

Qualitative Research Conference (QRC) 2016
24-26 May 2016, Penang, Malaysia

Decision-making Behaviour of Real Estate Investors: A Delphi Study in Australia and Malaysia

Consilz Tan^{a*}, Leland Entrekin^b, David Butler^b

^{a*}*KDU University College, Selangor, Malaysia*

^b*Murdoch University, Perth, Australia*

Abstract

The real estate investment markets of Australia and Malaysia are continuously developing, due to the reputation of real estate as a lower risk investment. This study aims to explore the real estate investment markets through the lenses of experts in the real estate markets. This research employs two rounds of a Delphi study to obtain opinions from Australian and Malaysian experts in real estate, in both academia and industry. We found that investors choose to invest in the real estate market to earn rental yield, look for capital growth, and to obtain capital gains through their real estate investment portfolio. There is evidence of emotive attachment in the real estate investment decision-making process. The dual function of investment asset and family home may complicate the decision-making process. The family home is a 'roof over one's head' and may be one of the biggest investments made by most individuals. As such, emotive attachment to the family home can sometimes be unavoidable. Nonetheless, the findings reveal that there are differences in property management and investment behaviour in both countries.

Keywords: Behavioural economics, decision-making, real estate investment, Delphi study

1. INTRODUCTION

In this day and age, real estate investment is becoming increasingly internationally oriented (Lim, McGreal & Webb, 2006). In Australia and Malaysia, the real estate investment markets are continuously developing, due to the economic development in both countries and its characteristic of lower risk compared to the other types of investment. Investigation of the real estate investment markets is seemingly crucial with the increasing number of individuals who participate in real estate investment to either accumulate wealth or receive rental yields. Individual investors play an important role in the current development of each of these real estate markets. Furthermore, there are several differences in the real estate management and investment process in both countries. This study aims to identify the variations in property management between the two countries. In addition, this study explores the decision-making behaviour of Malaysian and Australian real estate investors, which, so far, has been unexplored. This research critically examines the existence of bounded rational behaviour in property investment decisions. Simon (1987) suggested that decision makers are boundedly rational (cited in Kahneman, 2003a). Gallimore, Hansz & Gray (2000) proposed that decision-making processes are not fully rational. In addition, Camerer and Fehr (2006) argued that bounded rationality is better than traditional economic theory in predicting actual human behaviour.

As a preliminary study, this research was designed to understand the decision-making behaviour of individual real estate investors from the perspectives of experts in real estate, both in academia and industry. In order to produce a more complete understanding of the field, we employ a Delphi study to gather information related to real estate investment in Australia and Malaysia. The Delphi technique was originated from the Rand Corporation (Dalkey & Helmer, 1963). The Delphi study encourages independent and professional thought from the expert panel where there is no face-to-face contact among the experts so as to eliminate potential biases. Hence, this method of collecting feedback is different from a focus group discussion. The information and reasoning provided by the panel experts were independently based on their expertise, experience and knowledge. The Delphi study was divided into two rounds. For the first round, the feedback from panellists was compiled and analysed. Following

*Corresponding author. Tel.: +6012-530-5297; Fax: +6-00- 00000000
E-mail: cltan@kdu.edu.my

this, approximately after three months, the questionnaire for the second round was sent to the expert panel members, together with the executive summary of the first round. Subsequently, panellists received the executive summary of the second round after the second round was concluded. The data collected helps to examine the variations in property management and real estate investment between the two countries. It is understood that the policies that govern real estate investment in both countries are different in terms of tax exemption, payable tax, negative gearing, and current developments.

