

THE RELATIONSHIP BETWEEN SUPPLY (BASED ON NUMBER OF HOUSING UNIT DEVELOPED BY PRIVATE SECTOR) AND DEMAND (BASED ON POPULATION) IN MALAYSIA PROPERTY MARKET

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Abstract

This is preliminary research which based on secondary data such as Property Market Report, Preliminary Count Report, Malaysian Population Distribution and Demographic Report, Yearbook of Statistic Malaysia and *Idaman*, the Ministry of Housing and Local Government web site. This initial research is conducted to find the reality of the relationship between supply and demand in residential property market in several townships in Malaysia. The point to ponder in this research is to see whether a neo classical theory which the forces in supply and the law of demand in determining market (Harvey, 1996) is relevant to analyze the property market in the Malaysian context. Does the neo classical theory which indicates that when there is a demand, there must be a supply, is relevant? Does the increasing supply consistent with the increasing demand? The neo classical theory explains that the market will move to an equilibrium level, whereby the level of the quantity of demand is equal to the supply. The theory assumes that the markets are able to function perfectly and the market agents are rational, well informed and constantly strive to maximise their economic well-being. As the result of this preliminary study, the research analysis demonstrated that there is a reverse relationship between demand and supply in residential property market, that a supply and a demand may not be directly related. It is not necessary that if there is an increase in demand, there would also be an increase in supply. Thus, the supply is not influence by the demand or vice versa.

Keywords; Neo classical, institutionsl economics analysis, property market

1.0 INTRODUCTION

A residential property market can be defined as an interaction arena between buyers and sellers whether it is for rent or sale of properties. A market of residential property occurs when buyer and seller discuss on price determination of a property. Property market also acts as guidance to any person who is interested to own or buy a residential property. As such, the elements of a normal current situation of a property market are supply, demand and price level on the different types of the residential property. Generally, residential property market differs from other type of market as it could happen everywhere, at no specific avenues or time. It is dissimilar from the share market or other types of market which only focus on one area. Property market is an imperfect market, thus, it is different for every different area. It is highly influenced by the physical and the economic factors. The economic factors can be divided into two categories - micro and macro factor. Micro economic factor is related to the development in the vicinity, level and way of life; and economic activities surrounding the property. Macro economic factor is more related to matters such as economic crisis, changes in national fiscal or financial policy and the development of a country as a whole (Froyer, Richard, 1995).

In discussing a property market analysis, several approaches can be adapted to analyze a property market in order to see the effects of a particular factor on the property market. For example, Institutional Economics analysis focuses on the regulation enforced by the country. It exist in a form of formal rules within socio-economic, political and legal system (policy, acts, enactment, written regulations) and informal rules (culture, habit, custom, belief, and tradition which govern human social interactions) in economic system, laws; and social practiced in the country (North, 1996; Healy, 1992; Van der Krabben, 1995). Thus, institution or regulations have a positive or negative impact in our life. A positive impact gives us a guidance and motivation to improve our economic situation. Regulations also control our act and behavior in life e.g. a stringent laws and regulations to control a development process on land (Ismail, 1999). Institutional analysis emphasizes on formal and informal regulations in controlling and influencing market on property (Keogh and D'Arcy, 1998). Therefore, we discover that institutional approach which takes into consideration all type of institution whether formal or informal are successful in finding a dynamic scenario in property market (Van der Krabben, 1995; Ismail, 1999).

Apart from the institutional approach, an analysis on property market can be determined by using a neo classical approach (Ismail, 2000). According to the neo-classical theory that assumes that the laws of supply and demand can be explained through the property market behaviour (Harvey, 1996), describing that the function of the property market is to indicate changes in supply and demand. Thus, supply and demand is an importance variable in understanding property market behaviour. Property market changes are influenced by both internal and external factors, which are termed as the endogenous and exogenous factors (Wheton, DiPasquale, 1996). Endogenous factors are inherent within the property market, such as property prices, rent, vacancy rates, etc. While exogenous are factors outside the property market i.e. interest rates, economic growth, population growth, demographic, employment structure, etc.

The Neo classical approach focus on supply and demand in the open market and also looking at a reasonable human behavior in achieving a maximum profit through relations between demand and supply. It is undeniable that demand and supply give a strong impact and influence in the economic performance of the country. When the economic growth in the country increases rapidly, it provides more job opportunities and therefore, increases the income for the citizen. This situation gives them purchasing power to buy a property and thus, create an increase in demand. The increase on demands leads to the increase in supply.

