Public Transportation Effect on the Rising of Property Prices in Malaysia: A Correlation Study of MRT Project

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ABSTRACT

The Malaysian real estate sector started in early 1990's. Starting year 1996, Malaysian housing loan increased steadily in an upward trend. This indicates that the demand of real estate has been increase and it implies that purchasing power of Malaysian had increase. Furthermore, the increase suggests that increased in population demands more housing. Despite going through three financial crisis, the Malaysian house price remain strong. The prices of house have seen an increases of 20.3% in 1991 and later rose 14.4% in 1995 and during the Asian financial crisis In between 1997 and 1999, Kuala Lumpur's house price remain robust. Real estate prices have always been closely related to the availability of public transport. A house located near public transit will tend to be sold at a premium. This is due to the convenience that public transportation brings to a certain neighborhood, it enables people to travel from one part to the other in a relatively short time. Therefore the public is able spend lesser time on transportation and spend more time doing more efficient affairs. (John A. Kilpatrick, 2007) The study of public transportation also suggests that a better availability would increase the value of real estate. Based on (Alonso, 1964) study, he concluded that any location which is accessible to main road, public transport and retail outlet or convenience stores commands a higher price. In Malaysia, similar trend has started as a report from (Su-Lin, 2013) stated that property next to the upcoming MRT stations has seen an increase around 11%-19%. This research was done with the aim of identifying the correlation between the recently announced (on-going) MRT project in Malaysia with the rising of property prices in the country. The study focuses on selective region where the primary MRT stations have been proposed with the property prices of that particular region. The research methodology was based on the empirical evidence of property prices of a particular region before as well as after the announcement of MRT project stations. It's been concluded there is a stronger correlation between the rise in property prices due to higher market expectation within the region. This research also contributes to the indication of potential miniscule housing bubble crisis in Malaysia.

Keywords: (Public Transportation, MRT Malaysia, Property Price & Housing Bubble).

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INTRODUCTION

Malaysia as a developing country has obtained benefits from the development of the housing industry (Jarad, 2010). The Malaysian housing development has continued to fight in spite of various constructions and restrictions (Agus, 1997). The housing industry has been using conventional development methods for many years, because of the increasing demand for better dwellings, the continuous changes in technology, the increase in the construction cost and the tightness of the environmental policies and the concept of innovation, creation and state-of-the-art design, all of which have begun to find their place in the industry (Yusof and Abidin, 2007). The Government of Malaysia recognizes that housing is a basic need for every citizen. It is also an important component of the urban economy. These have led to the method of policies and programmers aimed at ensuring that all Malaysians have the chance to obtain an appropriate place to stay and other related activities. Housing developments in Malaysia are carried out by both parties, the public sector and the private sector, in terms of low-, medium- and high-cost houses. The Malaysian Government has also established a housing policy that focuses on the involvement of the private sector in housing production and delivery, especially in housing scheme development (Asiah, 1999).

In recent years, rapid economic development has resulted in an increasing demand for residential housing among urban areas in Malaysia. Reviewing the housing prices in Malaysia, the prices have appreciated dramatically whether in major cities or smaller towns and depending on specific location. Over the past ten years, the residential property market in Malaysia has experienced a significant price expansion throughout Malaysia, involving higher rates. Most people are wondering such a high annual increases in house prices is totally out of sync with annual income increases in the general population. In fact, most of the people are afraid that they are unable to cope with such a high property prices. So far, even with the housing prices almost hitting the sky, yet the real factors behind the illogical rise are still open to question. Successive governments and policy analysts have identified the lack of adequate and affordable housing as one of the critical problems facing the country. House and land prices are spiraling and even middle class Malaysian are facing difficulties to own a home. Based on the economic theory, house price movements are inherent in the regional demographics and regional economics, such as population, GDP, housing finance, inflation rate, RPGT and public transportation.

Public rail development are a huge investment for the country. However, a rail transit bring accessibility and also economic transformation to area's which it passes by. Therefore, make the area more desirable. The last major rail development was the light rail transit (LRT) which happened in the year 1999. The latest major rail development started in the year 2011 which is the Mass Rapid Transit (MRT). This project is intended to link Kuala Lumpur to other sub-cities. This has led developers to shift their development to areas along the MRT project. MRT stretches over 59 kilometres and most of the areas are uncharted by any rail development. To homeowners, buying a house which are in a strategic location would be a choice of a lifetime. Homebuyers often willing to pay a premium to stay at a location accessible to public rail transit. This research is aimed to identify the effect of MRT project in

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these selected areas. Moreover, it is to analyses and determine the volatility of housing prices in these areas mentioned above.

Research Objectives:

1. Identify the effect of MRT project in industrial area
2. Determine the increase in real estate pricing in residential area
3. Analyze the volatility of housing market prices in commercial area

LITERATURE REVIEW

The cost of building a rail transit can amount to millions or not billions (Stacey Schwarcz, 2002) Taking an example from Malaysia, the cost of building PUTRA LRT amounted to RM4.4 billion (US$1.15 billion). Keith Wardip mentioned that the completion of a rail transit would in turn change the way people live especially those who live in the area of rail service. Rail transit brings forth accessibility and accessibility brings development and development in turn brings investment and it would later be distributed to the region forming an economic cycle.

