House Price and Affordability in Housing in Malaysia

Harga Rumah dan Tahap Mampu Milik Rumah di Malaysia

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ABSTRAK

Pasaran harta tanah kediaman di Malaysia telah mengalami lonjakan harga yang signifikan dalam jangkamasa lima belas tahun dengan terdapatnya beberapa negeri mengalami lonjakan harga dengan kadar yang lebih tinggi. Berdasarkan teori ekonomi, pergerakan harga rumah kediaman mempunyai kaitan secara langsung dengan ekonomi wilayah dan demografi seperti pendapatan, kos modal, harga saham dan bilangan penduduk. Perubahan harga yang mendadak, meningkat atau menurun, mempengaruhi peluang memiliki rumah kediaman. Bagaimanapun, rumah kediaman tetap merupakan keperluan asas kehidupan manusia. Makalah ini bertujuan menganalisis pergerakan harga rumah kediaman di antara negeri-negeri yang dipilih dan kaitannya dengan tahap mampu-milik dan kesediaadaan rumah kediaman dan kemungkinan menjana kekayaan melalui pemilikan dan pengaruhnya kepada penggunaan. Kesan Bajet 2008 ke atas pemilikan rumah kediaman akan turut dibincangkan. Memandangkan industri harta tanah berperanan penting dalam ekonomi negara, kestabilan pasaran harta tanah mempunyai korelasi secara langsung dengan kebolehan pemilikan dan kuasa beli pemilik. Ketidaktentuan harga yang ketara akan mempengaruhi tahap mampu-milik dan kesediaadaan harta kediaman. Pergerakan harga yang mampan akan menyokong pemilikan yang mampan dan pasaran yang stabil.

Kata kunci: Mampu-milik, kesediaadaan, mampan, kekayaan, Malaysia.

ABSTRACT

Residential property market in Malaysia has experienced significant price expansion over the past fifteen years with prices, at several states, expanded at higher rates. As economic theory has explained, house price movements is inherent with the regional economics and regional demographics such as income, cost of capital, stock prices and population change. However, sudden price change could affect home ownership to some extent. Under any circumstances, the need for housing as a basic necessity persist. This article intend to analyse house price movements with regard affordability and availability and to some extent the possibility of wealth creation of house ownership and its influence on consumption. Discussion will also be made on the effect of the recent Budget 2008 on home ownerships. The article will address issues pertaining to affordability level among the sampled states, availability of housing for the lower income earners and wealth created through home ownership. Since the housing industry is an important sector to the Malaysian economy, the health of the housing market is of paramount importance and directly correlated to ability to own and thus, the purchasing power of the public. Pronounced price fluctuation affect ownership thus affordability and availability are much reduced. Sustained price movement can ensure sustainable house ownerships and support the housing market thus affordability level is favourable.

Keywords: Affordability, availability, sustainability, wealth, Malaysia.

INTRODUCTION

Owning a home for shelter and comfort is central to most families' ultimate plans and also considered definition of personal success. During periods of rapid economic growth, many have the notion that, house price will continue to surge and making it unaffordable especially during the years prior to the Asian financial crisis in 1997 and late 1998. However, housing continues to be an important expression of family aspiration and single most expensive investment by households. Consequently, housing industry plays an eminent role to the country's economy in terms of employment, capital market, consumption and financial wealth thus stimulating the business cycle. On the contrary, prolong run-up in house price makes the local economy vulnerable to an economic slowdown and increasingly prone to financial instability and imbalance (Abraham & Hendershott 1996).

Research shows that house price movements are influenced by economic fundamentals; real income growth - affects household's purchasing power and borrowing capacity, interest rate - affect cost of capital and pay-back capacity, stock prices - affects household's wealth and investment alternatives, supply - affects availability

and choice, population growth - proxy for growth rate of household, economic activity - affect consumption and sub sectors related to housing market such as furniture and household accessories. At the global front, with increasingly integrated financial market, to some extent synchronisation of stock prices and long term interest rates, stimulates the local housing market to be more dynamic (Otrok & Terrones 2004). As housing is the quintessential non-tradable asset, house price cycles across countries may be synchronised if the forces driving house price (such as output, interest rate, consumption, wealth) tend to move in tandem across countries. Evidence shows that the house price in some countries, namely industrial countries where house price booms/bust were synchronised, is a reflection of synchronisation of monetary and financial liberalisation, in addition to general business cycle linkages (Englund & Ioannides 1997). However, this article will not address any issues pertaining to the ongoing global financial crisis that is confronting major industrial countries and the rest of the world. It needs a separate paper as this crisis is considered unique, widespread and deep as it is still in the midst of uncertainty with most nations coming up with various stimulus packages to contain its erosive effect.

HOUSE PRICE AND SUSTAINABILITY

An approach seeking to analyse the state of the housing market is by determining whether demand is financially sound by considering house prices relative to the borrowing and pay-back capacity of households, furthermore housing also has important impacts on the competitiveness of any locality's economy (Quigley & Raphael 2004). If housing is expensive compared to other localities, firms will find difficulty to keep and recruit personnel and fewer families can afford to own home or homeownerships will lead to severe financial stress among households. Under tight housing market, households will be willing to commute long distance to work, which lead to high travelling cost, time and fatigue that would then drastically reduce productivity.