The increase on demand is also influenced by the country's population in which, a higher population creates more demand for the property market (N.G. Mankiew, D.N. Weil, 1990; Michael, 2005). Based on neo classical theory, when demand increases, the offer also increases and vice versa. Supply and demand have a direct correlation to each other in which supply react to demand. This theory presumes that supply and demand are interrelated and both have a different reaction on price changes. As such, in an imperfect

property market, does the neo classical theory could be applied to analyze a property market in Malaysia?

Therefore, this research was conducted to find a relationship between supply and demand in a residential property market in a several states in Malaysia. The issue arises whether a neo classical theory which based on supply and demand is relevant in analyzing the property market? Does a neo classical theory which indicated that when there is a demand, there must be a supply, is relevant? Does a supply increase when a demand increases?

1.1 Scope of Study

This research is preliminary research and was made in several states and districts in Malaysia. Those states are Malacca and in the districts of *Alor Gajah, Jasin and Melaka Tengah*; Perak and in the districts of *Perak Tengah, Kuala Kangsar, and Hilir Perak*; Kelantan and in the districts of *Kota Bahru, Tumpat and Machang*; Johor and in the districts of *Mersing and Batu Pahat*. Those places have basic similar characteristics on demography, physical, institutional structure, laws and they have a different type and level of economy. Since the property market is an imperfect market, a result on this research could not possibly depict the true and whole picture on the entire area in Malaysia.

The years of research involves the population and quantity of private housing project approved by government in a year 2001, 2002, 2005 and 2007. Therefore, the result of the research could possibly show different trends in supply and demand for each year. The population represents a demand in property market whereas the quantity of private housing project approved by authority represents a supply in a property market. This is due to the fact that the housing project developments in Malaysia are dominated by private developers. The population used in this research aged 25 and above who could possibly buy a property and thus, create a demand.

The quantity unit of private housing project approved by authority represents supply in property market. The data can be obtained from *idaman* web site, Ministry of Housing and Local Government. In this research, it is assumed that each project which was approved by the authority has been completed by the developer. Those projects are carried out in the year 2001, 2002, 2005 and 2007 i.e. beginning January till December. Schedule 1.0a, 1.0b, 1.0c, and 1.0d shows the summary on the quantity unit of private housing project approved by the authority for the year 2001, 2002, 2005 and 2007 crosswise with the population in a several states i.e. Johor, Perak, Malacca and Kelantan (refer appendix 1).

1.2 Methodology

1.2.1 Theoretical understanding

Literature on neo classical will be discussed below and it is obtained from a secondary data.

1.2.2 Data collection stage

This research is an initial research which based on secondary data and guided by Property Market Report, Preliminary Count Report, Malaysia Population Distribution and Demographic Report, Yearbook of Statistic Malaysia 2001 and *idaman* web site, Ministry of Housing and Local Government.

1.2.3 Data analysis stage

All data obtained from the secondary data will be analyzed by using computer software SPSS through Bivariate Correlations procedure to find the relationship between demand which represented by the amount of population and the supply which represented by the quantity unit of private housing project approved by authorities. Is there a positive or negative correlation value exist for the supply and demand?

1.2.4 Finding and Conclusion stage

Based on the analysis, the finding on the research will be concluded.

2.0 LITERATURE: NEO-CLASSICAL ECONOMIC FRAMEWORK

A few decades ago, neo classical theories have dominated the majority of studies on, and explanations to the economic problems. The neo classical ideology focus on the forces in demand and supply to determine market (Harvey, 1996). It explains that the market will move to an equilibrium level and at that level the quantity of demand is equal to that of the supply. The theory assumes that markets can function perfectly and that market agents are rationally well informed and constantly strives to maximize their economic well-being.

Neo classical economics systematized supply and demand as joint determinants of price and quantity in market equilibrium, affecting both the allocation of output and the distribution of income. It dispensed with the labour theory of value inherited from classical economics in favor of a marginal utility theory of value on the demand side and a more general theory of costs on the supply side (Antonietta, 1987).

