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An Examination of Service Quality, Transaction Costs and Sales Ethics among Real Estate Advertising Sales Agents

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This paper combines the transaction cost model, the sales ethics model and the service quality model as the theoretical foundations for evaluating house buyer satisfaction with their real estate advertising sales agents. This study uses a convenience sampling method with the population of sold-out building projects and new home projects in all administrative areas of Kaohsiung. The empirical results show that the reasons for agency problems and transaction costs affect the transaction costs of house buyers and the ethics of advertising sales agents. Furthermore, agents who provide better service are associated with more satisfied house buyers with stronger intentions. Finally, sales

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ethics have a significant influence on transaction costs as well as customer satisfaction and complaints.

Keywords

Service quality; Reasons for agency problems and transaction costs; Transaction costs; Sales ethics

1.   Introduction

The enormous monetary values associated with real estate transactions significantly influence the financial benefits of house buyers. However, many disputes arise during and following real estate transactions. Real estate brokerage firms play a pivotal role in the majority of these types of transactions. In Taiwan, the real estate brokerage industry consists of advertising sales agents and brokers.[1] Brokers are responsible for the sale of finished or newly finished houses. Since 1969, the presale house system has created a need for advertising sales agents, who primarily sell unfinished houses or newly finished houses on behalf of developers.[2] Presale buyers are limited to the information and advertising literature provided by advertising sales agents, who act as the major service provider when buyers reach their decisions. Therefore, these types of transactions can be quite risky. According to the statistics of the Department of Land Affairs of the Interior Ministry of Taiwan, there are approximately 1971 advertising sales agents in Taiwan.[3] According to the Housing and Development Journal published by the industry, the top 10 advertising sales agents in Taiwan in 2010 sold NT$4,063.6 billion (US$1≒NT$29, 2011/4), which account for 34% of the proposed projects valued at NT$11,649 billion. This reflects the importance of the advertising sales agent for market transactions.[4]   Advertising sales agents are essentially a service industry that caters to the needs of the new or unfinished homebuyer; as such, they play a large role in how buyers perceive the quality of services rendered.

The mainstream approach to assessing service quality is based on the service quality model (SQM) developed by Parasuraman et al. (1985). This model has been widely used to evaluate service behavior in various industries

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[1] Pursuant to Article 4-4 of the Real Estate Broking Management Act, the brokerage industry refers to the companies or businesses that operate as brokers or advertising sales agents.

[2] Presale houses are sold while they are being built or after they have been built. Buyers purchase yet-to-be-finished or yet-to-be-built houses.

[3] Data source: http://pri.land.moi.gov.tw/realestate_query/(2011/4).

[4] Data source: http://www.myhousing.com.tw (2011/02/25).

(Parasuraman et al. 1985; 1988; 1991). The concept of service quality also incorporates factors such as satisfaction, behavioral intention and customer complaints, and the revised SQM takes these into account when assessing the service quality of real estate brokers (McDaniel and Louargand, 1994; Nelson and Nelson, 1995; Seiler et al., 2008).

However, because transaction values are high and processes are complicated, uncertainties and high transaction costs are often associated with real estate transactions. Coase (1937) proposes the concept of transaction costs, and Williamson (1975) suggests that higher information asymmetry and opportunism lead to more difficult transactions and higher transaction costs. Williamson (1985, 1992) has further summarized a list of the factors that influence the levels of transaction costs. Real estate advertising sales agents act as agents to sell properties, and a principal-agent relationship exists. The issues and perceptual differences associated with the principal-agent relationship include agency problems as well as high transaction costs.

Real estate advertising sales agents are critical to real estate transactions. They can effectively promote the completion of transactions and enhance transaction efficiency (Yinger, 1981; Yavas, 2007). However, Hoyt and Schwer (1998) suggest that due to the great complexity associated with real estate transactions, advertising sales agents have frequent opportunities to mislead potential buyers. Therefore, the US government has stressed the importance of ethical requirements of the real estate brokerage industry and has urged practitioners to observe codes of conduct.[5] Studies indicate that ethics are very important to real estate brokers in that they affect sales (Allmon and Grant, 1990; Roulac, 2006).

To assess the factors that influence the home buying behavior of consumers and establish a comprehensive theoretical foundation, this paper integrates two key factors under the traditional structure of service quality theory: (1) the reasons for agency problems and transaction costs, and transaction costs themselves (the so-called transaction cost model (TCM)) (Coase, 1937; Williamson, 1975, 1979, 1985), and (2) sales ethics (Román and Ruiz, 2003; 2005). That said, when it comes to the decision to take action, it is necessary to incorporate other key factors in addition to the SQM to compensate for insufficient information that pertain to real estate transaction behaviors. To

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[5] The National Association of REALTORS® is the largest real estate organization in the US, with a total of 1,063,901 members as of March 2010. The association established the 1913 Code of Ethics and Standards of Practice, the newest version of which was amended on January 1, 2009. The code defines the obligations to clients and customers, the public and peer brokers in the industry. The purpose of the code is to regulate the behavior of brokers and protect the rights of customers. In Taiwan, the Ministry of the Interior in 2008 amended the 19 articles of the Code of Conduct for Real Estate Brokers—an ethical standard imposed on all Taiwan brokers and advertising sales agents.

extend the SQM, this paper includes two aforementioned factors, TCM and sales ethics, to gain a better understanding of the consumption behavior of house buyers.

