

FACTORS INFLUENCING DEMAND FOR  
CONDOMINIUM IN PENANG, MALAYSIA

By

Hasmah Abu Zarin

Ahmad Ariffian Bujang

Faculty of Engineering Science and Geoinformation

Universiti Teknologi Malaysia

Locked Bag 791, 80990 Johor Bahru

FOURTH PRRES CONFERENCE  
PERTH, WESTERN AUSTRALIA  
19TH - 21 TH JANUARY, 1998

## FACTORS INFLUENCING DEMAND FOR CONDOMINIUM IN PENANG, MALAYSIA

*Hasmah Abu Zarin & Ahmad Ariffian Bujang*  
Faculty of Engineering Science and Geoinformation  
Universiti Teknologi Malaysia  
Johor, Malaysia  
e-mail:hasmah@fksg.utm.my

### ABSTRACT

*Condominium development had been facing a lot of pressure now, in Malaysia, due to the softening of the property market. This has affected the demand for this type of property. Developers are facing more challenges in selling condominium units built due to buyers being more selective. Buyers are more particular in their purchasing decisions and use stricter criteria in investing their money to buy condominium units. This has given rise to the need for the developers to assess the specific factors that influence the demand for this type of property. This paper discusses these specific factors that influence the demand for condominium in Penang, West Malaysia. This small island is focussed because it is perceived that factors influencing demand for condominium in this state are rather different compared to other states due to its nature as an island and due to its geographic location. The study uses questionnaires to elicit information from the condominium buyers in the state. SPSS package was used to analyse the data. The study concludes that, besides price, beach scenery is one of the major factors determining demand for condominium in Penang Island compared to states in the mainland.*

**Key words:** Condominium and demand factors.

## INTRODUCTION

In recent years, condominium living has gained popularity amongst Malaysians. Many people bought condominiums because of the luxurious facilities provided by the developers. It has become the mode of living for the country's middle and upper class families. Condominium developments have mushroomed in all parts in Malaysia particularly in Kuala Lumpur, Penang, and Johor. The residents can enjoy the convenience of having the facilities at their doorsteps, with abundant greenery and open space.

Now, Malaysia economic growth rate show a soft landing trend where the Gross Domestic Product (GDP) grew moderately from 9.5% in 1995 to 8.2% in 1996. Malaysia's GDP still registered a growth rate of 8.2% for the first half of 1997 and it is forecasted that the economy growth rate will slow down between 4% to 7% in 1998 (Economy Report, 1997).

According to Kumar Tharmalingam (1985), "most of the developers have developed a functional blindness to their own defects. The developers are suffering not because they cannot resolve the problems but because they cannot see their problems". So, it is very important for the developers to know what are the main factors that attract people to buy condominiums to avoid the condominium projects from becoming abandon and also to guarantee the projects being carried out effectively.

## THE THEORY OF HOUSEHOLD DEMAND FOR HOUSING

To assert that apparently similar dwellings are alike only in terms of one or a few features implies that the qualitative differences between dwellings can be expressed in terms of their physical and environmental attributes. The consumer evaluation of these attributes is presumably reflected in the prices paid and therefore the dispersion or structure of prices is a measure of consumer valuations of different collections of attributes. Thus, the fact that houses of different types command different prices may be seen more precisely in terms of the different collections of attributes embodied in a dwelling which have several key attributes in a common and which therefore constitute the type. For technical reasons dwellings built in the same place at the same time tend to be of similar materials, size, number of rooms but of slightly different location and perhaps having different amounts of garden. Thus, the classifications of dwellings by type may be justified on the grounds that such dwellings have more (attributes) in common than they have differences (Wilkinson, R. K., & Archer, C. A., 1976).

