

Available online at www.sciencedirect.com**ScienceDirect**

Procedia - Social and Behavioral Sciences 101 (2013) 368 – 378

Procedia
Social and Behavioral Sciences

AicQoL 2013 Langkawi
AMER International Conference on Quality of Life
Holiday Villa Beach Resort & Spa, Langkawi, Malaysia, 6-8 April 2013
"Quality of Life in the Built and Natural Environment"

Attributes Influencing Housing Product Value and Price in Jakarta Metropolitan Region

Raden Aswin Rahadi^{a*}, Sudarso Kaderi Wiryono^a, Deddy P. Koesrindartoto^a,
Indra Budiman Syamwil^b

^a*School of Business & Management*

^b*School of Architecture, Planning, and Policy Development*

Bandung Institute of Technology, Jl. Ganesha No. 10, Bandung 40132, Indonesia

Abstract

This paper is a part of an ongoing dissertation research that tries to analyze the relationship between housing prices, Real Estate buyers' preferences, Real Estate developers' assumption of price, and external factors arising that influence the price. This paper acts as continuation study using the hypotheses from the author's previous research on the same topic to validate the hypotheses. The findings suggest that design, brand, facilities, reputation, reinvestment value, pricing policy, and speculative behavior play a significant part as internal and external attributes in price definition for housing price in Jakarta Metropolitan Region.

© 2013 The Authors. Published by Elsevier Ltd. Open access under [CC BY-NC-ND license](http://creativecommons.org/licenses/by-nc-nd/4.0/).

Selection and/or peer-review under responsibility of the Association of Malaysian Environment-Behavior Researchers, AMER (ABRA malaysia).

Keywords: Housing customer preferences; property developer perception; housing pricing model; real estate theory development

1. Introduction

Weimer (1996) stated that real estate resources have distinctive aspects that differentiate them from other commercial products. The aspects include their fixed location, long life span, large economic units for factories and real estate commercial products, government influences, and their market characteristics. When viewed from property customer perspective, they usually looked upon several key factors created

* Corresponding author. Tel.: +62-22-253-1923; fax: +62-22-250-4249.
E-mail address: aswin.rahadi@sbm-itb.ac.id.

from the given and created condition. A process of weighing and decision making will take place. At the end, customer will accept adjusted price.

From the property developer standpoint, when setting the price for a certain real estate product, they usually rely on their experience when selling similar products. From there, they make assumptions on what factors influence customer when purchasing the real estate product, and creates additional factors that boost the real estate price.

It is a difficult task for housing customers; real estate developers; government and real estate brokers to understand the price value of real estate products. The value is difficult to measure due to their heterogeneity and due to the amount of transaction occurring does not represent market values in an imperfect real estate market (Aluko, 2007). The other problem is because of different perception made by real estate developer and their customer. The two perspectives and point of view usually never met eye to eye to produce similar results. Research results indicate that real estate valuers skills and abilities influence the most appropriate real estate price value (Daly et al., 2003; Aluko, 2007). This approach neglected the facts that real estate developers also have their own perception towards price.

Using the author's previous study hypotheses about factors influencing price for housing products in Jakarta Metropolitan Region (Rahadi et al, 2012), this paper will try to cross examine those hypotheses through the interview with several real estate and property key players in Jakarta Metropolitan Region. Findings from this research will then be used to create the basis of the author's dissertation research conceptual model. Pricing model for Jakarta Metropolitan Region will use the conceptual model conceived from this research.

2. Literature review

Researchers have conducted studies to understand the behavior of real estate customer when selecting and purchasing residential products. There are several methods on finding the consumer attributes when selecting for a house for them to purchase (Zanis and Jusan, 2010). Research in real estate customer preferences can be classified in two main categories (Weimer, 1966). The categories are dwellers characteristics and environment characteristics. Further on, dwellers characteristics can be divided to dwellers demographics and dwellers social economy. Environment characteristics can be divided to neighborhood environment and neighborhood dwelling. Researches discussing dwellers characteristics can be found in the study by Blakely & Snyder (1998); Daly et al. (2003) and Shafiei et al. (2010). Researches discussing neighborhood characteristics can be found in the study by Eves (2006); Aluko (2007); Kopits et al. (2007); and Hoshino (2008).

