

**HOW INVESTOR BEHAVIORAL FACTORS INFLUENCE REAL ESTATE  
INVESTMENT SATISFACTION AND REINVESTMENT INTENTION IN  
PENANG, MALAYSIA**

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Research report in partial fulfillment of the requirements for the degree of  
Masters of Business Administration

**2008**

## **ACKNOWLEDGEMENT**

I acknowledge with gratitude the invaluable assistance, support and time given in the preparation of this thesis by my supervisor, Datin Dr Joriah Muhammad, lecturer of School of Management, Master of Business Administration, University Sains Malaysia.

I acknowledge the guidance and assistance given at the initial stages in the preparation of the Research Methodology, given by Professor Dato Daing Nasir Ibrahim, Director of Advanced Management Centre, School of Management, Master of Business Administration, University Sains Malaysia.

I acknowledge with gratitude, the support, guidance and advices given by my colleagues in School of Management, especially Ms. Ong Ee Pheng, Mr. Lo Liang Kheng and Mr. Wong Chee Keong.

I also acknowledge with thanks for the kind advice and comment given by the respondents, especially, Mr. Christopher Boyd, Chartered Surveyors, Registered Valuers, Estate Agents, Property Managers, Researchers & Auctioneers, Executive Chairman of Regroup Associates Sdn Bhd.

Last but not least, I acknowledge with thanks for the support, interest and love given by my family in this thesis.

Sincerely  
Tan Bee Khim  
May 2008

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## **ABSTRAK**

Matlamat kajian ini adalah untuk mengenalpasti perhubungan antara kepuasan pelaburan dalam hartanah dengan kemahuan melabur. Kajian ini bertujuan untuk mengkaji dalam konteks pelaburan tempatan. Hubungkait antara kepuasan pelaburan dengan tingkahlaku pelabur telah diuji. Kepuasan pelaburan oleh pelabur juga diuji bagi memastikan samada faktor ini bertindak sebagai pengantara dan mempengaruhi kemahuan melabur.

Bab 1 memperkenalkan Negeri Pulau Pinang sebagai negeri yang kedua mengalami perkembangan hebat dalam sektor perumahan dan hartanah dengan taraf hidup masyarakat yang tinggi. Potensi pembangunan dalam sector hartanah adalah cerah dengan kemasukan pemaju hartanah antarabangsa. Justeru Negeri Pulau Pinang telah dipilih untuk menjalankan kajian ini.

Bab 2 menyentuh tentang literatur yang berkaitan dengan kepuasan pelaburan dan kemahuan untuk melabur. Bab ini juga menyentuh tentang variabel-variabel seperti keuntungan pelaburan, jaminan pelaburan, kecairan pelaburan, undang-undang, lokasi pelaburan, kepuasan pelaburan dan kemahuan untuk melabur. Bab 3 menjelaskan tentang pengaruh dan kecenderungan variabel-variabel tersebut. Analisis faktor, analisis keyakinan dan juga analisis regresi berganda telah dijalankan untuk memastikan ketepatan model kajian. Keputusan kajian telah diringkaskan dalam bab 4 dengan jangkaan bahawa hanya sesetengah variabel menunjukkan kesan yang signifikan terhadap kemahuan untuk melabur.

Ringkasan mengenai kajiselidik ini telah dijelaskan dalam bab 5. Selain itu, limitasi kajiselidik berserta dengan cadangan untuk kajian akan datang juga dibincangkan.

## **ABSTRACT**

The aim of this study is to identify investors' investment satisfaction relative to investors' reinvestment intention in local context. In order to determine the relationship between investors investment satisfaction, investors' behavioral factors were examined through a multi-dimensional framework. As the consequences, the investment satisfaction is being tested if it serves as a mediator in influencing investors' reinvestment intention.

Chapter 1 introduces Penang as the second strongest real estate sector with high standard of living. The emergence of international developers has stimulated both the domestic and foreign interest in Penang property market. The promising outlook has formed strong attraction from local as well and foreign investors to Penang. Hence, Penang and it's residents are chosen as sample population in the study.

