums was due to the quality of the product. People staying in condominium reflect that the style of living. Besides that 31% said that variety does influence the demand for condominium, 30% was due to the uniqueness, and 15% was due to attractiveness of the condominium developments.

99% said that location is the most important factor before someone starts to purchase condominium. The demand for condominiums situated in a good location are highly demanded. Table 13 shows the location which are highly preferable.

Table 13: Preferred Location

Location	Percentage
Jalan Abdul Samad	8
Jalan Mariamah	12
Stulang	25
Jalan Kolam Air	17
Jalan Yahya Awal	15
Jalan Sungai Chat	5
Jalan Indera Putera	8
Others	10
Total	100

Source: Own Analysis.

There are other reasons that can relate to location. 54% of the respondents buy condominium because it is near the amenities centre and follows by near the city centre (14%) (Table 14). Buyers do not like to buy condominiums that are near public transport and shopping areas. These may be due to noise or heavy traffic or congestion.

Table 14: Reasons For Preferred Location

Location	Percentage
Near city centre	14
Near working place	7
Near public transport	2
Near shopping areas	2
Near recreational centre	21
Near amenities centre	54
Total	100

Source: Own Analysis.

As can be seen from table 10 above, the projects that are situated near the beach (facing the sea) such as Stulang area are highly demanded besides the green surrounding or environment compared to the one that are situated near the city centre.

The figure above tally with the purchasers preferred view. The main reasons why purchasers prefer good view to buy condominiums are due to the factor of harmony and relaxation (Table 15).

For their unit that they bought, 66% prefer their unit facing morning sun, 30% prefer facing evening sun, and 4% prefer facing no sun shine.

Table 15: Scenery From The Condominium Unit.

View	Percentage
Facing swimming pool	34
Facing town area	22
Facing green scenery	43
Missing	1

Source: Own Analysis.

Besides good location, it also relates to whether this location is near the prestige area and have a better environment. 86% said that before they buy a unit of condominiums, they also consider whether it is located near the prestige area and have a better environment. Out of 100 respondents, 52% prefer their location because it is near the prestige area with high income neighbour, 45% prefer to be near the facilities such as petrol kiosk, police station, fire brigade, 33% prefer to be near their friends and 14% prefer no heavy traffic.

A survey on 100 condominium buyers revealed that the 3 and 4 bedroom units are most popular among the type of bedroom units launched and are highly demanded (Table 16).

Table 16: Number Of Bedrooms Demanded

Number of Bedrooms	Percentage
2	1
3	38
4	61
Total	100

Source: Own Analysis.

Penthouse does influence the demand for condominiums. 100% prefer the condominium development to have penthouse. This is because it will differentiate between condominium and apartment. Apartments and flats in Malaysia do not have penthouse on the top of the blocks.

4-bedroom units are highly demanded and in terms of size, the most preferred built-up area is above 1,601 sq. ft. (Table 17). This figure tally with the technical guidelines issued by the Planning Department, City Hall of Kuala Lumpur which states that for 3-bedrooms, the size must be above 1,000 sq. ft.

Table 17: Preferred Built-Up Area

Built-Up Area	Percentage
800 - 1,000 sq. ft.	0.4
1,001 - 1,200 sq. ft.	3.8
1,201 - 1,400 sq. ft.	52.7
1,401 - 1,600 sq. ft.	37.0
1,601 and above sq. ft.	6.1
Total	100

Source: Own Analysis.

Most of the purchasers prefer built-up area between 1,201 - 1,400 square feet and 37% prefer built-up area between 1,401 - 1,600 sq. ft.

Floor layout also does influence the demand for condominium. 1% prefer more storage space, cupboards, and closets; 24% prefer separate or more formal dining room; 97% prefer to have balcony; 5% prefer to have larger kitchen; 68% prefer to have larger bedrooms.

Tenancy also plays an important role in influencing the demand for condominium. 98% prefer condominiums to have strata title and not just depend on the sell and purchase agreement.

g. **Fashion is a consideration:** this is influenced by ethnic origins, personal priorities and general economic considerations. Why do people like to live in a low rise or high rise condominiums? Since most both spouses are working, it leaves less time for property maintenance. This leads to preference to live in a condominium where there exist property management board.

Each condominium developments have the recreational and amenities facilities. These were the main differences between condominiums, apartments and flats. Rank 1 shows that the factor was the main reason why they bought the condominium and 9 was the least important factor influencing demand. Table 18 shows which recreational facilities was highly demanded whilst Table 19 shows the amenities facilities highly demanded.

Besides the factors mentioned above, other factors that also influence the demand for condominiums are the physical aspects of the condominium such as the density, height, and floor layout area.

Table 18: Preferred Recreational Facilities.