Study on real estate developer perception towards price are still new, and only been analyzed by a handful of researcher. Some of the researches worth mentioning include research by Chang and Havard (2009) and Knight (2011). Research in real estate developer perception can be classified in two main categories. The categories are valuers and housing product perception. Housing product perception deals with the assumption that housing product viewed as a commodity. This perspective supported by the study by Chang and Havard (2009) and The Real Estate Developer Association of Hong Kong (2010). Valuers perception deals with intangible value of the housing product, which can only be perceived via experience and knowledge of the valuers. Researchers have analyzed this perspective, including Daly et al. (2003); Aluko (2007); Knight (2011) and Babawale and Oyalowo (2011). As stated by Daly et al. (2003) and Aluko (2007), real estate developer or valuers usually do not analyze customer preferences and inputs when setting real estate product price. They prefer to rely on their experience, own judgment, and assumptions. This is in line with the author's statement. Based on the writer experience working in two property developers in Jakarta Metropolitan Region, and based on preliminary interviews with property developer managers, mostly when deciding to set a price for a property product, they usually

relies on experience on selling the similar product, not based on scientific research. From both of the approaches, this research will try to analyze deeper into the valuers perception when setting the price for housing product.

Last field of research that is worth analyzing is the study of external attributes that influencing price of housing product. In this case attributes created, not from the buyer (residential customers) and seller (real estate developer). There are several studies conducted, discussing these external factors. Some of the examples such as property cycle (Yusof, 2001, Malpezzi and Wachter, 2004, Simanungkalit, 2009, Reed and Wu, 2010, Pornchokchai, 2011), speculation (Malpezzi and Wachter, 2004, Pornchokchai, 2011), regulation (Malpezzi, 1996 and Eicher, 2008), economic condition (Hwang and Quigley, 2006 and Baker, 2008), and demand (Mankiw and Weil, 1989). Synthesis from these literature reviews will be the base for creating hypotheses and research questions for attributes influencing price for housing products in Jakarta Metropolitan Region.

3. Problem statement and objectives

The purpose of this research is to identify customer preferences of residential buyers and perceptions of property developers towards price. There are several research objectives that expected to be achieved:

- To investigate attributes that influence property developer when setting the price for housing product
- To examine attributes that influence customer when analyzing price for housing product
- To investigate external attributes influencing price for housing product

This present study expected to produce significant findings due to several reasons:

- This study will pioneer a housing customer preference model in a city scale.
- This study will be the first to uncover the reasoning behind pricing decision process attributes when setting the price for housing product.
- So far there is no research that tries to combine both opposite views of customers and property developers to produce a certain price model. This research is the first to try to integrate both points of view to produce a pricing model for residential housing products.
- Fourth, the incapability of valuers, in this case, property developer, to produce an accurate price decision will cause substantial loss of business and unnecessary exposure to litigation. According to Aluko (2007) there's a need to develop a centralized property market database or indices, and publication of revised valuation standard. This research is attempting to open the pathway for the first centralized market database in Indonesia to reduce the risk of loss and litigation for the property developers. The future use of this research then can be used to produce an index for Indonesian pricing data which at the end can be used to set up other indexes, such as the Real Estate Index Trusts (REITs).
- Lastly, as studies about effects of external attributes influencing price for housing products price is exceedingly rare, this research will try to analyze the phenomenon via pricing model test in order to find and determine the influencing factors. This research will be the first to integrate the internal and external attributes needed to create a single pricing model for housing product.

4. Research methodology

This preliminary study will try to analyze pricing model for residential product in Jakarta Metropolitan Region, Indonesia. For this purpose, we sent (ten) interview letters to real estate developers in the area. Seven has responded and giving their permission for the interview. Interview conducted for two and a half months (November 2012 – January 2013). Respondents demographic consisted of Serpong, Bogor,

Sentul, West Jakarta, East Jakarta, Central Jakarta, South Jakarta, and Bekasi. Respondent's background consisted from Senior Analyst to Managing Director of the real estate development.

We will produce findings by analyzing collection of interview manuscript. Cloud and descriptive approaches used to present the findings.

4.1. Interview questions

Questions asked to the respondents based on the author's dissertation research hypotheses (Rahadi et al, 2012). From the research questions above, respondents expected to provide their own answers for the main questions of this research:

- What are the underlying reasons for property developer when deciding to set a price for a housing product in Jakarta Metropolitan Region?
- What are the characteristics underlying customer preferences for housing product in Jakarta Metropolitan Region?
- What are the external attributes influencing the price of housing product in Jakarta Metropolitan Region?