Chapter 2 explores the literature and the variables that are associated with investment satisfaction and reinvestment intention. It includes the extent of the impact of the relevant variables such as investment profitability, investment security, investment liquidity, regulation, investment well-being and investment location. Chapter 3 exhibited the trend and influence of the variables. Factor analysis, reliability test and multiple regression analysis are being executed to test the research model. The result of the analysis is demonstrated in chapter 4, whereby only certain variable such as investment profitability, investment liquidity, investment location and investment well-being are proved to be significant.

The conclusions of the study are summarized in chapter 5, where the results have proven that investors' investment satisfaction has an influential on the investors' reinvestment intention. The chapter also discussed on the limitations of the study. Suggestions and recommendations are also raised for the enhancement of future research.

## CHAPTER.1

### INTRODUCTION

#### 1.1 Real Estate Investment and Investors Behavioral Factors

In previous research by (Shim, Lee, & Kim, 2006), Yang 2002 quoted that the rationale of investment in real estate is to generate the profit return in future when forgoing the present consumption by taking into the consideration of uncertainty and risk. In his findings, he categorized investment patterns based on the earning rate, stability and liquidity into cash deposits, securities and or securities by examining the behavioral patterns of real estate investors.

In the same article, Lee (2000) also commented the capital income from periodic income and transfer, tax protection, protection against inflation as well as gain in social status also appeal investors in real estate investment.

Hence, the study in real estate investment is essential to portray and understand real estate capital markets more comprehensively in order to ensure a positive investment return.

#### 1.2 Definition of Real Estate

Wikipedia, the free encyclopedia referred real estate as '*Legal term (in some jurisdictions) that encompasses land along with anything permanently affixed to the land, such as buildings*'. In-depth, real estate, which is also

defined as the immovable property or even realty is frequently deemed identical with real property compare to personal property.

Technically, real estate is not defined by such physical components as land and buildings. Rather, real estate is nearly synonymous with real property, the rights that associated with land and together with the fixtures, such as roads and buildings, that are permanently attached to the land (Peter F Colwell & Trefzger).

### **1.3 Malaysian Economic Overview**

Malaysia was enjoying rapid growth at an average of 9% annually before the 1997 Asian financial crises. Malaysia's real estate and related sectors of the economy were actually represented 20-30% of the Malaysian Gross Domestic Product (GDP) (Malaysia Market Situation 2006). Unfortunately, beginning 1998 GDP contracted sharply due to the real economy declined as the output of recession beginning 1998. However, in 1999 Malaysia managed to pull out and recover from financial and economic woes.

Subsequently, Malaysian GDP displayed optimistic growth beginning year 2000 to year 2006. Malaysian economy also grew up to 5.9% in 2006 compared to 2005. Further more, Malaysia is predicted a continue growing in the first quarter of 2008 by the 8.8% as illustrated in Table 1.1.

**Table 1.1****GDP by Expenditure Component in Constant (2000=100) Price**

<b>Period</b>	<b>RM million</b>	<b>Annual change in %</b>
2000	356,401	
2001	358,246	0.5
2002	377,559	5.4
2003	399,414	5.8
2004	426,508	6.8
2005	447,818	5.0
2006	474,392	5.9

Source: Department of Statistics, Malaysia.

**1.4 Malaysian Real Estate Industry- The Ups and Downs**

The Asian financial crises and economic recession have swept and left the country's stock, currency markets irreparable and also caused slump in businesses as a result of consumers became extremely cautious when demanding on goods and services.

Non-performing loans (NPLs) began to escalate due to distressed borrowers and high interest rates that weaken the borrowers' ability to service loans. As a result, the financial and property asset values and the value of collateral for many bank loans were significantly reduced. Majorities of the country's financial institutions experienced deterioration in profits. Real estate transaction suffered substantial contraction of 32% as well as the overall decline in real estate values of about 48%.

Malaysian Government then announced and implemented various measures to counter the worst of the recession. Those measures included pegging of the Malaysia Ringgit at 3.8 to the dollar, capital controls and also

the rejection of loan offered by the International Monetary Fund (IMF). Special task force agencies such as the National Economic Action Council (NEAC) was established as a consultative body to the Cabinet, Corporate Debt Restructuring Committee, Pengurusan Dana Modal and Pengurusan Danaharta National Berhad were established to salvage the NPLs and property from the problem banks and to guide the country out of the crisis.