1.1 Background to the study

With the closer economic gap between Australia and Malaysia as reported in the Global Competitiveness Report 2015-2016, it is worthwhile to compare both countries. The report revealed that Australia was ranked 21st and Malaysia was ranked 18th for year 2015-2016 based on the drivers of productivity and prosperity (World Economic Forum, 2015). From 1980 to 2015, the median house price in Perth grew from less than \$100,000 to nearly \$550,000 (Real Estate Institute of Western Australia, 2015). In the meantime, median house rents in Perth rose from around \$200.00 per week in June 2004 to \$420.00 per week in September 2015. As in Malaysia, the house price index rose dramatically by about 8.5% in 2014 (National Property Information Centre, 2015). The boom in housing prices encourages the individual investors to participate in the real estate markets. The analysis of the individual residential property market has been undertaken mainly within the neoclassical framework (see Arrondel & Lefebvre, 2001; Brown & Ong, 2001; Brown, Schwann & Scott, 2006; Friday & Higgins, 2000; Grenadier, 1996; Quan & Quigley, 1991; Wood & Ong, 2010; and Yinger, 1981). For example, Brown, Schwann & Scott (2006) used logit regression to investigate financial and socio-demographic factors that influenced property investment. There is research that used a probit model to predict the likelihood of rental investors when making a choice (Wood & Ong, 2010). Plenty of research has employed mathematical or econometric models to examine the investment process using independent socio-economic variables. Nonetheless, there are several key questions regarding individual human behaviours in real estate investment that are unanswered in these quantitative models. These questions include: what are the standard practices in the decision-making process, especially at the moment of selling and acquiring a property? Are investors making decisions based on their emotion or experience? Are cultural differences impacting on decision-making? The roles of individual investors as primary market players have become more important especially with the growth of real estate investment markets. There are two general motives in housing markets; housing consumption and investment (Brueckner, 1997). These two motives guide the individual real estate investors' decision-making behaviour differently. The fear of loss, hope for capital gains, enjoyment, regret of making wrong decision, joy in success of investment, and other emotions that influence the decision-making process. To date, there is a lack of qualitative studies to explore the emotive investments.

1.2 Significance of the study

There are several discrepancies between the real estate management and investment process in Australia and Malaysia. Basically, the investment process is comprised of: the viewing stage, negotiation, legal process, finance and loan arrangement, and taxation. This study investigates the differences in the investment process by studying Malaysia and Australia. The Delphi study is employed to gather information from experts in both the real estate industry and academia, to provide important information that will enhance our knowledge of the emotive investments of individual real estate investors. The concern here is how the individual investors make decisions on their real estate investments, as compared with professional institutional investors. It is interesting to find out what are the motivations and rationale that guides an investor to make choice. In the meantime, the study is aimed to investigate how do the judgments and preferences of individual investors function to affect each stage of the process of acquiring and selling property.

2. LITERATURE REVIEW

This section examines the background of real estate investment and the decision-making process. Real estate investment involves several decision-making processes that are essential for a successful investment. There are many studies that focus on institutional investors but there is lack of investigation of the decision-making behaviour of individual investors. The following sub-sections focus on real estate investment and decision-making process.

2.1 Real estate investment

Investing in the real estate market is profitable and has lower risks compared to investing in security markets. Houses are always viewed as a safer investment, as long as the investors hold the property long enough (Case & Shiller, 1988). When people have higher marginal propensity to consume on housing, they are accumulating wealth through capitalizing housing assets (Benjamin, Chinloy & Jud, 2004). Peripheral knowledge of the real estate market may not be sufficient for individual investors to succeed in real estate investment as one requires a deep understanding of the institutional environment. It is crucial for the individual real estate investors to comprehend housing policies, taxation, property laws, and current economic and financial issues. Additionally, the behaviour of housing investors is closely related to wealth accumulation (Arrondel and Lefebvre, 2001). Furthermore, Ioannides & Rosenthal (1994) highlighted the difference between the consumption and investment demand for housing, explaining that consumption demand is less sensitive to wealth and income compared to investment demand. The housing and non-housing consumption model explains the life cycle pattern of consumption. It is arguable that older cohorts are more likely to become investors than younger cohorts as younger people struggle to gain a house for consumption, rather than investment (Yang, 2005). Kupke et al. (2001) explained that younger cohorts take more time to acquire a home.

In the meantime, there are two types of investors. The first type of investor is one who invests by acquiring rental income. The second type is one who invests by acquiring capital gains by selling the property. It is arguable that both types of investors will behave differently according to their choice and objectives of investment. Private landlords, who invest in acquiring rental income, do not act rationally or efficiently, as is assumed by the economic model (Andersen, 1998). According to Andersen (1998), the motives of private landlords are comprised of long term profit, economic surplus from the property, income from undertaking building work, and keeping the property as a personal possession. According to the Asia Property Market Sentiment Report 2012, there are 8 factors that contribute to the readiness of a person to purchase a property (The iProperty group, 2012). These factors include political and economic climate, recommendation by friends and family, financing eligibility, developers' track record and reputation, potential capital appreciation, potential rental yield, and price and location (see also de Bruin & Flint-Hartle, 2003; The iProperty Group, 2013). When considering investment in the property market, expected return on the investment, wealth accumulation through long term gain, and risk attitude are among the motivations to make an investment (de Bruin & Flint-Hartle, 2003).

