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RESEARCH NOTE

HOUSE PRICES AND AFFORDABILITY IN MALAYSIA

Ashrof Zainuddin and Kamsiah Hj. Sirat

ABSTRACT

The primary purpose of this study was to investigate the relationship between house prices in Malaysia and the macro and microeconomic factors influencing them. A review of literature supports that movement in house prices are influenced by a multitude of factors and these include movements in price of building and building materials, housing demand and supply, population growth, Consumer Price Index (CPI), Gross Domestic Product (GDP), Base Lending Rates (BLR) and the availability of complementary as well as substitute properties. The study attempts to examine the factors that correlate with house prices and then estimate future prices by applying the multi-regression pricing model which will incorporate those factors. The idea is that House Price Index (HPI) that corresponds to multi-dimensional attributes such as economic indicators can determine house prices in the future. The finding shows that house prices in Malaysia will become an affordability issue for middle and low-income groups for the next ten years since the increase in house prices is more rapid than the average income increment. The findings are also consistent with the hypothesis that house prices are determined by economic and financial factors identified as relevant for the demand and supply of housing units in this country. This research proposed a model for house prices forecasting by using the common economic indicator GDP, CPI and population growth. It is believed to be a simple tool for ordinary people to predict house prices in the future.

Keywords: House, prices, affordability

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INTRODUCTION

House prices and affordability are becoming relevant issues in many developed countries. Countries like Malaysia whose population is almost 28 million this year with an average GDP of 3%-6% and an average CPI of 2%-5 % for the last three years is experiencing an average increase of 3% annually in house prices. Shelter is a basic need for human being. Although people vary in their capability to provide decent accommodation for their families, the provision of a decent place of stay has become a major aim of every family head. At the national level, the nation has a social obligation to provide adequate housing of reasonable standard to the citizens and this takes centre-stage in the nation's agenda.

Houses, like any other commodities, operate within markets of their own and are subject to movement in prices. In Malaysia, it is commonly perceived that house prices have increased phenomenally over the past twenty years, overshadowing the rate of increases in other sectors

of the economy. The increase appears more pronounced in urban areas where a great majority of this type of property are located. Given the implication this has on the affordability of housing and hence the national policy for the provision of housing, this subject merits a high place in the agenda for research.

The movement in house prices are influenced by a multitude of factors and these include movements in price of building and building materials, housing demand and supply, population growth, base lending rates and the availability of complementary and substitute properties. This research was undertaken to improve our understanding on the nature of house price dynamics in Malaysia.

BACKGROUND TO RESEARCH

The review begins with an examination of what is house price. It is important to note that when price is discussed, there are two forms of price; implicit and explicit. The combination of

implicit prices will be summed up as the explicit price. The determination of implicit prices however requires thorough analysis and a substantial amount of information pertaining to the goods under investigation. The price investors are willing to pay is related to the return available on alternative investments subject to wealth constraints. Prices observed in the market over time may embody different qualities and quantities of services in housing units. Hence price movement over time may in part reflect changes in the composition of the bundle of services. Thus it is quite hard to clearly suggest the meaning of price as the joint purchase of assets and housing services cannot be easily separated. As a conclusion, market price for houses incorporates per unit investment and service demands and overtime, possibly changing attributes—that is, the quality of service or investment units.

The house price determination is associated with macro (market-related factors) and micro (house-specific factors). However do the researchers link these factors to the price? The first step to this is to establish a theoretical background for the pricing theory. Thus, the review begins with identifying price determinants. The review will then be followed by discussion on the illustration of statistical tool as one of the approaches available to segregate the contribution of each variable hence enabling the quantification of perceived contribution in the overall price.

Problem Statement

The issue is a national concern and takes into consideration regards the various levels of affordability or background of income. An increase in house prices impacts different sectors of population differently. To the house buyers, an increase is undesirable due to the added burden associated with higher acquisition prices. To the developers, speculators and financial institution, the increase potentially creates an opportunity for higher profits. For the middle and low-income groups, the increase could mean a difference between being able to own a house or otherwise. Since the agenda to provide Malaysians with affordable housing is a national issue, this topic is really recommended for further research especially on the variables influencing the hiking of house prices.

The analyses into the causes underlying house price movements in this country have been underproductive in Malaysia. This has often led to a situation where researched information is unavailable when it is needed as input to decisions on policies. As a consequence, policies are formulated without the benefit of researched information and as a result, are not very successful when it comes to addressing the real problem. Further, the low activity on research led to

suppressed awareness of the house price problems within the real estate industry and has consequently caused frequent house price increases to be unquestioningly accepted as normal.

Research Objective

1. To identify significant correlation between purchasing power (Consumer Price Index) and house prices in Malaysia.
2. To identify significant correlation between economic growth (GDP-Gross Domestic Product) and house prices in Malaysia.
3. To identify significant correlation between population growth and house prices in Malaysia.
4. To forecast prices of houses and affordability in Malaysia towards year 2020.

