The Effect of the Broker's Competence on Recontract Intention in Real Estate Brokerage Services

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Abstract

This study examined the effect of brokerage competencies on recontract intention and customer satisfaction with the elements of ability, knowledge, and attitude, as well as sought to understand the mediating effects of satisfaction on a broker's competency and the recontract intention of the customers in real estate brokerage services. The study utilized a total of 200 questionnaire samples from customers of Tan Thoi Dai Agency. SPSS 20.0 and AMOS 24.0 were applied to complete all the structural equation modeling analyses to provide results. The results showed that the competencies of a broker positively impacted the satisfaction of service users through the elements of ability, attitude, and knowledge. Moreover, ability and attitude had a significant impact on the recontract intention in a direct effect, whereas, knowledge had an insignificant role in this correlation. Lastly, the satisfaction was revealed to play a mediating role in the relationship between all the elements of a broker's capacity and recontract intention due to reducing the coefficient. Interestingly, customer satisfaction had a full mediating effect with the appearance of knowledge, while it had a partial effect in the cases of ability and attitude. This study has significantly contributed to improving the quality of real estate agents, brokers, and managers. It is necessary to reinforce the competitiveness of real estate agents by increasing the rate of revisit intention of old customers. Therefore, to enhance recontract intention, it is important to not only focus on training brokers with essential capacities but also improve the level of customer satisfaction.

Keywords

Ability, attitude, knowledge, customer satisfaction, recontract intention.

Introduction

Generally, real estate agents provide real estate services, such as: primarily managing the marketing of a property, the bidding process,

and the closing of deals with buyers. According to the Law of Real Estate 2014 (The National Assembly, 2014), real estate agents are an intermediary between sellers and buyers of real estate properties. Some people, based on consultations with an agent, make major decisions, such as deciding on how to advertise a property and how to make it look attractive to prospective buyers. Moreover, real estate agents and brokerage services make the real estate market transparent, and reduce the risks in the real estate business for investors, buyers, and sellers (Baryla & Ztanpano, 1995; Palm & Bolsen, 2022). In short, real estate services provided by real estate agents are important, and agents need specialized skills and competence to solve problems (Abrenica, 2019). As such, it is one of the professional services that is expensive and often involves important decisions in life. By dint of the importance and complexity of such a service, consumers often take a long process to make a final decision. Hence, negotiating and persuading consumers as well as maintaining relationships with customers are all efforts of brokers - service providers. In the competitive environment, real estate agents and brokers must always find the proper ways to increase their competitiveness based on the number of old customers recontracting and the determinants of customer satisfaction based on their specific type of professional services (Le & Supphellen, 2017). Additionally, it is important for brokers to obtain a strong working capacity, and in the case of developing brokers, continuously build a good education. According to this, it will be easier for brokers to receive a higher level of satisfaction as their brokerage competencies increase. So, customers who are satisfied with the performance of the services provided will have a higher intention of reusing that kind of service (Counts & Hemphill, 2007). There have been various attempts to study the effects of satisfaction on customer recontract intention, but there are still weaknesses in the sector of real estate and a lack of deep investigation into the capacities of brokers.

Real estate brokerage services are a primary part of real estate businesses (Marsh & Zumpano, 1988). Therefore, it is essential to seriously assess this kind of service, which can provide a foundation to evaluate the service's advantages and disadvantages, as well as contribute solutions to enhance the efficiency of this service. However, there have been few studies about the complex issues of real estate brokerages in Vietnam, and published studies have just focused on simple relationships, such as customer satisfaction and service quality (Phuong, 2019), repurchase intention, and ethics (Le & Supphellen, 2017). To make up for this lack of research, this study attempted to demonstrate that the satisfaction level of customers has the greatest positive influence on their repurchase intention depending on the broker's competency with the three determining factors of ability, knowledge, and attitude.

Methodology

Research model

The basis of the research model was adopted as brokerage competence, customer satisfaction, and recontract intention. Recontract intention was set as a dependent variable, customer satisfaction as a parameter, and brokerage consulting competence as an independent variable **(Figure 1)**.

While:

Broker's competence: Competency determines the success or failure in performing well in real estate practices on an individual level (Abrenica, 2019). Therefore, to define the competence of a brokerage consultant in this study as well as to adapt to the situation in Vietnam, we suggested the concept of competence of a broker to include three main components: ability, attitude, and knowledge. Ability included the essential skills for a successful broker such as communication skills, negotiation and persuading skills, problem solving skills, and team work; attitude included integrity, trust, sympathy, and ethics; and knowledge included professional understanding about all related aspects, for example, land law, economics, the real estate market, and Feng-shui, among others (Pham Phuong Nam *et al.*, 2021).

Customer satisfaction: Expectations prior to and after the purchase a product or service are
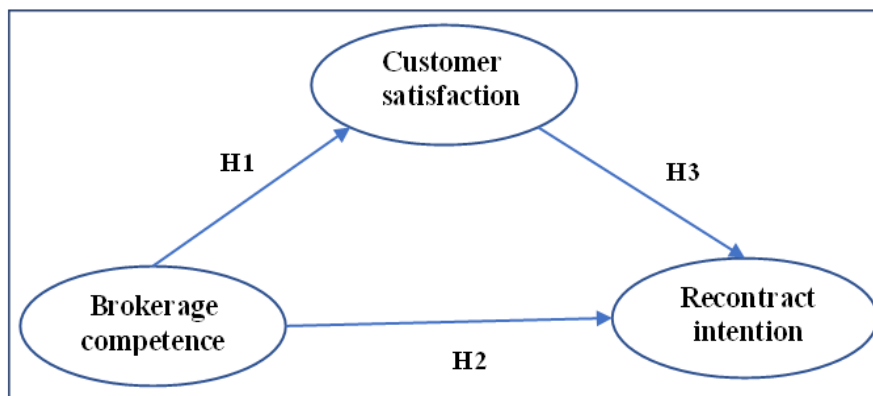
Figure 1. Research model

called customer satisfaction (Oliver, 1997). Customer satisfaction is the customer's review about a product or service, the people who provided the service, and the process of using the service that met their demands and expectations (Ferrand *et al*., 2010; Ishfaq *et al*., 2010). Admittedly, a happy and satisfied customer is always the priority of any successful business, especially in the service sector.