Early research done by Von Thünen in 1995 finds that accessibility to a transit station exhibits a difference in rent between agriculture farmlands even if those land are of the same fertility. This occurrence created a transit premium where theoretically if a property's location is situated nearer to a transit, transit premium would be higher compare with those which are located further to the transit. Further research by Ghebreegziabiher Debrezion and et. al suggested that factors such as service quality is also an attributes to the property value. For instance, referring to Realtor Organization, different capacity transits carries different amount of passenger and travels at a different speed. High capacity transit are transit system which provide faster speed and ridership capacity. Examples of high capacity transits are commuter rail; a rail service which travels sharing the heavy rail track, and it is able to travel at the speed of 200km/h and the gap between stations may reach as far as 24km.

This rail service is similar to Malaysia's Keretapi Tanah Melayu Berhad (KTMB). Next is Metro rail, this is a type of rail transit which travels through underground tunnels as well as elevated track. It has the capacity to carry 25,000 passenger in an hour and travel at the speed of 88km/h. lastly there is light transit rail which are able to travel at 104km/h and has stations range furthers to 3km. In addition, research done by NEORail II finds that, rail transit have different effect on commercial and residential areas. Landis et al. (1995) concluded that commercial areas has lesser influenced by rail transit. However, earlier research by Robert Cervero in the case of San Diego states that property value in commercial areas are more correlated to the convenience of rail transit.

Real estate prices has always been closely related to the availability of public transport. A house located near rail transit will tend to be sold at a higher rate. This is due to the convenience that public transportation brings to a certain neighborhood, it enables people to travel from one area to the other in a relatively short period. Using

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time as a measurement, time saved in traveling becomes a cost, where this cost is transferred to the cost of buying or renting a house (John A. Kilpatrick, 2005).

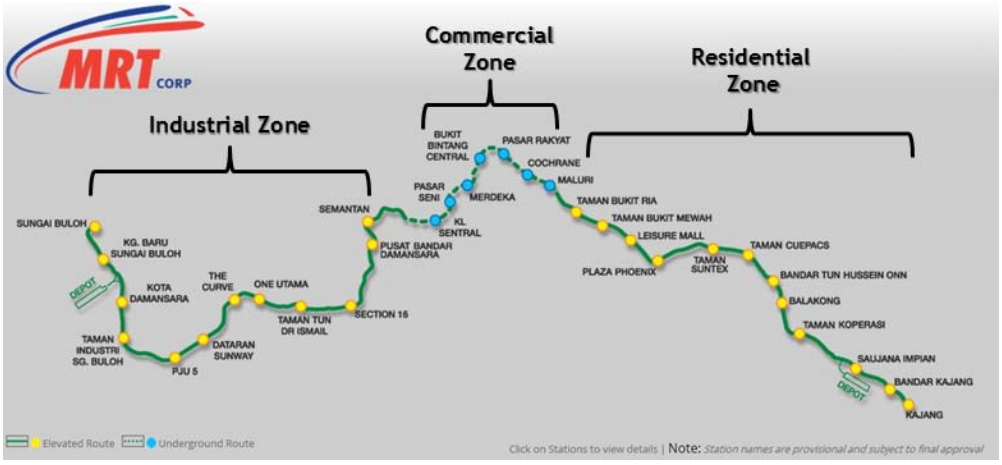
Rail transit have both positive and negative impact towards value of houses. With rail transit in a neighborhood, it would attract investment and expansion to that area. Furthermore, value of the houses in that area would increase by 3 to 40% depending on the distance of the house to the nearest transit. Traffic congestion is decreased and more sidewalks are introduced. On the other hand noise pollution as well as privacy concerns would drive value of houses situated beside the transit to reduce (Roderick B. Diaz, 2008).

Living near a transit may not be a disadvantage, according to Robert Cervero and Jin Murakami in the case of Japan, Tokyo's center railway corridor known as the Yamanote Loop have significant influence to the cost of houses around and along its stations. This is due to the strategic location which led to an increase of development within the station as well as the surrounding areas. These development range from entertainment, commercial and recreation.

METHODOLOGY

In order to determine the correlation between the MRT project and the housing prices surrounding the areas; all 31 stations proposed in the MRT project was categorized into 3 zones namely industrial zone, commercial zone and residential zone. This zoning was done to eradicate the possibility of false data as there are also other greater factor that can affect housing market prices. The first and the last zone, industrial and residential had a total of 12 stations for each zones while the remaining 7 stations was attributed to the commercial zone.

