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ORIGINAL ARTICLE

THE STUDY OF HOME-BUYERS' SATISFACTION TOWARDS PURCHASING HOUSES IN RESIDENTIAL AREAS

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ABSTRACT – As the world evolves across cultures and centuries, people have become master builders and construct different kinds of houses for themselves and the community. Houses act as shelters and typically have basic features that protects the occupants from rain or sunlight, however, the features and functionality of houses nowadays has gone through so much improvement to cater the needs of homebuyers. Most homebuyers decide on purchasing a house based on their limited knowledge on real estate purchasing, and a lot of them did not conduct research prior to purchasing a house. This resulted in dissatisfied homebuyers and end up making them spend more money in the long term as to perform maintenance work (if they purchased low quality houses). This paper explores the satisfaction of homebuyers towards purchasing houses in residential area by validating the three contributing factors towards achieving homebuyers' satisfaction found from the literature. This study assists in highlighting the vital aspects that developers should focus on in residential construction in order to increase the level of satisfaction of homebuyers during the post-construction phase. Three factors were identified from the literature as the factors contributing to homebuyers' satisfaction which are (i) home warranty, (ii) suitable location with complete facilities, and (iii) security protection. A total of 55 questionnaires were distributed to homebuyers in Taman Nusa Intan, Senawang, Negeri Sembilan. Based on the Pearson Correlation Coefficient, all variables have positive correlations and indicates that the three factors do contribute towards homebuyers' satisfaction in purchasing houses. In order to achieve homebuyers' satisfaction, developers need to ensure that workmanship during construction is performed according to standards to avoid resulting in bad quality and hence produce defects during the handover process to the homebuyers. Defects that were identified then need to be made good during the warranty period and need to be exercised fully to benefit the homebuyers.

INTRODUCTION

As the world evolves across cultures and centuries, people have become master builders and constructed different kinds of shelter or houses for themselves and the community. This can be observed as early as during the Stone Age when shelters were made using the natural environment. The earliest forms of shelter were those on trees, where it would provide humans with minimal protection against the searing heat of the sun and the cold of the rain. As time evolves and ancient civilization takes place, houses started to exist in the simplest form constructed by sun-dried bricks, clay bricks, and wood. Later on, the designs and functionality of houses started to improvise and can be seen through various types of residential development across the world.

Houses act as shelters and typically have basic features that protect the occupants from rain or sunlight, however, the features and functionality of houses nowadays have gone through so much improvement to cater to the needs of home-buyers. Currently, the quality level of completed residential projects has become an issue, as many of the developers fail to provide good quality houses. Developers across the nation are currently made aware of the needs and preferences of the society towards a comfortable and modern living style to attract home-buyers. This can be seen with various themes and styles of houses from landed-type of houses to serviced apartments and condominiums.

When purchasing a house, there are usually a lot of factors that need to be taken into consideration by home buyers. However, most home buyers decide on purchasing a house based on their limited knowledge of real estate purchasing, and a lot of them did not conduct research before purchasing a house. This resulted in dissatisfied home buyers, and end up making them spend more money in the long term to pay for maintenance work (if they purchased low-quality houses). This has been happening for quite some time where the quality level of completed residential projects has become an issue, as many of the developers fail to provide good quality houses. Homebuyers demand the quality of construction and workmanship in a completed house since most of the home buyers were not happy with the condition of the unit that they had purchased (Ooi et al., 2014). Based on the annual report by *National Consumer Complaints Centre (NCCC)* (2015), the total number of complaints received pertaining to housing and real estate was 1,704 cases. The second highest

complaint pertaining to housing is that of defective property. Some dissatisfied home buyers might go to the extent of relocating in order to fulfill their preferences. Therefore, it is extremely essential for homebuyers to look for the relevant factors prior to purchasing a house which later contributes to long-term satisfaction.

This paper explores the satisfaction of home-buyers towards purchasing houses in a residential area by validating the three contributing factors towards achieving home-buyer satisfaction found in the literature. This study assists in highlighting the vital aspects that a developer should focus on in residential construction in order to increase the level of satisfaction of home-buyers during the post-construction phase.