Respondent tasked to comment the research sub-questions about underlying reasons for real estate developer when deciding to set a price for a housing product in Jakarta Metropolitan Region, Indonesia, after answering the main questions.

- Design plays a significant part in price setting for property developer when dealing with housing product.
- Developer brand play a significant part in price setting for property developer when dealing with housing product.
- Facilities provided play a significant part in price setting for property developer when dealing with housing product.
- Accessibility plays a significant part in price setting for property developer when dealing with housing product.

Underlying reasons for a residential customer when purchasing residential product in Jakarta Metropolitan Region, Indonesia:

- Proximity plays a significant part in the purchasing decision for the customer when purchasing housing product.
- Affordability plays a significant part in the purchasing decision for the customer when purchasing housing product.
- Livability plays a significant part in the purchasing decision for the customer when purchasing housing product.

5. Result and analysis

This study will use to approaches to present the findings: cloud and descriptive approaches. Calculation for the cloud approach will use the help of Wordle word cloud application. The display of word cloud results based on the analysis of words mentioned. Larger words produced by the application shows the significance of the findings. Vice versa, smaller words produced by the application shows the insignificance of the findings. For descriptive approach, we will try to show the significance of attributes influencing the overall preferences, consumer preferences, real estate developers, and external attributes.

5.1. Interview results - Overall

Overall, the hypothesis asked consisted of combination between customer preferences, real estate developer perceptions, and external factors that affect the price of residential products in Jakarta Metropolitan Region.