In assessing housing requirements, it is important to clarify the housing demand. Demand is essentially a combination of what people want and what they are prepared to pay for, individually or collectively. It is easy enough to recognise when demand is strong and when it is not, but much harder to quantify it or forecast it. Thus changing standards of taste, rising expectations in terms of space and comfort, and above all fluctuations in the ability and willingness to pay, mean that the level of demand is never static. In the private housing market, changes in the availability of mortgage finance and in rates of interest are significant factors (The Chartered Surveyors Report, 1976).

Therefore, from the above statements are to fulfill the objectives of this study that are of identifying and ranking of demand factors for condominium in Penang, Malaysia.

## HOUSING AS A MARKET

Prices and housing affordability are determined by supply and demand. Housing demand is determined by demographic conditions, such as the rate of urbanization and formation of new households, as well as the macro-economic conditions that affect household incomes. It is also influenced by property rights, by the availability of housing finance, and by government fiscal policies such as taxation and subsidies, particularly those subsidies targeted to the poor. Since this study is on condominium demand where the buyers are of high and medium income groups, so subsidy factor will not be researched.

Housing supply is affected by the availability of resources such as residential land, infrastructure, and construction material. It is also affected by the organization of the construction industry, the availability of skilled and productive construction labour, and the degree of dependence on imports. Both the demand and supply sides of housing are affected by the regulatory, institutional, and policy environment.

Housing outcomes, including prices, physical conditions, levels of investment, tenure choice, and residential mobility, are determined by the interplay of supply and demand forces, each of which is affected by housing policy. Housing policies may in turn affect broader social and economic conditions, such as child mortality rate, the rate of inflation, the household savings rate, manufacturing wage and productivity levels, capital formation, the balance of payments, and the government budget deficit (Nathaniel Von Einsiedel, 1997).

## CASE STUDY

**Penang**, "The Pearl of the Orient" lies off the north-western coast of Peninsular Malaysia. The state comprises the island of Penang covering an area of about 285 sq. km and a narrow strip of approximately 760 sq. km on the mainland known as Seberang Perai (Province Wellesley) separated by a channel 3 km wide at the closest point. They are linked by the Penang Bridge and a 24-hour ferry service. Its population of more than 1 million represents a happy mix of the major races found in Malaysia with Malays making up 32%, the Chinese 59% and Indians 7%.

**Georgetown**, at the north-eastern tip of the island is the seat of administration and is also the commercial hub of the state. This bustling metropolitan city combines the best of east and west as seen in its fascinating collection of fine old buildings, each bearing the stamp of different foreign influences in its colourful history. Much of its charm also lies in its famous golden beaches and clear blue seas. Penang today is a resort island in full bloom - an idyllic playground for worshippers of the sun and the sea. Its multi-racial population contributes to a wealth of cultural attractions and festivals for visitors to bring home memories of happy times in Penang.

## CONDOMINIUM DEVELOPMENT IN PENANG, MALAYSIA

The success of Desa Kudalari condominium in Kuala Lumpur have sparked off a new trend of luxurious high-rise residential developments in various places in Malaysia. Penang is among other places where condominium developments take place in large numbers apart from Kuala Lumpur.

While Desa Kudalari was the catalyst that popularised condominium developments among developers, the residents of Penang Island were introduced to luxurious high-rise living for the first time as early as 1973 with the launching of Sunrise Tower. This is a mixed development with a shopping arcade on the lower



floors and twenty six-luxurious residential apartments, including four penthouses on the upper floors.

The emergence of condominiums in Penang came about not because of land scarcity, the need to reduce fragmentation of land and also to better provide and maintain community facilities. Speculation and optimism on developers' part were the principal factor that caused the genesis of condominiums in Penang ((Peh Seng Yee, 1994).

Condominiums that started construction before 1990 were mainly small projects without recreational facilities and many condominium development were abandoned or delayed whilst yet others were scaled down in size and facilities in an attempt to make the units more affordable. Condominiums that been built after 1990's reveals the trend of constructing condominiums and luxurious apartments which are equipped with various facilities has reemerged. However, the take up rate for the condominium units was slow. This was because of the funding restriction on foreign purchasers and the rise in the interest rates. Nevertheless, in 1997, as a result of some relaxations in the FIC (Foreign Investment Committee) guidelines for foreign ownership, more foreigners were observed to have made purchasers.