In microeconomics, neoclassical economics represents incentives and costs as playing a pervasive role in shaping decision making. An immediate example of this is the consumer theory of individual demand, which isolates how prices (as costs) and income affect quantity demanded. In macroeconomics it is reflected in an early and lasting neoclassical synthesis with Keynesian macroeconomics (Hicks, 1937)

Neo classical economics is occasionally referred as orthodox economics whether by its critics or sympathizers. Modern mainstream economics builds on neoclassical economics but with many refinements that either supplement or generalize earlier analysis, such as econometrics, game theory, analysis of market failure and imperfect competition, and the neoclassical model of economic growth for analyzing long-run variables affecting national income (Olivier Jean, 1987).

Neo classical economists argue that firms buy or rent the factors of production which they operate in at the highest possible level of efficiency in order to maximize profits, but the

firms have no control over the costs of these factors or of the price at which their finished goods are sold. In the same way, households may sell their factors of production: possibly land or capital, but often simply their labour. Neo classical economists argue that consumers seek to maximize utility, subject to the constraints of their incomes and prevailing price levels, and stress the concept of marginal utility -the added satisfaction (utility) which comes from acquiring extra (marginal) goods or services. Consumers maximize utility when the ratio of marginal utility to purchase price is the same for all the goods and services consumed; in other words, if the marginal utility per expenditure is lower for one good than for another, it will not be bought. The whole process is governed by the forces of demand and supply (Harvey, 1996).

When applied to uneven development, these neo classical economics principles would suggest that surplus labour and capital will move to areas where there are shortage of labour and capital, to eradicate the inequality. However, this argument ignores the frequent lack of mobility of these factors. Other important ideas include a belief in trickle-down economics (where the growth of profits in one sector or region trickles- down to other sectors and regions) and the development of growth poles.

Until recently, all the models created within neo classical economics were based on the assumption of rational decision-making, optimizing behaviour, and perfect information. Assumptions also inherent in the neoclassical approach to industrial geography, which sees all firms or individuals acting in appropriate manner enough to make generalizations possible.

Although neo classical economics theory approach is widely adopted in the property research, this theory has come under criticism for failing to elaborate some of the major problems in the property market systems (Norhaya and Maziah, 2002). The weaknesses in neo classical economics approaches are mainly concentrated in criticisms regarding the adapted fundamentals of these theories.

The fact is that the basic assumptions in neo classical economics theory namely in the perfect market characteristics; complete market information and efficient market coordination; have made this approach unsuitable for use in the context of property markets. This is due to the obvious differences of a real property market that is imperfect as a result of incomplete market information and poor market coordination. Similarly coordination problem may lead to the failure of the property market to operate efficiently due to problems of information and imperfect market (Keogh, 1994). Imperfect property market mechanisms with limited and incomplete coverage of the market information networks have resulted that the neo classical economics approach failed to analysed property market problems precisely and accurately.

Moreover, property market agents' movements and decisions are also very much influenced by institutional structures. Therefore, the market agents' main objectives of profiteering and maximising returns are highly influenced by the existence of institutional factors. Criticisms on the weaknesses and imperfectness of economics rationality concept

which was adopted as fundamentals in neo classical theories have encouraged the emergence of institutional economics approach.

3.0 THE RELATIONSHIP BETWEEN ECONOMY AND PROPERTY MARKET

Economy is an utmost important element in the property market. In Malaysia the value of transactions in a year equates to 15-20% of the Gross National Product (Mani 2000). Bank lendings to the property board sector consists 36-37% of all lending. The linkages with other 142 industries make the property sector being an important connective industry which is generally used to jump start sluggish economies (Mani, 2000).

A favorable economic outlook promise well for the property market, as the property market is an integral part of the economy (Property Market Report, 2001). Therefore, it can be said that the property market is very much influenced by the economy. According to the neoclassical perspective, which focuses on demand and supply in an open market, perceive the role of a rational economic man will attempt to maximize its profit by way of demand and supply (Ismail, 2000). The economic performance will have an important influence on the demand and supply of the property market. Hence, the economic performance will determine the most accurate time to engage in a land transaction in order to maximize profit.

In Malaysia, during the recession period between 1997 and 1999, many residential properties were unsold due to weakened purchasing power caused by the financial crisis and the fear of the investor be involved in the residential property market (Ismail, 1999). The residential property industry as a whole is also an investment and a speculative market (Ismail, 1999). One of the factors that lead to such a scenario is due to the high demand for residential property when compared to supply. This speculative development that influences the demand and supply of residential property also depends very much on the economic performance of the country (Ismail, 1999).