Moreover, there have been many studies focused on the decision-making process of institutional investment. Individual investors are not acting as professionals; compared to institutional investors. Institutional investors may not manifest the affective component of loss aversion in the situation of selling an object (Paraschiv & L'Haridon, 2008). Institutional investors are sophisticated while individual investors, as a group, are un-sophisticated (Grinblatt and Keloharju, cited in MacCowan & Orr, 2008). Even if there is insufficient information regarding the property market, there are in-house research teams that help institutional investors to perform forecasting before making a strategic decision. Institutional investors are similar to investment managers and pension fund and REITs managers (Lim, McGreal & Webb, 2006). Generally, institutional investors are not emotionally invested in any one property. MacCowan and Orr (2008) also discussed the disposal decision-making of property fund managers by using an economic approach. Apart from this study, there is little research that aims to understand the decision-making process of individual investors as specifically individual residential investors. According to Lim, McGreal and Webb (2006), there are four factors shaping the decision-making process of institutional investors: political, economic, socio-cultural, and legal circumstances.

2.2 Decision-making process

The reality of decision-making is that people often face more than one choice and need to select from different options. To select the correct option, people will weigh the value of the costs and benefits, either in the short or long term. One of the principles of economics is that rational people act according to incentives (Mankiw, 2008). Here, the more information available the better, especially in investment decision-making. A study on consumer behaviour may be useful to this research to understand the decision-making process. In other words, investors are involved in buying and selling activities too, the difference being that the product is a property and not typical consumer goods. Gibler and Nelson (2003) suggested that consumer behaviour theories can be applied to real estate education and that this may shed light on understanding the decision-making process in real estate investment. Understanding consumer behaviour will help to uncover the reasons that people have when buying a product and the processes that they are involved in when they make a decision and take action (Black et al., 2003). Furthermore, it is necessary to understand that decision-making is action-oriented and requires a person to take action in order to satisfy his/her basic needs and wants (Einhorn, 1980) as well as to opt into the choice (Carroll,

1980). Of course, people will face trade-offs when making decisions (Mankiw, 2008) but in the meantime, he/she will try to optimize based on updating information as explicated by Bayes' Theorem (Einhorn, 1980).

The competency or otherwise of decision-makers attracted researchers to conduct deeper research into how a competent and incompetent person assesses information before taking action (Camerer & Weber, 1992). Loewenstein (2001) found that individuals are different from one another, acting differently across situations and over time. In other words, even a single individual may act inconsistently in the same situation. This has prompted researchers to reflect on whether any individual model can be conclusive enough to predict human behaviour. Furthermore, Wilson et al. (cited in Loewenstein, 2001) concluded that people may act according to their "gut", especially in spontaneous decision-making. This again evoked reflection on whether real estate investments involve spontaneous decision-making. Real estate investment may not appear to require impulsive decision-making, but it often does. However, a rational investor should always obtain sufficient information before taking action. Anecdotal evidence suggests that the decision to buy and sell a house is a joint decision, where the individual uses an agent's knowledge and acquires other relevant information to narrow down choice in terms of price and location.

Availability of information is crucial when people do not wish to experience regret after making a decision. People are likely to avoid responsibility when feeling regret after a bad decision has been made (De Bondt & Thaler, 1995). Regret avoidance describes a situation where people avoid decisions as they are reluctant to make the wrong decision (Tetlock, 1992; see also Bell, 1982; Samuelson & Zeckhauser, 1988). People are averse to making wrong decisions when they are perceived as competent. Some investors prefer to hire an agent to help them make a decision in order to negate stress. Taking this into consideration, only experienced agents are able to make the decision and are responsible for the blame or credit from investors. Contrary to this, if the decision-making is done by the individual investor him/herself, the researcher's concern is that competency may still exist or has been transformed into other forms.