In spite of these, the Government initiated temporary waiver on the stamp duties in real estate transactions and Real Property Gains Tax (RPGT) by way of an exemption order. The Government impositions helped to stimulate the primary and secondary property market<sup>1</sup> in the short to medium term and this has resulted in the promotion of a healthy speculative activity in real estate sector.

The Central Bank of Malaysia also introduced low interest rate policy. As a result, the country's economy has recovered sooner than other neighboring countries in Asia such as Thailand and Indonesia. As what was anticipated by the Government, the Central Bank of Malaysia's effort has showed positive result in averting the deteriorating banking system. The measurers have gradually recovered, rejuvenated, and eventually accelerated property market activity.

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<sup>1</sup> Primary property market refers to the new housing property(ies) offered by the developer(s) in the real estate market and the secondary property market refers to the sold property(ies) that available for sale, which offered by the earlier purchaser(s) in real estate market.



### **1.5 Real Estate Investment Growth in Malaysia**

Malaysian property market remained optimistic in year 2007 as shown by the increased in both the transaction volumes and the value of the property market. The increased in sales performance for the newly launched housing units help to reduced numbers of property overhangs.

As illustrated in Table 1.2, the Valuation and Property Services Department of Malaysia has registered 269,600 transactions worth RM58.58 billion in 2006. It revealed a market activities contraction of 2.5% if compared to year 2005. Nevertheless, the total value increased by 4.9%.

The ups and downs of real estate property are principally influenced by the Government policies and initiatives. The growth of transactions in terms of volume and value are essentially boosted by the government-led liberalization incentives, which covered provisional exemption of Real Property Gains Tax (RPGT) which was implanted from 1<sup>st</sup> June 2003 to 31 May 2004. Hence, Table 1.2 has portrayed the trend of real estate performance during the period from year 2003 and 2005.

**Table 1.2****Sector Performance 2001-2006**

Sector	Residential		Commercial		Industrial		Agriculture	
Year	Volumn	Value (RM)	Volumn	Value (RM)	Volumn	Value (RM)	Volumn	Value (RM)
2001	176,208	22,199	15,862	6,427	6,098	4,320	36,659	2,308
2002	162,269	21,137	17,048	6,444	6,010	3,839	37,071	3,229
2003	164,723	23,011	18,663	7,327	6,490	3,968	43,506	3,698
2004	195,243	29,296	24,212	10,951	7,818	5,834	53,906	5,475
2005	181,762	28,407	24,151	11,631	7,143	5,005	51,868	4,952
2006	176,277	28,697	24,211	11,178	6,973	5,971	50,723	5,584

Sector	Development Land		Others		Total	
Year	Volumn	Value (RM)	Volumn	Value (RM)	Volumn	Value (RM)
2001	7,577	3,320	230	61	242,634	38,635
2002	8,755	3,892	241	102	231,394	38,643
2003	9,531	5,332	463	98	243,376	43,435
2004	11,650	8,305	383	103	293,212	59,964
2005	11,376	6,706	208	80	276,508	56,782
2006	11,152	8,041	264	66	269,600	59,538

Source: Valuation and Property Services

Value and prices of the real properties and homes escalated at a promising growth rate as demonstrated in Table 1.3. It shows that the investors have bred passionate interest in investing in real estate comparing to stock market security as well as bank or cash deposit investment. Wealth accumulation and long term capital gain is the most essential consideration in the real estate investment.

**Table 1.3****House Price Indicator from year 2000 to 2008**

Period	MHPI (2000=100)	Terraced	Semi- Detached	Detached	High-Rise Unit
		Annual Change in %			
2000**	6.0	6.7	6.3	5.3	1.9
2001	1.1	0.0	2.6	4.6	2.8
2002	2.5	4.7	-0.6	0.8	-5.9
2003	4.0	2.9	4.0	1.3	15.1
2004	4.8	3.7	9.1	8.7	1.5
2005	2.4	2.1	3.5	4.0	1.0
2006	1.9	1.6	1.3	6.1	1.2

\*\* New base year for the revised MHPI

Source: NAPIC, Department of Valuation and Property Services

In Malaysia, the Government has introduced various initiatives and incentives to spur the real estate sector. These include:

- The latest EPF flexibility monthly withdrawals from the balance in Account 2<sup>2</sup> announced in Malaysia Budget 2008.
- 50 per cent stamp duty exemption on documents of transfer for the purchase of a house of not more than RM250,000.
- A fund to banks to enable those without fixed income to obtain loans for purchasing of low- and medium-cost houses.
- Bank Negara Malaysia has maintained a constant interest rate to retain affordability of property purchaser.

