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CUSTOMER BEHAVIOR IN HOUSING FEATURES AND SERVICE QUALITY: THE CASE OF RESIDENTS IN HO CHI MINH CITY

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ABSTRACT

In the real estate sector, buying a house is one of the most important economic decisions that people make, and it requires the buyer to deeply collect information regarding to housing features. In an effort to provide a better understanding of customer behavior in buying a house, this study investigated the roles of housing features and housing service quality on a customer behavior. It also examined the role of housing features and housing service quality on customer service acceptance. Using the CFA & SEM analyses of 305 respondents who had house buying transactions in the residential areas in the Ho Chi Minh City, the research findings indicated that housing features and housing service quality had the positive relationship with customer's behavior and with customer service acceptance.

Keywords: housing features, housing service quality, customer behavior, customer service acceptance, residential parks.

TÓM TẮT Hành vi khách hàng đối với đặc điểm và dịch vụ nhà ở: Trường hợp cư dân mua căn hộ để ở tại TP.HCM

Trong lĩnh vực bất động sản, việc mua nhà phổ có sẵn tại các khu dân cư là một trong những quyết định kinh tế quan trọng nhất và yêu cầu người mua phải thu thập thông tin kỹ lưỡng về các đặc điểm nhà ở, chất lượng dịch vụ. Trong một nỗ lực nhằm cung cấp sự hiểu biết tốt hơn về bối cảnh hành vi khi quyết định mua nhà, bài nghiên cứu này khảo sát tầm ảnh hưởng của đặc điểm nhà ở và chất lượng dịch vụ đến quyết định mua nhà. Bài nghiên cứu cũng đánh giá tác động của đặc tính nhà ở và chất lượng dịch vụ nhà ở đến sự chấp nhận dịch vụ được cung cấp của khách hàng sau khi thực sự trải nghiệm sản phẩm nhà. Bằng cách sử dụng các phân tích yếu tố khẳng định (CFA) và mô hình (SEM) với mẫu phân tích 305 người khách hàng có giao dịch mua bán nhà ở các khu dân cư tại thành phố Hồ Chí Minh, các kết quả nghiên cứu cho thấy các đặc điểm nhà ở và chất lượng dịch vụ nhà ở có ảnh hưởng tích cực đến hành vi của khách hàng và cũng như có tác động tích cực đến sự chấp nhận dịch vụ của khách hàng sau khi trải nghiệm các đặc điểm nhà ở và chất lượng dịch vụ.

Từ khóa: đặc điểm nhà ở, chất lượng dịch vụ nhà, hành vi khách hàng, sự chấp nhận của khách hàng, khu dân cư.

1. Introduction

Vietnam's residential housing industry has been fast developing and growing after the economic reformation since the late 1990s. Add tionally, there were nearly 91 million people in 2014 and this number has increased by 1.06 percent annually (The World Bank, 2015). Thus, the increasing in population and rapid urbanization in the developing countries like Vietnam create the house shortage at critical levels (Morel, Mes bah, Oggero & Walker, 2001) and a high house demand often surplus the capacity of its supply (Zeng, 2013). The successful real estate transac-

tions in Hanoi in 2014 are 11,450 transactions (up by more than 2 times compared to 2013) and in HCM City are 10,350 transactions (up 30% compared with 2013) but nevertheless the large real estate outstanding loans and a big number of inventories created a serious crisis, particu larly the apartment inventories and land inve tories of VND billion 54,500 (CBRE Vietnam, 2014). To survive and develop in this tough market, marketers and analysts of this industry are required to have an in-depth understanding of home buyer's decision criteria (Ratchatakulpat, Miller and Marchant, 2009) and their satisfac-

tion regarding housing features and service quality (Torbica and Stroh, 2001).