To further extend the discussion of the decision-making process, a review by Roberts and Henneberry (2007) suggested that there are ten stages of decision-making in real estate investment:

- a) Setting of initial (property) investment goals and decision criteria
- b) Formulation of a fully defined decision-making strategy (relating to portfolio structure and performance)
- c) Search (for suitable properties)
- d) Information input (including analysis of market conditions)
- e) Prediction of outcomes (return and risk at portfolio and property levels)
- f) Application of decision criteria
- g) Trade-off (between properties)
- h) Project screening (of properties)
- i) Investment selection
- j) Negotiation, deal resolution, and post investment activity

Lewellen, Lease and Schlarbaum (1977) suggested that decision-making starts in a circular loop; from goals, analysis, and choice, to evaluation. This process is repeated again in the next decision-making process. In the same study, several investment behaviours and investment characteristics are examined. For example, when comparing the decision-making process of males and females, male investors are more likely to conduct their own security analysis; although savvy real estate investors understand that the security analysis is essential when making a decision to invest in a real estate portfolio. Security analysis is particularly important for investors who want to analyse financial statements, price trends, and momentum of securities. Einhorn and Hogarth (1981) have deconstructed the process of decision-making and judgement into smaller components that include: information acquisition, evaluation, action, and feedback or learning. It is understandable that most consumers purchase real estate intermittently, so they are more likely to conduct an information search (Gibler & Nelson, 2003).

The decision-making process includes a choice model. Here, choice behaviour is a concept in the study of consumer behaviour. However, the economists and psychologists have different opinions on choice behaviour. Economists explain choice behaviour consistently, using the hypothesis of rationality maintenance with an emphasis on outcomes. On the other hand, psychologists emphasise the importance of process and ask why such choices are made (Hogarth & Reder, 1987). This demonstrates that economists and psychologists observe choice behaviour from two different perspectives. When meeting with investors, the aim is to understand their decision-making process and the outcome can be unsure during the interview setting. Ebbesen and Konečni (cited in Einhorn & Hogarth, 1981) concluded that there are weaknesses in the laboratory setting when understanding the

decision-making process due to low external validity. However, the elements of an appropriate social setting are still vague.

3. THE DELPHI STUDY

3.1 Demographic profiles of panellists

This qualitative study invited 20 experts to participate in the Delphi study. However, there were 6 Australian and 6 Malaysian experts who accepted the invitation and agreed to provide their professional response. The panellists were comprised of academics, experienced key persons, and agents from professional institutions, property management companies, financial institutions, and developers. The professional institutions are such as Real Estate Institute of Western Australia, Australian Housing and Urban Research Institute, Malaysian Institute of Estate Agents, The Board of Valuers, Appraisers, and Estate Agents Malaysia. The panellists had more than 10 years of experience, either in academia or industry.

3.2 First round of the Delphi study

Delphi Question 1: What are the main elements of property investment decision-making in the real estate industry?

There are some differences and similarities between the Australian and Malaysian real estate markets when concerned with the important elements of the property investment decision-making process. Table 1 depicts the differences between Australian and Malaysian experts feedback.

Table 1. Differences and similarities of elements that involved in property investment decision-making.

	Australian Experts	Malaysian Experts
Differences	Rental income as source of retirement income Negative gearing Diversification of investment portfolios Wealth accumulation Emotive attachment	Government future plan for infrastructures Reputation of developers Past value appreciation of the property
Similarities		Location of the property Capital growth/appreciation Amenities and infrastructures Rental yield

The elements of property investment can be divided into two categories: financial and non-financial. Under the financial category, the potential for capital growth (appreciation) is one of the most important elements in both Australia and Malaysia. According to one of the panellists, investors believe that they can obtain capital gains if they retain their investment properties long enough. The property investors will also consider the return on their investment during the decision-making process. From the panellists' point of view, a non-owner occupier treats rental yield as both long-term investment and as steady income. The rental income is also seen as a source of retirement income. The panellists suggested that income security and diversification of an investment portfolio are important elements of property investment decision-making. In some Australian cases, people invest in property to utilise the tax shelter benefits. The benefits included negative gearing, where the shortfall between rental income and interest costs that incurred in the rental properties are tax-deductible. On the other hand, both Australian and Malaysian panellists suggested that location was the primary non-financial element of property investment decision-making. The location can be referred to the availability of amenities near to the property public transport, and educational institutions. Emotive attachment is also an important element that cannot be neglected. This is because the investment decision can be complicated by the dual function of the property as an investment and as a family home as well. In addition, the developer's reputation falls under the non-financial category.

Delphi Question 2: What are the most important features of the real estate investment process (i.e., viewing, negotiation, legal, and financial advice)?

Most of the panellists suggested that viewing of a property is the most important feature of the real estate investment process. Hence, the investors would want to view the property first to identify whether it is the 'right' property to invest in.

A Malaysian panellist commented that:

“Viewing is also important as no two properties are the same. External factors like facing a junction or graveyard behind it may cause its value to drop. Especially important for small time investors who invest on the lower priced properties and those who have a smaller portfolio. Any difference in price due to unexpected reasons may affect their profit in a big way” (Malaysian panellist 5).