Repurchase intention: Repurchase refers to a behavior in which one makes a decision on whether the customer has a willingness to revisit an agency to use the service in the future (Bayraktar *et al*., 2012). It is based on turning belief and attitude into action from the service provider. According to Limayem *et al.* (2007), customer satisfaction is a key role in customers returning to use a service. Similarly, Liao *et al.* (2017) asserted that repurchase intention in a range of services is caused by customer satisfaction, thus leading to increases in a firm's profitability.

Research hypotheses

According to the literature review, brokerage competence is composed of ability, knowledge, and attitude. Therefore, this study built hypotheses about brokerage competence with these three components. In the real estate brokerage industry, a broker's ability to leverage their resources and capabilities to complete and provide better value products or services than their competitors leads to gaining a competitive advantage (Park & Glascock, 2010). Moreover, employee attitudes as well as essential skills for

understanding the customers' needs relate directly to customer satisfaction and customer retention in the service industry (Davidson, 2003; Koutroumanis *et al*., 2015). Based on these findings, the following hypotheses propose that the competencies of brokers can have a similar correlation to the satisfaction and intention of customers:

H1. The broker's competence will have a positive effect on customer satisfaction.

H1-1. The broker's consulting ability will have a positive effect on customer satisfaction.

H1-2. The brokerage's knowledge will have a positive impact on customer satisfaction.

H1-3. The brokerage's attitude will have a positive impact on customer satisfaction.

Additionally, the determinants of competence are the primary effects on improving service quality (Pham Phuong Nam *et al*., 2021), which produce favorable behavioral intentions, and as a result of this, quality will be strengthened and lead to repeat customers. In contrast, low levels of competence will create unfavorable behavioral intentions, which in turn could cause customers to defect (Zeithaml, 2000; Koutroumanis *et al*., 2015). Following the above analysis, the following hypotheses were established for these relationships.

H2. Brokerage competence will have a positive effect on repurchase intention.

H2-1. Ability will have a positive impact on repurchase intention.

H2-2. Knowledge will have a positive impact on repurchase intention.

H2-3. Attitude will have a positive impact on repurchase intention.

Kotler & Armstrong (2004) defined the satisfaction of a person as being derived from the comparison of comments with expectations for the quality of a service, which depend on the service provider (people), the aspects of using the service (cost, time, interest, etc.), and service process (Yi, 1990). As a result, they make a perquisite for customer satisfaction. Almost all scholars believe the significant influence of satisfaction on repurchase intention in service sectors such as consulting, insurance, and banking, among others When the customer has enhanced their profitability, they will repeat their favorable behavioral intentions (Koutroumanis, 2021; Liao et al., 2017). Moreover, Burris (2019) suggested that 63% of sellers chose a real estate agent that they have worked with previously, and the reasons depend on the high level of satisfaction with the service quality. Therefore, Cronin & Taylor (1992) confirmed that customer satisfaction affects repurchase intention. Based on the above arguments and on the literature review, we predicted the following:

H3. Customer satisfaction will have a positive effect on repurchase intention.

In order to verify the mediating effect of the satisfaction of customers on the relationship between brokerage competence and repurchase intention, hypothesis 4 proposing mediation was built as below:

H4. The satisfaction of service users will have a mediating effect on the relationship between consultant brokerage competence and repurchase intention.

Research methods

Data collection

A survey questionnaire was composed of 20 questions, which included twelve questions about brokerage competence with the elements of ability, knowledge, and attitude, five questions analyzing customer satisfaction, and three questions recording repurchase intention **(Table 1)**.

The Tan Thoi Dai real estate agency belongs to the Tan Thoi Trading Development Investment Joint Stock Company, which is a famous in real estate business founded in 2010. This agency has provided professional brokerage consultants, investment consulting, legal, and so on for large real estate projects in Hanoi. Therefore, data were chosen to be collected from customers who have used the brokerage services of the Tan Thoi Dai real estate agency through 200 questionnaires. This survey was designed as a Google Form and sent to the service users of Tan Thoi Dai agency from March to May in 2022 via Gmail address, socializing networks, and direct surveys. Hair *et al.* (2006) confirmed that to use exploratory factor analysis (EFA) the sample size must be at least 50, but >100 is best, and the observation/measurement ratio must be 5:1, which means that a measurement variable needs at least five observations for each factor. Specifically, in the research model proposed by the research team, there were 20 items for all factors **(Table 1)**. Therefore, the minimum number of samples was 20 x 5 = 100 samples. But since the sample sizes for EFA analysis and CFA on AMOS should be at least 200, this study investigated 200 customers with a required interview. All 20 items were assessed by a five-point Likert scale.

Analysis method

To analyze the primary data collected through a questionnaire, this study used SPSS 20.0 and AMOS 20.0 to investigate the structural equation modeling (SEM). Firstly, frequency analysis was conducted to analyze demographic and general characteristics. Secondly, to ensure consistency of the research, reliability analysis was conducted with factor analysis and Cronbach's Alpha coefficient before SEM analysis by AMOS. Thirdly, verification factor analysis was conducted to verify the validity of the measured variables. Continuously, the fitness index extracted from the SEM was evaluated for the suitability of the research model and the path coefficient was estimated. Lastly, this study used the bootstrap method with 1000 repetitions and a 95 percent confidence level on AMOS 24 to confirm the mediating role of customer satisfaction in the correlation of competence and recontract intention.

Table 1. Variable measurements of the research model

Factors	Variables	Symbols	Descriptions	Total
Broker's Competency	Knowledge (K)	K1	Brokers are good at making plans, and analyzing and solving problems.	4
		K2	Brokers have basic knowledge about the aspects of the business market, law, economics, and society.	
		K3	Brokers are experienced and have practical knowledge to perform their duties.	
		K4	Brokers always provide appropriate consultations for the special needs of customers.	
	Attitude (ATT)	ATT1	Brokers do not only pay attention to an agent's interests but also have proper principles that are acceptable by customers.	5
		ATT2	Brokers implement principles.	
		ATT3	Brokers are equitable with all customers.	
		ATT4	Brokers always keep their promises.	
		ATT5	Actions are consistent with their words.	
	Ability (A)	A1	Brokers try to have a good relationship with their customers.	3
		A2	Brokers are able to pay special attention to the primary demands of customers.	
		A3	Brokers never lie to customers.	
Customer Satisfaction (CS)		CS1	I am satisfied that I have chosen this agency to receive brokerage consultations.	5
		CS2	I am satisfied with the brokerage process of this agency.	
		CS3	I am satisfied with the broker's attitude and kindness.	
		CS4	I am confident with the consultations from the brokers of this agency.	
		CS5	Overall, I am satisfied with the provided services compared to my expectations.	
Recontract Intention (RI)		RI1	I intend to use the brokerage services from this agency in the future.	3
		RI2	I will maintain my relationship with this agency in the future.	
		RI3	I will choose the brokerage services from this agency, even if other agencies provide better terms.	