The problem regarding the lack of correct information of their customers of choice and real estate market conditions encourages the real estate companies to focus on the need of understanding their customers. There is an i sue of how to know deeply the customer insight and their making decision behavior in buying a house. In the recent decades, the concept of customer behavior in buying a real estate product has been further developing in various articles and literature on managerial disciplines; thus, prompting more real estate developers use suitable reactions on their customer's buying deci sion to achieve the home sales targets and customer's satisfaction (Piron, 1993; Spetic, et al., 2005). Abdullah, et al., (2012)) identify real estate purchase decision as one of the biggest decision in one's life and it would change that person's life as the process involves a long time commitment. Basing on the real estate's special characteristics, a house buying decision defines itself as a unique behavioral process which is different from other normal business buying de cisions; and understanding how the purchasers behave is quite valuable for better suppliers' re actions (Kinnard, 1968).

Up to present time, the numerous researchers have been studying about the real estate sector in terms of the housing features, service quality, buying decision and customer service accept ance in other countries (Haddad, et al., 2011; Zeng, 2013; Opoku and Abdul-Muhmin, 2010). They focus more on the outside features of a real estate and less attention on customer behavioral experience, especially in a collectivist culture in making important buying decision like Viet nam where people relationships prevail over important buying decision, where everyone cares, supports, and takes responsibility for members of their family and acquaintances. Thus, this research aims to investigate house buyers' havior during the buying stages basing on their acceptance about housing features and service quality in residential parks in HCM City.

2. Literature review and conceptual model

Buying a house is one of the most significant economic decisions that people make, and it requires the buyers to gather a lot of information regarding its features (Haddad, et al., 2011). In reality, real estate is both a financial asset and a physical features comprising of its intrinsic features, extrinsic features and other factors that connect it to customer behavioral research (Anastasia and Suwitro, 2015). With this view, the house buying decisions are different from other business decisions due to "the innate, durable and long-term characteristics of real estate" (Kinnard, 1968, p. 6). It is a highly diffe ated product with "each specific site unique and fixed in location" (Kinnard, cited in Phan, 2012). Therefore, better knowledge of the factors influencing purchasers' behavior will help house en trepreneurs have better understanding and prediction of buying decision making in real estate markets (Anastasia and Suwitro, 2015).

Many researchers believe that a specific, situ ation and product-oriented model is needed for studying a concept of buying (Koklic and Vida, 2009). They also admit that there are lacks studies of buying decisions that consumers are most concerned about "buying behavior". Additi ally, the studies about customer behavior of buying a house in Vietnam are not yet to be found in public literatures. Thus, this study will provide a better understanding of customer buying beh ior and influences to all housing industry partic pants which are the entrepreneurs, buyers, and real estate agents.

2.1. Housing features and customer buing behavior

House customers seem to evaluate the main features of the house which they perceive as the most valuable, value these different features, and then assess their willingness to pay for these desirable features (Kotler and Keller, 2009). There are several real estate features have been researched in many previous studies as affecting factors on house customers' bu ior (Ratchatakulpat et al., 2009; Haddad et al., 2011; Opoku and Abdul-Muhmin, 2010; Alonso, 2002; Pope, 2008; Spetic et al., 2005; Wang and Li, 2006). Basing on the researches, Zeng (2013) and Ratchatakulpat et al. (2009) identify the main housing features into four categories: intrinsic housing features, extrinsic housing fea tures, environment features, and location features.

The potential home buyers firstly identify the major features and benefits which are similar to their expectations, and then value the importance of each attribute and benefit. After valuing which features will deliver the most perceived value for them, they prefer to pay money for these most valuable features (Bao and Wan, 2007; Farmer and Lipscomb, 2010; Sunding and Swoboda, 2010). Many features of residential houses pre sented can have indirect, positive or negative impacts on customer buying choices (Alonso, 2002; Opoku and Abdul-Muhmin, 2010; Spetic et al., 2005; Wang and Li, 2006). However, the researchers also realize that the relative importance of various housing features might vary across national contexts. Hence, based on the literatures, it is hypothesized:

H1. Customer buying behavior in Vietnam is positively related to house features.