## SUPPLY OF CONDOMINIUMS

The cumulative supply of condominiums in the market up to 1997 was 12,770 units (Table 1).

**Table 1:** Supply of Condominium Units, Penang (1980-1997).

Year	No. of Projects	No.of Units
1980	1	28
1984	3	96
1985	4	241
1986	2	39
1987	2	191
1988	3	260
1989	3	97
1990	8	307
1991	9	313
1992	8	423
1993	16	930
1994	11	727
1995	12	1057
1996	15	3678
1997	17	4383
<b>Total</b>	<b>114</b>	<b>12,770</b>

Source: Own Analysis, 1997.

## CONDOMINIUM DEMAND

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 to achieve 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 2.68 percent which is high compared to the annual growth rate in the Asia-Pacific for the period 1985 to 1990 which is 1.8 percent. In mid 1993, the population of Malaysia was 19.05 million (Statistics Department, 1993). An increase population means demand for more houses. In 1994, the population of Penang was 1,217,500 (Property Market Report, 1995).

Household size in Kuala Lumpur is getting smaller i.e. in 1980 the household size was 4.87 and in 1991 it became 4.65 (Statistics Department, 1993) whilst the household size in Penang was 4.55 (Jones Lang Wootton, 1995). This shows that there is an increase in demand for condominiums because in Kuala Lumpur, smaller families normally prefer to live in condominiums with all the facilities nearby.

Tables 2 and 3 show that the population of Malaysia is young with the majority in the productive 15 to 64 year age band. The percentage has been stable from 1980 to 1993 between the range of 57 to 60 per cent. This increases the demand for houses. Table 4 shows the age structure in Penang alone.

**Table 2: Population by age group.**

State	Age Group					
	0-14	15-64	15-64	15-64	above 65	above 65
Kuala Lumpur, Malaysia	1980	1990	1980	1990	1980	1990
	32.5%	33.2%	64.5%	63.6%	3.0%	3.2%
	38.9%	36.2%	57.4%	59.8%	3.7%	4.0%

Source: Statistic Department, 1993.

**Table 3: Population by age group, 1993.**

State	Age Group					
	0-14	15-64	15-64	15-64	above 65	above 65
Malaysia	1991	%	1991	%	1991	%
	6,658.3	37.0	10,808.9	59.0	713.7	4.0
	1992	%	1992	%	1992	%
	6,779.8	37.0	11,107.5	59.0	724.6	4.0
	1993	%	1993	%	1993	%
	6,912.7	36.0	11,375.5	60.0	758.8	4.0

Source: Statistic Department, 1993.

**Table 4: Population by age group, Penang (1991).**

Age Group	Percentage
0-14 (years)	29.4
15-64	65.7
above 65	4.9

Source: Property Market Report, 1996.

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 percent (Fernandez, 1993). In 1994, there is 1,217,500 people in Penang and total land area is 103,341 hectares (Penang Statistics Department, 1994). People prefer living in the cities because of high paying jobs, quality of life and cultural events. This means there will be an increase in demand for housing (Table 5).

Urban population growth can also relate to migration of people to Penang. Migration can be internal within the country, and external to and from other countries. Migration means increase or decrease in demand for housing. Urban population growth can also relate to migration of people to Penang. Those who can afford will live in Penang while those who cannot, will move to the neighbouring states. The high income group prefers living in the urban area while the middle and low income group is more likely to remain in the suburbs or on the fringe of the city.

**Table 5:** The urban population growth trend.

Year	Pop. ('000)	Urban	%
1970	10877	2719	25.0
1980	13764	2884	21.0
1990	18010	7744	43.0
2000f	22615	11353	50.0
2010f	27621	16645	60.0
2020f	33015	24403	74.0

**Source:** Economic Report, 1991.

f: forecast

c) Marriages.