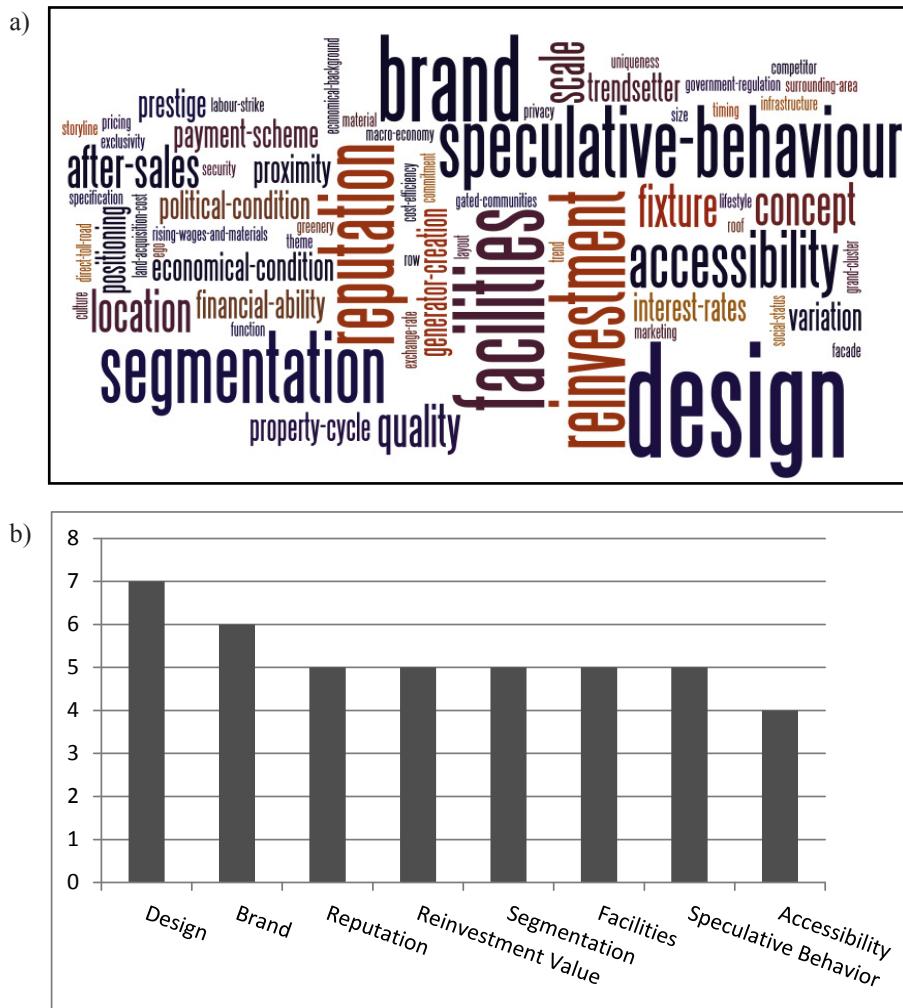


Fig. 1. (a) Interview results in cloud; (b) Attributes influencing price

Attributes affecting the price of residential products in Jakarta Metropolitan Region, there are 64 attributes mentioned by respondents. From the total of seven respondents, all of them agreed that design plays a significant part in price definition. Six of the respondents agreed that brand affects pricing decision. Five of the respondents agreed that developer reputation, product reinvestment value, product segmentation, facilities provided, and speculative behavior of buyers influence the pricing of housing products in Jakarta Metropolitan Region. Lastly, four out of seven respondents agreed that accessibility play a significant part in product pricing.

5.2. Interview results – Customer preferences

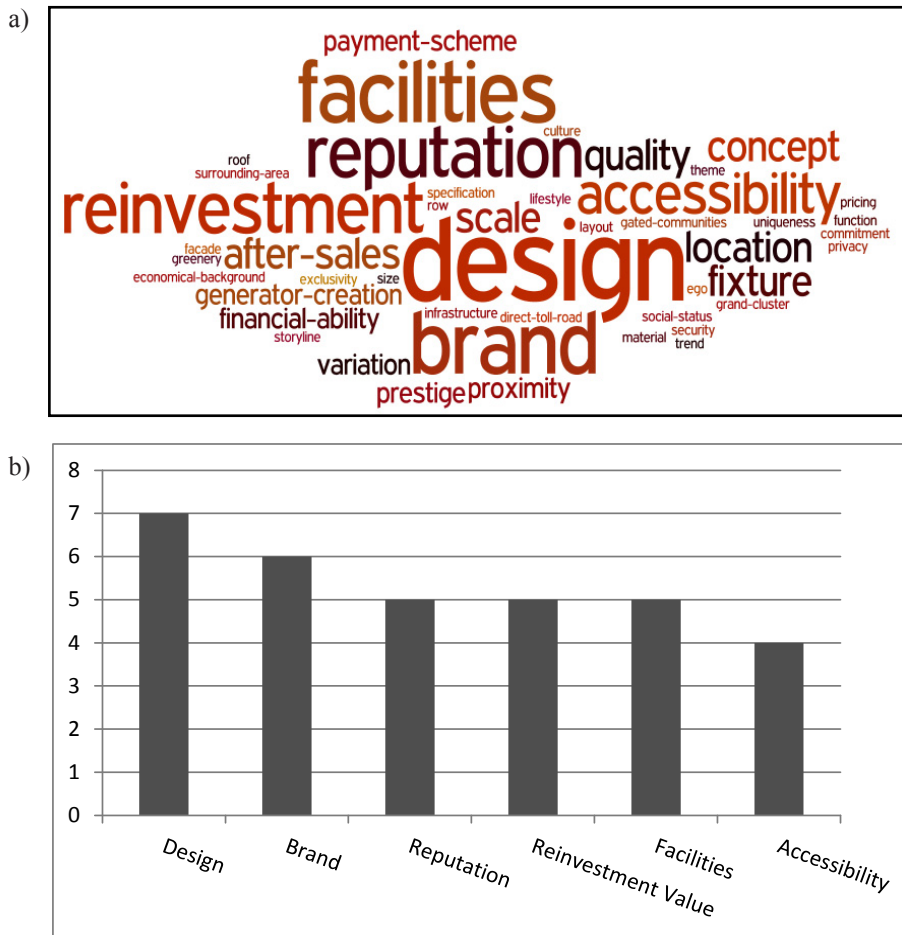


Fig. 2. (a) Interview results-customer preferences in cloud; (b) The customer preferences attributes influencing price

For customer preferences there are 46 attributes mentioned by the respondents. All of the of respondents agreed that design affect housing price; six of them agree that brand influence housing price; five of them agree that facilities, reputation, and reinvestment value play a vital part in housing price; and four of them agree that accessibility is vital for setting up housing price.

