CHAPTER FOUR

THE DEMAND FOR HOUSING

In its common, everyday sense, demand simply implies "what people want." Beyond that, however, it is not self-evident what is meant by the demand for housing nor how it should be measured. It becomes even more complex when we consider the demand for housing at specific locations, time and the determinants of choice in residential location. In this chapter we examine the method of analysis and the factors which determine the demand for housing.

The demand for housing is an economic concept and refers to the effective demand, that is, the demand for accommodation which is backed by purchasing power. And a person’s purchasing power is derived from his income and wealth. In economics, the demand for a commodity refers not only to the need or desire for that commodity but also to the ability and willingness to pay for it at a price. The demand for housing, in aggregate, represents the total of all household expenditures, government outlays, and institutional investment under the housing sector concept.
4.1 Definitions of Housing

Before we analyse the determinants of housing demand, let us start with the precise definition of housing. Housing basically provides shelter for its occupants. But much more than that, it is both a physical entity, a social artifact, an economic good, a capital stock, a status symbol, and at times a political "hot-potato." At least six common definitions of housing appear in the literature:

a) as a "physical facility unit" or structure, which provides shelter to its occupants, but which also consumes land and demands the provision of physical services such as water and sewerage as well as social services to household;

b) as an "economic good or commodity", a consumer durable good, which is traded or exchanged in a market and as an "investment" good which returns equity on its owner;

c) as a "social or collective good", as an element in the social fabric and in the society's set of social relations, and which
is provided to every one just as it attempts to do in education, food and, in most cases, health care;

d) as "package or bundle of services" - a view which recognizes that the occupancy of housing involves the consumption of neighbourhood services (parks, schools) location (accessibility to jobs and amenities) and the proximity of certain types of neighbours (a social environment);

e) as a "sector of the economy", a component of fixed capital stock, a means of producing wealth, and a tool of governments in regulating economic growth.

Apart from that, housing provides a combination of various types of services such as shelter, privacy, comfort and independence. It serves a locational function in relation to working places, schools and shopping and recreational facilities, and also acts as a form of security and investment. Therefore the house is demanded for both consumption and investment reasons. It should be noted, housing also provides various services or outputs. This will
be examined in the coming section, as it can give a clearer view of housing definitions.

4.2. **The Concept of Housing Services**

Housing production requires a combination of inputs such as land, labour, capital and entrepreneurship in order to create outputs (services). These inputs and outputs in turn can be conceived as representing housing services, such as benefits (or disbenefits), for builders, owners and tenants. Therefore, different kinds of housing, in different locations, require very different inputs and deliver very different services to those who own or occupy it. Therefore, the market plays its role as an allocation mechanism of resources to match these inputs and outputs.

Housing supply on the ground represents the combination of a set of inputs: a physical facility (materials), capital, land and labour (including entrepreneurial ability) - the standard "factors" of production which reflect the particular set of relationships in the means of production in that country - combined with location (accessibility) and local environment or neighborhood. This is shown in Figure 4.0. From these inputs, it creates outputs or
THE FLOW OF HOUSING SERVICES

INPUTS

- Production relations
- Physical facility
- Capital investment
- Labour and entrepreneurship
- Land and location
- Environment

OUTPUTS (SERVICES)

- Shelter
- Equity
- Satisfaction and Status
- Environment
- Accessibility
- Labour-intensive
- Social relations

housing services. These include "shelter", that is a place to live and for protection. "Equity", for owners especially in terms of financial return on a major asset in their personal investment portfolios (and a tax-free asset at that for owner - occupiers); "satisfaction and status", in that the consumption of housing (preferably comfortable housing in an attractive location) provides a degree of social satisfaction and for some is clearly an important component in establishing and visibly publicizing their social status; "a set of environmental attributes and services" which arise as externalities (effects external to but impacting on the housing itself); and "a level of accessibility" to places of work, shopping, friends, and leisure pursuits.9

Overall, the flow of housing services indicates the benefits from housing units in a certain location. Apart from that, it also implies the importance of housing to human beings overall. Therefore, the preceding explanation is expected to give a clear view of housing definition through the flow of housing services.
4.3 Unique Attributes of Housing

In order to understand the demand for housing, it is necessary to examine the special features of houses. Houses are certainly different from the goods and services we buy in the market. Therefore, the demand and price determinants of housing also differ in many ways. In addition to the conventional definitions of housing as a physical facility, and an economic good exchanged through a market, housing also has a number of relatively unique attributes which should be explicitly restated.10 Thus, the various unique attributes of housing will be discussed here.

a) Fixed Location

The fixed location or immobility simply tells that generally occupants move, houses do not. Of course in certain countries there are mobile houses such as in Australia. But, in the Klang Valley the houses are not mobile. Therefore, certain housing areas known as luxury or high class areas in where the value of houses is very high and during property market booms, the appreciation rate will be very high. This criteria, helps the housing sector as a store of
wealth, investment and for foreigners as a means of speculation.

b) **Durability**

Housing has a long life-span. In the Klang Valley this can be divided into either freehold or leasehold land. If it is a freehold land the owner can occupy it forever as long as the house is fit to be occupied. If the house is built on a leasehold land, the owner can occupy the property for 99 years and then reapply to the authorities to allow him to stay longer. Therefore, usually the houses built on freehold land is more expensive compared to the ones built on leasehold land. The same principle applies for the appreciation value of the houses in those areas. The durability of houses also provides physical facility as well as investment opportunities. The durability of houses can determine the price, appreciation value and investment returns.

c) **Limited Adaptability**

Since houses are fixed in certain locations and have a long life-span they are limited in terms of fulfilling the demand at a short time period. As a result, the housing stock is relatively slow to
respond to changing demands, although the flow of services from that stock can change rapidly over short periods of time. Therefore the housing sector most of the time deals with supply constraints and excess demands especially for low and medium cost houses. This problem is more serious in the Klang Valley due to its high land cost and stiff competition to obtain land for housing development in urban and sub-urban areas.

d) *Exogenous Influences*

Housing is highly sensitive to changes which are external to local markets. This depends on the level of openness of the domestic economy. Since Malaysia or precisely the Klang Valley is very much depended on foreign investments and external trade, any changes in foreign economy would definitely influence the domestic economy and thus the housing industry. Economic downturn in the mid 1980’s coupled with lower foreign direct investment (FDI) severely affected the housebuilding industry in the Klang Valley from 1985 to 1987. As a result, the property prices depreciated considerably, the supply went down tremendously and overall the house building industry was severely affected during that period. As a
result of an increase in per capita income due to economic recovery and higher FDI, hence, higher employment opportunities and higher demand for houses certainly lifted the housebuilding industry out of the slump. Thus, in the Klang Valley, the foreign factor plays an important role in determining the growth or performance of the housebuilding industry.

e) Policy overlay

Housing is also subjected to a multitude of institutional regulations imposed by the various levels of the government. In the Klang Valley there are public and private policy makers who decide on the direction of a housebuilding industry. In the public sector there are the Ministry of Housing And Local Government, City Hall, State Economic Development Cooperation (SEDC), Economic Planning Unit (EPU) and Klang Valley Development Authority (KVDA). While in the private sector there are the Housing Developers Association (HDA), Malaysian Building Society Berhad (MBSB) and various financial and insurance institutions involved.

f) Externalities

As recognized in the concept of the housing bundle, spatial externalities—particularly those
relating to the character of the immediate neighborhood environment—exert a powerful influence on what happens to any single housing unit or group of units.13

The implications of above mentioned unique attributes of housing is very vital in terms of social, economical and political influence to the housing market. One effect of the immobility and physical durability of housing is to limit the degree of substitution possible between different types and styles of housing. The openness of housing markets to external influence and control also means that one cannot understand changes in a local housing market area without examining the larger social and political context of which that area is a part of. Therefore, the above mentioned unique attributes of housing is expected to extend the broader definition of housing in real life context.

