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An Analysis on Malaysia Property Market: Factors Contributing Sustainability to Residential Bumiputera Properties Overhang in Seremban, The Malaysia Vision Valley

Nur Atika binti Othman¹, HJ. SLAE Zaiful Hasmi bin Mohd Hashim², Beni Widarman Yus Kelana³*, Sanil S Hishan⁴

Abtract

This paper aims to scrutinize the main factors that contribute to the glut of supplies for Bumiputera residential properties in Seremban to help the researcher's industry partners understand the market better, thus contribute to the industry in general. Each of the states in Malaysia imposes different rules and regulations for Bumiputera unit allocations which are strictly sellable to Bumiputera customers only. In Negeri Sembilan, it is compulsory to allocate 30 percent of total units launched for Bumiputera. When there are no ready buyers, these units become unsold units and developers have to bear huge holding costs and at the same time, their GDV drop as the units remains unsold. The research model has been modified from the 'Theory of Planned Behavior'(TPB) and the behavior that is being studied is the purchasing behavior for Bumiputera residential property in Seremban. The survey's questionnaires for this study measures three major factors capturing subjective norms, attitudes towards purchasing Bumiputera properties and Perceived Behavioral Control (PBS). Descriptive analysis in this research is derived from 'Statistical Package for the Social Sciences'(SPSS) Statistics software. The results confirmed the hypotheses which stated that all three variables in TPB significantly influenced the intention and behavior to purchase Bumiputera residential properties in Seremban. Studies about TPB has helped not only businesses but also other industries to better understand peoples' behavior and what to expect and react towards the behavior.

Keywords: Bumiputera, Residential, Overhang, Behavior, Properties.

Introduction

Study Background

Prior to year 2017, most property developers only catered for exclusive neighborhood without considering the low-income earner's capability to get a loan to finance the house regardless of the current market that demanded more, single story houses. Previous data concluded that 70% of potential property buyers preferred single story terrace or bungalow houses below RM 500,000 (NAPIC, 2019). These people are mostly Bumiputera buyers with low to middle income group. There are huge numbers of Malaysian Bumiputera with age above 40 years old still renting houses and still could not afford to buy their own property. It reflects the financial weakness of these groups of people as they have higher value of liability over assets (Rangel *et al.*, 2019). There is a lot of assumptions from property experts, one of which is Siva Shanker who has put out statement that the property market will reach its peak in 2020 despite the slow economic growth. Public, on the other hand are expecting that the property price will go down as the new

¹ Azman Hashim International Business School, UTM. Email: nuratika@graduate.utm.my, ORCID: 0000-0001-6910-0710

² Azman Hashim International Business School, UTM. Email: <u>zaifulhasmi@utm.my</u>, ORCID: 0000-0002-8844-3169

³ Azman Hashim International Business School, UTM. Email: beni@utm.my, ORCID: 0000-0001-7140-7447

⁴ Zilion Insight, Australia. Email: hishanssanil@gmail.com, ORCID: 0000-0002-7109-5719

Government took over during the last general election. While affordable properties are classified as property below RM500,000, the home buyers as general still find property price from RM300,000 to RM499,999 are less than affordable. The study was conducted at an industry partner, a property development company by using its resources and data. The industry partner, Sunrise MCL Land (SML) is a subsidiary company owned by equal share of UEM Sunrise and MCL Land Limited. SML develops a 488 acres boutique township with a concept of affordable premium homes. The area has less congestion, traffic, noise and offers a degree of privacy that is not available in densely populated urban areas.

Problem Statement

National Property Information Centre (NAPIC) reported in 2019, that the property market has been experiencing a downturn in 2018 and was at its slowest since 2012. It is challenging to launch new projects when the overhangs are huge. Property developers' profits are also shrinking as developers are being pressured to give additional discounts and rebates to clear the balance stocks (Rangel et al., 2019). The developers also suffered from reduction in profit margins as they must cover all quit rents of the overhang properties (Teck-Hong, 2011). All the balance stocks become liabilities to developers as developers cannot increase price, yet developers still have to conduct all necessary maintenances and marketing campaign for the unsold properties. Seremban is not an exception when it comes to recording increasing overhang residential property. There are 3,620 units of unsold residential units which are still under construction in 2019 while 1,048 units with overhang status as they are already completed for more than 9 months (NAPIC, 2020). This is worrying with all the new launches that will add up to the figures. Most of these unsold units are Bumiputera residential properties which make up 30 percent of the total number of units developed in almost all township and housing development in Negeri Sembilan.