New households created by marriage account for a major proportion of the demand for housing. On the other hand the termination of households by death, or divorce or separation are an offset.

In Malaysia, there is no statistics on marriages. Due to urbanisation and modernisation, there has been longer life expectancy, falling mortality and crude birth rate and death rate. These factors have increased the percentage of the aged or the older population, a rising proportion of whom finds condominium living more convenience (Table 6). In Penang, average crude birth rate for four years is 21.97 whilst for crude death rate is 5.57 (Table 7). This means that there will be an increase in demand for condominiums because at this stage of life cycle, the children would usually have left home and it is difficult and troublesome to maintain a large household. Besides that, a rapid decline in total fertility rate shows that more people opt more easily for the convenience of condominium living (Table 8).

**Table 6:** Selected indicators on health.

Indicator	1980	1985	1991	1992	1993
Life expectancy rate:					
Male	66.70	67.90	69.00	69.2	69.1
Female	71.60	73.00	73.7	73.9	73.8
Infant mortality (per'000)	19.70	16.95	12.5	12.2	11.9
Crude birth rate (per'000)	30.90	31.70	28.10	28.20	28.7
Crude death rate (per'000)	5.30	5.00	4.60	4.60	4.50

**Source:** Sixth Malaysia Plan (1991) and Statistics Department (1993).

**Table 7:** Penang crude birth rate and crude death rate.

State	Year			
	1991	1992	1993	1994
Crude birth rate (per'000)	21.6	22.1	22.3	21.9
Crude death rate (per'000)	5.4	5.9	5.5	5.5

**Source:** Social Statistics Bulletin, Malaysia (1994).

**Table 8:** Total fertility rate in Malaysia.

Year	1980	1990	1991	1992	1993
	Per'000				
Total fertility rate (per woman)	3.9	3.3	3.4	3.3	3.4

**Source:** Statistics Department, 1993.

d) 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 increasing middle and upper class groups with higher expectation of standard of living. In this context, condominium living may become more appealing and affordable (Table 9). Ninety percent of the condominium occupiers in Penang have their income above RM6,000 per month.



Malaysia's strong economic performance has resulted in an increase in the employment rate. This means that real per capita income of people has increased due to the rapid and sustained growth of the Malaysian economy. Gross Domestic Product (GDP) has been expanded by an average of 8.8 percent 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 percent. In addition, the nation's per capita income further increased to reach RM11,118 in 1996 (Table 9). In Penang, mean household is RM 1,405 (1995) and monthly income is RM 1,809 (1990) (Table 10).

**Table 9:** Key economic indicators of Malaysia 1992-1996.

Indicators	1992	1993	1994	1995	1996
Gross domestic product (% per annum)	7.8	8.3	9.2	9.6	8.2
Gross national product (% per annum)	7.2	8.7	9.1	9.3	8.5
Per capita national income (RM per annum)	7,539	8,126	8,975	10,068	11,118
Inflation rate (% per annum)	4.7	3.6	3.7	3.5	3.6
Unemployment rate (% per annum)	3.9	3.0	2.9	2.8	2.8

Source: Property Market Report, 1996.

**Table 10:** Per capita GDP and mean monthly household income.

State	Real Per Capita Income			Mean Household	Monthly Income
	1985	1990	1995	1995	1990
Malaysia	3,599	4,392	5,607	1,098	1,254
Penang	-	-	3,202	1,405	1,809

Source: Sixth Malaysia Plan, 1991.

However, in the three quarters of 1997, the Malaysia's economy growth has slow down and it is expected that it will grow around 7.0 to 8.0 percent next year. For this research, data collected was in 1995 and this economy slow down rate have not affected this research.

A recent survey by the National Population and Family Development Board shows that about 42.2 percent of women joining labour force in 1980 has increased to 46.1 percent in 1993. This indirectly shows that most of the families have both husbands and wives 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). Seventy one percent of the spouses, in the up-market 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 the people interviewed bought their houses by taking up a loan. Loans from financial institutions were easy and banks provided up to 90 percent 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). They have been quite low if compared to those in the United States which are around 12-15 percent.