When the economy is flourishing, the purchasing power of an individual to invest in the property market is enhanced, due to the improvement in income. This will inevitably lead to an increase in demand, and subsequently the increase in price of the property. Increase in demand will eventually lead to increase in supply. As such, the investor has to examine his financial capability, interest rates, loan accessibility from financial institutions, inflation, etc. which relates the property market with the economy. Also, in property market analysis, D'Arcy and Keogh (1996) assert the existence, the importance and the implication of an economic framework such as interest rate, inflation, organisation and development of the financial market and the spatial structure of economic activity which are embedded in various institutions governing the property market.

The economic recession in mid 1997, caused the country's economy to crash 7.4% (Property Market Report 1998). The recession continued to deepen in 1998 and the economic growth was registered at a negative of 2.8% to 6.8% (Malaysian Property Index, 1999). Recovery measures implemented by the 'Majlis Tindakan Ekonomi Negara' (MTEN) managed to reduce the plummeting economic growth up 1.0% for third quarter of year 1999. The steep global economic slowdown in 2001 had also affected the economic growth.

Despite the adverse external environment, the economy still managed to achieve positive growth of 0.4% (Property Market Report, 2002).

Economic recession lowered the property market investor's confidence and they shied away from the property market with an attitude of wait and see. Such behaviour led to the development of a vacuum crisis and subsequently leads to a fall in the property price (Tan, 2001). Property market then encountered a financial repayment difficulty combined with a weakened share market, low foreign exchange rates, high interest rates and a weak economy. The weakened property market reduced job opportunities coupled with job cuts. The chain reaction continued to affect the banking system, especially those that are exposed to financial property market repayment.

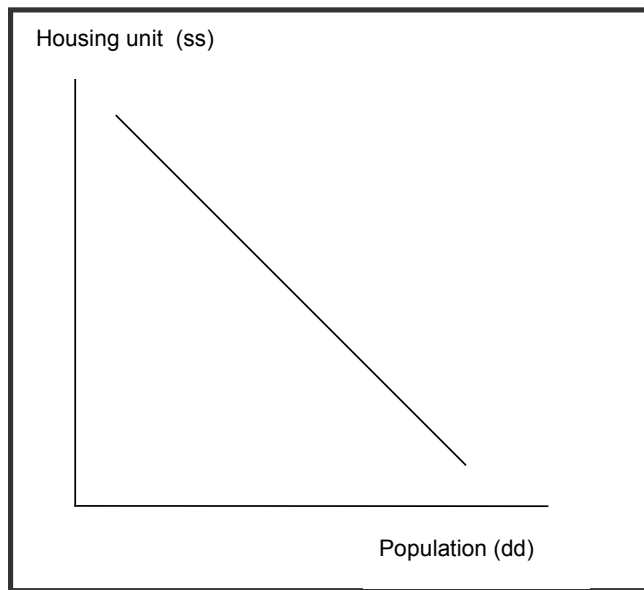
4.0 DATA ANALYSIS

In this preliminary research, *SPSS* analysis is made by using *Bivariate Correlations* procedure. This analysis is used to find the relationship between demand which represented by the number of population and supply which represented by the quantity unit of private housing project approved by the authorities. Is there a positive or a negative correlation value exist for the demand and supply? Two hypotheses are created to find the relationship i.e;

1. *Null Hypothesis*; There is no significance relationship exists between score population and score housing project approved.
2. *Alternative Hypothesis*; There is a significance relationship exist between score population and score housing project approved.

5.0 RESEARCH FINDING

Based on the analysis, the finding clearly stated that the trends of demand and supply for each year were different. For year 2001, three states had shown the uneven trends of demand and supply. In *Melaka Tengah* which has the highest population among three districts in Malacca i.e. 406,900, has the lowest unit of housing projects i.e. only 3,107 units. Whereas in *Jasin* which has the lowest population among three district i.e. 110,300, has 12,683 unit houses. This clearly showed that demand and supply was uneven. A similar scenario also happened in Johor, Perak and Kelantan, where the supply is higher in a small population area. A finding on *Bivariate Correlation SPSS* analysis illustrates that the population variable (demand) and quantity of private housing project (supply) has no significance relationship in which a value of correlation only at 0.084 compared to 1.000 for a maximum value of correlation (refer appendix 2; Correlation Schedule Analysis). The correlation also shows a negative value and thus, a relationship between both demand and supply is a negative relationship (refer to graph 1).