Literature Review

Bumiputera property overhang is a popular topic and most studies revolve around the factors influencing the property overhang. A study by Bujang et al., 2007 discussed specifically about the Bumiputera allocation, the difficulties in securing loans, socio-economic, socio-historical and speculation on the property market being the major contributor to the piling up of the unsold Bumiputera properties. Soon and Tan in 2019 has also conducted a study indicating the gaps between monthly income and the house preferred by the home buyers. People from middle-income group ranging from RM 2,001 to RM 4,000 have higher preference for landed property which are priced beyond their affordable range. They also mentioned in the paper that customers' preferences are also influenced by the location of the properties.

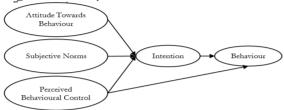
NAPIC, 2019 reported that the overhang property cases in Malaysia is in serious condition. Overhang property is classified as unsold units that has obtained Certificate of Completion (CCC) for more than 9 months. Teck Hong, 2011 in his paper discussed the neighborhood preferences of property buyers in the Kelang Valley. Home buyers becomes more careful in making decision to purchase property thus it is important to understand the market demands as this can further brings mismatch in the housing supply and demand. Malaysian home buyers may have different perceptions, behaviors and preferences for their dream home. They generally prefer landed houses with gated and guarded facilities with a freehold land tenure (Teck-Hong, 2011). The study was conducted at the Kelang Valley area, which contributed for more than 45 percent of total new launches in Malaysia as reported by NAPIC, 2019. Houses in the Kelang Valley are demographically similar with little variations in the housing qualities. (Teck-Hong, 2011).

Malaysia House Price Index (MPHI), constantly increasing at medium range and as at Q2 2019, it was at 194.8 points, an increase of 0.9 percent compared to Q2 2018. The Malaysian property market is expected to soar supported by the growth of gross domestic product (GDP) at 4.9 percent and few

initiatives by the Government to support the housing market activities (NAPIC, 2019). In the near future, the property sector will undergo standardization and appropriate changes will be brought about for the market condition to persevere (NAPIC, 2019). Other areas of research that relate to the study are how the economy affect and be affected by the property industry and the sustainability of the property developers. The study of economic impact on the other hands place emphasis on the effect of inflation against property market and how effective is the property market on hedging against expected inflation. These issues have been discussed in by Lin, (2014) and Razali and Adnan, (2015).

Related Framework for the Research

Figure 1: Theory of Planned Behavior.



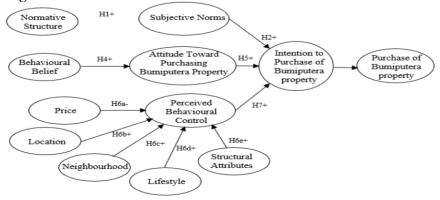
Source: From Azjen (1991)

Azjen, 1991 has put forward the 'Theory of Planned Behavior' (TPB) which has become one of the most popular and well tested theories to researchers (Okun and Sloane, 2002) due to its comprehensiveness of the behavioral antecedent and provided a framework to extend previous researches (Bobek and Hatfield, 2003). The behavioral intentions in TPB are defined by three major determinants. The first is the individual's attitude toward the behavior. A favorable attitude towards a behavior may result in favorable intention and vice versa. Secondly, the subjective norms, which are related to the normative beliefs of the important people surrounding an individual Obam et.al (2023). Normally, when a family members or friends recommend the products, a person's intention to buy the same product is strengthen and he or she will be more likely to purchase the product. The third most important factor in TPB is the perceived behavioral control (PBC), the evaluation of an individual's belief of own abilities to perform a behavior Duan.et.al (2023). Even though a person may have enough intent and motivation from the people surrounding, if the person faces constraints such as time and financial limitation, it will still be less likely that he or she will purchase the product (Azjen, 1991).