Results and Discussion

Demographic characteristics

Table 2 depicts all the demographic characteristics of the respondents with the variables of gender, income, and age. Among the consumers surveyed, 67.31% of the respondents were male, and the remaining 32.69% were female. These data are consistent within the context of Vietnamese society where a man has the strongest power in a traditional family to make the final decision about buying or selling a valued property and they are more acknowledgeable than a woman as well. Because of these reasons, potential customers employing real estate agencies are mostly men.

The age of potential customers was around 30-55 years old with the highest frequency of 58.97% compared to the rest. In reality, members of this group independent in their finances and successful in their careers, and as a result, they are already willing to buy housing, exchange properties, or invest in real estate. The age range of 56-70 was the second highest group, which accounted for 33.36%. The majority of members of this group have available capital so they can purchase real estate as a gift for their lateryounger generations or for the purpose of residential planning. However, people of this age usually accumulative savings in a bank instead of investing in real estate. In contrast, the practical

actions of a real estate business are nearly neglected in the youngest group (7.67%). Almost all of the members of this group are weak in finances, as their lives still depend on support from their families.

Clients of the real estate agency also differ in their level of annual income. The highest group at 51.92% had an income of more than 50 million VND per month, so their priority intention is to invest in real estate. This means that their demand for buying or selling houses occurs only in a small number of cases. An annual income between 21 and 50 million VND was the second group using the real estate services (32.69%), and their demand is purchasing real estate and only investing in some small properties. This was followed by the group making less than 20 million VND (15.38%) and this group nearly prefers buying residential real estate.

Reliability analysis by Cronbach's Alpha and EFA

Reliability analysis

Cronbach's Alpha is a measure of internal consistency, which means how closely related a set of items are in a group. It measures scale reliability. Cronbach's Alpha can be "too high", in which the value is more than 0.9, showing that a lot of variables in the scale are not different (Nguyen Dinh Tho, 2012), or or "too small", in which the value is smaller than 0.5, showing the inconsistency of the scale and thus, which variable should be removed. If the Cronbach's Alpha score is more than 0.6, it indicates a high level of internal consistency for the scale used for

the dataset, and those variables should be chosen for analysis (Hoang Trong & Chu Nguyen Mong Ngoc, 2008). According to the results of the reliability test shown in **Table 3**, the alpha coefficients for the factors were all larger than 0.8, ranging from 0.832 to 0.901, and the values of Cronbach's Alpha of all the variables were greater than 0.6, with the values ranging from 0.664 to 0.813. Therefore, the data suggested that all the variables had relatively internal consistency as to be reliable enough for EFA analysis.

The test of reliability showed how the indicators were with the measuring instruments. All the measurement items were suitable as previous studies in other service sectors have shown (Chamchuntra & Fongsuwan, 2014; Jeon & Seo, 2017; Khatoon *et al.*, 2020).

EFA analysis

Exploratory factor analysis (EFA) is a statistical technique that is used to reduce data to a smaller set of summary variables and to explore the underlying theoretical structures of the phenomena. Kaiser-Meyer-Olkin (KMO) is a test conducted to examine the strength of the partial correlation (how the factors explain each other) between variables. A KMO value greater than 0.5 is recommended as acceptable as well as good enough for analyzing the factors. Bartlett's Test of Sphericity is a measure of sampling adequacy with statistically significant values being less than 0.05, consequently, the correlation matrix is indeed not an identity matrix. According to the

Table 2. Demographic characteristics of the respondents (N = 200)

Variable	Description	Frequency	Percentage (%)
Gender	Male	135	67.31
	Female	65	32.69
Monthly income (VND)	Less than 20 million	31	15.38
	21-50 million	65	32.69
	More than 50 million	104	51.92
Age	Less than 30	15	7.67
	30-55	118	58.97
	56-70	67	33.36
Total		200	100

Table 3. Reliability test of the observed variables in the research model

Factors	Indicators	Number of variables	Cronbach's Alpha	Corrected item - Total correlation
Brokerage's Competence	Ability (A)	3	0.832	0.698
				0.723
				0.664
	Attitude (ATT)	5	0.901	0.746
				0.697
				0.813
				0.794
				0.721
	Knowledge (K)	4	0.884	0.708
				0.780
				0.762
				0.748
Customer satisfaction (CS)		5	0.895	0.717
				0.735
				0.759
				0.752
				0.754
Recontract intention (RI)		3	0.888	0.736
				0.803
				0.806

requirements of confirmatory factor analysis (CFA), this study ran EFA with three steps for all the variables, namely two EFA for the two independent variables (competence and customer satisfaction) and one for the dependent variable (recontract intention) using the Principal Axis Factoring for Extraction Method and Promax for Rotation Method.

(i) Factor analysis of broker's competency

EFA is applied to reduce a set of k scales into a set of F (with F < k) of more valued factors. The criteria in EFA are KMO, significance of Bartlett's Test, Eigenvalues, and factor loadings.

Based on the referenced value, the results were as follows: KMO = 0.815 and significance of Bartlett's Test = 0.000 indicated a sufficient number of items for each factor and the correlations between variables were all zero as described in **Table 4**.

As a result of the factor analysis, three factors were extracted to examine the validity of the brokerage's competency: KMO = 0.815 (> 0.5), sig. < 0.05, and Eig. > 1 **(Table 4).**

The Eigenvalues show how variance can be explained by a particular factor out of the total variance. According to Kaiser (1960) an Eigenvalue should be greater than 1 and the Total Variance Explained should be larger than 50%. As seen in **Table 5**, three factors were significant for the 12 variables in EFA and they explained 65.392% (>50%) of the variation for all the variables in EFA.

Factor loading depicts the correlation relationship between the observation and the factor. The higher the factor loading coefficient, the greater the correlation between that observation and the factor and vice versa. Hair *et al*. (2006) showed that a factor loading score greater than 0.5 indicates a good quality observation variable **(Table 6).** Therefore, all variables were significant in EFA.