The second important feature was financial advice, where investors seek to ensure that there is available capital and finance. Although, according to an Australian panellist, most owner occupiers would not seek financial advice before purchasing a property. The reason being is that the principal place of residence in Australia is exempt from capital gains tax. Some panellists suggested that negotiation is more important. The negotiation process is essential to the investors in order to obtain a property with the best buying price. Subsequently, it enables the investor to earn higher capital gain when he/she sells the property.

Delphi Question 3: Are there any observed differences between Australian/Malaysian and non-Australian/non-Malaysian investors in terms of their decision-making behaviour?

It was believed that the decision-making behaviours of Australian investors would be different to those of non-Australian investors. Similarly, this could be happen to Malaysian investors and non-Malaysian investors due to the cultural differences. The following four quadrant box shows the four different investor types in this discussion.

Figure 2. Four types of investors.

Australian investors investing in Australia	Non-Australian investors investing in Australia
Malaysian investors investing in Malaysia	Non-Malaysian investors investing in Malaysia

Feedback from Australian panellists:

Exchange rates will definitely affect the non-Australian investors. Non-Australian investors are thought to be more focussed on rental returns rather than capital gains. On the other hand, Australians, generally, will more likely be driven by status and wealth accumulation.

Feedback from Malaysian panellists:

There are differences, in terms of choice and options, available for local and non-local investors. The Malaysian housing authority has tighter regulations in place for foreign investors. Panellists suggested that Malaysian investors are more likely to be interested in longer term of investment. Contrarily, non-Malaysian investors tend to be interested in property for personal usage.

A panellist commented that:

“Exchange rates, including the risk of large movements in them and the trajectory of absolute and relative (to Australia) prices in the non-resident’s home market are both significant factors that are not relevant to domestic investors” (Australian panellist 2).

One of the Malaysian panellists agreed that there are differences where:

“Local investors have more options and choices as to the types and locations of their investment properties as compared to foreign ones. Also, there are certain restrictions placed on foreign investors especially when it comes to land ownerships” (Malaysian panellist 2).

3.3 Second round of the Delphi study

Delphi Question 1: If emotional attachment is one of the elements in property investment decision-making, how much do you think emotional factors affect judgement in property investment?

In residential property, the house is also a home. Hence, the residential purchasing process undoubtedly involves emotional factors. According to one of the Australian panellists, there is a high home ownership rate in Australia because most Australians aspire to own a property at some stage in their life. Emotional attachment takes place in the decision-making process where the primary home could be used to fulfil retirement needs. Furthermore, emotional factors in the residential property market may also encourage a person to hold onto a property longer than they should.

Some of the Malaysian panellists suggested that:

“Emotional factors like sense of basic needs security (to have a dwelling place especially for newly wed or elderly couple), as a secured saving plan (investment for long term capital growth to fund children’s education or retirement income), lifestyle living (sense of achievement amongst peers), safety and security (especially for gated and guarded), brand and track record of developers (workmanship and material, finishes quality, timely delivery) and etc. All these have become critical investment criteria for investors. Hence, the perceived value of the above factors will greatly affect the selection of the particular property for investment” (Malaysian panellists 3, 4).

Delphi Question 2: Do you think investors are acting rationally in property investment? Please provide examples of rational and irrational action that you have noticed.

An Australian panellist suggested that non-owner occupiers act rationally in property investment, similar to other types of investment. However, it is important for Australian investors to think like home owners for their investment to be successful. This is because home owners are driving 80% of the residential market in Australia. However, overconfidence is an element that can direct people move beyond rational behaviour into a bounded rational state of mind. Investors are considered to be acting irrationally when they opt for ‘fast lane’ investment.

One of the panellists suggested that:

*“Most people I know think their houses are always worth more than the market will offer. The FIGJAM (F*** I’m Good, Just Ask Me!) syndrome ego based comes again into play. Most people seem to think they are smarter than the next. But in selling, they stress out and hold on and eventually sell at what the market is prepared to offer. Attachment to their style and tastes and the work put into a property seems to reinforce a belief that God is on their side, which of course is not always the case”*
(Australian panellist 4).