Methodology

Framework Relevant to Research Issue

Figure 2: Research Model Relevant to Research Issue.



760 An Analysis on Malaysia Property Market: Factors Contributing Sustainability to Residential Bumiputera Properties Overhang in...

The research model used in this research is illustrated in Figure 2. It has been modified from the 'Theory of Planned Behavior' (TPB) and the behavior that is being studied, that is the purchasing of Bumiputera residential property in Seremban. The model is dissimilar with the typical Azjen, 1991 which include intention as the mediating effect, instead, the variables are designed to be in direct relationship with the purchasing behavior of Bumiputera property.

For that reason, the intention was omitted from the study and the subjective norms, attitudes and perceived behavioral control are put in direct relationship with the purchasing behavior. Seven hypotheses are developed from the model as illustrated in Figure 2. The hypotheses are derived from the TPB model as a basis and few of previous discussion on TPB effect on purchasing behaviors. The construct is drawn by reasoning on the positive or negative relationship between the attitude towards purchasing Bumiputera properties, the subjective norms and the perceived behavioral control to the purchasing behavior of Bumiputera residential properties in Seremban.

In the Bumiputera property purchase context:

H1: Beliefs that are hold by the most important people in a person's life about purchasing Bumiputera property positively influence the individual's subjective norms.

H2: The subjective norms of purchasing Bumiputera properties has positive influence on the purchasing intention and behavior of Bumiputera properties

There are two components of behavioral beliefs which are the beliefs on the outcomes that a person holds while performing a certain behavior and the evaluations of a person on the outcomes (Ajzen and Fishbein, 1980). Therefore:

H4: Belief that it is important to purchase own properties has positive effect on the attitude towards purchasing Bumiputera properties **H5:** Positive attitudes towards purchasing Bumiputera properties positively influence the purchasing intention and behavior of Bumiputera properties in Seremban

The factors affecting the PCB could be internal or external factors in which from the property purchasing context, the factors involved are the prices, location, neighborhood, lifestyle, and structural attributes. Few hypotheses to be studied are as follows:

H6a: The price of property has negative effect on the PBC of purchasing Bumiputera properties

H6b: The property location has positive effect on the PBC of purchasing Bumiputera properties

H6c: The neighborhood in which the property is located has positive effect on the PBC of purchasing Bumiputera properties

H6d: The lifestyle offered has positive effect on the PBC of purchasing Bumiputera properties

H6e: The structural attributes of the property have positive effect on the PBC of purchasing Bumiputera properties

H7: Positive beliefs on PBC has positive impact on the intention and purchase behavior of Bumiputera residential properties in Seremban

For this research, questionnaires will be distributed through softcopies and hardcopies of which; softcopies will be embedded in a Google Form link and shared through WhatsApp and emails while hardcopies will be handed over to the respondents during face to face meet up. The questionnaire was developed by using five-points Likert scale from 1 (strongly disagree) to 5 (strongly agree), a multi-items scale which were employed due to the psychological constructs that cannot be reliably measured via single rating scale. Using the TPB as a basis, the questionnaire measures three major factors capturing the subjective norms, the attitudes towards purchasing Bumiputera properties and the perceived behavioral control.

The respondents selected for this research is from the purposive sampling technique. As the research is focusing on the behavior of Bumiputera community towards purchasing Bumiputera residential properties, only Bumiputera respondents were invited to respond to the survey. The data collection

started in April 2020. The questionnaire has been piloted test to 30 respondents to avoid overlooking errors and evaluate the clarity of instructions, comprehensiveness and time taken to answer the survey. The questionnaire then was administered through Google Forms and distributed through WhatsApp application, e-mail, and Facebook. Total respondents responding to the questionnaire is 211 participants.

Data Analysis

Data Analysis

Table 1: Sample Statistics.