Table 4. Kaiser-Meyer-Olkin (KMO) and Bartlett's test of the broker's competency

KMO		0.815
Adequacy Bartlett's test of sphericity	Approx. Chi-Square	1305.452
	df	66
	Sig.	<0.001

Table 5. Total variance explained of the broker's competency

Factor	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total
1	3.654	30.449	30.449	3.298	27.486	27.486	3.096
2	3.145	26.206	56.654	2.815	23.461	50.947	2.827
3	2.046	17.047	73.702	1.733	14.445	65.392	2.258

Note: Extraction Method: Principal Axis Factoring.

Rotation Method: Promax with Kaiser Normalization

[a]*When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.*

Table 6. Factor Analysis of the Broker's Competency

Component	Ability	Attitude	Knowledge
A.1	0.900		
A.2	0.851		
A.3	0.728		
ATT.4		0.838	
ATT.3		0.823	
ATT.1		0.783	
ATT.5		0.768	
ATT.2		0.693	
K.2			0.879
K.3			0.819
K.4			0.814
K.1			0.742

Note: Extraction method: Principal axis factoring.

Rotation method: Promax with Kaiser normalization.

(ii) Factor analysis of customer satisfaction

Similarly, to the values of KMO = 0.845 > 0.5, sig. Bartlett's Test < 0.05, and Eig. > 1 in **Table 7** indicated that the choice of variables for the validity analysis was fairly good.

As seen in **Table 8**, three factors were significant for the 12 variables in EFA and all the variables explained 62.308% of the variance for the five factors.

Factor analysis of customer satisfaction is presented in **Table 9** with the five variables, which are all greater than 0.5 and ranged from 0.722 to 0.866, and consequently, these observation variables were of good quality. Therefore, all the variables were significant in EFA.

(iii) Factor analysis of customer satisfaction

The values of KMO and Bartlett's Test were recorded as 0.736 and 0.000, respectively, which

supported that the choice of variables was quite good **(Table 10)**.

As a result, there was a factor to be extracted with an Eigenvalue of more than 1 (2.450). This factor explained 72.771% of the variance of two variables in EFA **(Table 11)**.

Factor analysis of recontract intention is presented in **Table 12** with three items having significance because the factor loadings were more than 0.05. Therefore, all the variables were significant in EFA.

Confirmation Factor Analysis and Measurement Model Analysis

According to the above results, this study constructed the research model in the structural equation model in AMOS including the latent variable, the measurement variable, and the endogenous latent variable which are seen in **Figure 2**.

Model fit test

CFA (confirmatory factor analysis) was used to determine the factor and factor loading of the measured variables, and to confirm what was expected from the basic or pre-established theory. CFA assumes that each factor is associated with a specified subset of measured variables. Chi-square and a number of other goodness-of-fit indexes were used to test how well the model fit. The criteria of model fit included CMIN/DF, CFI, GFI, TLI, RMSEA, and PCLOSE **(Figure 3)**.

All the comparisons of references about the goodness of fit of the structural equation are shown in **Table 13**.

Hu & Bentler (1999) presented that criteria considered to assess model fit should include: CMIN/DF, CFI, TLI, RMSEA, PCLOSE, and GFI. The above table revealed that the absolute fitness values fulfilled the required criteria

Table 7. Kaiser-Meyer-Olkin (KMO) and Bartlett's test of customer satisfaction

KMO (Kaiser-Meyer-Olkin measure of sampling)		0.845
Adequacy Bartlett's Test of Sphericity	Approx. Chi-Square	568.672
	df	10
	Sig.	<0.001

Table 8. Total variance explained of customer satisfaction

Factor	Initial eigenvalues			Extraction sums of squared loadings		
	Total	% of Variance	Cumulative %	Total	% of variance	Cumulative %
1	3.484	69.672	69.672	3.115	62.308	62.308

Note: Extraction method: principal axis factoring.

Rotation method: Promax with Kaiser normalization

Table 9. Factor matrix[a] of customer satisfaction

No	Components	Customer Satisfaction
1	CS.4	0.866
2	CS.5	0.829
3	CS.2	0.773
4	CS.3	0.749
5	CS.1	0.722

Note: Extraction Method: Principal Axis Factoring.

Rotation Method: Promax with Kaiser Normalization.

[a] 1 factor extracted. 5 iterations required.

Table 10. Kaiser-Meyer-Olkin (KMO**)** and Bartlett's test of recontract intention

KMO (Kaiser-Meyer-Olkin Measure of Sampling)		0.736
Adequacy Bartlett's Test of Sphericity	Approx. Chi-Square	341.653
	df	3
	Sig.	<0.001

Table 11. Total variance explained of recontract intention

| Factor	Initial eigenvalues			Extraction sums of squared loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	2.450	81.662	81.662	2.183	72.771	72.771
2	0.334	11.142	92.804			
3	0.216	7.196	100.000			

Note: Extraction method: Principal axis factoring.

Table 12. Factor analysis of recontract Intention

Components	Recontract intention
RI.1	0.786
RI.2	0.883
RI.3	0.886

Note: Extraction method: Principal axis factoring.

  Rotation method: Promax with Kaiser normalization.
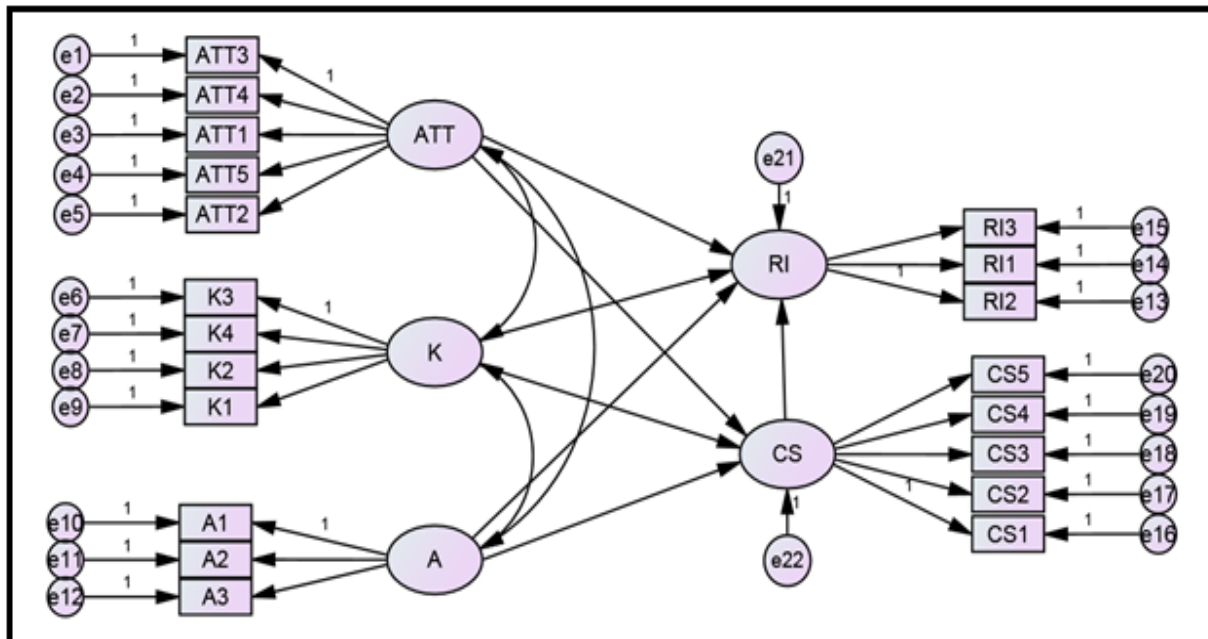
Figure 2. Structural equation model of the competency factors influencing customer satisfaction and recontract intention

