FACTORS AFFECTING HOUSE PRICE IN JOHOR, MALAYSIA

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ABSTRACT

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The research aimed to study the determinants of house price in Johor from year 1988 until 2013 based on time series data. There are three independent variables used in the study which is Gross Domestic Product per capita of Johor, total population of Johor, and lending rate. The study will conducted by using Dickey-Fuller GLS test (DFGLS) for unit root test, Johansen and Juselius cointegration test (JJ), VECM granger causality test, variance decomposition test, and impulse response function (IRF). Result of analysis shows that the Johor house price is positively influence by GDP per capita while total population and lending rate negatively influence the house price in Johor. The house price in Johor is significantly influence by the three independent variables.
ABSTRAK

FAKTOR-FAKTOR YANG MEMPENGARUHI HARGA RUMAH DI JOHOR, MALAYSIA

Oleh
Ng Yueh Shiun

Statement of Originality

The work described in this Final Year Project, entitled
“Factors affecting house price in Johor, Malaysia”
is to the best of the author’s knowledge that of the author except where due reference is made.

____________________  ____________________
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CHAPTER ONE
INTRODUCTION

1.0 Introduction

In Malaysia, there are three types of property which is residential, commercial and vacant land (Property types in Malaysia, 2010). Residential property is a type of property that contains houses, condominiums, and apartments which is not for business purpose (BusinessDictionary.com, 2014); commercial property is solely for commercial use such as shopping mall, office building and retail stores (Property types in Malaysia, 2010); and vacant land contain of three types of lands which is freehold land, leasehold land and Malay reserve land (Property types in Malaysia, 2010).

House is a building that provides shelter to people. Based on Lee (2009), housing is an important asset and contribution to total asset of many households. House price will be affected by demand and supply of dwellings. On the supply side, the developers will focus on the cost of land and material for building, wages of workers, and government taxes while on the demand side demographic factors, interest rate, income will influence the house prices (Liu & Daly, 2011).

Nowadays, house not only a shelter it also as an investment. In recent years the house prices attract a lot attention because of house sector become more important in global (Algieri, 2013). With the encouragement of government policies, foreign investors are
encourages to invest on housing market Malaysia (Ong and Chang, 2013). The
economic Malaysia has a rapid development in economic and this allow the demand for
residential housing increase (Ong & Chang, 2013). Besides that, in Malaysia housing is
a symbol of urbanization, social acceptance and achievement (Bujang, Zarin, and
Jumadi, 2010).

As states by Hasan (2013), consumerism trend in Malaysia change over time which
influence by geographic shift, sustainable consumption, redirected consumerism and
beyond consumerism. Beyond consumerism means that the changes of climate and
technology affect consumers’ behavior and hence change their purchasing behavior
(Hasan, 2013). Due to high technology on building, the developer will construct houses
depend on desire of consumer such as build a house where can get a nice view. So the
welfare of consumer will reach. Moreover, consumers afford to buy house which can
represent their reputation and image. As a result, houses no longer are necessity.

In Malaysia there are 13 states which are Johor, Kedah, Kelantan, Malacca, Negeri
Sembilan, Pahang, Pulau Pinang, Perak, Perlis, Sabah, Sarawak, Selangor, and
Terengganu; and 3 federal territories which are Kuala Lumpur, Putrajaya, and Labuan
(About Malaysia, 2012). Johor is the third largest states in Peninsular Malaysia and
located at the southern tip of Peninsular Malaysia which is also the nearest state to
Singapore (The Southern Gateway, 2006). Singapore is a country with small surface
area which is less than 700 km² but with a strong growth of economic since Singapore
independence (The economy of Singapore, 2007). Singapore situated along important
shipping routes in Southeast Asia and also a country where mainly focus on service industry such as commerce and trade; and shipping and logistics. According to *The economy of Singapore* (2007) Singapore is the busiest cargo port which flourished by trade with China, Hong Kong, Indonesia, Japan, South Korea, Malaysia, Saudi Arabia and USA. As a result, foreign and local investors pay attention to economy growth in Johor because the location is interesting. Based on Johor State Investment Center (2013) the foreign investment in Johor was RM 1,880,275,319 which is the highest among other states. Iskandar Malaysia is a multi-billion project that build in Johor since 2006 and Iskandar Malaysia also known as Malaysia’s Economic Super Corridor or The Super Johor’s Plan (*What is Iskandar Malaysia Project*, 2014). Through Iskandar Malaysia the economy of Johor will increase because investment will bring up the Gross Domestic Product (GDP) increase. As the GDP increase the house price will increase (Valadez, 2010).