Recreational Facilities	Rank
Parking Space	1
Swimming Pool	2
Function Hall	3
Tennis/Badminton Courts	4
Gymnasium	5
Sauna	6
Children Playground	7
Jogging Track	8
Gazebo	9

Source: Own Analysis.

Table 19: Amenities Facilities Demanded

Amenities Facilities	Rank
24 Hours Guard/Surveillance	1
Automatic Sprinkler	2
Nursery	3
Free Club Membership	4
High Speed Modern Lifts	5
Mini Markets	6
Cafeteria	7
Launderette	8
BBQ Area	9

Source: Own Analysis.

Density of the project does influence the demand for condominium and 30% prefer low density, 55% prefer medium density, and 15% prefer high density. Surrounding development also influence the demand for condominiums. 73% prefer medium density surrounding development (60 - 100 persons per acre), 25% prefer low density surrounding development (10 - 40 persons per acre), and 2% prefer high density surrounding development (400 persons per acre).

Height also do influence the demand for condominium. Height usually relates with either high rise or low rise building. 20% prefer low rise building (below 4

storey), 50% prefer medium rise building (5th floor - 10 th floor), and 30% prefer high rise building (11 th floor and above).

7.0 Conclusion

The factors mentioned above are the important factors that do influence the demand for condominiums in Johor Bahru. Factors such as rate of inflation, consumer price index and the rate of gross domestic product have not been surveyed because these factors have been reflected in the price of the condominium itself.

From the above discussion, it can be concluded the the main factors that influence the demand for condominiums can be categorised into eleven main category (Table 20). Rank 1 shows that it is the most important and vital factor in influencing demand for up-market condominiums and Rank 11 is the least important factor.

So, demand for condominiums will always be there because people are already accepting the concept of living in a condominium and also as their lifestyle. Before developers proceed with the condominium projects, they must know what are the most important factors that will attract people to buy the condominiums. This is to ensure that once the developers have taken-up the project, there is no turning back because condominium development involved a lot of money and the developers have to ensure that the project will be carried out effectively. Nowadays, people are talking about whether there is glut in the supply of the condominiums and so it is very important to know the main factors that influence the demand just to make sure that the projects being carried out by the developers will not be abandoned due to lack of demand. Beside the location and the characteristics of the building, prices are also very important. Developers need to determine these prices and deliver the type of houses within the expected price range to fulfill the demand. As the property market reports indicate, the bulk of the housing sector i.e. 72% to 80% of all residential transactions is for houses below RM150,000. Therefore, from this article, developers are advised to take note of such data and build more affordable housing for which a ready market is available.

Table 20: Main Factors That Influence Demand

Main Factors	Ranking
Location of development	1
Characteristics of the building	2
Price	3
Recreational facilities	4
View	5
Marketing	6
Financing	7
Management	8
Surrounding environment	9
Investment	10
Good reputation of the developer	11

Source: Own Analysis.

BIBLIOGRAPHY.

1. Dombal, Robert W.; Residential Condominium: A Guide to Analysis And Appraisals (American Institute Of Real Estate Appraisers Of The National Association Of Realtors, 1976).
2. Halim, Abdullah; Everything The Condominium Developer Should Have Told You But Didn't (Pelanduk Publications, 1992).
3. Hoyt, Homer; The Structure And Growth Of Residential Neighbourhood In American Cities (Washington: Federal Housing Administration, 1939).
4. Her Majesty's Stationary Office; Living In Flats, 1952.
5. Craig, C. N.; "Factors Affecting Economy In Multi-Storey Flat Design"; RIBA Journal (April, 1956).
6. Willis, Margaret; "Living In High Blocks Of Flats"; RIBA Journal (April 1954).
7. M. Roux-Spitz; "Immeuble Queie D'Orsay"; L' Architects (December 1930).
8. Wendt, Paul F.; Real Estate Appraisal: Review And Outlook (University Of Georgia Press, 1974).
9. Percetakan Nasional Malaysia Berhad, (1993). Statistics Handbook 1993. Kuala Lumpur.
10. City Hall Of Kuala Lumpur, (1984). Kuala Lumpur Structure Plan. Kuala Lumpur.
11. Department Of Statistics, Malaysia, (1992). Social Statistics Bulletin. Kuala Lumpur.