Graph 1: The Negative Relationship between numbers of private housing project approved (ss) and population (dd)

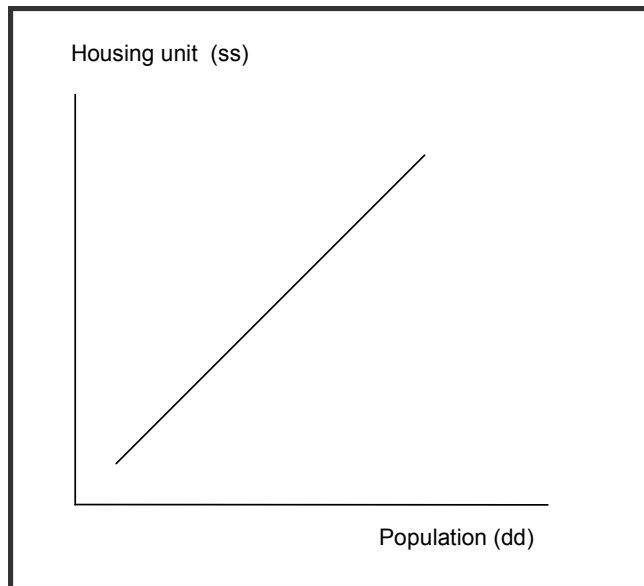
Source: author research, 2007

In year 2002, a similar scenario happened in many districts where the trends for demand and supply were uneven. In Perak for example, *Hilir Perak* has the highest population among other districts (*Perak Tengah* and *Kuala Kangsar*) i.e. 198,200 population, but has the lowest quantity unit of approved private housing projects by the authority i.e. 124 units of houses, compared to *Perak Tengah* (85,300) and *Kuala Kangsar* (150 100). In district of *Kota Bahru*, even though it has the highest population i.e. 425,200, the quantity unit of approved private housing project by the authority was only 11 units of houses. Whereas in *Tumpat*, even though the population only 140,900, the quantity unit of housing project approved by the authority was 138 units of houses. The finding of *Bivariate Correlation SPSS* analysis also indicates that the population variable (demand) and amount of housing projects (supply) has no significance relationship in which a value of correlation only at 0.517 compared to 1.000 for a maximum value of correlation (refer appendix 2; Correlation Schedule Analysis).

A study conducted in year 2005 indicated the different trends of demand and supply in the property market from year 2001 and 2002. The supply or the housing project approved by the authority was inconsistent with the population. In *Johor* for example, the approved housing project in the district of *Batu Pahat* was 4,532 units of houses with 389,000 populations, while the housing project approved in a district *Mersing* was only 13 units although the population was 79,400. Similarly in *Kota Bahru*, *Tumpat* and *Machang*, the quantity unit of housing project approved was 653, 467 and 184 units respectively. Thus, was inconsistent with *Kota Bahru* population of 459,100, *Tumpat* of 154,800 and *Machang* of 91,000, although the quantity offered was less than the quantity of demand. In *Malacca*, the quantity of supply of the approved housing project was inconsistent with the population even

though the quantity of supply was less than the population. In *Melaka Tengah* which has 439,000 populations, the approved housing project was 7,071 units of houses, in *Jasin*, which has 118,700 populations, the approved housing project was 1,013 units of houses and in *Alor Gajah* which has 154,500 populations, the approved housing project was 1,382 units. In Perak, the district of *Perak Tengah* and *Hilir Perak* has trends of supply and demand which was also inconsistent with the population. Finally, in *Kuala Kangsar*, the quantity of supply and demand was also inconsistent.

Bivariate Correlation SPSS analysis illustrates that variable population (demand) and a quantity unit of approved housing project has strong and significance relationship with its correlation i.e. 0.711 – the correlation value almost near to value 1.000 (maximum value of correlation) (refer appendix 2; Correlation Schedule Analysis). A positive value correlation indicates that there is a positive relationship existence between the population (demand) and the quantity unit of approved housing project (supply), as per the following 2 graph.