Rising house prices and low interest rates have fueled the surge in mortgage borrowing and enable consumers to spend at high rates supported by increase in their income. However, when and where housing prices have fallen, borrowing and growth slowed, with plausible effects of a slowdown in housing prices on household spending, economic growth and sectoral balance. Sustainability in house price embark on the factor of demand, where affordability will be the determining issue and supply, and where availability complement market demand. With the current income level, cost of fund and leverage offered by financial institutions, households have the opportunity to own and perform their monthly mortgage payment without much sacrifice.

This article will address three issues pertaining to affordability and sustainability. Firstly, how expensive are housing in two states, Selangor, (the most developed state) as compared to Kelantan (the least developed state) and the nation. It then looks at the affordability issues by comparing house price as to income between those states from 1995 until 2006. Secondly, to what extent are housing made available among lower income households (below median priced house) and thirdly, the effect of lower mortgage payment on wealth creation among households through capital accumulations.

The findings have several significance: firstly, the findings show the level of affordability among households in the two diverse states, secondly, the findings illustrates the availability of housing for lower income households and at poverty level; and thirdly, opportunity for households to create wealth through home ownership.

LITERATURE REVIEW ON HOUSING AFFORDABILITY

Issues pertaining to home ownership has been a major concern among political leaders, town planners and the government over the years. Owning a house is considered an impetus towards integration among family members. As such, a precise measure of housing affordability is essential to ensure aspirant home owners can fulfil this life-long investment and also the need for shelter.

Affordability issues in Malaysia has never been dealt with in detail and no specific study on housing affordability has been done. The connotation '*rumah mampu-milik*' which has been widely used by housing developers in Malaysia are mainly their selling point without referring to any established facts or index as base point. As such, this article intent to establish an index depicting explicitly housing affordability between two diverse states; Selangor and Kelantan and the nation. The same phenomena exist among the Asian countries, where specific studies on housing affordability has never been done compared to developed countries like United States, Germany, Spain, United Kingdom, Italy and Holland.

Over the years, affordability indicators have evolved, both by incorporating effective cost of housing and more accurate unit-record data compared to crude aggregate. Initially, affordability was measured by price-income ratios without incorporating the effects of interest rate, qualifying income of homeowners and inflation levels. Contemporary developments of affordability measure are discussed in this article as equation (1) to equation (4). These equations consider three sources of uncertainties face by homeowners/mortgages namely interest rate, income risk and price volatility (Chaplin & Freeman 1999). These factors can lead to unsustainable homeownership as high qualifying income (high monthly mortgage payment) can lead to arrears and consequently to

foreclosures. The Housing Affordability Index, equation (4), show the relationship between household income (annual) and the income needed to qualify for a typical house. It measures the degree to which a typical household can afford the monthly mortgage payments on a typical house. Prior to the current global financial crisis, mortgage interest rate were at all-time low and remain low for a lengthy period. These low regime interest rate had tremendously help to improve the affordability of homeownership especially among the developed nations namely United States, Britain, Australia, Netherlands, Germany, Italy and Ireland (Greenspan 2003).

A study done by Edison Properties Inc. USA in 2003 showed that on site-built homes (compared to manufactured homes) was completely out of affordable range from 1985 through 1991, mostly as a result of high interest rates. In 1998 affordability reached a high of 117, this time due to low interest rate. The same phenomena happened between 2000 and 2001. However, between 1997 and 1998, the median price of a site-built home rose approximately 4.6 percent due to increase in affordability. An examination of data depicted that interest rates took a dip plus a 4.1 percent rise in household income, actually decreased the cost of the home as a percentage of total income, thus increasing affordability.

Numerous other studies were done using this Housing Affordability Index. The National Association of Realtors (NAR) U.S (2004) found that between 1990 and 2000, housing affordability increased in all 69 major cities in the United States. Homebuyers had benefited from the declining interest rates which help to make mortgage payments more manageable. In most places, strong income growth has helped out owner-occupied housing within reach of many, even as prices have continued to rise.

Housing Industry Association of Australia (2005) reported, between June 2000 and June 2003, housing affordability fell to a 13-year low among capital cities in Australia caused by a 12.2 percent rise in house prices. Interest rate remain high at 6.75 percent while average household income edged up slightly over the period. Affordability is very much linked to sustainability, thus in this article, sustainability is specifically addressed to house price. The relevance of house price to sustainability is that house price has been very dynamic and to some extent volatile, especially among big developed economies. A sharp rise in house price without support by firm fundamentals such as income growth, increase in population, accommodative monetary policy and low unemployment rate could lead to artificial house price bubble. Persistent rise in the house price over lengthy period due to speculative buying without strong fundamental factors would certainly be over priced and unable to sustain. This will lead to a sudden drop in house price and thus collapse in the housing sector (David 2004). Once this happen, since buying a house is considered to be the largest investment for an individual or organisation, it will thus erode a huge proportion of their wealth. The vast scale of wealth that is locked into the housing market automatically implies that housing markets play a pivotal role in the national economy. As such, the sustainability of house price is correlated to the sustainability of the nation's economy (U.S. Department of Housing 2005).