2.2. House service quality and customer buying behavior

Nahmens and Ikuma (2009) state that house developers provide housing services to customers and customers perceive these service pr cesses in terms of interactions, activities and dynamic events in the residential housing systems. In these processes customers search for in formation, customers will evaluate and compare services from different residential housing suppliers, and select which alternative they believe better. They conclude that house buying decision can be shifted or modified with the circumstanc es of the person and/or consumption situation derived from the quality features of house developers. Thus, the quality of services provided by house developers also has an influence on home buyers' buying decisions and post-purchase s isfaction (Torbica and Stroh, 2001; Forsythe, 2008; Nahmens and Ikuma, 2009).

Nahmens and Ikuma (2009) and Forsythe (2008) adopt the five main dimensions of house service quality to analyze home buyers' perceived service quality and find out whether the actually received service quality met or exceeded home buyers' expectations. Basing on their works, the five dimensions of SERQUAL model are divided to 21 housing service quality features. Furthermore, Atterhog (2005) admits that residential house service providers could increase customer service acceptance and ing decision by effectively reducing the gaps between customers' service quality expectations and perceptions. This researcher has also identified housing service quality as an important fac-

tors influence housing buying decisions and has revealed major service quality factors involved in the buying stages that have a significant in fluence on customers' value perception and pur chase decision in house buying process setting. Therefore, based on the literatures, it is hypothesized:

H2. Customer buying behavior is positively related to the house service quality

2.3. House features and customer service acceptance

Customer service acceptance is generally defined as being a function of customer expectations and perceived performance, or of ceived product features' quality (Zeng, 2013) and it is consequently a subjective evaluation of the degree to which the customer's expectations concerning a particular service encounter are met (Zeng, 2013). Intuitively, it is expected that the customers' accepting level is the quality of customer comparison between their expectations about a house and house features.

Previous research identified the relative i portance of key dimensions of housing features to overall customers' satisfaction level (Nah mens and Ikuma, 2009) and in the context of real estate sector. Nahmens and Ikuma (2009) stated that customer service acceptance should be considered in post-purchase evaluation which included a number of antecedents such as housing features, performances and services. Customer expectations were significantly influenced by the value received from a house. As a result, investigating the positive relationship between house features and house owners' post-purchase service accepting might help the marketers to provide the right housing products and services to both potential home buyers and house owners who intended to buy a second house. Hence, the fourth hypothesis is:

H3. The overall service acceptance of consumers after the buying decision is positively related to the evaluations of housing features.

2.4. House service quality and customer service acceptance

Nahmens and Ikuma (2009) reveals that there are some service quality determinants that can satisfy and dissatisfy housing customers. The predominant satisfiers are attentiveness, responsiveness, care and friendliness and the pre dominant dissatisfies are integrity, reliability,

responsiveness, availability, and functionality. These theories imply to the relationship between house service quality and customer service a ceptance level. Torbica and Stroh (cited in Zeng, 2013) mention that customer service acceptance is the consequence of an evaluation process that compares pre-purchase expectations about an house with perceptions of performance during and after house consumption experience. Si larly, Nahmens and Ikuma (2009) illustrate the significant positive relationship between hou ing service quality and satisfaction as accepting the services. Thus, they mention that in order to create loyal customers and keep competitive advantage, real estate companies must monitor satisfaction, make changes in their operations, and exceed consumers' expectations. Intuitively, the more positive customers' perception of housing service quality, the better their overall acceptance with the house developer is likely to be. The strength of this relationship depends on the evaluation given by customers to overall features of house service quality. Thus, it is hypothesized:

H4. The overall service acceptance of customers after the buying decision is positively related to house service quality after their evaluations of the service quality.

3. Research Methods

3.1. Data collection and analysis

Two phases of the study were undertaken: a qualitative study and a main survey in Ho Chi Minh (HCM) city; since it is one of the biggest cities in Vietnam and most of real estate companies centralize here. The 390 questionnaires were delivered to participants in order to obtain an acceptable sample size. After data collection, total 350 responses from respondents who bought a house for living in HCM City were collected; the response rate was approximately 89.74 percent. These questionnaires were used as valid data for this research. The SPSS was used to review the sample's characters and the descriptive statistic tested the normal distribution of variables b ing on respondents' demographics. Then, AMOS was used for confirmatory factor analysis (CFA) to examine the reliability and validity of the first order constructs, the second order construct and the final measurement model. In addition, struc tural equation modeling (SEM) was used to test the research model.