approximately. Therefore, the model fulfilled all the requirements so it was suitable for building linkage among the factors and determining the contributions of the variables.

Convergent and discriminant validity

Convergent and discriminant validities are two fundamental aspects of construct validity. Convergent validity refers to how

closely the new scale is related to other variables and other measures of the same construct, while discriminant validity is the method for identifying the construct distinctions from one another. According to Hair *et al.* (2016) and Hair (2011), convergent validity is conducted by composite reliability (C.R. ≥ 0.7), and average variance extracted (AVE ≥ 0.5). Discriminant validity is tested by the maximum shared variance (MSV) being smaller than the average variance extracted (AVE), and the square root of AVE (SQRTAVE) being larger than the inter-construct correlations as proposed by (Fornell & Larcker, 1981) (**Table 14**).

As a result of the comparisons of the reference values, the values of C.R., AVE, MSV, and SQRTAVE were significant. Especially, the SQRTAVE of the interest column showed higher values when compared to the values of the cross-construct correlation within the same column. This suggests that the scales have convergent and discriminant validity, therefore, they are reliable scales.

Test of research hypotheses

In this study, hypothesis testing was performed on the path coefficients between the variables that constructed the hypothesis. The results of the hypothesis testing in the research model are presented in **Table 15**.

According to **Table 15**, knowledge did not impact recontract intention because the value of
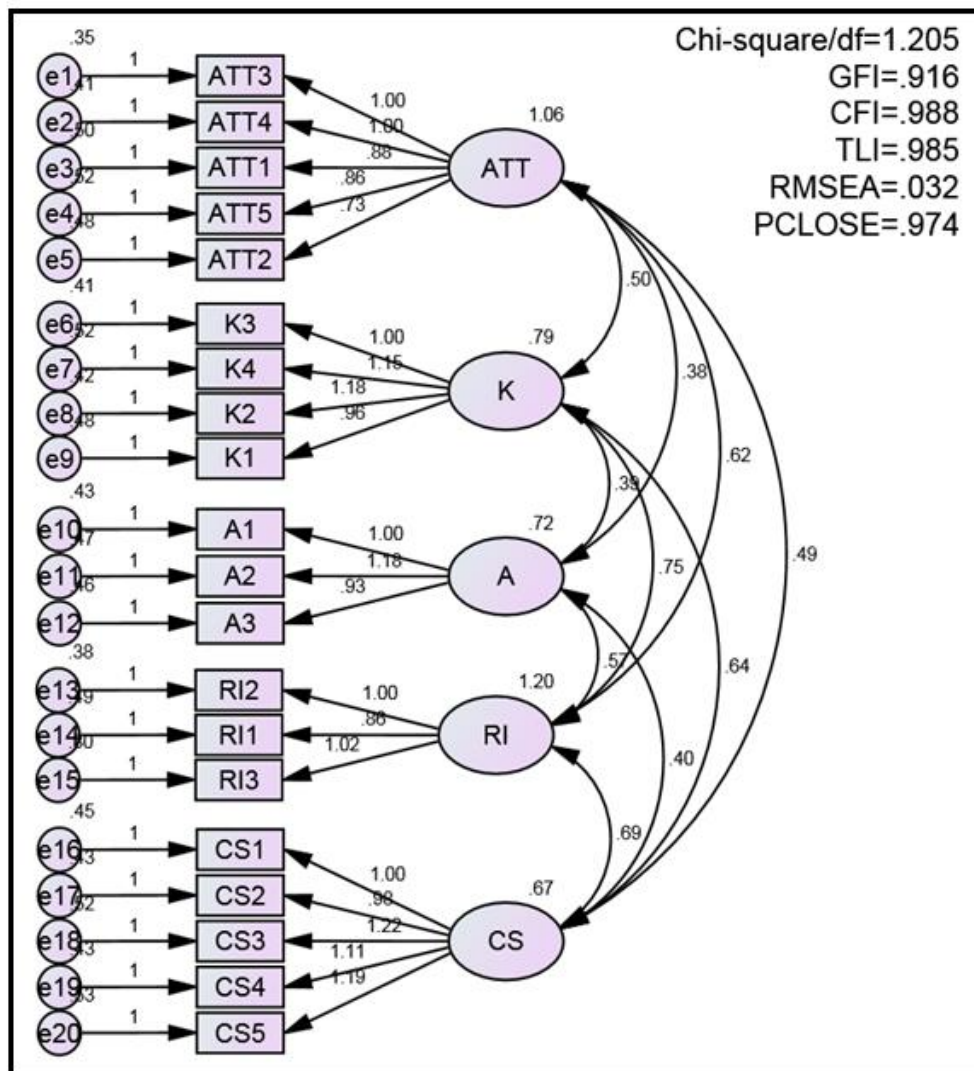
Figure 3. Model fitness of the confirmatory factor analysis in Structural Equation Modeling

Table 13. Model fit of the research model

Criteria	Reference value (Hooper *et al.*, 2008)	Measured value
Chi-Square	-	192.850
df	-	160
P-value	<=0.05	0.039
CMIN/DF	<= 3.0 is good	1.205
GFI	>=0.9 is good; >=0.8 is acceptable	0.916
CFI	>=0.9 is good; >=0.8 is acceptable	0.988
TLI	>=0.9 is good	0.985
RMSEA	<=0.06 is good; <=0.08 is acceptable	0.032
PCLOSE	>=0.05 is good; >=0.01 is acceptable	0.974

Table 14. Convergent and discriminant validity in CFA

	C.R.	AVE	MSV	MaxR(H)	CS	ATT	K	A	RI
CS	0.884	0.604	0.515	0.886	0.777				
ATT	0.904	0.654	0.479	0.909	0.692***	0.809			
K	0.884	0.656	0.375	0.887	0.588***	0.533***	0.810		
A	0.845	0.646	0.429	0.850	0.655***	0.445***	0.515***	0.803	
RI	0.815	0.688	0.515	0.828	0.718***	0.602***	0.613***	0.616***	0.829

Note: No validity concerns here.