The proposed MRT project and the zoning are illustrated below:



The model specification is illustrated below:

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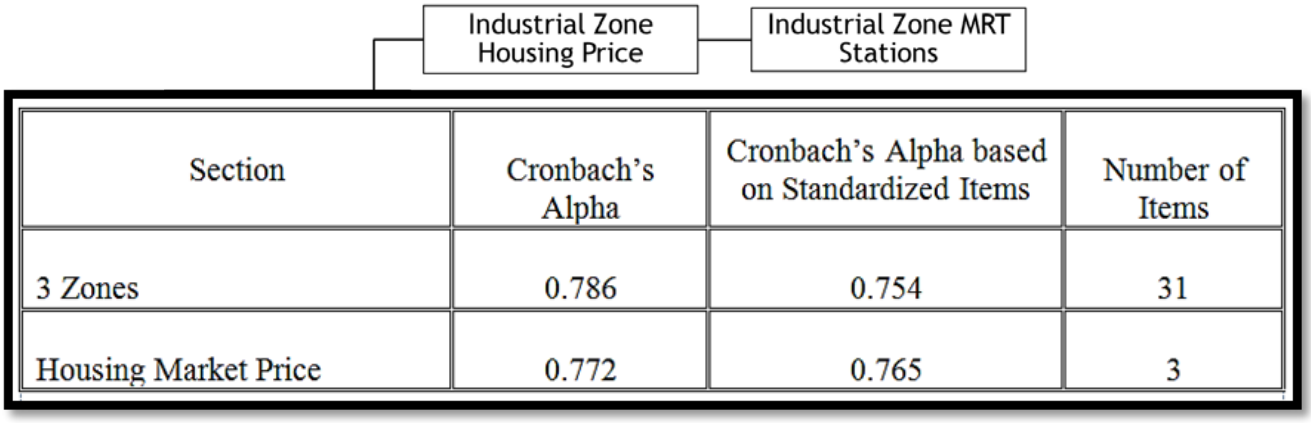

Section	Cronbach's Alpha	Cronbach's Alpha based on Standardized Items	Number of Items
3 Zones	0.786	0.754	31
Housing Market Price	0.772	0.765	3

This model illustrates that the stations surrounding a particular zone have significant correlation towards the zone itself. Furthermore, all three zones in total have a significant correlation relationship towards housing market prices within the areas. A total of 3 hypothesis was proposed from this model to assist in research objective.

Hypothesis:

H1: MRT Stations in Industrial Zone have a strong relationship with the House Market Price in Industrial Zone.

H2: MRT Stations in Commercial Zone have a strong relationship with the House Market Price in Commercial Zone.

H3: MRT Stations in Residential Zone have a strong relationship with the House Market Price in Residential Zone.

The data of the housing prices before and after the introduction of 31 MRT stations have been obtained. A correlation analysis was conducted between this data to determine which suggested hypothesis have a strong relationship with the housing market price.

RESULTS

a) Reliability Analysis
b) Summarizing the correlation analysis between all three zones

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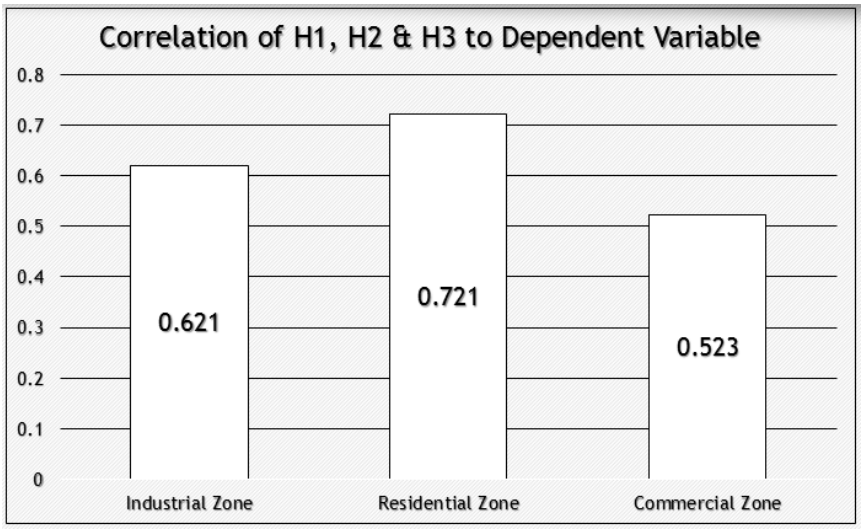

DISCUSSION & CONCLUSION

Based on findings, residential zone shows evidence of increase in housing price due to the MRT station within the zone. According to Wan Choy Heng, cost of houses increases by 15% to 25% depending on the area. On the other note, the extension of LRT Putra line and LRT Star line has caused houses in the proximity to rise tremendously. For example, a double story link house at USJ 6 is sold at RM250K in the year 2009. However, it is now priced around RM400k to RM450k.

The industrial zone also shows a spike in house price, however the correlation is lesser in comparison to residential zone as that area is mainly for industrial purposes and house are relatively lesser. Furthermore, heavy transportation are more likely to be used in this zone. In commercial zone, there is little significant in price hike on houses as commercial zone is the city centre and it is already connected by various public transport like LRT, monorail and public busses. Also, it is the hub of Malaysia as it connects people from various country into one strategic location.

Overall there is correlation evidence indicating that the recent MRT project does contribute to the increase of housing market prices in selected zones. The question lies in the volatility of the price fluctuations once the MRT have been completed. This is because, the sudden spike could be a result of market expectation of obtaining property near the public transport system and it may decline once the project itself have been completed which was taken into consideration for our future research studies.

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