**Table 11: Base lending rates.**

Year	BLR	Year	BLR
1980	9.5	1989	7.0
1981	12.0	1990	7.5
1982	8.5	1991	8.8
1983	10.8	1992	9.5
1984	12.3	1993	9.0
1985	10.8	1994	8.7
1986	10.0	1995	8.3
1987	9.5	1996	8.0
1988	7.0		

**Source:** Economic Report (various report).

Ninety percent of the condominium buyers said that financing does influence the demand for condominiums and 86.6% prefer low interest rates that is below 4% annually and 73.6% said that they bought condominiums for investment purposes.

Besides financing, other factors such as marketing and the developer's reputation also do influence the demand for condominiums. 16.3 percent said that marketing, and 9.9 percent said that developer's reputation do have an impact on demand. From the marketing aspect, 59.2 percent said they bought their condominiums after they have seen the brochures/pamphlets and 37.8 percent said it was due to the advertisement.

f). Other aspects of demand for condominiums.

Demand for condominiums 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. Besides these factors, different buyers look for different types of condominium in keeping with their families' social and financial status as well as the kind of living they seek. This type of demand is conditioned by the qualitative aspects such as the followings:

- \* accommodation: number of bed rooms, 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. 90.5 percent said that prices do influence the demand for condominiums. If demand for condominiums 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. 60.5 percent preferred prices below RM120,000-RM200,000 which is equivalent to the built-up area of traditional form of houses (semi - detached or double storey terrace), 20.5 percent preferred prices between RM200,000-RM300,000, and 7.0 percent preferred prices above RM300,000 (Table 12). Affordability is dependent on the size of household income, cost and availability of finance, repayment period and the availability of past savings and Employee Provident Fund withdrawals. 78.8 percent said the reason for buying condominiums was the quality of the product. High prices reflect better quality in the product. Besides that, 29.0 percent said designs do influence the demand for condominiums and 2.3 percent said it was due to either high-rise or low-rise, 11.8 percent said uniqueness and 7.3 percent said attractiveness of the condominium developments.

**Table 12: Condominium price preferable.**

Category	Percentage
RM120,000 and below	12.0
RM120,000-RM200,000	60.5
RM200,000 - RM300,000 per unit	20.5
RM300,000 and above per unit	7.0
<b>Total</b>	<b>100.0</b>

Service charges do influence the demand for condominiums. Service charges have to be paid by the tenants to the management board of the condominiums to maintain and manage the condominiums. Service charge is usually included in the management aspect. 75.6 percent of the surveyed tenants said that service charges were taken into consideration before they bought the condominiums.

84.4 percent of the purchasers said that the main reason why they bought condominium units was for investment purposes. 74.4 percent rented out the condominium whilst 25.6 percent for own occupancy. 22.5 percent said they will sell their units if there is a capital appreciation.

The demand for condominiums has been very slow, whereby those above RM300,000 per unit encounter some difficulties in sales and rentals. Sometimes it takes years for these condominiums to be sold and some units have been retained by the developers. At present, the percentage sales of condominiums is 17.9 percent (less than a year), 5.0 percent (1-2 years), 46.2 percent (2-3 years), 22.5 percent (3-4 years), and 8.4 percent (more than 5 years).

90.2 percent said location is the most important factor before making a purchase decision. There is a higher demand for condominiums in good locations. Table 13 shows preferred locations.

**Table 13: Preferred location.**

Location	Percentage
Ferringhi Beach	70.0
Tanjung Bunga and Cantonment Road	20.0
City Centre	10.0
<b>Total</b>	<b>100.0</b>

As reflected by the Table 13, projects that are situated near the town centre and in primary areas such as Ferringhi beach area was highly in demand compared to the secondary areas such as Tanjung bunga and Cantonment road and others.