HOUSING MARKET: THEORY AND IMPLICATIONS

Housing price, like any other goods and services in a market economy, are determined by the interactions of demand and supply. People's demand for owner occupied housing is primarily determined by price of housing, population growth and household formation rate and income growth (Flavin & Yamashita 2002). Comparatively, the state of Selangor outpaced Kelantan in all aspects of economic and social growth for the past 20 years. Income growth has been strong in Selangor and its economies are in the midst of an expansion of unprecedented length except with a mild set-back during the Asian financial crisis. This makes housing affordability high and house ownership rate to increase.

On the supply side, the key factors determining housing prices are the availability of housing that is vacated or offered for sale and the cost of new construction. Increase in cost of new homes, due to rise in input costs, affects the price of existing homes, since they are close substitutes for one another. If a new 2,000 square foot house on a one acre lot sells for RM150,000, then an identical house on the same size lot in the same locality that is three years old will sell for slightly less than RM150,000, even if the initial selling price of the house was much less, say around RM125,000. If the new house sells for RM130,000, then the three year old house will sell for slightly less than RM130,000.

New housing cost also affect the amount and price of existing housing through a process known as "filtering" by housing economists. The filtering process means, assuming that in a community there are three types of housing: high quality, moderate quality and lower quality. Developers will tend to build housing that is most profitable, generally high-end, and high-priced. These high-end housing are purchased by households currently living in moderate quality housing and want to move into more expensive housing. This will vacate/frees up that moderate quality housing for some other family to move in. That, in turn, paves the way for family living in the low quality housing to move up into the now vacated moderate quality housing. Finally, this in turn frees up lower quality and lower cost housing for new homeowners, which means low quality housing which is low cost housing. As such, affordable housing is created. This affordable housing is created at an affordable price by new construction and increased availability of lower

quality housing which is usually the older and cheaper housing in any community.

Studies show that there are several other factors that affect house price. Firstly, *supply condition*. Features most often in the market that can restrict the availability of land for housing development thus constraining the responsiveness of supply. These features include zoning rules, cumbersome building regulations, slow administrative procedures, all of which restrict the amount of developed land thus underlying both the trend rise of house prices and their high variability. These are pertinent feature among several developed nations like United Kingdom, United States and South Korea. Secondly, *demographic development*. High rates of net migration, decline in the average size of households and increase in population shares of cohorts of individuals in their thirties will boost housing demand by increasing the share of the population of household in their formation stage. In several countries like Ireland, Spain, Australia and the United Kingdom, the high shares of such households in the total population since mid-1990s have been associated with large increases in real house prices. Increase in real disposable income can also raise housing demand, thereby increase price level. For as long as there is no distortion in the housing market, demographic development can affect both house prices and its rent. Thirdly, *speculative pressure*. Investing in housing market commonly known as *buy-to-let* have grown substantially over the past years especially in United States, United Kingdom, Australia and Ireland. Lower interest rates have increased the return on rental property for investors enhancing the attractiveness of and demand for housing as an investment. Finally, *innovation in mortgage market*. A particularly important factor has been financial deregulation in mortgage markets which has significantly reduced borrowing constraints on households. This was considered the major contributing factor which triggered the sub-prime crisis in the United States in late 2007. The deregulation process started in the 1980s and saw rapid growth of mortgage credit concurrently leading to large run-ups in house prices. This was prominent in several countries like Australia, United Kingdom, United States, Canada and New Zealand. More recent changes in mortgage markets include lending innovations, adoption of new technologies and the growing use of payment reduction features in mortgages have offered households greater choice and lowered borrowing costs.

Changes in house prices affect the wealth position of households and thus can influence private consumption. During rapid economic growth, house prices tend to increase thus inducing wealth creation for house-owners. This consequently entice higher consumption and to some extent increase household's capacity to borrow as their assets can better serve as security for repayment and real estate is the most widely used as collateral. Households can withdraw part of the rise in housing equity by increasing their borrowing secured on rising property values and use some of the proceeds to finance extra consumption. This phenomena of wealth creation are means of capital accumulation by households owning residential property during encouraging economic growth where they can capitalise on lower monthly mortgage payments to generate savings and at the same time securing positive equity through house price hike.

An expanding economy with high housing demand need not lead to rapidly growing housing prices if supply of housing matches demand and the filtering process works well. The state of Selangor with high population growth, above nation's median income and prosperous economic growth encounters sustainable house price increase thus making it affordable for ownership among their populations.

AFFORDABILITY, AVAILABILITY AND WEALTH CREATION ISSUES

In essence, this article analyses three main issues; the level of affordability of housing between two sampled states, Selangor and Kelantan, the extent of availability of housing among lower income people for those two states and the opportunity of wealth creation among house owners when monthly mortgage payments were reduced and house price appreciated. The main sources of data for this article are from Property Market Report, Valuation and Property Services Department, Ministry of Finance Malaysia from 1995 until 2006. Every property transaction are recorded at the local district office and been collected and further analysed annually by the Department of Valuation and Property Services at every state. For the purpose of this article, only transactions pertaining to residential properties are analysed.