3.2. Measurement scales

The final questionnaires consisted of four measurement scales: house features, house s vice quality, house customer buying behavior, and customer service acceptance. These questionnaire items were measured using a seven-point Likert scale (from strongly disagree to strongly agree). Customer buying behavior was measured by four items (Piron, 1993). The measurement of customer service acceptance was adapted from Nahmens and Ikuma (2009), accessing customer post-purchasing behavior. The scale items of service quality, which were adapted from the ten scales of Nahmens and Ikuma (2009), were used to measure this construct. These it

ferred to as component services of house and had a large impact on end-users. Measurement scales of house features would be used from those developed by Ratchatakulpat et al., (2009).

prised intrinsic house features, extrinsic house features, environment features, and location features. Intrinsic house features were measured by five items, reflecting structure of a house, size and number of rooms, layout and decorate style, and architectural materials. Extrinsic house features were measured by three items, including appearance of the residential parks, garden and size of garden, and exterior spaces. Environment features and location features were measured by eleven items (five items for environment features and six items for location features respectively), reflecting the quality of living environment and the means of house location.

4. Results and Dicussion

4.1. Scale validatio

By running CFA test, the author removed the insignificant items because their factor loadings were lower than 0.5. All the constructs and sub-constructs were still measured by over 3 observed items and are still retained the con tent validity of constructs. The final measur ment model also achieved a good fit to the data (chi-square/ df=1.889; P=0.000; CFI=0.935; TLI=0.941; RMSEA=.046). The factor loadings of the rest items of first and second order co structs were significant and substantial (>0.5, p<0.001). The average variances extracted values of all constructs were high $(\geq .5)$. Besides that the composite reliabilities and Cronbach'a of scales were significant (≥ 0.70). Moreover, table 1 shows that six estimates of correlations

between pairs of constructs have values ranging from 0.21 to 0.41, significantly less than 0.8,

indicating discriminant validity among dimen sions of constructs in the research model.

Table 1. Correlations

Correlation			r(se)	
House Service Quality	\leftrightarrow	Customer buying behavior	0.41	(.065)
House Service Quality	\leftrightarrow	Customer service acceptance	0.30	(.068)
House Features	\leftrightarrow	House Service Quality	0.27	(.069)
Customer buying behavior	\leftrightarrow	Customer service acceptance	0.21	(.070)
House Features	\leftrightarrow	Customer buying behavior	0.30	(.068)
House Features	\leftrightarrow	Customer service acceptance	0.34	(.067)
N	ote: r(SE): co	rrelations with standard errors		

These findings indicated that all scales measuring the first-order constructs and the components of the second-order construct were uni-

dimensional (Fornell and Larcker, 1981) and within-method convergent validity was achieved (Steenkamp and Van Trijp, 1991) (Table 2).

Table 2. CFA results

Items	M	SD	٨
Intrinsic features: Cronbach'α=.75; CR=.76; AVE=.52			
IntrinsA2: Size of rooms in the house	3.50	1.06	0.75
IntrinsA3: Number of rooms in the house	3.54	1.07	0.79
IntrinsA4: Layout & decorate style of the house	3.59	1.15	0.62
Extrinsic features: Cronbach'α=.81; CR=.83; AVE=.59			
ExtrinA1: The appearance of the whole building	3.16	.970	0.71
ExtrinA2: Presence of garden and size of garden	3.35	1.04	0.77
ExtrinA3: Exterior spaces refer to public area	3.49	1.02	0.83
Environment features: Cronbach'α=.85; CR=.86; AVE=.67			
EnvirA1: Air quality of the living area	3.54	1.10	0.77
EnvirA2: Surrounding noise	3.58	1.10	0.90
EnvirA4: Rain water drainage system	3.69	1.12	0.77
Location features: Cronbach'α=.78; CR=.79; AVE=.57			
LocA1: Location close to schools and nurseries	3.46	1.05	0.66
LocA2: Location close to health center and hospital	3.25	1.03	0.87
LocA3: Location close to market, shopping center	3.31	1.09	0.71
House service quality: Cronbach'α=.79; CR=.80; AVE=.48			
SerQua1: Providing service as promised	2.66	1.05	0.78
SerQua2: Readiness to respond to home buyers' requests	2.53	1.01	0.66
SerQua3: Secure housing transaction	2.35	.990	0.72
SerQua4: Employees who are consistently courteous	2.67	1.13	0.56
SerQua5: Availability of after sales service	2.52	1.15	0.59
Customer buying behavior: Cronbach'α=.87; CR=.87; AVE=.69			