4.4. The Nature of Housing Demand

The housing demand is a complex issue, because it is expensive to purchase (a "lumpy" investment decision for households), durable, heterogeneous, fixed in location, durable and has a limited adaptability.14 Therefore, the demand for any houses in a given area cannot be easily separated from the demand for land, location, and the services such
as schools which the neighbourhood delivers. Since, housing is a heterogeneous commodity which means not all housing gives the same combination of housing services or even provides a particular service to the same degree. Thus, it is extremely difficult to measure or estimate the demand for housing in real context.

In reality, housing demand can be divided into two groups. First, the demand for housing to purchase to occupy. Second, the demand for housing to rent. Owning a house is generally regarded as better than renting one because ownership provides such services as the freedom to do what one likes in one’s own house, security and status. While housing demand for rent is very insecure because once the contract expires, the tenant is forced to look for another house and this creates many difficulties of adjustments such as searching cost, transport cost, schooling and other public facilities. Apart from that, since housing is a durable consumer good, it provides variety of services either in short or long term. Therefore, people demand houses to obtain these services in order to satisfy their needs and upgrade their living standards and thus welfare. It is also clear that housing demand is a reflection of both its use value for consumption or occupancy purposes and
its exchange value as an investment good for homeowners, investors, and landlords (as well as governments). 17

In addition, housing demand can also be classified as direct or indirect demand. The direct demand or overt demand refers to the effective demand which is expressed in patterns of residential location or the prices people are willing to pay for housing. While indirect demand or latent demand refers to the demand which is not directly expressed in the housing market. 18 Overall, both types of demands determine the actual market demand in one location. Apart from that, the demand for housing to purchase thus constitutes a form of derived demand, that is, the demand which is derived from the demand for various housing services.

The demand for housing in the house-purchase market comes from the flow of households searching for houses or flats to buy. 19 In the Klang Valley, the housing demand comes from newly-formed households such as those who are newly married; those who are renting previously and now wants their own shelter; from owner-occupiers who wish to buy a new house with more facilities and sell their present houses; from renters who want to buy their own accommodation (representing a transfer of demand from the rental market to the
house-purchase market) and from households looking for a second house to own (either for owner-occupation or to rent out to others) in that period of time. Apart from that, the housing demand also appears from expatriates who intend to stay here due to various reasons such as jobs, children and others. In addition, those who migrate from rural to urban areas like Klang Valley also demand houses. This situation is very important in the Klang Valley. Almost ever since the early 1970’s, the major portion of the housing demand comes from this group of people. Due to strong and stable economic growth, the demand for housing also comes from foreign investors who are profit motivated either from rental or property value gains. Therefore, the demand for housing comes from various groups of people either from local or abroad. Most of them contribute significantly to the demand behaviour of the housing market in the Klang Valley.

In addition, the potential buyers or occupiers are such as, the large expatriate community who live in rented apartments leased by their companies; local investors buying a house to rent it out to the expatriates; Asian investors, mainly from Singapore, Indonesia, Japan, Taiwan, South Korea and Hong Kong and speculators. It should be noted that, the main component of housing demand in the Klang
Valley comes from three groups. First, from owner-occupiers who intend to buy a second house. Second from first-time buyers who have never owned a house. Third, from expatriates and speculators (local or foreigners) who intend to buy either for occupying or profit reasons.

Figure 4.1 indicates the demand curve for the housing market. The demand curve shows an inverse relationship between price and number of dwelling demanded. The curve \( D_oD_o \) is the demand curve in the house purchase market. The slope indicates that, the demand is price elastic. The housing supply curve is inelastic or has a low elasticity. Therefore, the elastic demand and inelastic supply is the main cause of rapid rise in prices.

FIGURE 4.1

THE DEMAND CURVE IN THE HOUSE PURCHASE MARKET

Price

\[ D_1 \]

\[ D_o \]

\[ P_1 \]

\[ P_2 \]

\[ G_1 \]

\[ G_o \]

\[ D_2 \]

\[ \rightarrow \text{No. of dwellings demanded} \]
From Figure 4.1, a rise in price from $P_0$ to $P_1$ results a decrease in house demanded from $Q_0$ to $Q_1$. It should be noted that, the demand changes are not necessarily due to price variations. There are other factors which determine the demand for housing. The demand curve $D_1D_1$ represents a greater demand for houses compared to $D_0D_0$. Higher housing demand can be as a result of demographic factors, tax and investment policy changes, credit terms etc.

4.5 Method of Analysis

Here, we shall focus on the empirical studies of demand that have sought to identify the quantitative relationship between housing demand and its various determinants. From this, it is possible to forecast the future housing demands. There are various factors which determine the demand for housing either in the short-run or long-run. In the short-run, the housing demand is determined by income, price of houses, price of other commodities, credit terms and assigning only a subsidiary role to socio-demographic factors. This is because, in the short-run, the socio-demographic factors will remain unchanged. Therefore, in the short-run the government policies such as income tax, credit availability, or rent supplement schemes upon the existing housing demand will have a
greater influence on the demand side. While in the long-term, socio-demographic factors become important; indeed, they are often considered more important and predictable than most economic variables. Socio-demographic factors include population growth, household formation rates, household size distributions, age etc.

In this part, more attention has been devoted to examining the relationship between housing demand and income. Nevertheless, the study also analyse the other factors which determine the housing demand such as price, credit terms (interest rate) and a range of household socioeconomic characteristics. In estimating the link between housing demand and its determinants, multiple regression analysis has generally been used. Most of the data used are obtained from time-series data such as interest rate figures for housing loan from 1980 to 1992, per capita income for households from 1980 to 1992 and others. Eventhough, the demand for housing is affected by variations in all other variables in the economy, however, changes in certain variables have greater effect on the demand for housing. Therefore, these variables should be included under the demand for housing equation.
Basically, the study deals with secondary data and does not involve any questionnaires. Firstly, most of the information are collected from the Department of Statistics, Malaysia, The Ministry of Housing and Local Government, Valuation and Property Services Department, Ministry of Finance, Housing Developers Association (HDA) and City Hall.

Apart from that, more information is collected from local and foreign books mainly from Britain and United States of America (USA). Even though, much of the studies lack local situations, it is hoped that the theories presented are applicable to the housing market in the Klang Valley. Furthermore, urban economics are usually very similar with most countries except for their social factors.