LITERATURE REVIEW

Quality is one of the vital elements in property development and customer satisfaction. Customer satisfaction represents a contemporary approach for quality in a career and serves the enlargement of a customer-destined culture and management. In basic terms, customers are people who buy products or services. Satisfaction is classified as a customer's satisfaction with the end state resulting in the quality of a product or service. In other words, satisfaction can be defined as a customer's method of perceiving and evaluating a consumption capability purpose. Omonori (2014) designates the 'customer' as a person that incorporates the need of the buyer, prospective, and other interest groups of construction services. From another concept, a customer may be well-defined as the owner of the project and the one that needs the constructed facility by referring to their expectation.

In the case of house purchasing, the homebuyers are considered as the "customers" and their satisfaction is extremely crucial in determining whether or not the developer truly addresses the customers' needs and requirements. Aside from the quality of the finished product, in this case, is the house itself, there are other top factors that are found to be most contributing to the satisfaction level of the homebuyers.

There are many factors that are found to be affecting the overall homebuyers' satisfaction with completed houses, and this can be seen through the overall performance during the preconstruction and ongoing construction process. Shobana and Ambika (2016) define the factors affecting quality may be caused by several factors such as climatic conditions, location of the building, construction materials received, maintenance and operation, faulty design and plan, as well as lack of supervision. For the purpose of this study, three aspects were found in the literature to be the most contributing towards home-buyers satisfaction, namely home warranty, suitable location with complete facilities, and security protection.

Home Warranty

A home warranty, or else known as Defect Liability Period (DLP) is a common term in all standard forms of contracts that specify architects to deliver any defects in works that appear within the DLP period to the contractor not later than fourteen (14) days after the expiration of the DLP period. The contractor shall repair the defects specified within twenty-eight (28) days after the receipt of the schedule of defects (or within a longer period as may be agreed in writing by the architect) at the contractor's cost (Pertubuhan Arkitek Malaysia, 2006). According to JKR 203 contract (Jabatan Kerja Raya Malaysia, 2007), the contractor is said to be responsible for any defect, imperfection, shrinkage, or any other fault which appears during the Defect Liability Period, which will be six (6) months from the day named in the Certificate of Practical Completion (CPC) is being issued.

Based on the definition of DLP, the relationship between the client/developer and the contractor is clear, where an emphasis is given towards the obligation and liability of the contractor to rectify all defects that appear during DLP between the dates of CPC issuance until the end of the period given. It is a common process during the Vacant Possession (VP) period where the home buyers are to inspect the house components and provide a defect assessment report to the client/developer. It should be submitted to the client/developer within a grace period of one (1) week to a month. After that, the developer will point their main contractor to rectify the defects entirely at the contractor's own costs.

Suitable Location with Complete Facilities

A lot of investors within the real estate industry have been emphasizing the importance of location prior to purchasing a house. A great location can change the entire neighbourhood as it creates desirability, where desirability creates demand, and demand raises real estate prices. When looking to purchase a home, some of the aspects that need to be considered include the following: (i) The future of the neighbourhood, (ii) Facilities and Local Amenities, and (iii) Transportation (Fitzgerald, 2016).

It is important for homebuyers to consider the future of the neighbourhood as to how it will be in five or ten years, instead of only looking whether it is simply a safe place to live in. If the neighbourhood is a place that will be part of the future local development plan or is going to be transformed and on the verge of being the next best place to live in, homebuyers should consider purchasing a house there as the house value will increase and will benefit them for long- term investment. Schools, hospitals, grocery stores, restaurants, and shopping malls are among the important aspects that are usually being considered when buying a house. The distance of these facilities and local amenities with the neighbourhood truly have an impact when investing in real estate. Last but not least, transportation is another vital aspect that home buyers consider when looking into the location of the potential house to purchase. Commuting from home to work/school is very much associated with time, and the less time spent commuting is definitely a win for the home buyers.