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<sup>2</sup> EPF Act 1991; EPF Rules and Regulations 1991; and EPF Circular and Procedure Account II-Withdrawals are allowed for the purposes of:

- Attaining the age of 50 years;
- Owning a house - the downpayment for your first house;
- Settling the balance of your housing loan - first house;
- Financing education for you and that of your children's;
- Medical expenses for you and that of your children's

Also in the Malaysia's Ninth Plan, along with 'Malaysia my second home', i.e. Malaysia's visit year, the Government initiates a couple of impressive provisions, including elimination of certain restrictions to boost foreign investment in real property market. As of April 2007, Malaysia's property market became markedly more appealing to non-resident buyers when the country eliminated capital gains tax on all property deals (Cheah, 2007).

According to a recent survey carried out by CLSA Asia-Pacific Market, the banking and property investment are the most popular among Malaysians in terms of investment option. 81% chose property as their best investment, 10% on shares or unit trust, 1% on cash/ deposit, 1% on business and 7% on others (CLSA Asia-Pacific Market 2007, CG Watch 2007, [www.clsa.com](http://www.clsa.com)).

Although the increase in construction material costs as well as construction cost as a consequence of the hike of crude oil price would eventually intensify the pressure on purchaser affordability. This scenario entails the rise in the price of real estate property due to rise in the cost of living. However, the premium priced in real estate properties shows greater resilience due to the positive and robust economic outlook.

## **1.6 Penang Outlook**

### **1.6.1 Demography**

According to the 2006 Census, the total population in Penang accounted 5.6% of the nation's population of 26,640,000, residing on a total land area of 1,031 kilometer square. Penang State recoded the 2<sup>nd</sup> highest population

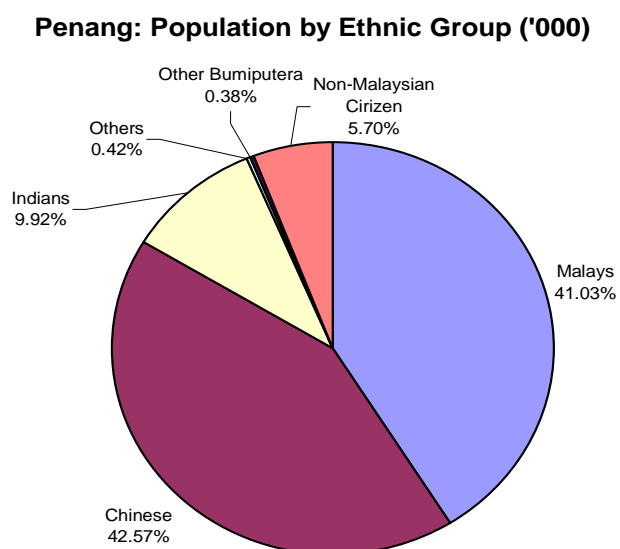
after Wilayah Persekutuan Kuala Lumpur. Majority of population are Chinese (42.57%), followed by Malays, Indians, Non-Malaysian citizen and others comprising 41.03%, 9.92%, 5.70% and 0.80% respectively. Table 1.4 shows the breakdown of the population in Penang<sup>3</sup>.

**Table 1.4**

**Penang: Estimated Population by Ethnic Group ('000)**

Ethnic Group	Population (,000)	Population (%)
Malays	612.3	41.03
Chinese	635.3	42.57
Indians	148	9.92
Others	6.2	0.42
Other Bumiputera	5.6	0.38
Non-Malaysian Cirizen	85	5.70
<b>Total</b>	<b>1492.4</b>	<b>100</b>