The writer also paid numerous visits to the main library and the Faculty of Economics and Administration Library of the University of Malaya. In addition to that, the author made use of the Department of Statistics library, Ministry of Housing and Local Government library, Bank Negara Malaysia Library, Valuation and Property Services Department Library and Economic Planning Unit Library.

In addition, the author used paper cuttings, seminar papers on Malaysian economy and housing
industry and various study reports in order to produce a credible piece of work on this issue.

In order to analyse the data using a computer package, data were collected from various organisations. Most of the data are time series data which covers a certain range of time period. In this study it covers from 1980 to 1992. The author found it extremely difficult to obtain the data which are prior to 1980. This is due to improper data collection by the various departments.

To produce the computer output, various data such as numbers of houses sold in the Klang Valley and Kuala Lumpur; the numbers of houses approved for construction in the Klang Valley and Kuala Lumpur; the real gross domestic product; the interest rate; the household size; the number of household; the per capita income; population growth in the Klang Valley and Kuala Lumpur; the average price of single-storey terrace houses in the Klang Valley and Kuala Lumpur; the average price of double-storey terrace houses in the Klang Valley and Kuala Lumpur; the average price of high cost houses in the Klang Valley and Kuala Lumpur; the supply of condominiums in the Klang Valley and finally the migration figures were collected.
In order to obtain the results, the SPSS computer package will be used. From here, T-Test will be used to identity whether the results are significant to the study. Basically, the method of analysis can be obtained by multiple regression analysis to estimate the relationship between demand and supply. This was done through analysing the time-series data which were obtained from various sources.

Normally, the relationship between housing demand and its determinants is expressed in the form of mathematical equation. Once an equation has been estimated on the basis of sample data, the individual coefficient (parameter) estimates will indicate how demand can be expected to respond to changes in the explanatory variables. The general form of the equation is given here as:

\[ H_D = f (N, Y, P, I, \ldots) \]  

(4.1)

Where \( H_D \) denotes housing demand

- \( N \) refers to number of households in the economy
- \( Y \) refers to income (per capita income)
- \( P \) refers to the price of housing
- \( I \) refers to the mortgage interest rate (or the cost of credit)
From equation 4.1, \( H_D \), \( N \), \( Y \), \( P \) and \( I \) are variables which represent the housing demand equation. The \( H_D \) accounts for the dependent variable and the rest such as \( N \), \( Y \), \( P \), \( I \), \( \ldots \) represent the independent variables which will influence the variation in \( H_D \).

In order to measure the variables more accurately, the equation has to be made more specific. This is usually expressed in linear form as shown in equation (4.2):

\[
H_D = b_0 + b_1 N + b_2 Y + b_3 P + b_4 I + \ldots \quad (4.2)
\]

Where \( HD = \) housing demand

\( N = \) number of households in the economy

\( Y = \) per capita income

\( P = \) price of housing

\( I = \) the mortgage interest rate

\( b_0 = \) constant

\( b_1 \ldots b_n = \) constants or parameters which show the responsiveness of demand to changes in the values of the determinants (elasticities).

Now the equation (4.2) can be transformed into an equation which is linear in the logarithms of
the variables and which is suitable for estimation by standard multiple regression techniques. For example:

\[ \log H_D = \log b_0 + b_1 \log N + b_2 \log Y + b_3 \log P + b_4 \log I + ... \]  

(4.3)

Based on equation (4.3), which shows the relationship between housing demand and its determinants, now we can measure the elasticity of demand. The elasticity of demand indicates, the sensitivity of demand for housing due to a change in any of the housing determinants. This can be obtained by differentiating the equation with respect to the determinant and substituting in the values of both the demand and the determinant at the point. For example, the income elasticity of demand is:

\[ e_D Y = \frac{\partial H_D}{\partial Y} \cdot \frac{Y}{H_D} = b_2 \cdot \frac{Y}{H_D} \]  

(4.4)

Other demand elasticities may, of course, be obtained from equation (4.2) by a similar process. Therefore, the price elasticity of demand may be expressed as follows:

\[ e_{H_D P} = \frac{\partial H_D}{\partial P} \cdot \frac{P}{H_D} = b_3 \cdot \frac{P}{H_D} \]  

(4.5)
In both of the above instances, however, the elasticity measures will vary over the range of the function because it is linear whereas the elasticity of demand refers to proportionate changes. To eliminate this variability in the values of the elasticities, the elasticity of demand is taken at the point of sample means. Thus equation (4.4) would show the income elasticity of demand at the mean income (\(y\)) level:

\[
e_{HD}y = \frac{\partial H_D}{\partial y} \cdot \frac{\bar{y}}{H_D} \quad (4.6)
\]

Apart from that, the price elasticity of demand at the mean price level (\(\bar{P}\)) is written as:

\[
e_{HD}P = \frac{\partial H_D}{\partial P} \cdot \frac{\bar{P}}{H_D} \quad (4.7)
\]

With the other determinants \(N, P, I, \ldots\) held constant.

The previous mentioned equations assumed that the demand for housing responds immediately to changes in its determinants. However, in reality, there is usually a time-lag between the change in the determinant and the demand response. In the Klang Valley this situation is obvious. For example, if the
price of houses decreases, the demand for housing will increase at a faster rate. But, the supply of houses will take around 2 to 3 years to increase. If it is a used property, obviously the supply is there, but the owner will not be willing to sell due to its lower price. Therefore, eventhough the demand increase due to a lower housing price this may not necessarily mean that the increase in demand satisfied through an increase in supply.

Meanwhile, as for housing loans, a drop in interest rate would obviously make credit terms more attractive. This in turn is expected to increase the demand for housing. But this does not occur immediately because, the application process for housing loans will take more time and this will create a time lag to increase the demand for housing. Apart from that, future expectations can also create a time-lag situation. For example, if credit cost is cheap and on the other hand if the price of dwelling is too high, and if people expect that in future the price of houses would drop, they might not demand houses for the time being. This "wait and see" attitude creates another time-lag situation. In addition, speculation, government policy changes expectation (tax, credit terms, investment incentives) and overall economic
growth expectations to some extent create time-lag in terms of demand for housing. This means that the adjustment in demand is often spread over a few years. Furthermore, information on changes in demand determinants such as house prices or credit availability often takes some time to spread through the market.

The size of the adjustments are greater during the earlier time periods and some are greatest during later time periods. Because of the distributed lag in the demand response, the adjustment in each of the periods over which the total demand responses, the adjustment in each of the periods over which the total demand adjustment is spread will be smaller than the total adjustment. Based on this situation, the elasticity of demand in the short-run will be smaller than the long-run elasticity of demand. Therefore, it is extremely important to include the time lag factor when calculating elasticity. Otherwise, the calculated elasticity of demand will be only for the short-term and so the whole effect of the changes in the determinants will be underestimated.

The demand function which include the time lag factor is given below. The form of the demand relationship allowing for distributed time-lags could be written as:
\[ H_t = a + b_0 X^{t} + b_1 X^{t-1} + b_2 X^{t-2} + \ldots \ldots + b_n X^{t-n} \] (4.8)

Where \( H \) = the demand for housing in the current period, that is, period \( t \)
\( X \) = the determinant in period \( t \)
\( X - 1 \) = the determinant in the previous period, that is, period \( t-1 \)
\( a \) = constant
\( b_0, ..., b_n \) = constants which are also known as parameters

The equation (4.8), explains the measurement of demand for housing which includes the current and previous periods determinants. This is expected to provide a more accurate demand for housing which includes the time-lag factor.