Security Protection

Currently, it seems to be the trend that more home buyers are placing safety as their main criteria when looking for a new home. Developers are coming up with more gated and guarded developments nowadays, despite the type of houses and their location. This is in lieu to the demands of the home buyers for better security. For housing developments that are gated and guarded, home buyers are usually looking for the followings; (a) the availability of CCTV surveillance, (b) well-trained security guards, (c) security of the house guard, (d) materials used for the neighbourhood gate/fencing, and (e) well-managed property (Rajadurai, 2016). Should all these aspects be done right, home buyers are willing to pay the difference in price for the additional safety measures and features provided.

As for the neighbourhood that is not gated and guarded, the relationship among neighbours plays an utmost important role in the fight against crime. Many residential areas and neighbourhood have different types of security programs or negihbourhood patrol schedules that are initiated by the residents' associations.

METHODOLOGY

A literature review was conducted to find the factors that contribute to homebuyers' satisfaction from previous research. After the literature review was done, a questionnaire was sent to a sample of respondents consisting of homebuyers. The questionnaire consists of questions on the homebuyers' satisfaction towards the quality of construction and the aspects related to post-construction issues. The respondents were asked to give their responses using a five-point Likert scale. This type of scale normally requires participants to specify their level of agreement or disagreement with a statement.

The population of the study focuses on the homebuyers in the Negeri Sembilan (6,686 km² area) affordable building residences. The proposed sampling design for this population is convenience sampling, where the respondents are selected based on easy access/availability. For this study, the sample size was determined through the Table of Sample Size Determination by Krejcie and Morgan (Krejcie & Morgan, 1970) where a minimum of 55 respondents was identified. The questionnaire was then were distributed to the homebuyers in Taman Nusa Intan, Senawang.

For the purpose of this study, Taman Nusa Intan, Senawang was selected as this housing area was built within 5 years starting from 2018. Besides, Taman Nusa Intan is an option because the residence is still new and the quality is still under guarantee compared to the other three residential estates. Therefore, questionnaires were distributed to 55 homebuyers in Taman Nusa Intan, Senawang.

As indicated by Yousaf et al. (2015), a pilot survey was conducted to check the validity and reliability of the questionnaires. Pilot testing was conducted before the distribution of the real questionnaire to a selected group of homebuyers in Kuantan. For the pilot study, an online survey questionnaire was used and considered as the most suitable method to be used to collect the data. The online survey questionnaire was developed using Google Forms and sent out to all respondents using email and phone messaging services. The underlying reason for using an online survey questionnaire to collect data is to take advantage of the increased use of the internet in various segments of the audience which was not reachable through other channels. The online survey questionnaire is relatively quick in collecting data as compared to other approaches such as interviews and observation. According to Brazier et al. (1992), the reliability and validity of data were determined using the Cronbach Alpha value for all items. The value of Cronbach's Alpha for Section B was found to be 0.782 which is greater than 0.75 for the reliability of 95% confidence interval (Brazier et al., 1992 & Chung & Huang, 2007). Section C and Section D's values for Cronbach Alpha were 0.865 and 0.908 respectively. The test performed indicates that the data under study is reliable for analysis. The results are tabulated in Table 1.

Table 1. Reliability and Validity Analysis

Section	Reliability
Section B – Aspects to achieve homebuyers' satisfaction	Cronbach Alpha = 0.782
Section C – Factors of poor functionality in quality performance	Cronbach Alpha = 0.865
Section D – Suitable strategies to maintain good quality for customer satisfaction	Cronbach Alpha = 0.908

RESULTS AND ANALYSIS

In order to validate the three factors contributing to the satisfaction of the home buyers, Pearson Correlation of Coefficient was chosen as the analysis for this study to measure the strength between the inter-items within each factor. The strength of the association within the inter-items can provide validation and justification for the three factors found in the literature.