Significance of Correlations:† P <0.100; * P <0.05;** P <0.01;*** P <0.001.

Table 15. Hypothesis test

Hypothesis	Structure path	β	S.E. *(p-value)*	Beta	Result
H1-1	A->CS	0.281	0.056 (***)	0.378	Accepted
H1-2	K->CS	0.145	0.068 (***)	0.160	Accepted
H1-2	ATT->CS	0.328	0.056 (***)	0.438	Accepted
H2-1	A->RI	0.506	0.103 (***)	0.463	Accepted
H2-2	K->RI	0.243	0.108 (0.065)	0.182	*Rejected*
H2-3	ATT->RI	0.120	0.100 (***)	0.216	Accepted
H3	CS->RI	0.560	0.167 (***)	0.644	Accepted

Note: *** sig. = 0.000 in AMOS

Confidence level 95%.

A = ability; ATT = attitude; K = knowledge; CS = customer satisfaction; RI = recontract intention.

significance was larger than 0.05, which was recorded as 0.065. All the rest of the variables composing ability and attitude were significant in the correlations with customer satisfaction and recontract intention. As a result, six hypotheses were to be accepted out of the seven research hypotheses.

Of the three factors impacting customer satisfaction (ability (A), attitude (ATT), and knowledge (K)), attitude had the biggest effect,

followed by ability, which were recorded by the standardized estimates of 0.438 and 0.378, respectively. Knowledge was the smallest with a value of 0.160. In contrast, ability had the strongest effect on the recontract intention of the customer with the standardized estimate of 0.463, and was followed by attitude, evidenced with 0.216.

The R^2 values of customer satisfaction and recontract intension were 0.645 and 0.565,

respectively, and therefore, the independent variables played important roles in the changes of CS and RI with 64.5% and 56.5%, respectively, according to this order.

All the coefficients of relationships are presented in **Figure 4**.

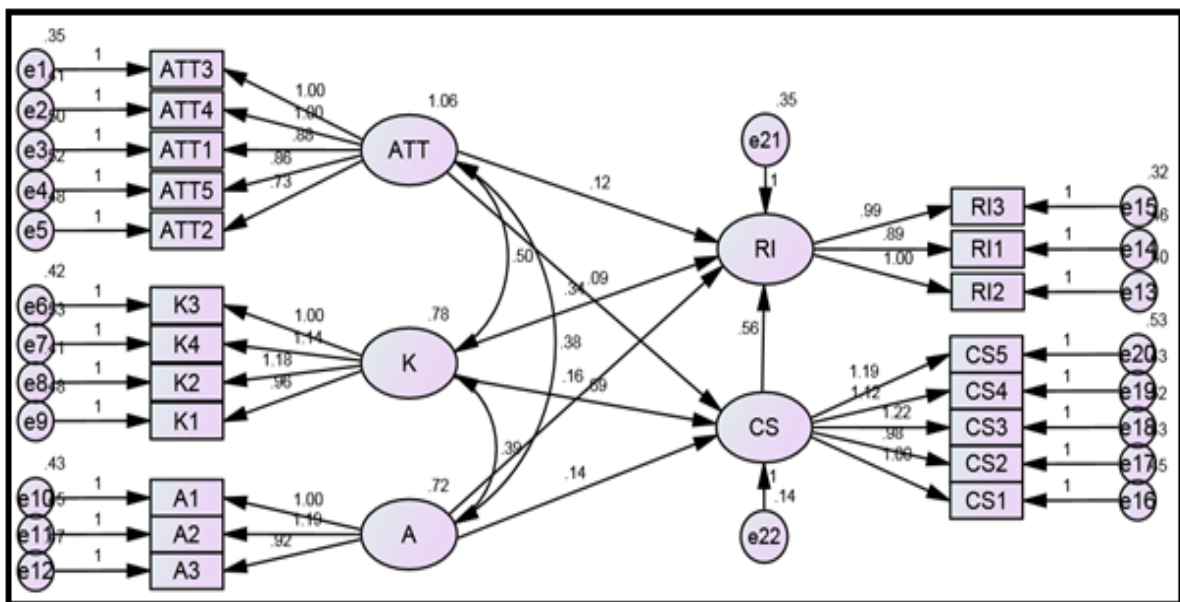*Mediating effect analysis resulted*

To test the mediating effect, the bootstrapping method was utilized. The indirect effects from ATT, A, and K to RI achieved the p values of 0.043, 0.036, and 0.029, respectively, which were significant (smaller than 0.05). Consequently, there were indirect effects among ATT, A, K, and RI. In brief, the mediation of the sub-factors of competence and recontract intention was confirmed. Standardized indirect effects were obtained with the values of 0.315, 0.160, and 0.146 for knowledge, ability, and attitude, respectively, which were smaller than the direct co-efficient (Baron & Kenny, 1986). As a result, customer satisfaction occurred through a mediation between the sub-factors of competence and recontract intention. However, the relationship between the sub-factors of knowledge and recontract intention (direct effect) was not significant due to the value of significance being greater than 0.05, which emphasized that customer satisfaction is a full mediator in the effects of K and RI; meanwhile,

a partial mediation was seen in the interaction of A and ATT on RI.

Discussion

The results of the study indicate that there is indeed a relationship among competence, satisfaction, and the behavioral intention in repeat intention with regard to customers' use of real estate brokerage services from Tan Thoi Dai agency.

Firstly, competence positively affected customer satisfaction (H1), indicating that when consumers received support and consultations from brokers who had good abilities, knowledge, and attitude, buyers and sellers benefited from the improved service quality. As a result, the better the real estate services provided to customers, the more successful the agency will be in satisfying them (Seiler & Reisenwitz, 2010). Hence, the competence of brokers can elicit positive emotions as well as increase the experience of customers. Moreover, the elements of competence, including attitude and ability, play important roles in the relationship with re-purchase intention (H2), which merges with the findings of Davidson (2003) and Koutroumanis *et al*. (2015), meaning that attitude and essential behaviors directly impact customer retention in the service industry.