4.6 The Determinants of Housing Demand

The housing demand determinants can be divided into two groups. First, the short-time determinants such as price, the income, credit terms or interest rate for housing loans, economic growth, tax systems, investment incentives and others. Second, the long-term determinants such as population growth, household size, the number of household, migration either internal or external and others. In this study, the above mentioned factors will be examined in
respect to the housing market in the Klang Valley. Housing is demanded for both consumption and investment reasons, both of which are affected by largely independent developments in macroeconomic conditions, especially changes in incomes, prices and interest rates. Government policies in respect to tax relief, subsidies and rent regulations are also important. In the medium and long term, demand is also crucially dependent upon demographic factors.

In Malaysia, the demand for housing is more encouraging. Malaysians upgrade their housing stock frequently. A Malaysian Banking Berhad study found the average actively working houseowner is "likely to change his residence an average of 2.2 times for better quality houses". In particular, owners of low-cost homes are likely to upgrade upwards as the family expands and as average income increases. In urban areas like Kuala Lumpur and Petaling Jaya, this process is multiplying, even at a faster rate due to higher earning capacities.

So the list of potential housing demand determinants are produced here.\textsuperscript{31}

1. Change in population.
   a) Increased in population
   b) Changes in the age-sex composition
2. Changes in income and employment.
   a) Total disposable personal income: past, current, expected
   b) Income distribution
   c) Employment and unemployment

3. Consumer asset holdings and their distribution, especially liquid assets and equities in existing houses.

4. Changes in the prices of housing.
   a) The price elasticity of housing relative to other prices.
   b) The shape of the construction supply and cost curves.

5. Relationship between occupancy costs and price of dwellings.
   a) Credit availability and the cost of credit.
   b) Real estate taxes and operating expenses.
   c) Depreciation

6. Consumer tastes and preferences.

7. Net replacement demand for dwelling units demolished or otherwise removed from the inventory less nett conversion and mergers of existing units.
8. Utilization of the housing inventory supply.
   a) Utilization of the housing inventory such as vacancies and intensity of occupancy.
   b) Prices of rents for existing dwelling units.
   c) Quality, location

9. Reaction to changes in demand
   a) Builders' organization and profit expectations
   b) Investors' organization and profit expectations
   c) Market structure and market information

The above mentioned factors are not necessarily equally important in determining the housing demand. Therefore the author will only examine the factors which are more important and which are the main consideration for the house buyers when they demand a house.

4.6.1 Price

The demand for a commodity normally has an inverse relationship to the price of the commodity. Other things remaining the same, demand falls as price increases. However, this is not always true for housing.\[^{32}\] This inverse relationship of housing
demand and price might be true in the case of the first-time buyer. For the first-time buyer, when the price of new houses rises, they cannot afford to buy and therefore the housing demand will decrease. Since the first-time buyer cannot afford to pay such a high price for the house, he may choose to buy a low priced house or continue renting until he can afford to buy a house according to his budget. On the other hand, if the price falls, obviously the demand for houses will increase. But, the future expectation or speculation can change this behaviour. For example, if a first-time buyer expects that in future the house prices will increase tremendously compared to the present price, he might buy now against future price rises. Thus, demand may increase instead of decreasing when price rises. This creates a direct or positive relationship between housing demand and prices.

It should be noted that, for the owner-occupiers the law of demand may not be necessarily apply. For them, the increase in house prices will not really affect their demand. This is mainly because of two reasons. Firstly, when they buy a second house, they might sell the first house at a higher price which is more than the developers price. The capital gains from here can be used to pay for the
second house. Therefore, even though the present house price rises, the demand will still increase. Because for them, the higher price will be offset by the capital gains. Secondly, for the owner-occupiers, when they decide to buy a second house, they can rent out their first house. The rental returns can be used as monthly payment to the financial institution for the newly bought house. Again, here they do not feel the pinch due to higher housing prices. As a result, the demand will increase even though the price of houses rises.

In 1971, 47 per cent of purchasers in UK were existing owner-occupiers, and 53 per cent by first-time buyers. First-time buyers are predominantly newly formed households (mainly couples but also one-person households) and former private or public tenants. In the Klang Valley, first-time buyers mainly consists of new family (newly married), migrants into this area and those who have been renting previously.

Furthermore, the rate of change of house prices depends on changes in the demand and supply of housing. In general, apart from house prices, the cost of financing also determines the demand for houses. For first-time buyers, higher prices would be expected
to reduce demand, though if there is a widespread expectation of a continuing rise in prices, demand may rise initially. In addition, quantity of housing demanded will depend upon its price, as housing expenditure accounts for up to one-third of the average household's budget. This clearly indicates that, the price of houses certainly will determine the demand for houses.

Various empirical evidence will give a clearer view of this situation. The price effect as a housing determinant can be explained using the price elasticity of demand. American research suggests a price elasticity of demand of about -1.0. This implies that a constant money expenditure is allocated for housing, other things remaining the same. While, British research suggests a more inelastic price elasticity at approximately -0.6 and below. While, Holmans used a figure of -0.3 for the house price elasticity of demand.

Therefore, the price remains as an important factor which determines the demand for houses. Higher price leads to lower demand if future expectation is assumed constant. While lower price, will increase the demand for houses among the house buyers. However, future expectations or speculations can
change that situation. Speculation will increase the demand even though the present price is higher. This is so, because the buyer expects that if he does not buy the house now, in future he has to pay a higher price for the same house. As a result, he will lose financially. In general, these house price studies provided support for the notion that house prices are determined by locational, racial, neighbourhood, historical, physical and structural factors.

It should be noted that, empirical evidence also suggests that the price elasticity of demand for housing tends to be around -1.0. In other words, an increase in the price of housing, relative to other consumer products, tends to decrease housing consumption as represented by number of rooms, their facilities and quality.\textsuperscript{39} It also implies that an increase in the relative price of housing has little effect on the percentage of income going to housing and that housing consumption tends to increase at about the same rate as the price of housing tends to fall.\textsuperscript{40} Apart from that, house price changes also influence the income and demand patterns. With an increase in normal income, other things being held constant, a marked rise in housing consumption is to be expected, but such rise will be checked if the
price of housing products increase. This is because, since house expenditure constitutes a third of consumers' income, any change in house prices will obviously influence the housing demand and this depends in which direction the price changes.

4.6.2 Income

Higher income leads to a greater purchasing power and therefore increasing the demand for housing. Income is the most important determinant of housing demand. The effective demand for housing for owner-occupancy therefore depends on the real income and ability to pay the bank loan. Income is important both because it determines the ability of a household to spend, and because of the institutional rules imposed by building societies as to the relationship between income and the sum lent which acts as a constraint on borrowing. One would expect demand to rise as income rises. Increases in income enable renting households who have been previously prevented from buying because of lack of income to move into their own houses, enable existing owner-occupiers to move into more expensive homes or buy second homes, and may increase the rate of household formation.41
Under the concept of income, real income plays a greater role in determining the housing demand compared to money income. This is because, higher money income does not necessarily generate higher purchasing power.