Based on Wahida (2014), average house price in Johor recently increase dramatically which is 39.92% from year RM 197,147 (2012) to RM 275,854 (2013) as compare to Kuala Lumpur which is capital of Malaysia only increase 37.66% while 31.45% in Pulau Pinang. In overall, during 2012 the transactions of purchased house was 427,520 worth RM 142.84 billion while during 2013 the transaction of house decreased to 381,130 worth RM 152.37 billion (Wahida, 2014). In short, the house price in Malaysia increase from time to time because when the transaction decrease the total value of house price purchased still keep increasing.
1.1 Background of study

In Malaysia, house price became a topic to argue on various politic issues. Based on news that reported on Malaysian homes less affordable (2014), the house price of Malaysia is less affordable than in Singapore, Japan, and the United States. Based on Bertaud (2013) if the housing is 5.1 times or more than median annual income it is rate as severely unaffordable; between 4.1 to 5.0 is rate as seriously unaffordable; between 3.1 to 4.0 is rate as moderately unaffordable; and 3.0 or below is rate as affordable. While Malaysia was 5.5 times more than median annual income which is higher than Singapore where 5.1 times and for Japan and United States the house were moderately unaffordable (Malaysian homes more unaffordable, 2014).

1.1.1 Johor

In the early of 16th century it was the opening of Johor when Malacca is conquered by the Portuguese and Sultan Mahmud Syah who is the last heir of Malacca was escaped to Johor and start open Johor (History of Johor, 2013). During 19th century it was modernization of Johor start (Johor, Malaysia, has it all, n.d.). When Sultan Abu Bakar gave the first constitution for Malay state and introduced a proper system of administrative government and since Johor began drive toward prosperity and stability, so Sultan Abu Bakar earned a title as ‘Father of Modern Johor’ (Johor, Malaysia, has it all, n.d.). Now, Johor which is bordered by Malacca, Pahang and Selangor is one of the most developing and advanced states in Malaysia.
Based on Mankiw (2009), the income increase make the consumption increase also and since the standard of living will increase and will cause inflation. As inflation increases, the price of things will increase such as housing. As a result the housing market will be affected due to the income of consumer increase. The GDP of Johor increases steadily from 2006 when the Iskandar Malaysia start invest in Johor.

Figure 1: GDP of Johor at constant price 2005 from year 2005 to 2013
Source: Department of Statistics (2014)

However, the GDP of Johor has a significant drop in year 2009 this is was due to the global financial crisis and this downturn not only affect Malaysia while the United States, Euro area, Japan and Singapore also experienced this downturn (Department of Statistics Malaysia, 2010). The Figure 2 below shows the GDP growth (%) by State at constant price 2000 year 2009.
Figure 2: GDP Growth (%) by State at Constant Price 2000 Year 2009
Source: Department of Statistics Malaysia (2010)

The fall of electrical and electronics segment contributed negative impact to the states such as Selangor (-1.6%), Johor (-4.2%), Kedah (-1.6%) and Perak (-1.0%) which is highly depend on this sector. Meanwhile, Johor is the third strongest growth of GDP among other states of Malaysia after crisis happens in 2009 which is from 4.0% increase to 9.3% in year 2010.
Figure 3: GDP Growth (%) by State at Constant Price 2000 Year 2010
Source: Department of Statistics Malaysia (2011)

Figure 4: Mid Year Population: Non-citizen and total population, Johor
Source: Department of Statistics (2014)
Moreover, the population of Johor also increases continuously. According to the Figure 4 the population in Johor on non-citizen increases steadily as overall population in Johor. The population of non-citizen in Johor make up only 8.7% of the total population in Johor (ENX Asia Sdn, Bhd., 2013). As a result, the demanding for residential property will rise and make the price become unaffordable.

1.1.2 Iskandar Malaysia

Since 2006, Iskandar Malaysia starts to invest in Johor, Malaysia. Iskandar Malaysia covers 550,000 acres which is three times bigger than Singapore (Medini Iskandar Malaysia, 2014). According to Iskandar Regional Development Authority (2014), the population, Gross Domestic Production per capita and employment is 1.4 million, 14,790 (PPP) in USD, and 0.61 million respectively by the year of 2025 the population, GDP per capita and employment will increase to 3.0 million, 31,100 (PPP) in USD and 1.428 million respectively. The Iskandar Malaysia aimed to rejuvenate and revitalize Johor Bahru City as a heritage and cultural city which attracts vibrant activities and population (Iskandar Regional Development Authority, 2014). Besides that the Iskandar Malaysia expects that the value of property will rise in Malaysia (Iskandar Regional Development Authority, 2014). As a result, the house price in Johor increases continuously from 2006 until now.
Except, from attract homebuyers and investors Iskandar also aimed to build Small-Medium Enterprise (SME) and education sector (Nadaraj, 2015).