•	Frequency	Percentage
Gender		• •
Male	112	53.1%
Female	99	46.9%
Age		
Below 25 years old	13	6.2%
25 to 35 years old	79	37.4%
36 to 45 years old	53	25.1%
46 to 55 years old	58	27.5%
56 and above	8	3.8%
Marital Status		
Single	36	17.1%
Married	170	80.6%
Divorced	5	2.4%
Current Home Ownership		
Parent's Home	33	15.6%
Home Owned with Mortgage	38	18.0%
Home Owned without Mortgage	43	20.4%
Rented	97	46.0%
Household Size		
0 – 2	22	10.4%
3 – 5	122	57.8%
6 – 8	58	27.5%
More than 8	9	4.3%
Monthly Household Income		
Less than RM2000	12	5.7%
RM2000 - RM5000	59	28.0%
RM5001 - RM8000	63	29.9%
RM8001 - RM10000	35	16.6%
More than RM10,000	42	19.9%
Have you purchased any residential propo	erty before?	
Yes	89	42.2%
No	122	57.8%

The data from the survey for this research has been analyzed using the SPSS statistics software. Table 1, shows the descriptive statistics of the demographic distribution of the participants who responded to the questionnaires. 211 respondents successfully took part in the survey with all valid responses as the Google forms enabled the researchers to make all fields compulsory.

The data analysis included gender, age, marital status, current home ownership, household size, monthly household income and previous property buying experience. This is important as to reflect on the demographics of the purchasers for the intent of the study. The result of the descriptive statistics obtained from the survey are as listed in Table 2.

All the constructs were measured using Likert scale from range of 1 to 5, which indicates strongly agree and strongly disagree. The data obtained from the surveys were analyzed using regression analysis via SPSS. One of the most significant assumption of Azjen's "Theory of Planned Behavior '(TPB) is that intention strongly reflects actual behavior. Therefore, intention is always used as the indicator of the actual behavior. The prediction of behavioral intention and actual behavior to purchase Bumiputera property using TPB is studied using regression analysis, with variables such as attitude, subjective norms and 'Perceived Behavioral Control'(PBC).

Table 2: Descriptive Statistics

Table 2: Descriptive Statistics. Construct	Mean	SD				
Attitude Towards Purchasing Bumiputera Residential Properties in So						
It is important for me to buy a home.	4.6825	.63142				
I spend very minimum amount of money on other things so I can purchase a home.	3.7204	.94743				
I have regular savings specifically to purchase a home.	3.5972	.92777				
I prefer to buy my own home than paying rental to the homeowner.	4.5403	.79405				
I rather buy a new home than upgrade to a new car.	4.3602	.86911				
Bumiputera residential properties in Seremban is worth-buying.	3.7630	.98598				
If I were to buy a new home, it would be a Bumiputera residential property in Seremban.	3.8910	1.05671				
All Bumiputera in Seremban should buy Bumiputera residential properties.	3.7630	1.07383				
Subjective Norms for Purchasing Bumiputera Residential Proper						
My family greatly influence my decision to purchase Bumiputera residential property in Seremban.	3.5545	1.11296				
My family support my decision to purchase Bumiputera residential property in Seremban.	3.6872	1.10271				
My family relies on me to make decision on purchasing Bumiputera residential property		1.102/1				
in Seremban.	3.6351	1.12737				
Most important people in my life think that I should purchase Bumiputera residential						
property in Seremban.	3.5450	1.15536				
Most important people in my life also purchased Bumiputera residential property in	3.3791	1 12052				
Seremban.	3.3/91	1.12052				
The people whose opinion I value would approve if I purchase Bumiputera residential	3.5640	1.04628				
property in Seremban.	3.3040	1.04026				
The people whose opinion I value advise me to purchase Bumiputera residential property	3.5071	1.03450				
in Seremban.						
People in my society expect me to purchase Bumiputera residential property in Seremban		1.09705				
PBC for Purchasing Bumiputera Residential Properties in Serem	ban					
This item is the most important to me while making decision to purchase Bumiputera	1.6825	.88835				
residential properties in Seremban						
It is most likely for me to purchase Bumiputera residential properties in Seremban which	2.7014	1.21536				
are priced more than RM500,000 It is most likely for me to purchase Bumiputera residential properties in Seremban which						
offer convenience in term of location	4.2796	.90106				
It is most likely for me to purchase Bumiputera residential properties in Seremban which						
offer neighborhood that are secured and guarded	4.1706	.95583				
It is most likely for me to purchase Bumiputera residential properties in Seremban which						
offer certain kind of lifestyle (i.e active, luxurious)	3.6398	1.07044				
It is most likely for me to purchase Bumiputera residential properties in Seremban which						
offer high quality of structural attributes/building material	4.2180	.87823				
If I wanted to, I could purchase Bumiputera residential properties in Seremban	4.0853	.87414				
It is mostly up to me whether or not I want to purchase Bumiputera residential properties						
in Seremban	4.2133	.77890				
Intention to Purchase Bumiputera Residential Properties in Seremban						
I intend to purchase Bumiputera residential properties in Seremban anytime soon.	4.6398	.66413				
I will purchase Bumiputera residential properties in Seremban anytime soon.	3.6730	.95727				
I plan purchase Bumiputera residential properties in Seremban anytime soon.	3.5829	1.00309				
I predict purchase Bumiputera residential properties in Seremban anytime soon.	4.4739	.89071				
The second secon						