The value of the correlation of coefficient, r can be determined according to the following formula:

$$r = \frac{N\Sigma xy - (\Sigma x)(\Sigma y)}{\sqrt{[N\Sigma x^2 - (\Sigma x)^2][N\Sigma y^2 - (\Sigma y)^2]}} \tag{1}$$

where:
N is the number of pairs of scores
Σxy is the sum of the products of paired scores
Σx is the sum of x scores
Σy is the sum of y scores
Σx^2 is the sum of squared x scores
Σy^2 is the sum of squared y scores

For this study, the value of correlation coefficient, r was determined between the variables to identify the factors that affect the homebuyers' satisfaction in the residential property they purchased. Items within the factors identified were tested and the relationship level was reported as follows:

Home Warranty

Table 2 indicates the correlation between the items under home warranty. The value of coefficient correlation, r between "Period Living in Current Residence" with "Defect Inspection" is 0.488 indicating a medium level of relationship between both items. Apparently, homebuyers that have been living in their new residence for quite some time should be able to enjoy the benefits offered by the developer regarding repairing the defects within the warranty period.

Table 2. Pearson correlation coefficient value, r for items under "Home Warranty"

		Duration of living in current residence	Home warranty is needed in order to protect the expenses of home maintenance (B1a)	Duration of warranty period is less than one year from the date of purchase (B1b)	Defect inspection is performed by developer once every three months during home warranty period (B1c)
Duration of living in current residence	Pearson Correlation	1	.009	-.212	.488**
Home warranty is needed in order to protect the expenses of home maintenance (B1a)	Pearson Correlation	.099	1	.197	-.014
Duration of warranty period is less than one year from the date of purchase (B1b)	Pearson Correlation	-.212	-.197	1	.029
Defect inspection is performed by developer once every three months during home warranty period (B1c)	Pearson Correlation	.488**	-.014	.029	1

**Correlation is significant at the 0.01 level (2-tailed), N = 55

Suitable Location with Complete Facilities

A positive correlation was found between "home ownership" and the "facilities provided near the residential" with the value of r = 0.323. The residence that lives near the facilities has a correlation with "environmental factor and distance to public utilities" with the value of r = 0.318 and r = 0.266 respectively. Meanwhile, the value of r between "environmental factors before buying a home" and "distance to public utilities" was found to be 0.39. These values are tabulated in Table 3 below. This explains that facilities built within the residential area do have an impact on homebuyers' decisions in purchasing. Therefore, the nearer the residential around facilities offered by developers, the higher the chances of homebuyers to purchase homes in that residential area. When the developers construct the residences near the facilities such as hospitals, schools, banks, and shop lots, it makes it very convenient for the homebuyers to even consider buying properties around the area as it is within close proximity. For homebuyers, to own a residential near with complete facilities around is an investment and an advantage in the next 10 years as the area will develop to be a new township. This is because the price of land will get pricier every year.

Table 3. Pearson correlation coefficient value, r for items under "Suitable Location with Complete Facilities"

		Home Ownership	Developers need to provide residence that near with facilities such as shops, schools, playground and others (B3a)	Environmental factors play a role before buying a home (B3b)	Distance to public utilities plays an important role before buying a home (B3c)
Home Ownership	Pearson Correlation	1	.323*	-.123	-.253
Developers need to provide residence that near with facilities such as shops, schools, playground and others (B3a)	Pearson Correlation	.323*	1	.318*	.266*
Environmental factors play a role before buying a home (B3b)	Pearson Correlation	-.123	.318*	1	.394**
Distance to public utilities plays an important role before buying a home (B3c)	Pearson Correlation	-.253	.266*	.394**	1

*Correlation is significant at the 0.05 level (2-tailed), N = 55
**Correlation is significant at the 0.01 level (2-tailed)

Security Protection

According to Table 4, the value of correlation coefficient, r = 0.312 where indicates there is a medium positive correlation between "home ownership" and "security provided in each residential". Another indication of a strong positive correlation is between "providing CCTV with allocated facilities" with "allocation for security by developer" (r = 0.471) and between "providing CCTV with allocated facilities" with "robbery cases in the residential" (r = 0.420). Based on the data collected, it can be concluded that guaranteed security by developers plays an important role to attract homebuyers to own a residential or to rent. This is because the safety of residents is more secure if there is strict security control and simultaneously reducing crime rate immediately. Another alternative to reduce crime is by installing CCTV as facilities for security by the developer for each resident to ensure safety at a higher level. In fact, the homebuyers find that the robbery cases in Taman Nusa Intan are a concern in these few years.