12. Department Of Statistics, Malaysia, (1992). Population And Housing Census Of Malaysia. Kuala Lumpur.
13. Percetakan Nasional Malaysia Berhad, (1994/1995). Economic Report.. Kuala Lumpur.
14. Government Of Malaysia, (1981). Fourth Malaysia Plan: 1980 - 1985. Government Printer, Kuala Lumpur.
15. Marans, R., W. (1979). The Determinants Of Neighbourhood Quality: An Analysis Of The 1976 Annual Housing Survey. U.S. Government Printing Office, Washington, D.C.
16. Needleman, L., (1965). The Economics Of Housing. Staples Press, London.
17. Tan, Soo Hai, (1979). "Factors Influencing The Location, Layout, And Scale Of Low-Cost Housing In Malaysia", in Public and Private Housing in Malaysia, by Tan Soo Hai, and Hamzah Sendut. Heinemann Educational Books Asia) Ltd., Kuala Lumpur.
18. United Nations, (1977). The Social Impact Of Housing: Goals, Standards, Social Indicators, and Population Participation. Department of Economic and Social Affairs, New York.
19. Hasmah, Abu Zarin, And Ahmad Ariffian, Bujang., (1993). "Kuala Lumpur Condominiums - Up Market Study", in Real Estate Practice Education & Research Seminar.
20. Hasmah, Abu Zarin, And Ahmad Ariffian, Bujang., (1994). Demand And Supply Of Condominium In Federal Territory Of Kuala Lumpur. University Teknology Malaysia, Skudai, Johor.
21. Hasmah, Abu Zarin, Noor Sharipah, Sultan Sidi, And Ahmad Ariffian, Bujang., (1995). "Factors Influencing Demand For Condominium In Kuala Lumpur", in Living And Working In The Information Age Seminar, Melbourne Australia.
22. Bournfe, Larry, S., (1981). The Geography Of Housing. V. H. Winston & Sons, U.S.A.
23. Rahim & Co. Research Department; "Up-date Kuala Lumpur and Singapore Property Market", in Real Estate Review (October 1994).
24. City Hall Of Kuala Lumpur, (1994). Briefing: Condominium Housing In Federal Territory Of Kuala Lumpur.
25. Gerard Soong, (1984). Insuring Condominiums. Vol. 9 No. 3, Institution Of Surveyours, Malaysia.
26. Abbott, D. (1973). Encyclopedia Of Real Estate. Redwood Burn Limited.
27. Karr, J. N. (1973). The Concominium Buyer's Guide - What To Look For And Look Out For - In Resort, Residential And Commercial Condominiums. Frederick Fell Publichers Inc., New York.
28. Jones Lang Wootton (1992). Kuala Lumpur Condominium Upmarket Study.
29. Rahim & Co. (1992). The Kuala Lumpur Property Market - A Forecast Of Trends 1992 To 2007. Kuala Lumpur.
30. Sim Loo Lee (1989). Guide To Condominium Housing In Singapore. Singapore University Press.
31. Gurjit Singh (1992). Conference On Successful Condominium Development. Kuala Lumpur.
32. Lim Lian Hong (1993). Successful Pricing To Achieve Better Investment Returns. Presented in the Seminar On Strategic Directions And

- New Features For Service Apartments And Condominiums, Kuala Lumpur.
33. Elvin Fernandez (1993). Where The Opportunities Lie: Positioning Your Development To Meet The Demand. Presented in the Seminar On Strategic Directions And New Features For Service Apartments And Condominiums, Kuala Lumpur.
 34. Tracy Vincent (1993). Value Added Design For A Competitive Edge. Presented in the Seminar On Strategic Directions And New Features For Service Apartments And Condominiums, Kuala Lumpur.
 35. Han, A. (1983). Condominium Living: A New Lifestyle Limited To The High Income Group. April/May, Perumahan, Housing and Property.
 36. Alan Tong Kok Mau (1995). The Klang Valley Condominium Market: The Oversupply Issue In The Klang Valley - Fact Or Fiction?. Jan/Feb, Real Estate Review.
 37. Hasmah Abu Zarin & Ahmad Ariffian Bujang(1995). What Influences Demand For Up-Market Condos?. October/Disember, Real Estate Review.
 38. Hasmah Abu Zarin & Ahmad Ariffian Bujang (1996). Factors Influencing Demand For Up-Market Condominium In Kuala Lumpur. The Surveyor.
 39. Marbeck, A.B (1994). House Buying In Malaysia. Kuala Lumpur: Berita Publishing Sdn. Bhd.
 40. David Chua (1997). Will Tomorrow's Houses Be Priced Out Or Reach Of Tomorrow's Generation? National Housing Convention.
 41. Ministry Of Finance, Malaysia, (1995 & 1996). Laporan Pasaran Harta. Kuala Lumpur.
 42. Kerajaan Negeri Johor (1997). Laporan Ekonomi Negeri Johor. Johor.
 43. Government Of Malaysia, (1981). Sixth Malaysia Plan: 1990-1995. Government Printer, Kuala Lumpur.
 44. Mani Usilappan (1998). Economic Issues And Trends And Its Relationship To Property Investment In Malaysia. The Surveyor.