5.3. Interview results – Real estate developer

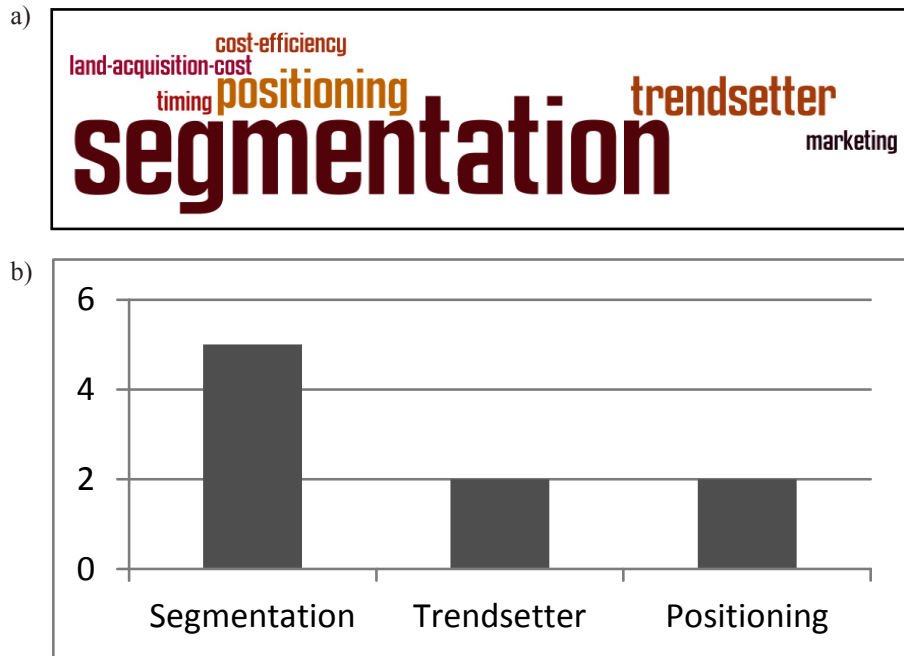


Fig. 3. (a) Interview results- Real estate developer perspectives in cloud; (b) Real estate developer perspectives attributes influencing price

For real estate developer perspective there are six attributes influencing the price. From all respondents, five of them agreed that segmentation affect housing price, and two of them agree that trendsetter and positioning help them to increase the price of housing product they sold.

5.4. Interview results – External factors



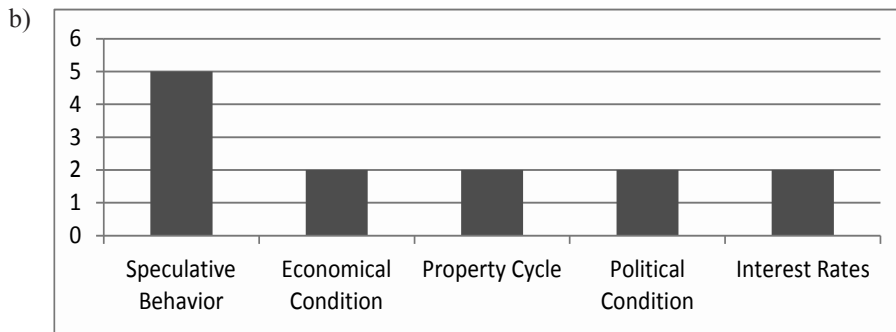


Fig. 4. (a) Interview results- External factors in cloud; (b) External attributes influencing price

The research shows that there are factors influencing price that cannot be controlled by either buyer (housing consumer) or seller (real estate developer). The factors called as external factors. From the interview result, five of them agree that speculative behavior is the most influencing uncontrollable factors that influence housing price. Next two of them agree that economical condition, property cycle, political condition, and interest rates are uncontrollable attributes that influence housing price.

6. Discussion and conclusion

Based on the research findings we can see that most influencing attributes that affecting the price mostly come from the customer point of view. Seven respondents agreed that design affect housing price. Six respondents agree that brand influence housing price. Five respondents agree that facilities, reputation, and reinvestment value play a prominent part in housing price. Four respondents agree that accessibility is essential for setting up housing price. From real estate developer point of perspective, Five of them agreed that segmenting product can help improve pricing policy. From external attributes that cannot be controlled by buyers and sellers, speculative behavior plays a significant part in price definition.

Customers reflected most of the attributes influencing the price. From here we can make a conclusion that in order to optimize price of housing product, real estate developer should pay more attention towards what the customers prefer, and not just reflecting on their experience when setting up price for their new products.