CusBuyingBeha1: I experienced a desire to purchase an house	2.93	1.17	0.86
CusBuyingBeha3: The urge to purchase an house overcome me	2.64	1.07	0.90
CusBuyingBeha4: I have purchased an house	2.92	1.19	0.74
Customer service acceptance: Cronbach'α=.88; CR=.89; AVE=.66			
ServA1: I personally feel good that I have bought an house	3.30	1.28	0.78
ServA2: I am pleased that I have bought an house	3.32	1.26	0.76
ServA3: The features of the house that I have bought meets my expectations	3.09	1.14	0.85
ServA4: The services provide by suppliers of the house that I have bought meets my expectations	3.15	1.20	0.86

4.2. Structural equation modeling (SEM)

The structural equation modeling results dicated that the theoretical model had a fit to the data: $\chi 2$ [312] = 448.803 (p = 0.000); chi-square/df= 1.838; CFI=0.949; TLI=0.942; RM

SEA=0.045. The results supported all five potheses. All of regression weight values were positive, thus all hypotheses were supported by data set of research. The unstandardized es mates are presented in Table 3.

Table 3. Unstandardized structural paths

	Hypotheses structural paths	Testing result	Est.(se)	CR	P-value
H1	Customer buying behavior in Vietnam is positively related to house features.	Supported	.244(.119)	2.065	0.041
Н2	Customer buying behavior is positively related to the service quality.	Supported	.517(.171)	2.958	0.002
НЗ	The overall service acceptance of consumers after the buying decision is positively related to the evaluations of housing features.	Supported	.454(.133)	3.224	0.001
Н4	The overall service acceptance of customers after the buying decision is positively related to house service quality after their evaluations of the service quality.	Supported	.434(.162)	2.971	0.007

4.3. Discuss

Regarding this finding, in order to explain and confirm these outcomes in managerial practice in the real estate sector, the author proposed all four hypotheses based on previous research and related theories. Then, the in-depth interviews and survey were employed to collect a sample size of 305 and the results of data analysis were used to indicate the discussions as follow:

H1. Customer buying behavior in Vietnam is positively related to house features.

Research result found that house features had positive impact on buying decision at β =0.16 and at the statistical significance level of 0.001,

corresponds with many studies which suggested that house features is the preliminary process toward establishment of buying decision (Opoku and Abdul-Muhmin, 2010). The house which performs good features would affect customer's buying behavior. He or she senses features of a house are meaningful, valuable and important factors to help her or him has scales to make a decision to buy (Opoku and Abdul-Muhmin, 2010; Ratchatakulpat et al., 2009). Therefore, hypothesis H1 was supported.

H2. Customer buying behavior is positively related to the service.

Hypothesis 3 exhibited a positive impact of service quality factor on how well the house customers perform their buying behavior. With β =0.28 and p=0.001, it proved that H3 was sup ported by the data. This result was consistent with the findings of the previous study of N mens and Ikuma (2009). Customers who feel strongly comfortable with service quality provided by house developers have a strong sense of truthfulness in making a decision to buy a house.

H3. The overall service acceptance of customers after the buying decision is positively related to the evaluations of housing features.