Source: Department Of Statistics, Penang



**Figure 1.1 Penang: Population by Ethnic Group**

Source: Department Of Statistics, Penang

<sup>3</sup> ["Key statistics"](#), Department of Statistics, Malaysia

### **1.6.2 Real Estate Investment Growth in Penang**

The advent of Northern Corridor Economic Region (NCER) signifies significant growth in real estate industry as a direct consequence increase in infrastructure in Penang State. Numerous major projects have also been lined up to drive Penang as a main transportation and logistic hub of NCER. Penang Government expected the property sector will maintain and give a positive and constant growth in year 2008. The concerns of the implementation of certain major project such as Penang Outer Ring Road (PORR) and Penang Second Bridge may remain unanswered, Penangites and other investor remained optimist on the property market as a whole. The Government initiated a temporary waiver of RPGT in year 2007 undeniably brings positive affect on the market. The One-Stop Centre for projects under 'built then sell' (BTS) would as well smoothen the purchaser sale and purchase procedures. Not to mention the Malaysia-My-Second-Home (MM2H) has also attracted substantial foreign investor to the State.

### **1.7 Problem Statement**

There has been an unprecedented development and growth in real estate property due to the belief that real estate is within a multi-asset portfolio which would offer security of capital or income flow, or even a combination of both. However, the limitations of data on risk and return analysis in this inefficient real estate marketplace may present fundamental problems to the investors in hunting suitable properties, and at the same time restrict the real estate marketers in fulfilling the purchaser or investors satisfaction and to

encourage the purchaser to invest in future investment (Adair, Berry, & McGreal, 1994).

The fundamental problem with real estate market irregularities and inefficiencies does not lie in the properties themselves. This is because many investors never even know that a property is available for sale. This circumstances has preventing the investors from bidding on the property that is available in the market (Morrison III, 2006). Morrison also further explained that real estate properties are classified as assets, albeit unique, that possess value. This is due to individual investors perceived real estate value differently. In realizing the fact that individual investors is the one who set a value on real estate property, it is essential to understand the different investors so as to see real estate capital markets more completely. Each and every investor's perception on real estate property and location preferences, risk tolerances, tax motivations vary. He has suggested to group similar investors into several major categories or types in order to study the behavior and performance of different real estate investors.

The study on investors' behavioral factors is essential to portray and understand real estate capital markets more comprehensively. Previous study (Shim et al., 2006) has demonstrated the pattern of the investment satisfaction on reinvestment intention. The finding of the study also commented the investors' behavioral factors are fundamental in influencing the level of satisfaction in investment. (Shim et al., 2006) explained that the investors are motivated when they achieved satisfaction based on the

fulfillment in the antecedent factors such as, profitability, investment security, investment liquidity, regulation, investment location as well as investment well-being. Thus, this investment satisfaction would positively relate to their reinvestment intention. When investors perceived the investment satisfaction was fulfilled, they would consider reinvesting.

Investor's belief and behavior radically affect the change of individual's thought and decision in term of benefit and having satisfaction on investment. Lack of satisfaction from investment cause the relative lack of reinvestment intention in the literature.

(Anne de Bruin & Flint-Hartle, 2003), Ratchliffe (1972) commented that the essence of property is human behavior and the premise that the property discipline is an applied science. However it was argued strongly by Graaskaamp (1991).

Behavioral theory is a paradigm for decision making. As explained in Wikipedia, an electronic encyclopedia, behavioral change theories and models explained the reasons behind alterations in individuals' behavioral patterns. The environmental, personal, and behavioral characteristics has been taken as the major factors in behavioral determination. As precious research, investment profitability, investment security, investment liquidity, regulation, investment location and investment well-being are perceived as the major factors in investors behavioral determinations. Hence, the focus of this study attempts to conceptualize and further examine the previous



research from a multi-dimensional framework if it fits our local social cultural and economic aspect. Furthermore, this study would benefit the real estate sector by providing a comprehensive recommendations and implementations of policies.

Thus, it is essential to study the major factors that determine investors determination in their investment satisfaction and reinvestment intention, which include:

1. Investment Profitability
2. Investment Security
3. Investment Liquidity
4. Regulations
5. Investment Location
6. Investment Wellbeing

### **1.8 Research Objective**

The primary objective of this study is to examine the relationship of the abovementioned six behavioral factors with regards to investment satisfaction and reinvestment intention in the real estate instrument. The study has been developed by previous researchers (Shim et al., 2006) but yet to be tested in the Malaysian context. At the end of the research, this research will be able to gain some insight of investor behavioral factors on real estate investment in a broader perspective, which could be elaborated as below:-

1. To justify the identification of investors investment satisfaction as the dominant determinant relative to investors' reinvestment intention.
2. To justify the identification of investors behavioral factors as the independents variables relative to investors' investment satisfaction.
3. To justify the previous research(Shim et al., 2006),and conceptualize within a multi-dimensional framework in local social and cultural context.