### 1.1.3 Foreign Investment

The foreign investors from China invest a large sum of money into Johor. For example, Guangzhou-based R&F Properties Co Ltd. bought a land to develop it become R&F Princess Cove where near to Causeway from the sultan of Johor which cost RM 4.5 billion and 116 acres (Hamid, 2014). R&F Properties Co Ltd. is a well-known property developer in China. However, most of the big properties developers force to diversify investment across global due to restriction of China’s government policy so those big property developer pumped billions of dollars to many destination that they desire where included Johor (Hamid, 2014). Hence the problem of affordability of house price arises due to foreign investors. Besides, investors from Singapore also make the residential
property in Johor Bahru rise. According to Khairul (2014), investors from Singapore make up a significant number of investments in Iskandar, which is almost 75% of total foreign purchases for the projects in Iskandar.

1.2 Problem of statement

Factors affecting house price are famous to be studied among academics. In general, the changes of house price are affected by many factors such as macroeconomic and microeconomic factors, demographic factors and government policies.

Income of household kept constant while the living cost and house prices kept increasing along the time (Ong, 2013). This makes a lot of Malaysian wonder about the affordability of house price. This is because the annual income not synchronizes with the residential property. Kuala Lumpur is city of Malaysia, where a place with high living cost. Kuala Lumpur has an average monthly disposable income of RM 3836.50 with RM 9569.20 of price per square meter to buy an apartment in city centre while in Johor the average monthly disposable income is lower than Kuala Lumpur which is RM 2583.33 but with a higher price per square meter to buy an apartment in city centre which is RM 10763.91 (Cost of living comparison, 2014). Furthermore, cost of construction on material and energy are also one of the factors that make the house prices increase (Property prices rise in Malaysia, 2007). According to Ng (2013), the wages of workers increases average 30% to 50%.
According to Tan (2013), Batu Pahat was a small district in Johor the house price in Batu Pahat also increases to a less affordable level for resident in Batu Pahat because due to the geographic factors. During 1993, the single-storey house cost about RM 73000 and after 10 years which is year 2003 the price became RM 130000 and during 2010 the house price was RM 200000 but during 2013 the price of a single-storey house became RM 300000 (Tan, 2013). The prices of house keep increasing from year to year.

![Figure 6: House price of single-storey in Batu Pahat, Johor](source: Tan (2013), Prices of landed property rising fast in Batu Pahat. The Star Online)

According to Department of Statistics (2014), the population in Johor is 2.36 million of people during year 2006 and increase to 2.54 million of people during year 2011. While the number of non-citizen population keep increasing which is from 6.56% in year 2006 rise to 8.60% during year 2011. The example of non-citizen population can be the immigrants from foreign country. The foreigners tend to migrate to Malaysia due to the low living cost, near to nature and high employment opportunities (Wonderful Malaysia, 2014).
The keep increasing of population in Johor make the demand for residential property increase. There are some questions dealing with the study of factor affecting the house prices in Malaysia. The research questions are listed below:

1. What is the trend of housing prices in Johor?
2. What are the impact of GDP, population and lending rate on house price in Johor?
3. What is the policy that can impose to stabilize the house price in Johor?

1.3 Objectives

General Objective

The general objective of this study is to identify the potential determinants of house price in Johor, Malaysia.

Specific Objective:

1. To study the trend of housing prices in Johor.
2. To examine the impact of GDP, population and lending rate on house price in Johor.
3. To identify the policy that can impose to stabilize the house price in Johor.
1.4 Significance of study

This study investigates the factors affecting the house price in Johor. In previous study, the researchers mostly study about the determinants of house price in certain country. Other than that, the study of house price in Malaysia only takes a short period and this may cause the result unpredictable because of not specified. It is less attention on the certain states of Malaysia. So, the study can be considered as an important study to identify the factor affecting house price in Johor. Moreover, this study will be advantageous to investors who are interested to invest in Johor. From this study the investors can identify the determinants of house price in Johor and make a good estimation on the return of the investment on residential property.
1.5 Scope of Study

This study aimed to examine the relationship between macroeconomic factors and the house price in Johor. The annually data start from 1988 to 2013 will be used in this study. The study organized as following: Chapter one is about the introduction and overview of the study which comprised with background of study, problem statement, objective of study, and significance of study. Chapter two includes literature reviews of house price and its determinants. In Chapter two there are divided into few sections which is theoretical issues, empirical testing and empirical findings. While in Chapter three methodology used is further described which included empirical model, data description, methodology and concluding remarks. Chapter four includes data result and analysis of finding. Lastly in Chapter five covers summary, conclusion and policy implication.