The result of the descriptive statistic shows the mean and standard deviation of each item of the variables, demonstrating that the scales used for the questionnaires of the survey are reliable. These result shows that all three factors; attitudes, subjective norms and 'Perceived Behavioral Control'(PBC) are significant to the intention to purchase Bumiputera residential homes.

It also shows that the intention has significant impact on the actual purchasing behavior. The table highlighted that all 28 items are loaded strongly to the four dominant factors. That affect purchasing behaviors. The attitudes scales demonstrated that almost all respondents are approaching the value of 4.00 = "Agree" especially on the items that depict the importance and preference of purchasing Bumiputera residential property in Seremban. For the subjective norms, it is in between of scale 3 = "neutral" and scale 4 = "agree" indicating that respondents are somewhat influenced by the normative structure and the beliefs that their significant others think about them purchasing Bumiputera residential property in Seremban.

The PBC was measured using 8 items of Likert scale from 1 = "Strongly Disagree" and 5 = "Strongly Agree" and the variables being studied are the property price, property location, neighborhood, lifestyle and the property's structural attributes. The price was measured in such a way whether the Bumiputera customers will likely be able to purchase property above RM500,000 and the result obtained shows that the price of the property has negative impact on the purchasing behavior. And as shown, properties priced above RM500,000 are not very likely to be purchased by Bumiputera customers in Seremban. The other four determinants, location, neighborhood, lifestyle and structural attributes also have positive relationship with the intention to purchase the properties.

Table 3: Multiple Regression Analysis Result.

Variables	β	t-value	p-value
Attitude Towards Purchasing Bumiputera residential properties	0.221	3.327	0.000*
Subjective Norms for Purchasing Bumiputera residential properties	0.167	2.991	0.002*
PCB for Purchasing Bumiputera residential properties	0.219	5.103	0.001*

Notes: Significant value at *p<0.01 and **p<0.001; $R^2 = 0.291$, adjusted $R^2 = 0.283$; dependent variable: intention to purchase Bumiputera residential properties in Seremban

The results obtained from multiple regression analysis is illustrated in Table 3. The analysis was carried out to evaluate the significance of the relationship between variables. Seven hypotheses were formulated and tested with intention to purchase Bumiputera residential properties in Seremban as the dependent variables. Table 3 shows the composite variables of attitudes, subjective norms and PCB and its effect towards the intention to purchase. As per result shown, all three factors show positive relationship with the dependent variable. It supports the hypotheses in a way that attitude ($\beta = 0.221$ and p < 0.001), subjective norms ($\beta = 0.167$ and p < 0.001) and PCB ($\beta = 0.219$ and p < 0.001). The results confirm the hypotheses that are made earlier which stated under H2 that "The subjective norms of purchasing Bumiputera properties has positive influence on the purchasing intention and behavior of Bumiputera properties", "H5: Positive attitudes towards purchasing Bumiputera properties positively influence the purchasing intention and behavior of Bumiputera properties in Seremban" and "H7: Positive beliefs on PBC has positive impact on the intention and purchase behavior of Bumiputera residential properties in Seremban".