Real estate developer should look carefully at their current design and listen more on what their customers demand on the design. Currently most of the real estate developer when designing new products only looked at the trend of design of new developments in the United States, Europe, China, and developing countries outside Indonesia. This one-sided action led real estate developer to make guesses on what customers need. Most of the time the design are not optimally caters what customers wanted.

Brand of real estate developer is a key factor in price setting. Brand have interconnected if not interchangeable meaning with a reputation that it bears. Real estate developer will have a better reputation and brand if they can interpret what customer need, act professionally, deliver their product on time, maintaining their quality, and support the customers with good after-sales service will have a better reputation and brand. Real estate developers that have good brand will have better position to bargain their price, compared with new real estate developer that just started to launch their initial product. New real estate developer usually tries to improve their initial brand and reputation, by recruiting veteran real estate professionals to join them in top managerial level, and by hiring top architects, reputable contractors, and sales agency with a good brand to boost their credentials.

Facilities provided by real estate developer is vital when customer plan to purchase a housing product. The facilities itself can be separated into several categories including education facilities (school, universities), living facilities (supermarket, entertainment center), business facilities (shophouses, office building, bank), religion facilities (mosque, church, temple), and others. Are the current development located closely with aforementioned facilities? Do customers willing pay a premium in order to live near those facilities? Sometimes when development location is remote, real estate developer create the facilities to support the sales of their product. These examples can be found in Indonesia, like the development of BSDCity, overall real estate development in Karawaci and Serpong area, and current development of Sentul City in Sentul area.

Customer always prefer to purchase real estate product that has reinvestment value. The reinvestment value can be obtained from renting the real estate product or by selling them. Reinvestment value related with almost all of the factors contributing to price, including brand, reputation, location, and other related factors. For this, real estate developer should always try to see from the customer perspective and look what are their expectation for the current development in the long term. What happen with the area in the next 5, 10, 15, 20 years from now? Will new toll-road be built near the area? Does the government has a plan to move their capital to the location near the proposed development, like happening in Putrajaya, Malaysia or failed plan on moving Indonesia capital to Jonggol area? These questions can determine the future of the product, the reputation of the real estate developer, and most importantly, the brand of the real estate developer.

Interconnected with facilities, accessibility related closely with price of a real estate product. People who lives in Jakarta relies heavily to their automobile despite worsening condition of the traffic. As the price of real estate price in Jakarta increased exponentially and the reluctance of Indonesian to purchase and lived in the apartment, customers choose to purchase housing in the sub-rural area of Jakarta Metropolitan Region. People working in Jakarta area now have considered living in a location such as Serpong, Bekasi, Cibubur, Sentul, Depok, and even Bogor. For this, the importance of direct toll-road access, good feeder bus connection, dedicated train station, and public transportation hub station can increase the value of real estate product in the surrounding area.

Viewed from real estate developer perspective, by carefully segmenting product and targeting customer for a market segments, real estate developer can significantly improve their pricing strategy. Segmentation relates heavily to the demographic condition of the area, economical background of the customer, design of the product, location of the development, facilities provided, and other attributes. Real estate developer can carefully determine the right design, the right layout, and the right price for the product to be sold to the customer in the area.

For external factor that cannot be controlled by either customer and real estate developer, speculative behavior of customer and real estate developer can heavily influence the price of housing product. Customers hoping to obtain quick gain from a real estate product can purchase it in bulk. Here, the process of supply and demand function kicked in and making price of the product increase uncontrollably. The same thing can be done by real estate developer. If the product is premium, real estate developer can sell the product in several phases. Real estate developer will sell the product like auction. Highest bidder will get the product. However, if the real estate developer conduct this action too aggressively, the strategy can backfire and hurt their reputation and brand. This action in the long-term can hurt the company.

The findings suggest that although most of the real estate developers in Jakarta Metropolitan Region create the assumption for the price of the housing products based on their experience, there are silver linings of attributes that can be used as guidelines by real estate developers when setting up housing price. These attributes should be used by real estate developers when they are planning to set up price for their housing products.

7. Future research

The results from this paper are useful for the continuation of the ongoing dissertation research currently conducted by the author. This study act as preliminary research for the author to obtain valuable data that further be expanded through his dissertation study. It is hopeful that the result of the following dissertation study can produce a better understanding about the price formulation for housing product in Jakarta Metropolitan Region.