Usually, purchasers preferred locations that are near the city centre and the primary areas, due to their work places. Close proximity to the city and work place is therefore a main factor in making decision for purchase of condominiums (Table 14). This was not true for condominium buyers in Penang where they preferred scenery or view as their main reason followed by location wise.

**Table 14: Reasons for preferred location.**

Location	Rank	Percentage
near city centre	1	56.1
near working place	2	46.9
near recreational centre	3	43.9
near shopping complexes	4	42.7
near amenities centre	5	31.7

85.4 percent said that before they bought a condominium unit, they did consider if it is located near a prestigious area with a upper-class neighbourhood and has a good environment. Out of 50 respondents, 41.2 percent made decision based on the above factor. 40.5 percent preferred to have facilities such as petrol kiosk, police station, fire brigade, and 18.3 percent preferred no heavy traffic.

A survey on the same group of condominium buyers also revealed that the 3 bedroom units and 3 + 1 are the most popular among the types of unit design launched (Table 15).

**Table 15: Number of bedrooms demanded.**

No. of bedrooms	Rank	Percentage
2	-	-
2+1	3	7.3
3	1	60.7
3+1	2	32.1

At the same time, 66.4 percent preferred condominium development with penthouses whilst the rest did not. Most of the buyers preferred condominium projects with penthouses because this distinguishes condominiums from apartments. Apartments and flats in Malaysia do not have penthouses on top of the blocks.

Three-bedroom units are highly in demand and in terms of size, the most preferred built-up area is in the range of 1,200 to 1,400 sq.ft. (Table 16). The result tallies with the technical guidelines issued by the Planning Department, which states that sizes must be above 1,000 sq. ft. for three bedroom units.

**Table 16: 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
<b>Total</b>	<b>100.0</b>

53.4 percent said layout also influences their choice for condominiums. One aspect of it is built-up area. 27.9 percent were of the opinion that built-up area influences the demand for condominiums. Most of the purchasers preferred built-up areas between 1,201-1,400 sq.ft. Out of these, 41.2 percent preferred their living areas

in the range of 141-60 sq.ft., 39.3 percent (121-140 sq.ft), 13.7 percent (above 161 sq.ft) and 5.7 percent (101-120 sq.ft.).

19.6 percent said that floor layouts do influence the choice of condominium. 5.0 percent preferred more storage space, cupboards, and closets; 53.8 percent preferred separate or more formal dining room; 11.5 percent liked the idea of having a balcony; 1.1 percent chose to have larger kitchens and 28.6 percent thought 'larger bedrooms' is important.

Besides layout, tenure also plays an important role in influencing the demand for condominiums. 20.8 percent said tenure do affect the demand for condominium and the rest would rather have condominiums with freehold strata titles.

Another factor on demand for condominiums is view. 90.4 percent said that the reason for buying condominium was a good view. 53.8 percent preferred a beautiful scenery of facing ocean for their view, 23.3 percent would rather have a natural green view, and 20.9 percent liked the idea of city view and 2.9 percent prefer the idea of facing the swimming pool. For the units that were purchased, 67.9 percent preferred units facing the morning sun, 17.6 percent would rather have the evening sun, and 14.5 percent chose no sunshine at all.

g) Fashion is a consideration.

This is influenced by ethnic origins, personal preferences and general economic consideration. Why do people like to live in low-rise or high-rise condominiums? Since most spouses are working, it leaves little time for property maintenance. This therefore leads to preference to live in a place with proper maintenance is being taken care by a management board.

76.3 percent of condominium occupiers are normally of a small household size, that is, with only one child and 85.4 percent said their preference for condominium living is due to improved urban environment; 70.9 percent liked the recreational and other facilities that are readily available in a condominium, 86.6 percent indicated the importance of the security aspect as well as easy access to their work places. The present scarcity of traditional domestic house maids too has contributed to this change in lifestyle.