2.   Basic Concepts and Research Background

2.1   Sales Ethics

An increasing number of researchers are investigating ethics within the real estate brokerage industry. Roulac (1999, 2001) argues that ethics are very important to the market and suggests that the ethical practices of the brokerage industry can enhance its importance as an intermediary. Román and Ruiz (2005) find that ethics have a positive influence on customer satisfaction, trust and commitment. Ethical sales behavior is integral to the maintenance of the relationship between buyers and sellers. Roulac (2006) has conducted a survey with members of the American Real Estate Society (ARES) and find that real estate professionals can improve their ethical behavior in terms of trust, fiduciary duties, competence, disclosure and integrity.

Advocates for improved ethical behavior have existed for decades, but whether ethical behavior is truly practiced, and by what percentage of brokers, remain unclear. Allmon and Grant (1990) have conducted a voice stress analysis to evaluate the practice of ethical behavior by brokers.[6] The results indicate that even in the presence of ethical codes, the practice of ethics is not perfect. Barker (2008) has examined brokers with licenses issued by the Association of Real Estate License Law Officials (ARELLO). The empirical results show that education and work experience both increase the commission incomes earned by real estate brokers. However, in the absence of any improvement in brokerage services, consumers pay US$5.04 billion per annum, but do not receive the best service possible. This finding highlights the ethical issues faced by brokers. Although ethical behavior is an important part of the real estate transaction process, its influence has yet to be analyzed. Therefore, this paper incorporates sales ethics into the SQM model to better assess the real estate brokerage industry.

2.2   Transaction Cost Model (TCM)

Coase (1937) has established the basis for the transaction cost theory. Williamson (1975) argues that transaction costs include asset specificity, transaction frequency and uncertainty. Other scholars have extended the

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[6] Voice stress analyses are used by the police to test for lies based on the amplitude of interviewee voices. In theory, interviewees would strongly react to their own actions; as such, their voices will show greater amplitudes when answering questions about their own actions.

concepts proposed by Williamson by suggesting that potential sources of transaction costs include bounded rationality, information asymmetry, opportunism, uncertainty and asset specificity (Douma and Schreuder, 1992; Heide, 1994). Williamson has applied the transaction cost theory to his examination of organizational relationships. Jensen and Meckling (1976) suggest that when a principal relies on an agent to take certain actions for the benefit of that principal, agency problems occur. Real estate brokers are the middlemen in this transaction process, so that a principal-agent relationship exists. However, when there is an agency relationship between the principal and the agent, agency problems occur because both parties have different goals and different risk perceptions (Fama, 1980; Eisenhardt, 1989). In addition to the presumption of rational self-interest, agency problems also result from inconsistent or conflicting benefits and goals that pertain to the principal and the agent, differences in risk perceptions with regards to the result of the action taken by the agent, and information asymmetries (Stump and Heide, 1996).

Agency problems affect real estate transactions. Gardiner et al. (2007) have examined dual agency problems associated with real estate brokers.[7] Their empirical findings suggest that dual agency lowers real estate transaction prices by 8% and reduces the turnover time by 8.5%. Turnbull and Dombro (2007) also support the variances in prices due to agency problems associated with real estate brokers. Therefore, it is necessary to clarify the reasons for agency problems and transaction costs and the content of transaction costs to understand the implied effects of TCM on real estate transaction processes.

2.3   SQM

The previous mainstream approach for assessing service quality was the SERVQUAL (service-quality) framework proposed by Parasuraman et al. (1988). This framework included five constructs: tangibility, reliability, responsiveness, assurance and empathy. Parasuraman et al. (1991) indicate that customer loyalty is based on the enhancement of service quality, which in turn, affects the willingness of consumers to recommend the product or service to others. Similarly, Cho et al. (2004) find that when customer needs are completely satisfied, they exhibit positive loyalty. As such, the higher the service quality rendered, the better the perceived quality by the customers. Olorunniwo et al. (2006) argue that improved service quality raises the level of customer satisfaction; in turn, customers are more willing to re-authorize. Therefore, service quality is expected to have a positive influence on satisfaction and intention.

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[7] Dual agency refers to the situation where the real estate broker is the agent for both the buyer and the seller. The seller wants to demand a higher price, while the buyer hopes to bargain for a lower price.