Eventually, this study will also assist to provide the basis of investment strategies in planning and developing strategic marketing revitalization in Malaysia.

### **1.9 Research Questions**

The research question will cover the following aspect:

1. What are the significant factors that would influence investment satisfaction?
2. How do the six investor behavioral factors (Investment Profitability, investment Security, investment Liquidity, regulations, investment location, investment well-being) influence investment satisfactions?
3. Do investment satisfactions contribute to reinvestment intention?

4. What are the relationships among the constructs on uni-dimensional<sup>4</sup> characteristics?

### **1.10 Significant of Study**

The dimensions of the investor's behavioral factors towards investment satisfaction and investment intention reveal the real estate investment pattern in Malaysia. Consequently, the findings of the study would allow investors and those involved in real estate market activity to gain a broader insight on real estate investment.

From the marketing point of view, it would also help to achieve competitive advantages particularly when deciding to make a strategic planning on investment. Understanding the importance of relationships among the constructs would broaden perspective of reinvestment intention in order to ensure long term profitability (Shim et al., 2006).

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<sup>4</sup> Guttman scale, where subset of the survey items are arranged in an order so that an individual who agrees with a particular item also agrees with items of lower rank-order.

## **CHAPTER.2**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter contains the literature review and theoretical background of the investors' behavioral factors, the investment satisfaction and the reinvestment intention. The literature reviews, examines and investigates the factors, arguments, findings and outcomes by previous researches. It also highlights the key factors and variables in order to strengthen the research framework of this thesis.

#### **2.2 Theoretical Foundation**

As discussed in the Problem statement in section 1.7, behavioral change theories and models has explained that the environmental, personal, and behavioral characteristics are important in influencing one's behavioral determination.

In fact, the significance of behavioral change theories has become obvious followed by their apparent application in various aspects. There are few theories that discussed the behavioral change, which include:

1. The Theories of Reasoned Action, Icek Ajzen (1985)
2. The Theories of Planned Behavior, Icek Ajzen (1985)

### 3. Theory of Transtheoretical Model of Intention Behavior Change (TTM)

#### 2.2.1 Theory of Reasoned Action

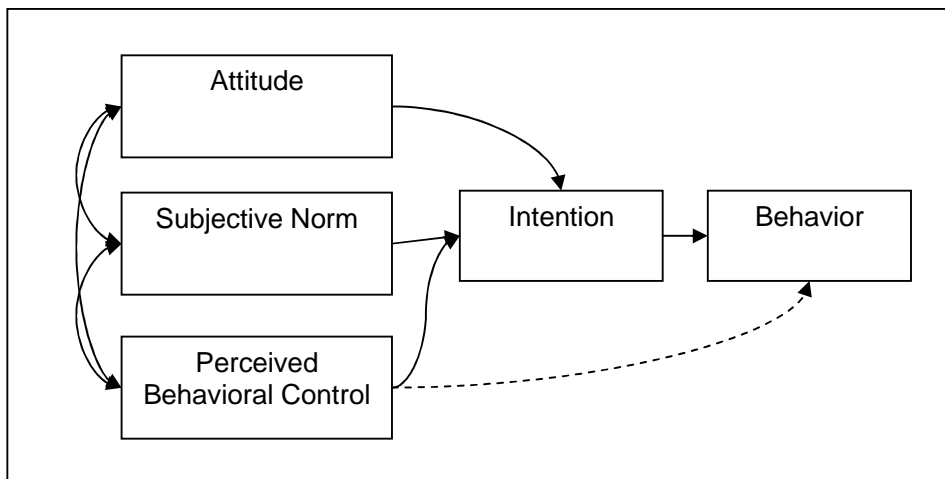
Ajzen and Fishbein (1980) with the theory of reasoned action declares that individual performance of a given behavior is primarily determined by a person's intention to perform that behavior. This intention is dominated by:

1. The person's attitude toward the behavior, for example the beliefs on the outcomes of the behavior (decision on reinvestment) and the value of these outcomes (satisfaction on the investment).
2. The influence of the person's social environment or subjective norm for example the beliefs about what other people think the person should do, as well as the person's motivation to comply with the opinions of others.