Out of the 50 respondents interviewed, 70.9 percent said the reason for buying their condominium units was the facilities provided as well as the availability of 24 hour-security services. This obviously means that condominium facilities do influence the demand for condominiums.

Each condominium project has its own exclusive recreational facilities and amenities. This factor differentiates them from apartments and flats. Rank 1 shows that such factor was the most vital reason for the purchase of condominium and 9 is the least important factor influencing the demand. Table 17 shows which recreational facilities were highly preferred whilst Table 18 shows the amenities highly in demand.



**Table 17: Preferred recreational facilities.**

<b>Recreational Facilities</b>	<b>Rank</b>
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

**Table 18: Preferred amenities facilities.**

<b>Amenities Facilities</b>	<b>Rank</b>
24 hours guard/surveillance	1
automatic sprinkler	2
nursery	3
free club membership	4
high speed modern lifts	5
mini markets	6
cafeteria	7
laundrette	8
BBQ area	9

Besides the abovementioned factors, other factors that also influence the demand for condominiums are their physical aspects such as the density, height, and floor layout area. 23.1 percent said that density does influence the demand for condominium and 41.6 percent preferred low density, 55.3 percent opted for medium density, and 3.1 percent chose high density.

Moreover, surrounding development also have an effect on demand for condominiums. 73.7 percent preferred medium-density surrounding development (60-100 persons per acre). 25.2 percent chose low-density surrounding development (10-40 persons per acre), and 1.1 percent went for that of high density (400 persons per acre).

In addition, demand for condominium is also influenced by its heights, as reflected in the replies of 82.7 percent of those interviewed. 28.6 percent preferred low-rise buildings (below 4 levels), 29.7 percent picked medium-rise constructions (5-10 levels), whilst the remainder chose high-rise (11 levels and above).

## **Conclusion**

From the above analysis, it can be derived that the main factors influencing demand for condominiums in Penang can be categorised into eleven main categories (Table 19). Rank 1 shows the most vital factor that influenced demand and Rank 11 is the least important factor.

The analysis thus provides useful information on factors influencing demand of condominium living. These have implications on developers not only in Penang but those in other newly industrialised and Third World cities which undergo rapid urbanisation.

Besides selecting good locations, developers should pay more attention to the physical features of a project. The amenities and recreational facilities provided, the overall project and unit design should all be carefully planned to ensure the success of a development. As the society becomes more affluent and its living standard improves, the demand for better quality housing is expected to increase.

**Table 19:** Main category factors that influence demand.

Amenities Facilities	Rank
Price	1
View/Scenery	2
Location of development	3
Prestige area and better environment	4
Investment	5
Management/Maintenance	6
Rec. facilities/professional landscape	7
Characteristics of the building	8
Financing	9
Marketing	10
Good reputation of the developer	11

### **Bibliography.**

1. Berman, D.S. (1966). How To Organise And Sell A Profitable Real Estate Condominium, Prentice Hall., Inc., New Jersey, U.S.A.
2. Karr, J.N. (1973). The Condominium Buyer's Guide, Frederick Fell Publishers, Inc., New York, U.S.A.
3. Hubin, V. J. (1976). Warning: Condominium Ownership May Be Dangerous To Your Health, Wealth, And Peace Of Mind, Dow Jones Irwin, Illinois, U.S.A.
4. Rothenberg, H. H. (1974). What You Say Should Know About Condominium, Chilton Book Company, Radnor, Pennsylvania, U.S.A.
5. Wong Chak Wai (1980). "Condominiums - A Trend In Urban Development", Seminar Urban Development On The 80's. Shangri-La Hotel, Singapore, 20-21 November.
6. Statistic Handbook (1993). Department of Statistic, Malaysia.
7. Property Market Report (1996). Ministry of Finance, Malaysia.
8. Social Statistics Bulletin (1994). Department of Statistic, Malaysia.
9. Economic Report (1991). Ministry of Finance, Malaysia.
10. Sixth Malaysia Plan (1991). Ministry of Finance, Malaysia.