Furthermore, a Malaysian panellist advised that:

“All buying decisions initially are prompted by emotional attachment and connection to the perceived values of their purchases, hence the initial action by the investors are mainly irrational. For example, the investors could very much be attracted by the life style concept and well designed and decorated show units without working out their capability to fund the purchase or hoping the rental yield will be able to meet the mortgage repayments (principal and interest). Hence most purchasers are following the herd effect without understanding the market and the sustainability of repayments especially for those who invest for capital and rental yield”
(Malaysian panellist 3).

Delphi Question 3: How does property management work in Australia/Malaysia? What are the behavioural patterns of real estate investors in property management?

Feedback from Australian panellists:

“In Australia, most real estate investors outsource property management to a management agent. Property agent is responsible to rental collection. Nevertheless, some of the managers will take responsibility finding ideal tenants and perform inspection works on the property. Hence, the advantage of property management outsourcing is both reducing pressure and saving time. Not to forget, property managers are often over-loaded with work and some allow their properties to deteriorate through bad or insufficient maintenance. The engagement of property management services lowers the return from rent”.

Feedback from Malaysian panellists:

“There is a different situation in Malaysia in terms of property management. This industry is struggling to gain recognition from real estate investors. Real estate agencies in Malaysia do not offer property management services. There is also a lack of reputable property managers who have the integrity, experience, and service orientation to manage sale and rental management, as in Australia. In view of that, most Malaysian investors are accustomed to managing their own investment properties. Nevertheless, there are increasing number of educated investors who recognize the importance and benefits of property management”

4. DISCUSSION AND IMPLICATIONS

To discover information that would assist in understanding property investment decision-making, this study aimed to gather real market information from experts in the property market and related industries. It was found

that investors choose to invest in the real estate market to earn rental yield, look for capital growth, and to obtain capital gains through their real estate investment portfolio. These findings are supported by Benjamin, Chinloy & Jud (2004) who suggested that people accumulate wealth through the capitalization of housing assets (see also de Bruin & Flint-Hartle, 2003). There are also investors who participate in property investment to generate income after their retirement. Otherwise, the investors utilize the tax shelter benefits, especially in Australia, by leveraging negative gearing. This tax treatment is only applicable in Australia, New Zealand, and Canada.

There are differences between local and non-local real estate investors, in both Australia and Malaysia. For example, exchange rates influence the decision-making process of non-local investors. Additionally, there are legal restrictions placed on foreign investors in Malaysia. Local investors are perceived as being more focused on their needs and practical usage when considering a property. For example, in Malaysia, local investors place more focus on location, amenities, and the facilities of a property during the decision-making process.

The dual function of family home may complicate the investment decision-making. The family home is a 'roof over one's head' and may be one of the biggest investments made by most individuals. As such, emotive attachment to the family home can sometimes be unavoidable. A review of the literature revealed that institutional investors are less affected by emotional attachment and have less bias in their judgment (Kahneman, 2003a; Kahneman, 2003b; Shapira & Venezia, 2000). In this study, some panellists suggested that emotional attachment will only be evident in the owner occupiers' decision making process. In other words, the judgment of non-owner occupiers, second property buyers, or institutional investors is not affected by emotional attachment. A direct emotional attachment was not perceived to be noticeable if the investors purchased a property with the clear objective to acquire capital gain or rental yield. These investors were thought to search for complete information before making investment decisions. The FIGJAM (F*** I'm Good, Just Ask Me!) syndrome, suggested by one of the panellists, conform to the concept of overconfidence that was recommended by Kahneman (2011), which he labelled as "What You See Is All There is" (WYSIATI). According to Payne, Bettman & Johnson (1992), overconfidence is a hindsight bias or the "I knew it all along" phenomenon.

It was also interesting to discover the major differences in property management between Australia and Malaysia. Property management refers to the collection of rent and performing inspection and maintenance on a property. In Australia, properties were thought to be commonly managed by management agents. These agents were seen as liable for collecting rent, maintaining the property, and securing ideal tenant. However, this situation was not reflected in Malaysia. Most Malaysian property investors manage their properties themselves.

Future research can focus on investigating the differences between home buyers and individual investors, particularly addressing which of the bounded rational behaviours affect home buyers and the differences between home buyers and individual investors. In addition, future research into the financial and non-financial elements of decision-making process can be a way forward in understanding the behaviours of home buyers and individual investors.

ACKNOWLEDGEMENTS

The authors wish to thank the Australian and Malaysian panellists for their kind participation and useful feedback in the Delphi study.