Discussion

The result of the study shows the significance of the three main factors of TPB: attitudes, subjective norms and PBC in determining the robustness of TPB in shedding lights on the study of Bumiputera market. Three main factors are outlined in the study and the result achieved is that attitude and subjective norms are somewhat influencing the purchase behavior. However, PBC being the most significant impact on the intention to purchase and price has been depicted as one of the main factors that negatively impact the control beliefs. Therefore, the implementation done for the study is by offering more rebates and incentives to Bumiputera customers to see the response when one of the most significant factors being taken care of. The implementation validated that pricing strategy is crucial to

facilitate in combating the overhang issues in Seremban property development. The increasing number of sales reflects the effectiveness of reducing the net price and offering more rebates. Lower price directly impacts the homebuyers positively as the homebuyers' control beliefs has shifted that they are able to purchase property lower than RM500,000 and they have resources to do so.

Conclusion

In conclusion, as 'Theory of Planned Behavior' (TPB) has been used extensively to determine the relationship between attitudes, subjective norms and 'Perceived Behavioral Control' (PBC) to intention and behavior, it is also a great framework to identify the factors that contribute to specific set of behaviors. The utmost importance of this study is that it benefited the researcher to understand more about the application of TPB and it also contribute to the industry partner by enabling the researcher to propose marketing strategy to help with the sales. With PBC being the most significant factor in purchase intention, the price determinant helps the industry partner to understand the need to look further into the feasibility study that should involve market preference in terms of pricing. It is also important to study the demography of the target market to not put housing affordability stress at spike. When the behavior is understandable, it gives more opportunity for researchers to dig deeper on how to improve the PBC, the businesses to adhere to customers' demand and preference and the Government to consider for policy improvements to ensure the sustainability of Malaysia property market.

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References

- Ajzen, I. (2008), "Consumer attitudes and behavior", in Haugtvedt, C.P., Herr, P. and Kardes, F.R. (Eds), Handbook of Consumer Psychology, Erlbaum, Mahwah, NJ, pp. 525-548.
- Bang, H., A. Odio, M. and Reio, T. (2014), "The moderating role of brand reputation and moral obligation: An application of the theory of planned behavior", Journal of Management Development, Vol. 33 No. 4, pp. 282-298.
- Benefield, J. (2009), "Neighborhood amenity packages, property price, and marketing time", Property Management, Vol. 27 No. 5, pp. 348-370.
- Chan, T. and Abdul-Aziz, A. (2017), "Financial performance and operating strategies of Malaysian property development companies during the global financial crisis", Journal of Financial Management of Property and Construction, Vol. 22 No. 2, pp. 174-191.