Research Questions

This research aims to answer four research questions:

1. Is there any significant correlation between purchasing power (Consumer Price Index) and house prices in Malaysia?
2. Is there any significant correlation between economic growth (GDP-Gross Domestic Product) and house prices in Malaysia?
3. Is there any significant correlation between population growth and house prices in Malaysia?
4. What are the forecast prices of houses and affordability in Malaysia towards year 2020?

Significance of research / Contribution to the Body of Knowledge

This research will enrich the understanding of the direction of house prices in Malaysia. Furthermore, it will contribute towards new knowledge through the research process on household affordability. All the data and the findings will have a commercial value for industry players.

LITERATURE REVIEW

Housing is an important sector of the national economy in most countries. Housing is the largest component of household net wealth, representing 30% of world wealth, larger than bonds (27%) or equities (19%). Housing investment, defined as the market value of the structure of new houses and improvements for existing houses, accounts for 2-8% of national output and 10-30% of total fixed capital formation. Fluctuations in house prices have a direct impact on the level of macroeconomic activity by influencing

private consumption and investment. Simultaneously, housing price is affected by macroeconomic variables such as real income, interest rate and the supply of credit (Kim, 2004).

The jump in house prices in Malaysia lately has raised concerns that speculators may be taking advantage of the easy home financing scheme. Buyers only need to fork out a small deposit of 5% or 10% of the property price and do not need to make any further payment until after their property has been delivered to them. Since the introduction of the scheme in early 2009 property sales have improved considerably while prices in some locations in the Klang Valley and Penang have edged up by between 10% and 20% (Angie & Thean 2010).

House price dynamics were investigated and reported in several earlier works. David and Cuero (1999) discovered that price movements are co-integrated with the level of the GDP in the country, base lending rates and the total unit of housing developments in new projects

The level of household consumption spending for real estate depends on many factors: wealth, (lifetime) income and real interest rate are among the most important (Elbourne, 2008). Dispasquale and Wheaton (1996) presented a framework for depicting the long run equilibrium of the real estate market. David et al (1999) suggested that any movement in gross domestic product (GDP), prime lending rate and the supply of new private housing is bound to have an impact on the private residential market. In this regard, as economy expands, national income rises to lead to greater demand for housing space. For a given level of housing space, rents must rise if the demand is to be equal to the available space. Higher rents lead to greater prices, which in turn lead to a greater level of new construction and hence a greater stock of space associated with new market equilibrium.

On the demand side, studies showed that income is an important determinant of residential price, which in turn depends on the economic well being of the country (Ong and Teck, 1996). Economic theory suggests that interest rates and house prices have an inverse relationship. In general, lower interest rates tend to lead to increased housing demand, which in turn lead to increased house prices. This, however, leads to a subsequent increase in supply in response to the higher house prices and lower construction financing costs. Thus, interest rate influences house prices through the demand for, and supply of, housing (Ong and Teck, 1996).

Similarly, Willie Tan (1994) suggested that cheaper financing costs in recession tends to boost housing demand and exerts an upward pressure on house prices. However, this effect is mitigated by a similar outward supply shift in response to higher house prices and lower builder's

financing costs. According to the same author again, in Singapore, rapid economic growth is likely to weaken the inverse relation between house price and credit costs.

In Malaysia, local real estate commentators suggest that the growing population and the increasing disposable income coupled with easy access to finance have led to a high demand for housing (Rahah, 1998). This in turn will impact the house price movements.

Although house price movements are influenced by an infinite number of factors, the above studies help to narrow the variables by showing the various elements in the marketplace with house price dynamics, including the level of GDP in the country, base lending rates, demands and supplies of housing, population growth, disposable income and housing loan availability.

There is a relatively recent, growing recognition about the importance of the interactive nexus between and among housing markets and the macroeconomy. The research finding proved that the interplay between housing markets and macroeconomy is really significant. The discussion which examines these lynchpin housing-macro-economic nexus issues pertaining to housing taxation, housing cycles and housing market-urban structural form would give a better perspective on these issues (Charles Leung, 2004).

The trend of house prices in Malaysia and the impact derived from variables such as building material index, purchasing power, economic growth, housing stock, composite index, housing loan availability, base lending rates (BLR) and population growth will have significant impact on house prices. All the variables are interrelated but the scope of this research will be on the correlation of purchasing power, economic growth and population growth on house prices in Malaysia.

METHODOLOGY

To investigate the relationships between the influencing factors and house prices movement, correlation analyses were performed on the factors involved. Data for house prices were taken from the Valuation and Property Services Department (VPSD). The Department maintains the most comprehensive records on housing transactions by virtue of being the central agency for the collection of such data.

For the economic data, several other sources were referred to. For data on GDP, CPI, population level and disposable income, the study turned to the Statistics Department. The Statistics Department's database is the repository of macroeconomic variables and sector-specific variables for the Malaysian economy. The reliability and integrity of this database are beyond doubt. The Malaysian government relies on this

database to monitor and forecast the economy's performance. Table 1 shows the summary of research methodology for this research.