Affordability indexes range from the simple to the very complex, but nearly all relate the cost of housing to some measure of income. Goodman (2001) uses American Housing Society (AHS) data to show that the ratio of house cost to income for homeowners has increased from 2.08 in 1985 to 2.17 in 1999. A more sophisticated indicator of affordability is produced for *The State of the Nation's Housing* (2002) which takes into account tax effects and shows the percentage change in the share of income going to housing for house owners. However, the most common housing affordability index is that used by the National Association of Realtors (NAR) generated by Shimberg Centre For Affordable Housing, Florida, United States. The NAR index measures the ability of the median income household in an area to purchase a median priced house in that area. In addition to the median income and median house price, the index takes into account the current mortgage interest rate, amount of down payment required to purchase the medium priced house and the maximum percentage of household income that can be spent on

housing. The higher the calculated affordability index, exceeds 100, the easier it is for a household in the area with median income to purchase a median priced house and vice versa.

The formula used to calculate Affordability Index is as follows;

Monthly payment = Median house price $\times$ 0.8 $\times$ (R/12)/(1–(1/(1+R/12)^360))   (1)

Necessary monthly income = ((monthly payment $\times$ 12)/ median family inc) $\times$ 100   (2)

Qualifying income = income necessary to qualify for a loan for median house price
= monthly payment $\times$ 4 $\times$ 12   (3)

Housing Affordability Index = (median family inc./ qualifying income) $\times$ 100   (4)

Where:
R : Interest rate on loan, 0.8 : conversion factor. Assumption: Index consider income and % down payment, other factors constant.
In calculating qualifying income, a deposit of 20% with repayment equivalent to 30% of income is assumed using a conventional 25 years loan.

Homeowners will have an added savings when the monthly mortgage payments are reduced which normally happens when the lender revised downward their interest rates. For this article, the added savings incurred among homeowners for the sampled states are when there are allowed to pay half of their monthly mortgage payment from their EPF account 2. As such, the second half of the payment is considered amount saved by homeowners and potentially can generate financial wealth if invested elsewhere. Domodaran (2001) has demonstrated a well known formula to calculate the amount of capital accumulated from the above investment;

$$\text{Financial wealth} = \sum_{t=0}^{T-1}\left(R - E_t\right)^{(T-t-1)} \qquad (5)$$

R; monthly mortgage payment
E_t; 50% from EPF

As for equity withdrawal, monthly mortgage payments are considered as forced savings and through the years the property has appreciated in value. Assuming the property appreciated at six percent per year and after the fifth year, the value of property bought at RM91,360 in 1995 will fetch a value of RM122,240 an increase of 33.1 percent in value. Using the normally used discounting procedure, Clauretie & Sirmans (2006) has come up with the formula as below in calculating the above returns;

$$\text{Real estate wealth} = \sum_{t=1}^{T} \frac{R}{\left(1+r\right)^t} \qquad (6)$$

HOUSING PRICE AND AFFORDABILITY

The continuous increase in house prices have spurred debate as to their causes, their implications and the affordability level for the vast majority of the population. Whether the increase can be fully explained by income growth, population increase and interest rates, given prevailing supply condition, or whether prices have been boosted by speculation to 'bubble' levels has been frequently contested by most economics.

Affordability plays centre role in house ownership, increase equity and nation's economic stability. A central concern is that, if house price continues to increase, this may undercut the affordability of homeownership. As such, its essential to identify which pricing factors are making houses and homeownership less affordable.

AVERAGE HOUSING PRICES

Generally housing markets are regional in nature, as such the discussion on house prices are at state level. Given the geographic size and location of the state of Selangor (west coast) and Kelantan (east coast) it is reasonable to use state price as a measure of regions within the nation. Due to vast economic disparity between these two states, their difference in total number of houses transacted annually, house price and household income will profoundly influence the level of housing affordability, housing availability and opportunity of wealth creation between these two states, which is the main focus of this study.

Table 1 depict summary statistics on the housing market for both states and nation. A few important points are highlighted by the data in this table. Firstly, naturally house price are higher in the state of Selangor, at least double that of Kelantan in early 1990s and almost four times higher in 2006. At the national level, house price in Selangor on the average is 35 percent to 53 percent higher between 1995 until 2006. Malaysian property market was hard hit by the Asian financial crisis which started in late 1997 and persisted until early 1999. House prices contracted across the nation between 8 percent and 9.5 percent due to reduced in number and value of transaction for all categories of properties, residential by almost 30 percent. However, the market recovered moderately thereafter following stringent monetary and fiscal policies by the government. There was a mild house price contraction in 2001, mainly due to slowdown in the US economy and property overhang followed by increase in non-performing loan, namely commercial property. However, it was well absorbed by the market in retaliation to policy measures introduced through Budget 2001 to strengthen the industry. By 2006, house prices have experienced tremendous increment, especially Selangor, due to its robust growth in manufacturing sector (52.9 percent state GDP, 2000) followed by transportation and communication sector. However, house prices in Kelantan increased moderately and contracted to some degree. In terms of total number of transactions, there were no significant increment, but the increase in property value sold has prompted house price to increase, especially in early 2000.