- Cohen, T., Lindblad, M., Paik, J.-G., & Quercia, R. (2009). Renting to Owning: An Exploration of the Theory of Planned Behavior in the Homeownership Domain. Basic & Applied Social Psychology, 31(4), 376–389.
- Dick, B. (2002), "Postgraduate programs using action research", The Learning Organization, Vol. 9 No. 4, pp. 159-70.
- Duan, R., Ramakrishnan, S., & Hishan, S. S. (2023). Impact of CSR on Organizational Resilience across Chinese Listed Firms: Combination of Process-oriented and Outcome-oriented Perspectives. Migration Letters, 20(6), 963-982.
- George, J. (2004), "The theory of planned behavior and Internet purchasing", Internet Research, Vol. 14 No. 3, pp. 198-212.
- Fellows, R. and Liu, A. (1997), Research Methods for Construction, Blackwell Science Limited, Oxford. Jaafar, M., Nuruddin, A. R. H., Abu Bakar, S. P. S., & Ali, R. (2014). Determinants of housing developer's performance: A case study of bumiputera firms. Jurnal Pengurusan, 41, 155-170. doi:10.17576/pengurusan-2014-41-14
- Krathwohl, D.R. (1998), Educational & Social Science Research: An Integrated Approach, Longman, New York, NY.
- Levy, D. and Kwai-Choi Lee, C. (2004), "The influence of family members on housing purchase decisions", Journal of Property Investment & Finance, Vol. 22 No. 4, pp. 320-338.
- Lindblad, M. R., Han, H.-S., Yu, S., & Rohe, W. M. (2017). First-time homebuying: attitudes and behaviors of low-income renters through the financial crisis. Housing Studies, 32(8), 1127–1155.
- Mariadas, P. A., Abdullah, H., & Abdullah, N. (2019). Factors Influencing the First Home Purchase Decision of Middle-Income Earners (M40) in Selangor, Malaysia. E-BANGI Journal, 16(1), 1–11.
- Ministry of Finance's Valuation and Property Service Department (2019), Property Overhang, Government Printer, Kuala Lumpur.
- Ministry of Finance's Valuation and Property Service Department (2019), Property Market Status Report, Government Printer, Kuala Lumpur.
- Mohd Daud, S. and Marzuki, A. (2019), "An unobserved component analysis of Malaysia's house prices", International Journal of Housing Markets and Analysis, Vol. 12 No. 3, pp. 353-376.
- Mohd Thas Thaker, H. and Chandra Sakaran, K. (2016), "Prioritisation of key attributes influencing the decision to purchase a residential property in Malaysia: An analytic hierarchy process (AHP) approach", International Journal of Housing Markets and Analysis, Vol. 9 No. 4, pp. 446-467.
- Najib Razali, M. and Mohd Adnan, Y. (2012), "Transparency in Malaysian property companies", Property Management, Vol. 30 No. 5, pp. 398-415.
- Nau, D. (1995), "Mixing methodologies: can bimodal research be a viable post-positivist tool?", The Qualitative Report, online serial, Vol. 2 No. 3, available:
- Obum, O. E., Kelana, B. W. Y., Rahim, N. S. A., Saidi, M. I., & Hishan, S. S. (2023). Testing Effects of Job Satisfaction and OCBs on the Relationship between Talent Management and Talented Employee Turnover for Sustainable Human Resource Development in Healthcare. Migration Letters, 20(5), 648-666.
- Poudyal, N.C., Hodges, D.G. and Merrett, C.D. (2009), "A hedonic analysis of the demand and benefits of urban recreation parks", Land Use Policy, Vol. 26 No. 4, pp. 975-83.
- Rangel, G., Ng, J., Murugasu, T. and Poon, W. (2019), "Measuring Malaysian housing affordability: the lifetime income approach", International Journal of Housing Markets and Analysis, Vol. 12 No. 5, pp. 966-984.
- Razali, M. and Mohd Adnan, Y. (2015), "Sustainable property development by Malaysian property companies", Property Management, Vol. 33 No. 5, pp. 451-477.
- Soon, A. and Tan, C. (2019), "An analysis on housing affordability in Malaysian housing markets and the home buyers' preference", International Journal of Housing Markets and Analysis, Vol. ahead-of-print No. ahead-of-print.

- 766 An Analysis on Malaysia Property Market: Factors Contributing Sustainability to Residential Bumiputera Properties Overhang in...
- Tan, T. (2016), "Residential satisfaction in gated communities: Case study of Desa Park City, Kuala Lumpur, Malaysia", Property Management, Vol. 34 No. 2, pp. 84-99.
- Tan, T.H. (2008), "Determinants of homeownership in Malaysia", Habitat International, Vol. 32, pp. 318-35.
- Tan, T.H. (2010), "The effects of housing characteristics on neighborhood stability of homeownership", International Journal of Business and Emerging Market, Vol. 2 No. 3, pp. 286-304.
- Teck-Hong, T. (2011), "Neighborhood preferences of house buyers: the case of Klang Valley, Malaysia", International Journal of Housing Markets and Analysis, Vol. 4 No. 1, pp. 58-69.
- Yap, J. and Ng, X. (2018), "Housing affordability in Malaysia: perception, price range, influencing factors and policies", International Journal of Housing Markets and Analysis, Vol. 11 No. 3, pp. 476-497.