Figure 4. Final measurement model of the competency factors influencing customer satisfaction and recontract intention

Table 16. Mediating effects analysis of customer satisfaction

Relationship	Indirect effects	
	Standardized indirect effects	P-value
ATT->CS->RI	0.146	0.043
A->CS->RI	0.160	0.036
K->CS->RI	0.315	0.029

Secondly, customer satisfaction positively affected recontract intention (H3), and this result is consistent with previous studies in various service sectors (Ferrand *et al.*, 2010; Ishfaq *et al.*, 2010; Limayem *et al.*, 2007) that showed that when a customer's needs are met by fully understanding the requirements of the customer, and the customer trusts the consultations from the broker, the customer is more likely to do business again. Therefore, to strengthen the rate of customer retention, agencies should focus on improving the level of customer satisfaction by creating a sense of trust among users in terms of the broker's attitude and the skillfulness of the real estate agents (Fiske *et al.*, 2002; Chamchuntra & Fongsuwan, 2014). Although McDougall & Levesque (2000) and Mittal & Kamakura (2001) argued that customer satisfaction is a necessary but not a sufficient condition for future intentions of repurchase behavior, as a result of our study, we still believe the magnitude of the relationship between satisfaction and recontract intention varies across services. Moreover, satisfaction plays as a mediator between the association of competence and recontract intention (H4) when the effect declines with customer satisfaction. Therefore, real estate agents should invest in training and communication improvements to strengthen employee skills and the level of customer satisfaction, which, as a consequence, will help the agency gain a competitive advantage by having a high rate of customer re-intention and positive word of mouth intention (Marsh & Zumpano, 1988; Yik-Chee & Meredith, 2009; Hamza, 2013; Fu *et al.*, 2020; Koutroumanis, 2021).

Conclusions and Limitations

The purpose of this study was to examine how the determinant of brokerage competence affects the intention for returning customers as well as customer satisfaction, and how customer satisfaction plays a mediating role in the relationship between brokerage competencies and recontract intention. The results indicate that brokerage ability and attitude have significant positive effects on recontract intention while knowledge has an insignificant effect as seen in this study. All indicators of competency impact the level of satisfaction. Based on the findings, it can be implied that improving one's core skills and professional attitude, for example, communication skills, problem-solving skills, excellent and active listening skills, great negotiating skills, great marketing skills, honesty, integrity, etc., are extremely essential in real estate brokerage. These skills will help agents build a remarkable portfolio for themselves and become one of the best professionals in their real estate career. Moreover, knowledge in terms of providing good and reliable service is another important factor as it can increase the level of satisfaction in brokerage services, and as a result, improve the real estate agent's profitability.

More importantly, this study discovered that customer satisfaction does have a partial mediating effect between the determinants of competence, namely ability and attitude, and recontract intention. The level effect of the two dimensions (ability and attitude) was reduced in the appearance of customer satisfaction. Especially, customer satisfaction is a full mediator in the relationship between knowledge and recontract intention. In brief, the results from this study have several practical implications for real estate brokers and real estate agents. They should strive to attract and retain their current customers by increasing their customer satisfaction level. Moreover, agents can encourage recontract intention directly by

improving the competencies of brokers, especially their ability, attitude, and knowledge. According to the above analysis, it is highly recommended for real estate agents to develop their efficiency, in which they should pay attention to training all core skills as well as professional knowledge in order for brokers to become professional and successful real estate agents.

It is important to note some limitations of the study. The scope of the study was only conducted in one real estate agency. Therefore, the findings about the relationships among competencies, recontract intention, and customer satisfaction for this professional service may not reflect the overall characteristics of other real estate agencies in Vietnam. It is proposed that we should expand this study to a larger group of real estate agencies to obtain more reliable results.

In addition, other factors that may affect recontract intention with this professional service such as brand loyalty, reputation, marketing cost, and agent fees should be checked in further research. Finally, future research may also focus on a qualitative approach to study customer intention or use different data types to investigate this topic.

References

Abrenica G. (2019). The Competency and Capability of Real Estate Brokers in Calabarzon. The 13th Joint Multidisciplinary Research Conference Abstract Proceedings. November 28-30, 2019. Thai Nguyen University, Thai Nguyen City, Vietnam.

Baron R. M. & Kenny D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. Journal of Personality and Social Psychology. 51(6): 1173-1182. DOI: 10.1037/0022-3514.51.6.1173.

Baryla E. & Ztanpano L. (1995). Buyer Search Duration in the Residential Real Estate Market: The Role of the Real Estate Agent. Journal of Real Estate Research. 10(1): 1-13. DOI: 10.1080/10835547.1995.12090769.

Bayraktar E., Tatoglu E., Turkyilmaz A., Delen D. & Zaim S. (2012). Measuring the efficiency of customer satisfaction and loyalty for mobile phone brands with DEA. Expert Systems with Applications. 39(1): 99-106. DOI: 10.1016/j.eswa.2011.06.041.

Chamchuntra S. & Fongsuwan W. (2014). Customer Repurchase Intention, Trust And Customer Satisfaction Influecing Outsourced Employees At Kasikornbank Bank Public Company Limited (Thailand). International Journal of Arts & Sciences. 7(3): 233.

Counts R. & Hemphill E. (2007). Factors Affecting Real Estate Broker Selection: What Really Counts? International Real Estate Review. 10(1): 1-22.

Cronin J. J., & Taylor, S. A. (1992). Measuring Service Quality: A Reexamination and Extension. Journal of Marketing. 56(3): 55. DOI: 10.2307/1252296.

Davidson M. C. G. (2003). Does organizational climate add to service quality in hotels? International Journal of Contemporary Hospitality Management. 15(4): 206-213. DOI: 10.1108/09596110310475658.

Ferrand A., Robinson L. & Valette-Florence P. (2010). The Intention - to - Repurchase Paradox: A Case of the Health' and Fitness Industry. Journal of Sport Management, 24(1): 83-105. DOI: 10.1123/jsm.24.1.83.

Fiske S. T., Cuddy A. J. C., Glick P. & Xu J. (2002). A model of (often mixed) stereotype content: competence and warmth respectively follow from perceived status and competition. Journal of Personality and Social Psychology. 82(6): 878.

Fornell C. & Larcker D. F. (1981). Evaluating 'Structural Equation Models with Unobservable Variables and Measurement Error. Journal of Marketing Research. 18(1): 39. DOI: 10.2307/3151312.