Acknowledgements

The authors would like to thank the organizing committee and reviewer from AiCQoL 2013 International Conference, for giving us the opportunity to participate in this conference.

References

- Aluko, B. T. (2007). Examining valuer's judgement in residential property valuations in residential property valuations in metropolitan Lagos, Nigeria. *Journal of Property Management*, 98-107.
- Babawale, G. K., & Oyalowo, B. A. (2011). Incorporating Sustainability into Real Estate Valuation: the Perception of Nigerian Valuers. *Journal of Sustainable Development*, 236-248.
- Baker, D. (2008). *The housing bubble and the financial crisis*. Washington DC: Center for Economic and Policy Research.
- Blakely, E. J., & Snyder, M. G. (1998). *Fortress America: gated communities in the United States*. Washington, D.C.: Brookings Institution Press.
- Chang, N. S., & Havard, T. M. (2009). *Understand How Developers Construct the Pricing of the Residential Property by Process Tracing Protocol*.
- Daly, J., Gronow, S., Jenkins, D., & Plimmer, F. (2003). Customer behavior in the valuation of residential property: A comparative study in the UK, Ireland and Australia. *Journal of Property Management*, 295-314.
- Eves, C. (2007). Planned residential community developments: do they add value? *Journal of Property Management*, 164-179.
- Hwang, M., Quigley, J.M. (2006). Economic Fundamentals in Local Housing Markets: Evidence from U.S. Metropolitan Region. *Journal of Regional Science*, 46(3), 425-453
- Hoshino, T. (2008). *Estimation and Analysis of Preference Heterogeneity in Residential Choice Behavior*. Department of Geography and Environment, London School of Economics, 1-29.
- Knight, T. (2011). The perceptions of property developers: approaches to the process of development. *Centre for Environment and Society Research*, 1-17.
- Kopitz, E., McConnell, V., & Walls, M. (2007). The Trade-off between Private Lots and Public Open Space in Subdivisions at the Urban-Rural Fringe. *Resources for the Future*, 1-19.
- Mankiw, N. G., Weil, D. N. (1989). The Baby Boom, the Baby Bust, and the Housing Market. *Regional Science and Urban Economics*, 19, 235-258
- Malpezzi, S. (1996). Housing Prices, Externalities, and Regulation in U.S. Metropolitan Areas. *Journal of Housing Research*, 7(2), 209-241
- Malpezzi, S., Wachter, S. M. (2004). *The Role of Speculation in Real Estate Cycles*. Zell/Lurie Center Working Papers 401, Wharton School Samuel Zell and Robert Lurie Real Estate Center, University of Pennsylvania.
- Pornchokchai, P. (2011). *Real Estate Cycles: What Can We Learn?* 17th AVA Pre-congress, Thailand 9 July 20-22, 2011, Siem Reap, Cambodia.
- Rahadi, R. A., Wiryono, S. K., Koesrindartoto, D. P., Syamwil, I. B. (2012). Relationship between Consumer Preferences and Value Propositions: A Study of Residential Product. *AcE-Bs 2012 Bangkok Procedia - Social and Behavioral Sciences*.
- Reed, R., Wu, H., (2010). Understanding property cycles in a residential market. *Property Management*, 28(1), 33 – 46.
- Shafiei, M. W., Foo, F. S., Said, I., & Omran, A. (2010). Malacca House Buyers' Housing Preferences in Malaysian New Residential Market. *ANNALS of Faculty Engineering Hunedoara - International Journal of Engineering*, 217-226.
- Simanungkalit, P. (2009). *Property Investment Strategy in the Global Crisis*. Tjiptono Darmadji Network "Seminar Investment In Property", April 14, 2009, Le Meridien Hotel, Jakarta.
- Weimer, A. M. (1966). Real Estate Decisions are Different. *Harvard Business Review*, 105-112.

- Yusof, A. (2001). Economy and Commercial Construction Cycle in Malaysia, *PRRES Conference 2001*, January 21-24, 2001. Adelaide, the Pacific Rim Real Estate Society (PRRES).
- Zinas, B. Z., Jusan, M. M. (2010). Choice Behaviour of Housing Attributes: Theory and Measurement. *Asian Journal of Environment-Behaviour Studies*, 1(2), 1-18.