Table 1: Research Methodology

<p>1st Objective: To identify the significant correlation between purchasing power and house prices in Malaysia. The Consumer Price Index in Malaysia (2000-2008) - secondary data from Statistic Department, Ministry of Finance. The House Price Index in Malaysia (2000-2008) - secondary data from National Institute of Valuation (INSPEN). Analysis method - The Pearson Correlation Analysis which will determine the coefficient correlation between the above variables.</p>
<p>2nd Objective: To determine the significant correlation between economic growth and house prices in Malaysia. The Gross Domestic Product (GDP) in Malaysia (2000-2008) - secondary data from Statistic Department, Ministry of Finance. The House Price Index in Malaysia (2000-2008) - secondary data from National Institute of Valuation (INSPEN). Analysis method - The Pearson Correlation Analysis which will determine the coefficient correlation between the above variables.</p>
<p>3rd Objective: To determine the significant correlation between population growth and house prices in Malaysia. Population growth in Malaysia (2000-2008) - secondary data from Statistic Department, Ministry of Finance. House Price Index in Malaysia (2000-2008) - secondary data from National Institute of Valuation (INSPEN). Analysis method - The Pearson Correlation Analysis which will determine the coefficient correlation between the above variables.</p>
<p>4th Objective: To forecast house prices and affordability in Malaysia towards year 2020 Gross Domestic Product (GDP) in Malaysia (2000-2008) - secondary data from Statistic Department, Ministry of Finance. Consumer Index in Malaysia (2000-2008) - secondary data from Statistic Department, Ministry of Finance. Population growth in Malaysia (2000-2008) - secondary data from Statistic Department, Ministry of Finance. And House price Index in Malaysia (2000-2008) - secondary data from National Institute of Valuation (INSPEN). Analysis method - The Multiple Regression</p>

Analysis which will determine the trend and forecast house prices in Malaysia based on the above variables.

DATA AND ANALYSIS

Table 2 below shows the independent variable, the House Price Index (HPI) and dependent variables namely the Consumer Price Index (CPI), Gross Domestic Product (GDP) and Population Growth in Malaysia. All the data were analysed using Multi Regression Analysis (MRA) to obtain the correlation coefficient -r and the regression equation, $HPI = a + CPI(X1) + GDP(X2) + P(X3)$ for forecasting the House Price Index (HPI) in the future.

Table 2: The Empirical Data for Correlation and Multiple Regression Analysis

Year	Y= House Price Index- HPI Yr. 2000=1 00	X1= Consu mer Price Index -CPI Yr. 2000= 100	X2= Gross Dome stic Produ ct- GDP Yr. 2000= 100	X3= Popula tion Growt h (Millio n)
2000	100	100	8	23.2
2001	104	101.4	0	24
2002	107	103.2	4.3	24.5
2003	110	104.4	5	25
2004	109	105.9	7	25.5
2005	115	109.1	4.5	26.1
2006	118	102.8	5	26.6
2007	125	105	5.4	27.1
2008	130	108	7.4	27.5
CORRE LATION , r		Y and X1, r=0.67	Y and X2, r=0.19	Y and X3, r=0.97

Source: Bank Negara Malaysia, 2009.

Interpretation and Findings

The findings of this study have a number of implications. Economic indicators such as Consumer Price Index (CPI) and population growth have a significant correlation with House Prices in Malaysia but the Gross Domestic Product (GDP) is unconvincing. Both CPI and Population Growth have a correlation coefficient of 0.67 and 0.97 respectively. These show that there is a strong relationship between HPI and CPI and also a very strong relationship between HPI and Population Growth in Malaysia. However, the GDP has a weak correlation with HPI, where the r value is 0.19. This indicates that the GDP is not the main factor

to influence Malaysians to own houses even during economic crisis.

The regression equation for all the data computed using Multi Regression Analysis is as below:

$$\text{HPI} = -186.77 + 0.86\text{CPI} + 0.10\text{GDP} + 8.22\text{Population}$$

The regression equation above indicates that the average annual increase in HPI in Malaysia is 4%. Therefore, for the last objective, by considering that the Malaysian population in 2020 is 35 million, our GDP is 5% and the CPI is 105, the prediction for HPI in Malaysia for 2020 is 184 compared to 100 in year 2000. The prediction indicates that all types of residential housing price in Malaysia will increase by 84 % generally compared to prices in 2000.

Since the average annual increment in salary for government servants is 4%, the affordability issue will become serious because house price increment is almost double that, which is 8 % annually in the next 10 years. That means, instead of the average 15% that the ordinary citizen normally spends for monthly mortgage or rental, unfortunately for the next 10 years people have to spend 30-60% of their disposable income depending on the type of houses. I hope and believe the Malaysian Government is concerned about the issue and they have a good policy to tackle affordability among Malaysians.

CONCLUSION

The purpose of this study is to observe the significant economic indicators that determine house prices. These economic indicators would provide valuable data for house prices prediction by using Multi Regression Analysis statistic method. This prediction model is simple and effective for ordinary people because by knowing the three main economic indicators such as GDP, CPI and total population we could predict house prices in future.

Market psychology can depend on any number of factors that cause participants to have a negative or positive view of the market. Market psychology can shift rapidly. A change in market psychology is difficult to predict. This study shows that the variable CPI and Population Growth have a significant impact on house prices but there are other macro and micro factors for further exploration.

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