Fu J., Liu J., Wang X., Zhang M., Chen W. & Chen B. (2020). Ecological risk assessment of wetland vegetation under projected climate scenarios in the Sanjiang Plain, China. Journal of Environmental Management. 273(August): 108-111. DOI: 10.1016/j.jenvman.2020.111108.

Hair J., Anderson R., Black B. & Babin B. (2016). Multivariate Data Analysis. Pearson Education.

Hair J. F. (2011). Multivariate Data Analysis: An Overview. In: Lovric M. (Ed.). International Encyclopedia of Statistical Science (pp. 904–907). Springer Berlin HeidelbergHair J. F., Black W. C., Babin B. J., Anderson R. E. & Tatham R. L. (2006). Multivariate data analysis (Vol. 6): Pearson Prentice Hall Upper Saddle River. NJ.

Hooper D., Coughlan J. & Mullen M. R. (2008). Structural equation modelling: Guidelines for determining model fit. Electronic Journal of Business Research Methods. 6(1): 53-60.

Hu L. & Bentler P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. Structural Equation Modeling: A Multidisciplinary Journal. 6(1): 1-55. DOI: 10.1080/10705519909540118.

Ishfaq A., Muhammad M. N., Ahmad U., Muhammad Z. S. & Navee A. (2010). A mediation of customer satisfaction relationship between service quality and repurchase intentions for the telecom sector in

Pakistan: A case study of university students. African Journal of Business Management. 4(16): 3457-3462.

Jeon Y. & Seo W. (2017). The Effects of the Competence of Consultant on the Consulting performance, Utilization and repurchase intention. Asia-Pacific Journal of Multimedia Services Convergent with Art, Humanities, and Sociology. 7(5): 655-664. DOI: 10.14257/AJMAHS.2017.05.35.

Kaiser H. F. (1960). The Application of Electronic Computers to Factor Analysis. Educational and Psychological Measurement. 20(1): 141-151. DOI: 10.1177/001316446002000116.

Khatoon S., Zhengliang X. & Hussain H. (2020). The Mediating Effect of Customer Satisfaction on the Relationship Between Electronic Banking Service Quality and Customer Purchase Intention: Evidence From the Qatar Banking Sector. SAGE Open, 10(2): 215824402093588. DOI: 10.1177/2158244020935887.

Kotler P., & Armstrong G. (2004). Principles of marketing. Pearson Prentice Hall.

Koutroumanis D. A. (2021). Developing Competitive Advantage for Real Estate Agents: Links to Organizational Culture, Service Quality and Behavioral Intentions. Journal of Applied Business and Economics. 23(2). DOI: 10.33423/jabe.v23i2.4085.

Koutroumanis D. A., Alexakis G. & Dastoor B. R. (2015). The influence organizational culture has on commitment in the restaurant industry. Small Business Institute Journal. 11(2): 27-40.

Le N. Q. & Supphellen M. (2017). Determinants of repurchase intentions of real estate agent services: Direct and indirect effects of perceived ethicality. Journal of Retailing and Consumer Services. 35: 84-90. DOI: 10.1016/j.jretconser.2016.12.006.

Liao C., Lin H.-N., Luo M. M. & Chea S. (2017). Factors influencing online shoppers' repurchase intentions: The roles of satisfaction and regret. Information & Management. 54(5): 651-668. DOI: 10.1016/j.im.2016.12.005.

Limayem Hirt & Cheung. (2007). How Habit Limits the Predictive Power of Intention: The Case of Information Systems Continuance. MIS Quarterly. 31(4): 705. DOI: 10.2307/25148817.

Marsh G. & Zumpano L. (1988). Agency Theory and the Changing Role of the Real Estate Broker: Conflicts and Possible Solutions. Journal of Real Estate Research. 3(2): 151-164. DOI: 10.1080/10835547.1988.12090550.

McDougall G. H. G. & Levesque T. (2000). Customer satisfaction with services: putting perceived value into the equation. Journal of Services Marketing. 14(5): 392-410. DOI: 10.1108/08876040010340937.

Mittal V. & Kamakura W. A. (2001). Satisfaction, Repurchase Intent, and Repurchase Behavior: Investigating the Moderating Effect of Customer Characteristics. Journal of Marketing Research. 38(1): 131-142. DOI: 10.1509/jmkr.38.1.131.18832.

Pham Phuong Nam, Phan Thi Thanh Huyen, Bui Le Vinh & Ngo Thi Ha (2021). Real Estate Agent Management. Vietnam National University of Agriculture Publishing House. DOI: NXBHVNN-2021 (in Vietnamese).

Oliver R. L. (1997). Satisfaction : a behavioral perspective on the consumer. Irwin/McGraw-Hill.

Palm R. & Bolsen T. (2022). The Role of the Real Estate Agent. In: Housing Market Response to Sea-Level Rise in Florida. Coastal Research Library (pp. 53-65). Springer International Publishing. DOI: 10.1007/978-3-030-88435-2_5.

Park A. & Glascock J. (2010). Review articles: corporate real estate and sustainable competitive advantage. Journal of Real Estate Literature. 18(1): 1-19.

Phuong N. T. L. (2019). Evaluating the level of customer satisfaction with the real estate brokerage consulting service in Vietnam. Journal of Financial Economics. 1(1): 1-9.

Seiler V. & Reisenwitz T. (2010). A Review of Service Quality Research in Real Estate. Journal of Real Estate Literature. 18(2): 225-238. DOI: 10.1080/10835547.2010.12090274.

Nguyen Dinh Tho (2012). Method of scientific research in business. Labour and Social Publishing House (in Vietnamese).

Hoang Trong & Chu Nguyen Mong Ngoc (2008). Analysis research data with SPSS (Vol. 1). Hong Duc Publishing House (in Vietnamese).

Hamza V. K. (2013). A Study on the Mediation Role of Customer Satisfaction on Customer Impulse cand Involvement to Word of Mouth and Repurchase Intention. International Journal of Business Insights & Transformation. 7(1): 62-67.

Yi Y. (1990). A critical review of consumer satisfaction. Review of Marketing. 4(1): 68-123.

Yik-Chee L. & Meredith G. (2009). Client Survey - Service Quality of Singapore Stock Brokers. Professional Doctorate Research in Australia. 133.

Zeithaml V. A. (2000). Service Quality, Profitability, and the Economic Worth of Customers: What We Know and What We Need to Learn. Journal of the Academy of Marketing Science. 28(1): 67-85. DOI: 10.1177/0092070300281007.