#### 2.2.2 Theory of Planned Behavior

As an extension of the theory of reasoned action, Ajzen also proposed that the theory of planned behavior is a theory about the link between attitudes and behavior, in psychology. This theory is described as one of the most predictive persuasion theories and has been applied to studies of the relations among beliefs, attitudes, behavioural intentions and behaviors in various fields, which include advertising, public relations, campaigns, healthcare, etc.

As mentioned above, the theory of planned behavior further completes the theory of reasoned action and the concept of perceived control over the opportunities, resources, and skills necessary to perform a behavior. The concept of perceived behavioral control is comparable with the concept of self-efficacy or a person's perception of his or her ability to perform the behavior. Perceived behavioral control over opportunities, resources, and skills necessary to perform a behavior which would be significant for behavior change processes Ajzen (1985).



**Figure 2.1 Model of Theory of Planned Behavior**

Source: <http://en.wikipedia.org>

### **2.2.3 Theory of Transtheoretical Model of Intention Behavior Change (TTM)**

TTM is a model that illustrates human intention to change and modifying existing, and also intention to create new behaviors, or even stop

problematic pattern of behaviors based on an individual experiences and participation. Prochaska (1998) and DiClemente (2003) explain that this dimension, stages and process, context and markers of change of this model helps in portraying and understanding the process of change (Carlo, 2007).

### **2.3 Application of Behavioral Change Theories**

The application of behavioral change theories have been proven and supported in various areas such as healthcare, education, and criminal behavior.

On the other hand, the general theories of behavioral change has also explained and suggested methods of correcting the deviant behavior (Akers, 1979). This implicates that, by understanding the behavioral change, it helps to propose an effective correctional methods for policy-making. The Social Learning Theory's clarified that the interaction between an individual and their environment also developed as a function of an individual's exposure to a certain behavior and their acquaintances, who can reinforce either socially acceptable or socially unacceptable behavior (Akers, 1979).

However, there are also inconsistencies between the theories that were formulated as guides to understanding behavior and those that were developed as frameworks for behavioral interventions (USDHHS, 1996). In such circumstances, the examination on the extent of the acceptance of behavioral change theories are necessary in this study due to the numerous criticisms on the theories that are emphases on individual behavior and a

general disregard for the influence of environmental factors on behavior, which include, investment profitability, investment security, investment liquidity, regulations, investment location and investment well-being.

## **2.4 Real Estate Investor Behavior**

Real estate investors' behavior is defined as the actions involved in investing in real estate that is built and developed for the rent with the permanent purpose of earning profit, presuming reasonable security and eventual recovery in compensation for forgoing current consumption (Gyu, Seung, & Yong, 2007). European market is robust to the inclusion of behavioral variables, and the role of behavioral variables is mixed across countries (Avramov & Chordia, 2004). Odean, 1998, 1999 also quoted and identified other systematic biases in investor behavior (Frijns, Koellen, & Lehnert, 2006). Various evidences and studies on investor reaction have developed questioning of many theories that rely on investor rationality and behavioral models. This model illustrates that investors are influenced by market outlook and self-assessed financial expertise (Frijns et al., 2006).

### **2.4.1 Decision Making Process of Real Estate Investor**

In general, decision theory does not rely on any one discipline. Bacharach and Hurley (1991) and McClennan (1990) argue the decision theory embraces work from philosophy in the form of work relating to ethics (French & French, 1997). However, Bacharach and Hurley, 1991; Hahn and Hollis, 1979 suggest mathematics of decisions economics work relating to



ideal rational choice behavior while Hogarth, 1987; Sutherland, 1992 proposes that the disciplines of psychology, sociology and political science have worked on the analysis of actual decision making.

Real estate investor purchases and disposals retail properties for capital appreciation and profit gains. The decision making process basically involve typical study and investigation on interested property; follow by acquisition of real property after satisfying with investment criterion.

Lee (2000) describes decision making process in real estate investment refers to the systematic research, acquisition, application, and analysis of the desired real estate asset that satisfies the investor's economic and personal goal during the period of ownership (Gyu et al., 2007).