TABLE 1. Housing Market Indicators by State: 1995 - 2006

Year	Total units sold			Mean price RM			Median price RM			% mean > median		
	Sel.	Kel.	Nation	Sel.	Kel.	Nation	Sel.	Kel.	Nation	Sel.	Kel.	Nation
1995	40,341	1,380	156,913	119,976	44,015	100,780	88,647	45,354	91,360	35	-3	11
1996	41,369	1,692	170,007	145,253	48,617	110,307	99,465	45,905	94,420	46	5	17
1997	27,932	1,321	175,682	165,826	53,444	123,009	126,919	46,075	88,414	30	14	39
1998	29,074	1,541	122,881	149,406	52,109	113,320	116,754	40,060	81,975	28	23	38
1999	36,535	1,714	157,082	171,942	55,723	118,024	126,546	44,242	79,998	35	26	48
2000	40,227	1,469	170,932	185,600	59,946	128,351	136,753	44,203	87,365	36	35	47
2001	41,773	1,406	176,208	174,141	62,141	125,983	134,374	41,278	89,964	29	51	40
2002	36,116	1,104	162,269	180,904	79,230	130,257	135,518	57,089	90,331	33	39	44
2003	36,978	1,294	164,723	199,790	59,722	139,696	138,912	35,438	93,752	43	69	49
2004	39,660	2,300	195,243	226,776	56,300	150,047	152,309	37,227	97,853	49	51	53
2005	42,986	2,445	181,762	220,698	50,103	156,289	147,235	26,754	101,043	49	87	55
2006	48,384	1,923	176,277	228,756	61,882	162,796	160,345	40,321	105,034	43	55	55

Note: Sel. = Selangor
　　　Kel. = Kelantan
Source : Property Market Report, several years

Secondly, there is a significant difference between median and mean prices for the states and nation. The mean price, known as average price, is calculated by adding the prices of every transaction, total value of transaction, recorded and dividing by the total number of transaction. The median price, at which half the houses sold were more expensive and half are less expensive. The mean price can be highly skewed by the sale of very expensive houses, so the median is a much better indication of the actual representative housing price faced by buyers. Table 1 clearly shows that the state of Selangor experienced a consistent increase in difference between mean and median prices except for a reduction in 1998 and 2001 due to economic contraction across nation. As for the state of Kelantan and the nation as a whole, the difference between mean and median price widen. This clearly shows that the housing developer were more keen to build high-end residences as it ensure higher profit as take up rates were encouraging. Proliferation of high-end residential were further enhanced by several government incentives to stimulate the property market such as individual income tax relief on loan interest: RM5,000 (2003), RM3,000 (2004), and RM2,000 (2005). Beginning June 2003, house purchased at RM180,000 and above were exempted from stamp duty and real property gains tax were abolished. Ceiling for foreign purchase was reduced from RM250,000 to RM150,000. Correspondingly, Bank Negara intervention rate was reduced by 50 basis point, indicating that loans were cheaper. However, by end of 2006, across the country, residential property overhang continued to rise from 15,558 units in 2004 to 25,645 units in 2006 encompassing 61.5 percent priced above RM150,000.

HOUSING AFFORDABILITY

Housing can only be said to be expensive relative to something. Since housing is the most expensive item that most households will purchase, the cost of housing against the ability of people to pay for their mortgage was measured by focusing on income (Bourassa 1996). For that purpose, we compare the cost of servicing a mortgage on the median priced house to the income available by state and nation. Table 2 shows the median household income, obtained from the Economic Planning Unit, monthly mortgage payment on the median priced house by state and nation assuming a buyer who finance the loan with 30 year mortgage payment, 20 percent down payment and variable interest rate from 1995 until 2006. The mortgage percent of income is essential as banks sets a maximum of 30 percent of gross income should be put aside for monthly payment for house ownership. Anything less than 30 percent should be better as it increases their capacity to pay. Affordability Index, measures the degree to which a typical household can afford the monthly mortgage payments on a typical home without much difficulty. An index value of 100 indicates that the household making the median income can afford to buy median priced home, a value less than 100 indicates less affordability and a value greater than 100 indicates more. The index is influenced by several factors such as interest rate, duration of loan, income, monthly mortgage and percent down payment.

Median household income for Selangor, the most developed states in Malaysia, demonstrated an average annual growth rate of 5.1 percent with an initial set back in 1998. As for Kelantan, the least developed state, experienced an average annual growth rate of 4.6 percent but with a much lower median income.