Graph 2: The Positive Relationship between numbers of private housing project approved (ss) and population (dd)

Source: author research, 2007

Similar trends shown for year 2005 and 2007, where the supply – the approved housing projects, increased inconsistent with population. In Johor, particularly in district of *Batu Pahat* and *Mersing*, the approved private housing project was 453 and 140 units of houses, with the population of 404,100 and 83,300 respectively. Comparable to *Kota Bahru*, *Tumpat* and *Machang* where the approved housing unit was only 590, 492 and 40 units respectively, this was inconsistent with the quantity of population in Kota Bahru (475,000) Tumpat (160,800) and Machang (94,200). Even though the quantity of supply was less than the quantity of demand, yet it was still inconsistent with the population. In Malacca, the quantity of supply or the approved housing project was inconsistent with the quantity of

population although the quantity of supply was less compared to the quantity of population. In *Malacca Tengah* which has 455,400 populations, the approved housing project was 5,504 units of houses. In *Jasin* with 122,900, the approved housing project was 1,113 units and in *Alor Gajah* which has 160,500 populations, the approved housing project was 2,828 units of houses.

A result on *Bivariate Correlation SPSS* analysis illustrated an almost similar result with the result in the year 2005 which indicated that the population variable (demand) and the approved housing project by the authority (supply) has strong and significance relationship with the pekali correlation of 0.687. It also indicated that both variables have a strong and significance relationship since the correlation value almost near to value 1.000 – the maximum value of correlation (refer appendix 2; Correlation Schedule Analysis). A positive value of correlation shows that the existence of a positive relationship between the population (demand) and the quantity unit of approved private housing project (supply).

Based on the conducted analysis, it was clearly indicated that the property market which was imperfect in nature with the asymmetry market information, lead to the existence of differences in the market trends for different countries and for different years. A basic presumption of neo classical economic theory which assumes that a perfect market feature could not be accepted in Malaysia.

A finding on analysis clearly shows that demand and supply are not directly related. It does not necessarily mean that when demand increases, supply also increases. Alternatively, it indicates the reverse behaviour of the neo classical theory which resulted inconsistency with a neo classical theory which relies on the law of “*when there is a demand, there must be a supply*” or in another words the quantity in demand is similar with the quantity in supply. Thus, even a district with larger population; has only a small quantity of supply. A population and a demand on a residential property is said to be directly related where the higher population creates a larger demand (N.G. Mankiew, D.N. Weil, 1990). It seems that a supply in the property market is not similar and imbalance at one place to another. For example, the quantity of supply in *Kota Bahru* is less even though it has larger population, compared to other districts such as *Batu Pahat* and *Malacca Tengah*. Therefore, it can be concluded that the development in a property market for those places was imbalance. In Kelantan for example, although the population is very much larger, yet the development in property market is not encouraging such as in Johor and Malacca. Perhaps, the developer in this states prefer the residential property as an investment rather than ownership. Thus, in order to acquire higher profit, the developer prefers to develop a housing project in the area which they think has the potential to attract more investor and thus, lead to an effective and higher demand.

6.0 CONCLUSION

To conclude, the result of the analysis depicted a rather peculiar scenario with respect to the theoretical approach to the property market. This is an irregular scenario in the property market whereby the neo classical theory does not occur in Malaysia. The supply and

demand does not correlate with each other. There is no demand for property even though there is a shortfall in supply.

The reality of the neo classical theory which based on demand and supply and a presumption that when there is a demand, there must be a supply is no longer relevant to analyze the current Malaysian residential property market context. A supply is not necessarily consistent with a demand i.e. when a demand increase, a supply does not necessarily increase. There are several factors which influence trends in the Malaysian property market other than demand and supply. Indeed, a property market in Malaysia is operating within the legal and policy frameworks.

Property market formations are built and created by human being. Property markets exist and operate within legal and policy frameworks. Unlike other asset classes, property markets fail to operate efficiently. In a wider context, property markets are faced with institutional frameworks that structure the markets (Loo-Lee Sim *et al.*, 2003). The fact is that the basic assumptions in the neo classical economics theory, namely the perfect market characteristics, with complete market information and efficient market coordination have made this approach unsuitable to be adapted in the context of the property markets. This is due to the obvious differences of the real property market which is imperfect as a result of incomplete market information and poor market coordination. The imperfect property market mechanism which is limited and with incomplete coverage of market information networks, have made the neo classical economics approach fail to analyse the property market problems, precisely and accurately. With the general view and assumptions on economic rationality, equilibrium model fails to address the co-ordination required in dealing with human social relations (Healey, 1992).

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