In terms of investigating the house features' relationship with service acceptance of customers, this analysis found a quite strong effect of house features on customer service acceptance. It is connected to the study of Opoku and dul-Muhmin (2010) and Nahmens and Ikuma (2009). With β =0.28 and p=0.001, it could be concluded that hypothesis 4 was well confirmed.

H4. The overall service acceptance of customers after the buying decision is positively related to house service quality after their eva ations of the service quality.

According to the results, service quality provided by house developers was found to have a strong influence on a dependent factor (customer service acceptance) at p=0.001 and β =0.22. Therefore, there was a positive relationship of service quality and customer service acceptance. Thus, hypothesis 4 was supported.

In summary, based on the results above, the theoretical model was fitted to the data. Hypotheses H1, H2, H3, and H4 were all supported by the data set in the research.

5. Conclusion and Implications

5.1. Conclusion

This study shows that house features and house service quality affect buying behavior and service acceptance of customers who bought a house for living in HCM City. The house customers sense their buying behavior and improve their satisfaction in accepting the service if they highly value house features and house service quality. Regard to the path coefficient among variables, house service quality has been defined as the strongest predictor of buying behavior in real estate sector in HCM City, followed by house features respectively. As being mentioned

in the research gap, the research concepts were not properly studied in Vietnam. As what shown in standardized coefficients of model, it can be concluded that this study satisfied the research gaps, objectives and contributed a buying behavior model of customers.

In general, this study focuses on discussing the significance of each factor as well as sugges ing several useful recommendations for managing plans of marketing and sales based on the research's findings. The findings of this study contribute the understanding of house features and house service quality, which play ve portant roles in customers' buying behavior and their service acceptance. Based on the outcomes of this study, several major implications are discussed in this chapter.

5.2. Implications

The present research provides empirical evidence to support the idea of applying the concept of house features' values, house service quality's values to explain customers' buying behavior and their service acceptance. With the positive relationship among constructs in the research model, the author offers the following general guidelines for real estate organizations in HCM City.

Firstly, the positive impact of house features on customers' buying behavior reveals the very important role of house features on encouraging customers to make a decision to buy a house. Therefore, those in the functions of marketing and sales may deeply investigate the key features which house customers concern in der to consult house developers to design and build the house to satisfy customer's demands (sending surveys, in-depth interviews, designing games...). In addition, marketing and sales employees should apply suitable marketing and sales strategies to brighten up the key features on a house and their advantages in order to attract the value customers basing on the niche market segments.

The findings mentioned that house service quality has strongest impact on customers' buying behavior. Thus, those concerned with mar keting and selling process, after-sale services can utilize service quality to attract customer attention and assist them to make decision to buy. These were the commonly adopted strategies to improve house service quality. Firstly, the real

estate organizations should help customers to believe that they will get the house services exactly as listed in a purchasing contract. Furthermore, incorporating a wider purchaser perspective into their decision of buying and developing a more customer oriented service would also give more credit for customers to make decision.

Basing on the positive relationships of house features and house service quality on customer's service acceptance disclosing an important role of these factors on satisfying customers right after the customers have made a buying decision. Therefore, the real estate organizations have to make sure that they are going to provide house features and services exactly as promised. The author also believes that giving customers to add their own characteristics on house features values will gain more customer's satisfaction (designing a house or using equipment materials as requested...). Moreover, the house authority should improve performance on the house repairs and after-sale service, incorporate a wider purchaser views into their service expectations. While the technical, property, aspects of the house service dominate customer's view of housing – especially after-sales service systems - the relationship with real estate staff is also very important in respect of friendliness, understanding, explanation, and privacy to strengthen customer's satisfaction after purchasing the house product.

Basing the findings of this study, the author also suggests that the government should issue a series of real estate adjustment measures on real estate policies, tax standards, finance aids to for both real estate organizations and customers to develop this industry. The government's actions should be: requiring real estate companies to provide clear information about housing features, service quality, and financial issues and to guarantee their services basing on the public requirements and quality for a house; providing government's helps on time to rescue the real estate sector; developing regulations to control the growth of the housing market.

Conflicts of Interest:

The author declare no conflict of interest

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