REFERENCES

- Andersen, H. S. (1998). Motives for Investments in Housing Rehabilitation among Private Landlords under Rent Control. *Housing Studies*, 13, 177-200.
- Arrondel, L. & Lefebvre, B. (2001). Behaviour of Household Portfolios in France: The role of housing. *Review of Income and Wealth*, 47, 489-514.
- Bell, D. E. 1982. Regret in Decision Making under Uncertainty. *Operations Research*, 30, 961-981.
- Benjamin, J. D., Chinloy, P. & Jud, G. D. (2004). Why Do Households Concentrate Their Wealth in Housing? *Journal of Real Estate Research*, 26, 329-343.
- Black, R. T., Brown, M. G., Diaz, J., Gibler, K. M. & Grissom, T. V. (2003). Behavioural Research in Real Estate: A Search for the Boundaries. *Journal of Real Estate Practice and Education*, 6, 85-112.
- Brown, G. R. & Ong, S. E. (2001). Estimating Serial Cross correlation in Real Estate Returns. *Managerial and Decision Economics*, 22, 381-387.

- Brown, R., Schwann, G. & Scott, C. (2006). Personal Residential Real Estate Investment in Australia: Investor Characteristics and Investment Parameters. *AREUEA Conference*. Vancouver.
- Brueckner, J. K. (1997). Consumption and Investment Motives and the Portfolio Choices of Homeowners. *Journal of Real Estate Finance and Economics*, 15, 159-180.
- Camerer, C. F. & Fehr, E. (2006). When Does "Economic Man" Dominate Social Behaviour. *Science*, 311, 47-52.
- Camerer, C. F. & Weber, M. (1992). Recent Developments in modelling Preferences: Uncertainty and Ambiguity. *Journal of Risk and Uncertainty*, 5, 325-370.
- Carroll, J. S. (1980). Analysing Decision Behaviour: The Magician's Audience. In T. S. Wallsten (Eds.), *Cognitive Processes in Choice and Decision Behaviour*. New Jersey: Lawrence Erlbaum Associates.
- Case, K. E. & Shiller, R. J. (1988). The Behaviour of Home Buyers in Boom and Post Boom Markets. National Bureau of Economic Research NBER Working Paper No. 2748.
- Dalkey, N. & Helmer, O. (1963). An Experimental Application of the Delphi Method to the use of Experts. *Management Science*, 9, 458-467.
- De Bondt, W. F. M. & Thaler, R. H. (1995). Financial Decision-Making in Markets and Firms: A Behavioural Perspective. In: R. Jarrow et al. (Eds.), *Handbook in Operations Research and Management Science*. Elsevier Science B.V.
- De Bruin, A. & Flint-Hartle, S. (2003). A Bounded Rationality Framework for Property Investment Behaviour. *Journal of Property Investment & Finance*, 21, 271-284.
- Einhorn, H. J. (1980). Learning from Experience and Suboptimal Rules in Decision Making. In: T. S. Wallsten (Eds.), *Cognitive Processes in Choice and Decision Behaviour*. New Jersey: Lawrence Erlbaum Associates.
- Einhorn, H. J. & Hogarth, R. M. (1981). Behavioural Decision Theory: Processes of Judgment and Choice. *Annual Review Psychology*, 32, 53-88.
- Friday, H. S. & Higgins, E. J. (2000). The day of the Week Effect in Real estate investment trusts. *Journal of Real Estate Portfolio Management*, 6, 273-282.
- Gallimore, P., Hansz, J. A. & Gray, A. (2000). Decision making in small property companies. *Journal of Property Investment & Finance*, 18, 602-612.
- Gibler, K. M. & Nelson, S. L. (2003). Consumer Behaviour Applications to Real Estate Education. *Journal of Real Estate Practice and Education*, 6, 63-83
- Grenadier, S. R. (1996). The Strategic Exercise of Options: Development Cascades and Overbuilding in Real Estate Markets. *The Journal of Financial*, 51, 1653-1679.
- Hogarth, R. M. & Reder, M. W. (1987). Introduction: Perspectives from Economics and Psychology. In: R.M. Hogarth & M.W. Reder (Eds.), *Rational Choice: The Contrast between Economics and Psychology*. Chicago and London: The University of Chicago Press.
- Ioannides, Y. M. & Rosenthal, S. S. (1994). Estimating the Consumption and Investment Demands for Housing and Their Effect on Housing Tenure Choices. *The Review of Economics and Statistics*, 76, 127-141.
- Kahneman, D. (2003a). A Perspective on Judgment and Choice: Mapping Bounded Rationality. *American Psychologist*, 58, 697-720.