Table 4. Pearson correlation coefficient value, r for items under "Security Protection"

		Home Ownership	Developers need to allocate facilities for security in each residential (B4a)	Robbery case in the residential is a bit of concern (B4b)	Developers produce CCTV to ensure safety of the residents (B4c)
Home Ownership	Pearson Correlation	1	.312*	-.049	-.006
Developers need to allocate facilities for security in each residential (B4a)	Pearson Correlation	.312*	1	.218	.471**
Robbery case in the residential is a bit of concern (B4b)	Pearson Correlation	-.049	.218	1	.420**
Developers produce CCTV to ensure safety of the residents (B4c)	Pearson Correlation	-.006	.471**	.420**	1

*Correlation is significant at the 0.05 level (2-tailed), N = 55
**Correlation is significant at the 0.01 level (2-tailed)

DISCUSSIONS

Based on the correlation analysis from the three factors that contribute to home buyers' satisfaction, all of them have positive correlations between inter-items of the independent variables. The associations between the inter-items validate that these factors, which are identified earlier from the literature do contribute to the satisfaction of home buyers towards purchasing houses. Homebuyers will weigh in the home warranty factor when purchasing a house as it provides peace of mind and protection. The developer, in accordance with the DLP clause within the contract, is required to make good defects within the DLP period at their own expense. Defects covered include crack, leakage, or replacing home appliances (if it comes within the house) due to a short circuit as described in the contract agreement.

The next factor that satisfies the home buyer is when the residence is built within a suitable location with complete facilities such as hospitals, shopping malls, schools, shop lots, accessibility to public transportation access, and other facilities. It will make homebuyers feel easy to travel from one place to another if an emergency happens and it would be easier when the distance from the residence to public facilities are near to each other. Lastly, the security protection factor does satisfy the homebuyers. New homebuyers generally are concerned about the safety of the property as crime usually happens in the residential area and this factor needs to be taken into consideration. Strict security measures such as installing CCTV and nightly security patrols need to be provided to ensure the residents' safety and the rate of crime is almost zero to none.

CONCLUSIONS

Homebuyers' satisfaction together with the service quality is the result of home builders providing services that are perceived as meeting or exceeding buyers' expectations. As a result, developers need to identify and understand homebuyers' needs in order to continuously improve the quality performance. From this study, there are three important factors that need to be given emphasized by the developer if they intend to attract more homebuyers which are:

a) Warranty – Developers need to ensure that the warranty given for the house purchased is fully exercised according to the Sales and Purchasing (S&P) contract. Developers need to provide a proactive customer service division to cater to all the complaints related to the defect reports that are still within the warranty period. Effective monitoring on workmanship during making good defects is vital and need to be done systematically to ensure the same defects does not happen after it is being repaired.

b) Suitable location with complete facilities – Upon the project planning phase, the developer needs to take into consideration the facilities required within the residential area. It is important that developers systematically plan the location of the facilities and tie in with the future development of the area. This will attract more homebuyers and further will create a smart township when proper planning is given priority in the initial phase of the development.

c) Security protection – Most developers nowadays create home purchase packages that include security protection as a point of attracting homebuyers. An example would be installing alarms and providing gated-and-guarded service according to areas within the township. While all of these additional features are attractive to buyers, developers must ensure that the features provided are fully functioning and serve their purpose to the residence.

In order to fulfill homebuyers' satisfaction, developers need to ensure that workmanship during construction is performed according to standards as it will result in bad quality and hence produce defects during the handover process to the homebuyers. Defects that were identified then need to be made good during the warranty period and need to be exercised fully to benefit the homebuyers.

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CONFLICT OF INTEREST

The author(s), as noted, certify that they have NO affiliations with or involvement in any organisation or agency with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, jobs, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, expertise or beliefs) in the subject matter or materials addressed in this manuscript.

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