Therefore, higher money income growth should be associated with lower inflation rate. Thus, this will increase the real income or purchasing power which will finally increase the demand for housing. However, some economists do not agree with this statement. Historically, major debates were focused on Engel’s Law, which asserted that the proportion of income spent on housing remained constant with rising income, and Schwabe’s Law which asserted that the proportion decreased with rising income.\(^\text{42}\) As defined above, the income elasticity of demand in the former case would be 1.0 and in the latter case less than 1.0. More recently, the debate was reactivated by Reid (1962) who demonstrated that the elasticity was considerably higher than 1.0,\(^\text{43}\) where the income elasticity of demand for housing can be defined as the proportional change in the demand for housing which results from a unit change in the level of real income.
Apart from that, housing-income relations among consumer units observed for 1950 and 1960, as well as for earlier years, are consistent with Schwabe's Law of rent. In other words they indicate that among consumer units, the higher the measured income the lower tends to be the housing-income ratio. Therefore, the income elasticity of housing demand among consumers tend to be less than 1.0, being around 0.35 for 1950. As a result, housing is classed as a necessity for the various income groups in the society.

In addition, studies from 1918 to 1960 indicate that, the elasticity of housing with respect to normal income appears to be between 1.5 and 2.0. In other words a 10 per cent rise in normal income has tended to be accompanied by a 15 to 20 per cent rise in housing demand. In the Klang Valley, income has increased tremendously for the past few years. As a result, the demand for the various types of houses has increased and especially for low-cost houses. It clearly shows that, the reason behind the massive house construction has been the per capita income factor. Table 4.1 shows the per capita income changes from 1973 to 1992 in the Klang Valley.
Table 4.1 indicates that the per capita income in the Klang Valley grew at an average, of 10 per cent during 1987 to 1992. This creates a higher purchasing power or effective demand which stimulates housing demand during that period. (See Figure 4.2)

<table>
<thead>
<tr>
<th>TABLE 4.1</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1st.</td>
<td>1,360</td>
<td>2,490</td>
<td>4,304</td>
<td>5,065</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(12.0)</td>
</tr>
<tr>
<td>2nd.</td>
<td>1,680</td>
<td>3,206</td>
<td>4,867</td>
<td>5,558</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(9.8)</td>
</tr>
<tr>
<td>3rd.</td>
<td>1,690</td>
<td>3,560</td>
<td>4,581</td>
<td>6,147</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(10.6)</td>
</tr>
<tr>
<td>4th.</td>
<td>2,050</td>
<td>4,022</td>
<td>4,088</td>
<td>6,796</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(9.2)</td>
</tr>
<tr>
<td>5th.</td>
<td>2,280</td>
<td>4,079</td>
<td>4,558</td>
<td>7,554</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(10.8)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(11.2)</td>
</tr>
<tr>
<td>Average</td>
<td>1,812</td>
<td>3,489</td>
<td>4,479</td>
<td>6,224</td>
</tr>
</tbody>
</table>

**Note:** Figures in the brackets show growth rate in percentage

**Source:** Ministry of Finance, Economic Report Various Issues.
Figure 4.2
Per Capita Income, 1980-1992

FIGURE 4.3

Relationship of housing demand to economic development


Figure 4.4 indicates the link between housing demand (consumption) and population shifts to urban areas.
FIGURE 4.4

Relationship between housing consumption and population shifts to urban areas

\[
\% \text{ of consumption spent on housing}
\]

rate of urbanization


Most studies of the demand for housing in urban areas have tended to focus on aggregate populations and to assume uniform preferences or housing elasticities. However, various later studies show that such relationships differ substantially between groups of different income, age and ethnic background. Moore and Clatworthy (1978), for example, have shown in their studies of Wichita, Kansas that income elasticities of demand do vary widely within and between income and racial groups and over stages in the life cycle. A given increase in income, for instance, produces a far smaller increase

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in housing consumption among low-income groups where they also found elasticities to be higher among families without children.53

In terms of income, the concept of permanent income is more prominent as a determinant of housing demand. This is because, housing is a durable commodity and is expected to provide a flow of services over the years. Furthermore, Reid (1962) argued that, housing expenditure is viewed over a longer time period because of the inconveniences of moving house and the considerable transactions costs involved, housing consumption will not be adjusted frequently; instead there will be periodic adjustments that will depend not only on current income, but past and expected future income streams as well.54 In addition to this, permanent income elasticity of housing demand may be expected to have a higher value than those obtained using current income.55

According to Milton Friedman (1957), current income (Y) consists of: permanent income (Yt), which is the individual’s long-run anticipated income based on past earnings and expectations about the future, and transitory income (Yt) which causes unforeseen short-run aberrations from the long-run trend.56 Based on this principle, housing expenditure or demand
can be expected to be related to permanent income but not to transitory income.\textsuperscript{57} Now if, as is likely, households receiving above average incomes tend to have positive transitory income, whereas households with below average incomes experience negative transitory income, housing expenditure in relation to current income will be higher for the low-income households, and lower for the high-income households, then it would be in relation to each group's permanent income.\textsuperscript{58} Therefore any elasticity measure obtained from the relationship between housing expenditure and current income will underestimate the permanent income elasticity.\textsuperscript{59} When the income elasticity is underestimated, the demand for housing may not necessarily be determined by income. Therefore, it is important to use the permanent income concept when measuring the income elasticity.

The main findings from various empirical studies are:

a) The response of housing demand to price or income changes is much greater than is commonly believed. The income and price elasticities of desired stock demands are both above unity.

b) Experiments with the income variable suggest that Friedman's expected-income series is
indeed the appropriate one for studying housing demand.  

4.6.3 The Credit Availability

The availability of housing credit is a crucial determinant of the housing demand. The credit terms will transform a demand into an effective demand for house buyers. Furthermore, many households cannot buy houses with their own savings because housing is an expensive good. This is more serious for the low-income house buyers. Furthermore, houses are unique among consumer goods in their high cost in relation to income and in how long they last, and housing services therefore have to be obtained either through renting or purchased with the aid of long term credit. In addition, changes in the interest rates, maturities, and loan-to-value ratios prevailing on new home mortgages have an important effect on the demand for housing.

Basically there are six main financial sectors which provide credit facilities for the housing industry. These includes, building societies, local authorities, insurance companies, commercial banks, finance companies, government credit and ready money. In the Klang Valley, commercial
bank, such as May bank. Citibank and others are the major housing loan contributors. In terms of building societies, we have Malaysian Building Society Berhad (MBSB). Insurance Companies consists of The Great Eastern Life Assurance Company Limited, Malaysian Assurance Alliance Berhad and others. In the Klang Valley, there are 18 insurance companies providing various financial facilities for house buyers.

Finance companies include Public Finance, Maybank Finance, MBf Finance and others. In addition to these, the Employee's Provident Fund (EPF) also plays a greater role in terms of channeling its fund to its contributors to buy houses. On top of that, privatised companies such as Keretapi Tanah Melayu Berhad (KTMB) or Malayan Railways, Telecoms, Tenaga Nasional Berhad (TNB) and others also provide financial facilities for its staff to purchase houses. While, for the civil servants, the government has its own fund to finance the house buyers. Therefore, credit facilities are widely provided by the various institutions either private or public.