As for the monthly mortgage payment, it is obvious that, households had to pay the highest; Selangor RM1,006, Kelantan RM365 and nation RM701 per month. During 1997, when the Asian financial crisis begins to set in and interest was at the peak 11.52 percent and the median house price in Selangor increased almost 30

TABLE 2. Housing Affordability by States: 1995 - 2006

Year	Median Hsehold Income (RM)			Monthly mortgage (RM)			Mortgage % of Income			Affordability Index		
	Sel.	Kel.	Nation	Sel.	Kel.	Nation	Sel.	Kel.	Nation	Sel.	Kel.	Nation
1995	2,930	920	1,850	585	299	603	20	33	33	125	77	77
1996	3,018	957	1,943	705	324	670	23	34	34	107	74	73
1997	3,108	1,105	2,041	1,006	365	701	32	33	33	77	76	73
1998	2,860	968	1,865	801	275	562	25	25	27	97	80	83
1999	3,105	1,150	2,272	725	254	459	23	22	20	110	113	124
2000	3,330	1,208	2,385	761	246	486	23	20	20	109	122	123
2001	3,429	1,245	2,395	692	212	463	20	17	19	124	146	129
2002	3,704	1,307	2,514	686	289	457	18	22	18	135	113	137
2003	3,926	1,372	2,640	674	172	455	17	13	17	146	199	145
2004	4,161	1,454	2,875	729	178	468	18	12	16	143	204	154
2005	4,409	1,541	3,025	715	130	491	16	9	16	154	296	154
2006	4,673	1,633	3,182	829	209	543	18	13	17	141	196	147

Source : 9th Malaysia Plan.

percent in 1997. However, the monthly mortgage payment begins to taper down, for the states and nation, there after with a slight increase in 2006 due to an increase in the median house price, even though interest rate was quite low at 6.72 percent.

In most cases, banks and lending institutions bench mark at 30 percent of gross income of individuals to allocate for payment of mortgage monthly. This is considered as the basic requirements for individuals to be qualified for loans, anything lower than 30 percent is considered affordable and payments without much difficulty by home owners. As depicted in Table 2, from 1995 until 1997, except for Selangor household had to spend slightly more than 30 percent for monthly mortgage payment. However, after 1997 due to improvement in median income and lower interest rate, percentage income spent on monthly mortgage were substantially reduced. This makes households have more savings which consequently stimulate consumption, equity accumulation and alternatives for investments, correspondingly as an impetus for business activity to pick up.

Last column of Table 2 shows the level of affordability of households for the states and nation from 1995 until 2006 as indicated by the index. The table explicitly shows that from 1995 until 1998 home ownerships were completely out of affordable range except for Selangor in 1995 and 1996. Beginning 1999, home ownerships were made more affordable for the states and nation mainly due to improvement in income, tax cuts benefit, low interest rates, attractive loan packages made by government and financial institutions in Home Ownership Campaigns in 1999, such as stamp duty waiver on property transfer, less down payment and housing loan eligibility for public sector employees raised and upgrading to better and higher-priced properties were allowed. To further dispose residential property, Pengurusan Danaharta Nasional Berhad (Danaharta), entity to deal with non-

performing loan, through series of its tender, managed to sell 58.5 percent properties. The government continued to focus on affordable housing with Syarikat Perumahan Negara Bhd (SPNB) a spearhead the construction of low and medium-cost houses and rehabilitate abandoned housing projects. Consequently, the Employee Provident Fund (EPF) has also relaxed its policies to permit contributors to make withdrawals towards the purchase of a second home and also contribute to the monthly mortgage payments.

In analysing Table 2, consider that in 1999, the median house price in Selangor rose 8.4 percent over 1998 and yet the affordability index actually increased from 97 to 110. The reason is mainly due to the mortgage interest rate dropped from 9.72 to 7.75 percent. This illustrates why the affordability is so dependent on interest rates more so than the actual price of the house itself. Concurrently, between 2000 and 2002 for Selangor, affordability index exhibited a huge increment from 109 to 135 mainly due to three reasons; its median house price dropped by almost 1 percent; dip in mortgage interest rate almost one point and 11 percent rise in household income, consequently reducing monthly mortgage payment and mortgage percent of income.

Overall, the median house price in Selangor has risen 81 percent since 1995 while median household income has risen approximately 60 percent. Without declining interest rates, housing is rapidly pricing itself out of existence, at least in terms of households making less than the median income, since that figure by definition is 50 percent of all families.

According to the index, houses in Selangor for the year 2003 (with an index of 146) were 26.6 percent more affordable and houses at national level (index of 145) were 27.1 percent more affordable than houses in Kelantan. These were mainly due to significant difference in median income and interest rate at its lowest level.

HOUSING AVAILABILITY

The analysis of mean and median house prices and mortgage payments provides information on price but does not provide an indication of the number of housing units available at different prices for the states, Selangor and Kelantan, and nation. Much of the households concern about high house prices is over the availability of housing at the lower price ranges. Many lower income households are not able to afford the median priced house, so the number of houses at different price ranges below the median will be important to lower income households who have fewer choices than middle income households. That is, if the median priced house in a particular state is RM100,000, that means, half the houses sold in that state cost RM100,000 or less. However, it will be more meaningful if household is able to know if most houses selling below the median price cost more than RM90,000 or if there were significant number of houses available at lower prices say in the RM75,000 to RM85,000 price range. A low income household might be able to afford a RM80,000 house, but not qualify for a mortgage on a median priced house.