- Kahneman, D. (2003b). Maps of Bounded Rationality: Psychology for Behavioural Economics. *The American Economic Review*, 95, 1449-1475.
- Kahneman, D. (2011). *Thinking, Fast and Slow*, Penguin Books.
- Kupke, V., Rossini, P., Marano, W. & Kershaw, P. (2001). An Analysis of the Private Rental Investment Market: Some Preliminary Findings. *4th Australasian Conference of Tenancy Tribunals and Associated Bodies*. Adelaide
- Lewellen, W. G., Lease, R. C. & Schlarbaum, G. G. (1977). Patterns of Investment Strategy and Behaviour among Individual Investors *The Journal of Business*, 50, 296-333.
- Lim, L. C., McGreal, S. & Webb, J. R. (2006). Perception of Real Estate Investment Opportunities in Central/South America and Africa. *Journal of Real Estate Portfolio Management*, 12, 261-276.
- Loewenstein, G. (2001). The Creative Destruction of Decision Research. *Journal of Consumer Research*, 28, 499-505.
- MacCowan, R. J. & Orr, A. M. (2008). A behavioural study of the decision processes underpinning disposals by property fund managers. *Journal of Property Investment & Finance*, 26, 342-361.
- Mankiw, N. G. (2008). *Principles of Economics*, Harvard University, South-Western Cengage Learning.
- National Property Information Centre (2015). *The Malaysian House Price Index*. Available from: naptic.jpjh.gov.my/portal [Accessed 12 November 2015]
- Quan, D. C. & Quigley, J. M. (1991). Price Formation and the Appraisal Function in Real Estate Markets. *Journal of Real Estate Finance and Economics*, 4, 127-146.
- Paraschiv, C. & L'Haridon, O. (2008). Loss Aversion: Origin, Components and Marketing Implications. *Recherche et Applications en Marketing (English Edition)*, 23, 67-82.
- Payne, J. W., Bettman, J. R. & Johnson, E. J. (1992). Behavioural Decision Research: A Constructive Processing Perspective. *Annual Review of Psychology*, 43, 87-131.
- Real Estate Institute of Western Australia 2015. *Perth Rent and Vacancy Rate*. Available from: <http://reiwa.com.au/Research/Pages/Perth-listings-and-rental-trends.aspx> [Accessed 12 November 2015].
- Roberts, C. & Henneberry, J. (2007). Exploring office investment decision-making in different European contexts. *Journal of Property Investment & Finance*, 25, 289-305.
- Samuelson, W. & Zeckhauser, R. (1988). Status Quo Bias in Decision Making. *Journal of Risk and Uncertainty*, 1, 7-59.
- Shapira, Z. & Venezia, I. (2001). Patterns of Behaviour of Professionally Managed and Independent Investors. *Journal of Banking and Finance*, 25, 1573-1587.
- Simon, H. A. (1987). Rationality in Psychology and Economics. In: R. M. HOGARTH & M.W. REDER (Eds.), *Rational Choice: The Contrast between Economics and Psychology*. Chicago and London: The University of Chicago Press.
- Tetlock, P. E. (1992). The Impact of Accountability on Judgment and Choice: Contingency Model. *Advances in Experimental Social Psychology*, 25, 331-376.
- The iProperty Group (2012). *Asia Property Market Sentiment Report 2012*. Available from: <http://www.iproperty.com.my/news/4958/iproperty-com-asia-property-market-sentiment-report-2012-h1> [Accessed 13 March 2012].

- The iProperty Group (2013). *Asia Property Market Sentiment Report 2013*. Available from: http://invst8r.com/downloads/files/iProperty_Asia_Sentiment_Survey.pdf [Accessed 31 May 2014].
- Wood, G. & Ong, R. (2010). Factors shaping the decision to become a landlord and retain rental investments. *AHURI Final Report No. 142* Melbourne: Australian Housing and Urban Research Institute, RMIT Research Centre and Western Australia Research Centre
- World Economic Forum (2015). *The Global Competitiveness Report 2015-2016*. Available from: <http://reports.weforum.org/global-competitiveness-report-2015-2016/> [Accessed 12 November 2015].
- Yang, F. (2005). Consumption Along the Life Cycle: How Different is Housing? : Federal Reserve Bank of Minneapolis Research Department Working Paper 635.
- Yinger, J. (1981). A search model of Real Estate Broker Behaviour. *The American Economic Review*, 71, 591-605.