In England and Wales, in 1973, 71 per cent of first-time purchasers borrowed from building societies, 12 per cent from local authorities and 6 per cent with ready money, while 63 per cent of moving
owner-occupiers financed their move by a loan from a building society and 24 per cent with ready cash.62

While in Malaysia, commercial banks and Treasury Housing Loans Division (THLD) provide a major bulk of the housing loans. In 1992, commercial banks share in the total housing loan issued was 37.7 per cent in 1991 [refer to Table 4.2]. For the THLD, its share was 38.96 per cent in 1991 and 38.2 per cent in 1992. This was followed by the finance companies' share with 14.3 and 15.3 per cent in 1991 and 1992 respectively. Next on the list is the Malaysia Building Society Berhad with 4.5 and 4.7 per cent share in 1991 and 1992 respectively. While, National Savings Bank (NSB), Borneo Housing Mortgage Finance Berhad (BHMFB), Sabah Housing Corporation and Bank Rakyat represents between 0.5 and 1.6 per cent of the national share.

A clear situation of the sources of housing credit and approved housing loans is shown in Table 4.2 and Table 4.3 respectively. As far as Klang
TABLE 4.2
Malaysia: Sources of Housing Credit

<table>
<thead>
<tr>
<th></th>
<th>As at end of</th>
<th>Annual change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial banks</td>
<td>11,588</td>
<td>12,203</td>
</tr>
<tr>
<td>Finance companies</td>
<td>4,289</td>
<td>4,983</td>
</tr>
<tr>
<td>Treasury Housing Loans Division</td>
<td>11,657</td>
<td>12,347</td>
</tr>
<tr>
<td>Malaysia Building Society Berhad</td>
<td>1,339</td>
<td>1,514</td>
</tr>
<tr>
<td>National Savings Bank</td>
<td>313</td>
<td>536</td>
</tr>
<tr>
<td>Borneo Housing Mortgage Finance Berhad</td>
<td>410</td>
<td>414</td>
</tr>
<tr>
<td>Sabah Housing Corporation</td>
<td>213</td>
<td>217</td>
</tr>
<tr>
<td>Bank Rakyat</td>
<td>110</td>
<td>125</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>29,919</strong></td>
<td><strong>32,321</strong></td>
</tr>
</tbody>
</table>


Valley is concerned, commercial banks, and Treasury Housing Loans Division (THLD) play a greater roles in providing end financing for house buyers irrespective of first-time buyers or moving owner -
occupy buyers. A wide range of credit facilities are the main force behind strong effective demand for houses in the Klang Valley especially for the upper and middle income buyers.

**TABLE 4.3**

Malaysia: Approved Housing Loans

<table>
<thead>
<tr>
<th></th>
<th>RM million</th>
<th>Annual change (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>--------------------------------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Commercial banks</td>
<td>4,479</td>
<td>3,961</td>
</tr>
<tr>
<td>Finance companies</td>
<td>1,813</td>
<td>1,627</td>
</tr>
<tr>
<td>Treasury Housing Loans Division</td>
<td>1,710</td>
<td>1,320</td>
</tr>
<tr>
<td>Malaysia Building Society Berhad</td>
<td>403</td>
<td>373</td>
</tr>
<tr>
<td>National Savings Bank</td>
<td>431</td>
<td>75</td>
</tr>
<tr>
<td>Borneo Housing Mortgage Finance Berhad</td>
<td>43</td>
<td>39</td>
</tr>
<tr>
<td>Sabah Housing Corporation</td>
<td>20</td>
<td>13</td>
</tr>
<tr>
<td>Bank Rakyat</td>
<td>17</td>
<td>59</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8,916</td>
<td>7,467</td>
</tr>
</tbody>
</table>


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In the house purchase market, interest rates play an important role. Usually, higher rate on housing loans will increase cost of borrowing which increases the monthly loan payment. As a result, due to income constraints, certain house buyers will find it difficult to repay the loans at that level. On the other hand, lower interest rates on housing loans reduce costs of borrowing and monthly repayments which reduce the burden of consumers with limited income. Lower interest rates on housing loans usually induce more house buyers to purchase houses and vice-versa. Apart from that, the interest burden is also determined by the downpayment for the houses and the length of repayment period.

In Malaysia generally and the Klang Valley precisely, the house purchasers will pay 10 per cent as downpayment in respect to the whole value (price) of the house. The balance 90 per cent is paid through housing loans. On the other hand, if, another buyer pays 20 per cent as a down payment and the balance 80 per cent is paid through housing loans, the former, ends up paying higher monthly repayments compared to the latter. Here, we assume that, the price of the houses and the length of loan repayment periods as
identical for both buyers. It should be noted that, higher downpayments and longer loan repayment periods will reduce the monthly loan repayments. However, lower downpayment and shorter loan repayment periods will increase the monthly loan repayment.

Gelfond (1966) examined the relative importance of the interest rate, the length of repayment period and the loan-to-value ratio for a sample of 1500 households in the state of Pennsylvania. He concluded that the downpayment requirement arising from loan-to-value lending practices was quantitatively the most important factor restricting households in their quest for housing of their choice. While in Britain similar lending practices resulted in the households' liquidity position becoming an important determinant of demand. At the macro-level, Guttentag (1961) has claimed that in the United States of America, credit availability is the major determinant of short-term housing demand.

The impact of the interest rate, length of repayment and down payment is shown in Table 4.4, Table 4.5, Table 4.6 and Table 4.7. Table 4.4 and 4.5 depicts, the monthly repayments for housing loans with a 15 and 20 year repayments period. These two tables
indicate that, with a given interest rate and with a higher loan repayment period the monthly repayments will be lower but the total amount of money paid by the end of the year will be greater (higher) and vice-versa. For example, if a house buyer takes RM30,000 loan with a 10 per cent interest rate for a 15 year repayment period, he only pays RM329 per month and at the end of the 15 year period the total amount paid

<p>| TABLE 4.4 |
| Monthly Repayments For Housing Loans with a 15 year Repayment Period (to nearest RM) |</p>
<table>
<thead>
<tr>
<th>Amount of Loans</th>
<th>Interest rates p.a.</th>
</tr>
</thead>
<tbody>
<tr>
<td>30,000</td>
<td>4% 10% 12% 13% 14%</td>
</tr>
<tr>
<td>225</td>
<td>329 368 387 408</td>
</tr>
<tr>
<td>50,000</td>
<td>375 548 613 645 680</td>
</tr>
<tr>
<td>70,000</td>
<td>525 767 856 903 952</td>
</tr>
<tr>
<td>90,000</td>
<td>675 986 1103 1161 1224</td>
</tr>
<tr>
<td>110,000</td>
<td>825 1205 1348 1419 1496</td>
</tr>
<tr>
<td>130,000</td>
<td>975 1424 1593 1677 1768</td>
</tr>
<tr>
<td>150,000</td>
<td>1125 1843 1838 1935 2040</td>
</tr>
<tr>
<td>170,000</td>
<td>1275 1862 2083 2193 2312</td>
</tr>
<tr>
<td>190,000</td>
<td>1425 2081 2083 2481 2584</td>
</tr>
<tr>
<td>210,000</td>
<td>1575 2300 2573 2709 2855</td>
</tr>
</tbody>
</table>

Notes: 1) Actual amount may differ slightly from bank to bank depending on rounding of decimal place during calculations.