Since there is no data on the number of households with incomes at any given percentage of the state median income, so it is not possible to match housing prices to incomes for lower income households. However, Table 3 depict two ways on how to examine the availability of lower cost housing for the states and nation, also capital accumulation on house ownership.

Columns 2 until 4 of Table 3 address the issue of the availability of housing at lower price levels by showing the price levels at state and national levels at which 30 percent of the houses were sold from 1995 until 2006. For the state of Selangor in 1995, the median priced house

was RM88,647 (Table 1) and 30 percent of the houses were sold for RM65,000 or less and correspondingly, 30 percent of the RM31,407 or less with median priced house of RM45,354 the same year. Naturally, prices for the 30th percentile increase throughout the years as median price, income and affordability increases for Selangor, but did not happen in the state of Kelantan. This implies that, for the least developed state of Kelantan, the 30th percentile house price or 30 percent of the houses sold from 1995 until 2006, were still priced at not more than RM31,848 (1996) except for the year 2002. Since there have not been much development in terms of infrastructure, facilities and mega projects in Kelantan, house prices have not made significant movement since 1995.

For the state of Selangor, in the year 1995, thirty percent of the houses were sold at RM65,000 or less, which demand households to have minimum income of RM1,478 per month to fulfil monthly mortgage of RM443.50 for twenty years, with interest rate at 5 percent and 5 percent down payment. If there were data to match number of households with that level of income and thirty percent of houses sold at RM65,000 or less (assuming there were first timer house buyers), we would be able to estimate whether sufficient units of that kind of houses were supplied to the market in Selangor for the year 1995. For illustrative purposes, say for the year 2006, Selangor, at the 30th percentile price of RM105,350 or less, minimum monthly income for households required is RM2,396 to fulfil monthly mortgage payments of RM718.90 with other requirements remaining the same.

Another way to look at the availability of lower cost housing is to bench mark to a certain level of income which signifies the amount of income and below which a household will not be able to obtain basic necessities in life such food, clothing and shelter. In the case of Malaysia, the poverty line which was revised and established in 2004 is RM691 income per month. With that income level, the kind of house household can afford will be at the price of RM32,800; monthly mortgage payment of RM207, interest rate at 5 percent for twenty years and 5 percent down payment. Table 3 (column 7) shows that, houses sold at RM32,800 keeps on decreasing from 26 percent in 1995 to 17 percent in 2006 at the national level. This implies two things; firstly, poverty level is not keeping in pace with the rise in house price, secondly, less houses are made available for the lowest income group of households. Thus, more low cost housing are in need across the nation supplemented with lower interest rate, lower down payment and longer payment period, to make housing and house price more sustainable.

Budget 2008 broadly helped to boost the property market in several ways. Beginning January 1st 2008, Employees Provident Fund (EPF) contributors can make monthly withdrawals from their account 2 balances to pay off their housing loans. This make home ownership much easier thus stimulating the property market in terms of number and value of transaction, however speculation

TABLE 3. Housing Availability by State

Year	30th Percentile Price			Capital Accumulation RM®		% Sold at Poverty Level®
	Sel.	Kel.	Nation	Financial	Equity	
1995	65,000	31,407	48,760	385	122,240	26
1996	71,094	31,848	51,150	427	126,340	24
1997	83,160	30,522	64,180	448	118,300	18
1998	78,480	25,900	78,018	359	109,682	23
1999	85,762	27,780	47,565	293	107,040	26
2000	94,095	29,815	56,290	310	116,900	21
2001	92,700	24,200	60,780	260	120,372	18
2002	90,650	37,780	59,047	292	120,865	19
2003	92,600	20,220	60,518	291	125,440	19
2004	99,320	18,630	64,231	300	130,930	18
2005	97,150	15,480	66,380	314	135,200	17
2006	105,350	23,670	65,726	347	140,540	17

Note: ® Nation

Source : Property Market Report, several years

and unnecessary price hike can be contained. This phenomenon can be capitalised by household in two ways, namely financial wealth and equity withdrawal as shown in Table 3 under capital accumulation at national level.

Assuming that home owners are allowed to pay 50 percent of their monthly mortgage from their EPF account 2, that is half of RM603 which is RM301.50. This means a saving of RM301.50 per month for households. If these savings were invested at 5 percent per annum for five years, home owners have accumulated financial wealth of RM385 for house bought in 1995 at the price of RM91,360 as shown in column 5 of Table 3. The proceed from these 50 percent savings from EPF are continuously deposited in the savings account thus generating financial gains at the current saving rate at 5 percent. This demonstrates that lower mortgage payment either by means of lower interest rate or in this case 50 percent of the mortgage payment was from EPF which had created an opportunity for house-owners to generate wealth through savings. The formula used to calculate the amount of accumulated financial wealth as shown in Table 3 (column 5) is equation (5).