#### **2.4.2 Investment Profitability**

Wealth accumulations and long-term capital gain as well as attitude are the major motivation real estate investment. The concept of 'real wealth increase' Dupuis (1992) was cited by (Anne de Bruin & Flint-Hartle, 2003) and it explained the smaller the outlay of the investor's own equity, the greater the wealth increase. The most prominent factor that influences real estate investor is the earning rate or profitability. Basically, profitability is assumed having positive relationship with the risk, offset relationship between profit and risk. Ross et al (1995) states profitability has a close relationship with investment risk (Shim et al., 2006).

### **2.4.3 Investment Security**

As cited in (Shim et al., 2006), Bansel et. al commented investment security in terms of ease of disposing of the assets gained from real estate investments as well as recovery of the principal is not always optimistic. Risks always exist in many forms in investment. A portfolio maximization model in property may forecast a particular allocation in order to gain optimum performance relative to investment risk. However, it may also conflict with business risk considerations (French & French, 1997). In the same article, French, N., 1996 also explained that the decision makers in real estate allocation may vary from the final observed outcome. In addition, cited in (Shim et al., 2006), Markowitz (1952) also suggested that when a decision maker has a shape to their preferences which is non-quadratic (e.g. different risk attitudes) and or they value other factors (e.g. ethical portfolios), their preferences will depart from the model prediction. Risk taking on principal is one of the risk management in real estate investment which subject to the uncertainties and change of laws and regulation, economy and also technology.

### **2.4.4 Investment Liquidity**

Conventional perception suggests that the individual prefers investing in a liquid asset than illiquid asset. However, quoted in a research by Ludwig & Zimper (2006), Laibson (1997) explained that this insight fails to embrace individuals with dynamically inconsistent preferences due to hyperbolic discount functions, Strotz (1956), Pollak (1968) assert that these inconsistent preferences motivate “sophisticated” individuals to constrain their future

choices by investing in an illiquid asset, Laibson (1997) point out that “illiquid assets provide a form of commitment, although there are sometimes additional reasons that consumers might hold such assets. The existence of “rational bubbles” in U.K. property market is stagnant and capital value as well as rent of the aggregate, office, and retail property markets do not tend to depart away in the long, the industrial property which is non-stationary in the spread may be contributed to the high illiquidity in the industrial property market (Peijie, 2000).

#### **2.4.5 Regulation and Restrictions**

Real estate sector is actually regulated by very complex rules and regulations may distort or discourage investment decision. According to Lim, McGreal & James (2006), a real estate market exists in any country within a broad institutional context defined by the prevailing political, economic, social, and legal systems (D'Arcy and Keogh, 1998). Evidently, the institutional distinctiveness varies in different country these differences are essential to the analysis of market outcomes and behavior (Lim, McGreal, & James, 2006).

#### **2.4.6 Investment Location**

Cited by Tom (2006), in continental European urban areas, various empirical studies by Hoesli, Thion, & Watkins (1997), Janssen (1992), Laakso (1997), Needham, Franke, & Bosma (1998), Spit and Needham (1987) respectively have shown influence on the perceived quality, price or rental of the real estate and its vicinity. A later research based on cross-country

evidence on housing consumer preferences, based on expert elicited residential location quality profiles (Tom, 2006) has exhibited fundamental distinction between the housing consumer preference and intentions across the two geographical and institutional.

Lentz and Wang (1998) observe that externality impacts, for example parks which are located within or nearby to neighbourhood having influence on level quality variables, Miller (1982) illustrates negative externalities such as damages caused by air pollution, noise, visual effects and so on, Lentz and Wang, (1998) confirms that specific local externalities, such as proximity to industry and refineries affect property values negatively (Tom, 2003).

#### **2.4.7 Investment Wellbeing**

Wellbeing can be perceived as the quality of life in term of general health and happiness as well as welfare. Cited by Shim, Lee & Kim (2006), Hwang (2005) highlighted the significance of comfort among the environmental factors and it leads to emotional as well as physical wellbeing when making decision in real estate investment.

#### **2.4.8 Real Estate Investor Satisfaction**

The investor satisfaction embraces the maximization of future wealth or cash income compare to the present cash expenditure or investment, or in short, real returns on investment. However, in real estate market, the satisfaction level varies. In the Economics of Real Estate Principles, Real