2) Those taking government housing loans actually pay less than the figures shown here because the government uses the 'monthly rest' method.


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would be RM59,220. However, this amount is much lower compared to the total amount paid at the end of a 20 year period, that is RM70,560 with a monthly repayment of RM294. Therefore, it is always advisable for house buyers to repay the loan in a shorter period. Similar explanation applies for the rest of the figures shown in the table.

**TABLE 4.5**

Monthly Repayments for Housing Loans with a 20 year Repayment Period (to nearest RM)

<table>
<thead>
<tr>
<th>Amount of Loans</th>
<th>Interest rates p.a.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4%</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----</td>
</tr>
<tr>
<td>30,000</td>
<td>135</td>
</tr>
<tr>
<td>50,000</td>
<td>308</td>
</tr>
<tr>
<td>70,000</td>
<td>431</td>
</tr>
<tr>
<td>90,000</td>
<td>554</td>
</tr>
<tr>
<td>110,000</td>
<td>677</td>
</tr>
<tr>
<td>130,000</td>
<td>800</td>
</tr>
<tr>
<td>150,000</td>
<td>923</td>
</tr>
<tr>
<td>170,000</td>
<td>1048</td>
</tr>
<tr>
<td>190,000</td>
<td>1169</td>
</tr>
<tr>
<td>210,000</td>
<td>1292</td>
</tr>
</tbody>
</table>

**Notes:**
1) Actual amount may differ slightly from bank to bank depending on rounding of decimal place during calculations.
2) Those taking government housing loans actually pay less than the figures shown here because the government uses the 'monthly rest' method.

**Source:** Goh Ban Lee, Buying A House In Malaysia, Marican and Sons, Kuala Lumpur, 1985, p. 95.
### TABLE 4.6

Total Amount of Money Paid by the End of the 15 year Period (to the nearest RM)

<table>
<thead>
<tr>
<th>Amount of Loans</th>
<th>4%</th>
<th>10%</th>
<th>12%</th>
<th>13%</th>
<th>14%</th>
</tr>
</thead>
<tbody>
<tr>
<td>30,000</td>
<td>40500</td>
<td>59220</td>
<td>86240</td>
<td>89660</td>
<td>73440</td>
</tr>
<tr>
<td>50,000</td>
<td>67500</td>
<td>98640</td>
<td>110340</td>
<td>116100</td>
<td>122400</td>
</tr>
<tr>
<td>70,000</td>
<td>94500</td>
<td>129060</td>
<td>154440</td>
<td>162540</td>
<td>171360</td>
</tr>
<tr>
<td>90,000</td>
<td>121500</td>
<td>177480</td>
<td>198540</td>
<td>208980</td>
<td>220320</td>
</tr>
<tr>
<td>110,000</td>
<td>148500</td>
<td>218900</td>
<td>242640</td>
<td>255420</td>
<td>269280</td>
</tr>
<tr>
<td>130,000</td>
<td>175500</td>
<td>258320</td>
<td>286740</td>
<td>301860</td>
<td>318240</td>
</tr>
<tr>
<td>150,000</td>
<td>202500</td>
<td>295740</td>
<td>330840</td>
<td>348300</td>
<td>367200</td>
</tr>
<tr>
<td>170,000</td>
<td>229500</td>
<td>335160</td>
<td>374940</td>
<td>394740</td>
<td>416160</td>
</tr>
<tr>
<td>190,000</td>
<td>256500</td>
<td>374580</td>
<td>419040</td>
<td>441180</td>
<td>465120</td>
</tr>
<tr>
<td>210,000</td>
<td>283500</td>
<td>414000</td>
<td>463140</td>
<td>487620</td>
<td>514080</td>
</tr>
</tbody>
</table>


### TABLE 4.7

Total Amount of Money Paid by the End of the 20 year Period (to the nearest RM)

<table>
<thead>
<tr>
<th>Amount of Loans</th>
<th>4%</th>
<th>10%</th>
<th>12%</th>
<th>13%</th>
<th>14%</th>
</tr>
</thead>
<tbody>
<tr>
<td>30,000</td>
<td>44400</td>
<td>70580</td>
<td>80640</td>
<td>85650</td>
<td>90720</td>
</tr>
<tr>
<td>50,000</td>
<td>73920</td>
<td>117600</td>
<td>124400</td>
<td>142800</td>
<td>151200</td>
</tr>
<tr>
<td>70,000</td>
<td>103440</td>
<td>164640</td>
<td>168160</td>
<td>199920</td>
<td>211680</td>
</tr>
<tr>
<td>90,000</td>
<td>132960</td>
<td>211680</td>
<td>241920</td>
<td>257040</td>
<td>272160</td>
</tr>
<tr>
<td>110,000</td>
<td>162480</td>
<td>258720</td>
<td>295680</td>
<td>314160</td>
<td>332640</td>
</tr>
<tr>
<td>130,000</td>
<td>192000</td>
<td>305760</td>
<td>349440</td>
<td>371280</td>
<td>393120</td>
</tr>
<tr>
<td>150,000</td>
<td>221520</td>
<td>352800</td>
<td>403200</td>
<td>428400</td>
<td>453600</td>
</tr>
<tr>
<td>170,000</td>
<td>251040</td>
<td>399840</td>
<td>456960</td>
<td>485520</td>
<td>514080</td>
</tr>
<tr>
<td>190,000</td>
<td>280560</td>
<td>446880</td>
<td>510720</td>
<td>542640</td>
<td>574560</td>
</tr>
<tr>
<td>210,000</td>
<td>310080</td>
<td>493920</td>
<td>554480</td>
<td>599760</td>
<td>635040</td>
</tr>
</tbody>
</table>

Based on Table 4.4 and 4.5, we can conclude that the lower income earners who earn less than RM700 per month, will find it difficult to buy a house in the Klang Valley. If the buyer chooses to buy a house with a RM30,000 housing loan for a repayment period of 20 years with a 10 per cent interest rate, he ends up paying a monthly repayment of RM294. This amount is almost half his income and therefore it is difficult to cover his family expenses with the balance. Therefore, in the Klang Valley, the demand for houses costing less than RM30,000 is very high.

But developers are unwilling to build at such a price due to lower profit margins. Since the mid 1980's, more developers tend to develop apartments and flats which are priced less than RM100,000. As a result, the low income earners are forced to buy such dwellings due to escalating housing prices especially for single and double storey terrace houses. Thus, the credit terms, house prices and types of houses supplied obviously are the main determinants of housing demand in the Klang Valley.

Therefore, the availability of credit certainly influences the buyers whether to purchase a house or not. Apart from income and price, credit
terms also play a significant role in determining the housing demand in the Klang Valley. For the owner-occupiers or first-time buyers' credit terms, location and of course the price range would certainly determine the types of houses they purchase. While for speculators or investors either from local or abroad, credit terms will determine their profit or investment returns apart from the appreciation value of the particular property in a particular location. Foremost, the credit terms and its availability are widely believed to have great impact on housing demand in the short-run. While in the long-run, it is less important.