These effects of capital accumulation through housing wealth arise either from savings or from increase in house price, contributes significantly to household consumption spending, consequently to the business cycle. Housing equity withdrawal help to finance other purchases or invest in alternative options. High rates of house ownerships, low interest rate and the recent abolishment of capital gains tax on housing wealth contribute to strengthen the aggregate wealth effect. Thus, the growth in homeowner's equity through increase in house price is shown in Table 3 (column 6) and was calculated by using equation (6).

As for the price movements from 2003 until 2005 in Table 3, house prices in Selangor and the nation showed an upward trend while house prices in Kelantan trended downward. The marginal decrease in house prices in Kelantan was mainly due to the fact that the majority of the transactions (60.2 percent) were concentrated on the lower end price bracket of below RM30,000. Thus, the 30th percentile house price in Kelantan moves in tandem with the lower market average. At the same time, problem with overhang persisted in some major districts. This phenomena continue in 2005 thus further putting downward pressure on house price.

During the year 1998, Malaysia was in the middle of the Asian Financial Crisis. During the year the construction sector was among the troubled sectors confronted with negative growth. Developers faced difficulty in obtaining loans to resume projects that were shelved. Market was severely unattractive to speculators, oversupply was the major problem and market confident was at its lowest level. However, Selangor and Kelantan (least affected) showed a marginal recovery in their house prices in 1998 and 1999, but the nation as a whole faced a downward trend in house price between the same period.

House price for the nation dropped marginally between 2005 and 2006 despite an increase for Selangor and Kelantan. The reason being, the market was contemplating on Budget 2005 which outlined favourable financial and monetary policies aiming to boost the property market would really materialize. The downward trend continued into 2006 and performance of most states were mixed and trending downward. Nation's demand for residential primary market softened.

Extensive research will be conducted to see the effect of house ownership to wealth, equity withdrawal and consumer consumption. Consequently, housing market play significant part in the nation's economic performance and naturally the business cycle.

CONCLUSION

The normal perception of households pertaining to housing market, especially during the period of expanding economy, is of sky-high prices where majority of them are frozen out of the market by low income and high prices thus affordability and availability of housing were almost impossible. Under such situation, housing and housing market are considered unsustainable for two reasons: firstly, prices were too high and ownership was difficult or owners have difficulty in making the monthly mortgage payments; secondly, fluctuations in prices were unpredictable and highly speculative which do not synchronise well with income, affordability and availability.

However, there are several approaches that a potential buyer or investor have to look at the property market prior to making a statement with regard to prices. First, have an overall view of the property market from time to time in terms of type, location, features and market target. Focusing only on a small subset of housing prices, especially newly high end constructed houses gives a biased and misleading price evaluation. This kind of houses is always the most expensive segment of the housing market since developers are making huge profits from the sale. Majority of the clients are foreign investors, corporate figures, business entities and cash rich individuals. Second, looking at the total housing market and focusing on average (mean) prices also gives a misleading picture of the housing market. As discussed earlier, mean house price is well above the median price, thus median price is a better indicator of the level of the typical price facing the buying public. Third, there exist a wide variety and variation in the price of housing within the state across the nation. Obvious from most housing schemes, there are mixed kind of development within any particular housing estate such as link houses, detach houses, individual unit houses, apartments and condominium. In addition, the government is building

more low cost housing at strategic locations to address the issue of home ownership and eradication of squatters in major cities and growing urban areas. To put the concept of sustainability in perspective, housing market need to address the issue of affordability and availability to the majority of the buying public. The government, quoted occasionally, affordable houses are those houses priced at RM150,000 and below. As discussed in Table 2, affordability as shown by the states in the study, have been improving since after the financial crisis of 1997 – 1998. With the increase in house prices through the years, households affordability level improves and house availability for the median and low income households priced at RM150,000 and below were sufficient to meet demand, thus help stabilise market conditions.

Issues pertaining to affordability and sustainability of housing has been among the major concerns to households especially those living in major cities. Economic theory depicted that housing is a market commodity, consequently, supply and demand determines the quantity of housing produced and the selling price. However, the authorities need to play their part in ensuring adequate and suitable housing are accessible to the majority of the community towards building a balance and nurturing an equilibrium in housing ownership. Among the initiatives are; sufficient allocation of space and less stringent on regulations in building public houses, direct or indirect incentives to developers to help stimulate the creation of affordable housing, partnership or collaborations with local agency, organisations or entities to generate funds and enhance understanding in building public houses, facilitate in loan applications, low down payment, low interest rate and longer pay back period. These are the ways in which affordability can be increased, concurrently establishing sustainability through equitable house ownership within any specific locality.

Efforts towards better understanding of housing demand and supply dynamics at local and national markets would enhance awareness with regard public concern over sustainable housing for the vast majority of the population. Focusing on sustainable housing supply can reduce housing market stress, make homes available to the masses and act as the contributing factor towards sustainable housing. At the same time, opportunity to create some wealth out of home ownership are indications of sustainable living since consumption, investment and choice of life style are the outcome of well planned and structured resources towards sustainability for the current generation and generations to come.

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