4.6.4 Demographic Factors

Demographic factors usually influence the housing demand in the long-run. This is because, demographic factors would basically take longer time to affect the housing demand. These include the age and sex structure, population growth, migration trends, the rate of household formation, household size and the number of household. For these factors, it takes more time for change. For example, age needs more time to change from young to middle age where a person will be able to buy a house.
a) **Migration**

In the Klang Valley, migration plays an important role in terms of housing demand. People migrate from various parts of the country into this area. This is due to its strategic location, more job opportunities, higher earning power and more prospects. The flow of migrants into the local market will greatly increase the number of households in the local market.

Nett migration into the Klang Valley increased up to 240,000 people from 1970 to 1980. While during 1980 to 1990 it increased further up to 290,000 with 29,000 people per year.\(^{66}\) Annually, about 60,000 flock to Selangor, especially to the districts of Petaling, Klang and Gombak to seek greener pastures, doubling the national annual population growth to 2.6 percent.\(^{67}\) Moreover, nett migration accounts for 35 percent of the total population growth in the Klang Valley.\(^{68}\) Therefore, the large influx of migrants into the Klang Valley would obviously increase the housing demand especially for low-cost and medium-cost houses.
b) The Rate of Household Formation

The rate of household formation is directly involved with housing demand. Higher household formation will increase the need for housing and this will finally increase the demand for housing. The household formation is influenced by numerous factors.

Age plays an important role in household formation. If more of the population are below 21 years old, this will reduce the household formation because, they would be either students, just started to work or with lower purchasing power. Therefore it is not possible for them to look for a new house. This will finally reduce the demand for housing. However in the Klang Valley, almost half of the population are with enough purchasing ability to own a house. Apart from that, they tend to buy or demand a house due to high rentals in this area. Thus, higher marriage rate with enough purchasing power will increase the rate of household formation and this will finally boost the demand for houses.

It should be noted also, the household size also influences the rate of household formation and demand for housing. The household size in the Klang
Valley decreased from 5.7 in 1970 to 5.4 and 5.0 in 1980 and 1990 respectively. This implies that, less people are staying in one house. In other words, more people tend to stay in their own house.

In addition, from 1989 to 1992, more than 447 new manufacturing projects with investments totalling more than RM6.8 billion were approved, most of them in the Klang Valley and within 40 km from Kuala Lumpur and as a result these projects created more than 150,000 jobs. This huge job market increases per capita income for workers thus creating a rapid increase in housing demand. It should be noted that the per capita income in the Klang Valley is above the national average. Therefore, this leads to a higher purchasing power or higher effective demand for houses. The Petaling District absorbs more housing demand compared to other districts. Petaling district with 633,144 residents and 1,308 people per square km area in 1991 compared with 389 people per square km area in 1970 accounted for 35 per cent of the units under construction and Hulu Langat district housed 32 per cent.

Overall, migration plays an important role as a demand determinant for housing. This is very clear in the Klang Valley where since the 1970's till
today, (1993) the main component of housing demand comes from them. This trend is expected to continue in future based on rapid economic growth being experienced by the Klang Valley now. Therefore, the reduction in the household size in the Klang Valley is expected to contribute in increasing the household formation and thus increase the demand for houses. Furthermore, a person does not always intend to stay in a rental house. Sooner or later he or she would want to stay in his or her own house.

The number of households also determines household formation and thus the demand for housing. The Klang Valley Report shows that, the number of households decreased from 1.7 in 1970 to 1.4 in 1990. This indicates that, in one dwelling in the Klang Valley the number of family staying is decreasing. As a result, more families will be looking for a house to stay either through rental or purchase market. If they rent, this may be for a short-term only, because sooner or later they have to look for their own house either for security, status or convenience reasons. This process would finally lead to an increase in the housing demand in the Klang Valley.

In addition, population increase also determines housing demand. The Klang Valley
population increased from 1.27 million in 1970 to 1.89 million in 1980 and 2.66 million in 1990. As a result of this, the housing requirement increased to 187,400 units from the period 1970 to 1980. Later during 1980 to 1990 it went up to 257,400 dwellings. Therefore, the number of new dwellings built each year must rise from an estimated 11,300 in 1970 to 23,000 in 1990.72 As a result, the number of dwellings in the Klang Valley increased from 368,873 units in 1980 to 668,389 units in 1991.73

It should be noted that, migration obviously adds to the total population in a city and therefore alters total housing demand and it also becomes part of the explanation of differences in demand. Apart from that, housing conditions between cities would generate inter-urban migration, such as from middle income areas to luxury areas. For example, in many new town development schemes housing has been used as a policy instrument in attracting labour, and in turn the availability of housing could be an additional inducement for labour attraction. Johnson, Salt and Wood (1974) found some evidence of the importance attached to housing in the interregional migration of labour within the U.K., particularly housing conditions at the destination.74
Finally, it is generally agreed that changes in tax rates and taxation policies can sharply alter the level of housing demand. For example, if interest on mortgages is tax deductible, changes in the allowable deduction or in tax rates will shift the demand for housing, relative to other consumer expenditures, upwards or downwards. Similarly, the exclusion of the personal home from capital gains tax will produce a transfer of household investment into housing (rather than, say, stocks and bonds) and thereby increase the demand for housing. On the other hand, proportionally large increase in local property taxes or rates can render housing - at least larger houses - less attractive and thus reduce the level of replacement demand.

Overall, the demographic factors influence the housing demand in the long term. This is mainly because, demographic factors need more time to change such as population growth, age, household size and number of household. Apart from that, various government policies also influence the changes in the demographic factors. Thus, various factors contribute to the changes in the demographic factors.
4.7 Summary

Finally the previous explanation is expected to provide a good coverage regarding the demand for housing in the Klang Valley. It started with the definition of housing, the concept of housing services and the unique attributes of housing. Later it moved further to explain the nature of housing demand which examined the various reasons to purchase a house. It was further extended towards the method of analysis which explains the housing demand equation, income and price elasticity of demand. Finally the analysis extended to cover the various determinants of housing demand. These include price, income, credit availability, population and other demographic factors. This chapter is designed in such a way to provide a clear view pertaining housing demand and its determinants. Therefore, it is expected to provide a good and a complete coverage regarding housing demand.
FOOTNOTES


10. Ibid. p.17.

11. Ibid. p.17.

12. Ibid. p.17

13. Ibid. p.17.

14. Ibid. p.126


16. Ibid. p.8


18. Ibid. p.126.


34. Ibid. pp.46-50.
35. Ibid. p.52.
38. Ibid., pp.51-52.
40. Ibid. p.7.
43. Ibid., p.127.

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45. Ibid., p.7.
46. Ibid., p.7.
51. Ibid., p.128.
56. Reid, M.G. (1962), opcit, p.3.
58. Ibid., p.42.
62. Ibid., p.50.
64. Ibid., p.54.


68. Ibid., p.20.

69. Klang Valley Study Report (1973), opcit., p.34.


71. Ibid., p.20.


75. Ibid., p.130.