Customer complaint behavior has been investigated since the 1970s. Studies have examined the factors that influence such behaviors and attempted to classify customer complaint behaviors (Singh, 1988). Shilling and Sirmans (1998) apply the concept of customer compliant behavior to their analysis of real estate brokerages in an attempt to better understand consumer behaviors subsequent to the rendering of services.

Current studies on service quality issues have summarized the constructs of customer satisfaction, intention and customer complaints. The result is the SQM, which has been validated through extensive studies of real estate brokerage service quality (RESERV). Studies indicate that real estate broker service quality influences buyer intentions, satisfaction and complaints (McDaniel and Louargand, 1994; Nelson and Nelson, 1995; Seiler et al., 2008).

3.   Research Model and Hypotheses Development

3.1   SQM

Reichheld and Sasser (1990) suggest that high satisfaction boosts customer loyalty, which indicates the intention of consumers to purchase products or services in the future. This paper also uses this definition. Taylor and Baker (1994) have sampled service industries and find that service quality and customer satisfaction positively influence intention. Parasuraman et al. (1991), Cronin et al. (2000), Cho et al. (2004) and Olorunniwo et al. (2006) also support the relationship between service quality, satisfaction and intention. As such, the current paper refers to service quality as the basis and combines it with customer satisfaction, intention and complaint behavior to construct a comprehensive service-quality decision model. This paper proposes the four following hypotheses:

H1: Advertising the service quality of sales agents has a positive influence on homebuyer satisfaction.
H2: Homebuyer satisfaction has a positive influence on intention.
H3: Homebuyer satisfaction has a negative influence on homebuyer complaints.
H4: Homebuyer complaints have a negative influence on intention.

3.2   Sales Ethics and SQM

Oliver and Swan (1989) indicate that during the transaction process, the feeling of being treated fairly enhances the level of satisfaction of consumers with salespeople. Román (2003) suggests that this feeling is largely based on the ethical behavior of salespeople. Ethical sales behavior is a difficult concept to understand, but plays an important role in the formation and

maintenance of long-term customer relationships. Román and Ruiz (2005) define unethical sales behavior as temporary behavior that causes customer losses. These types of behavior include lying about or exaggerating the benefits of products, delivery dates and industry competition, promoting products that customers do not need, answering questions without knowing the answers, clever tactics and hard sales. When customers sense that salespeople are not acting ethically, they often complain directly to the salespeople or their companies. Based on these factors, this paper proposes the following two hypotheses:

H5: The sales ethics of advertising sales agents positively influence homebuyer satisfaction.

H6: The sales ethics of advertising sales agents negatively influence homebuyer complaints.

3.3   TCM and SQM

Williamson (1975) indicates that in the presence of doubt or mistrust between the buyer and seller, higher levels of information asymmetry and opportunism are associated with greater difficulty in completing transactions as well as increased transaction costs. Williamson (1992) has summarized the factors that influence transaction costs: asset specificity, property rights, contract laws, reputation effects, and transaction uncertainties and frequencies.

Based on the above, this paper states that the reasons for agency problems and transaction costs are based on information asymmetries, opportunism, goal incompatibility and risk perception differences. Greater differences in terms of information and perceptions are associated with greater uncertainties. In turn, transaction costs rise. Hence, this paper proposes the following hypothesis:

H7: The reasons for agency problems and transaction costs have a positive influence on transaction costs.

Teo and Yu (2005) have investigated online transactions from the perspective of transaction costs and find that transaction costs have a negative influence on consumer purchase intentions. Higher real estate transaction costs are associated with higher involvement costs that pertain to information collection, monitoring and adjustment costs. As such, homebuyers must spend more time and effort to deal with their advertising sales agents. In other words, it is expected that transaction costs will have a negative influence on intention. Based on the above, this paper proposes the following hypothesis:

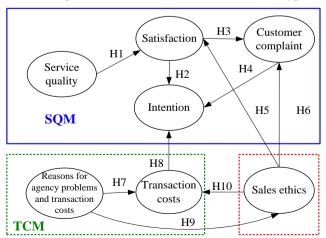H8: Transaction costs have a negative influence on intention.

3.4   TCM and Sales Ethics

Many scholars have examined ethical issues that surround the real estate brokerage industry (Román and Ruiz, 2005; Roulac, 2006). Because most homebuyers in Taiwan are in the market for the first time, agency problems and transaction costs tend to occur due to a lack of familiarity and mutual trust, and these factors result in unethical sales behavior by real estate brokers. This finding is consistent with the relevant literature, which states that real estate brokers do not provide the services deemed most beneficial to buyers and sellers (Levitt and Syverson, 2005). Johnsen (2009) integrates the social contract theory and transaction costs in an examination of business bribery and find that in a high transaction cost situations, the groups that seek benefits find it difficult to bargain or negotiate. Muller (2009) states that it is necessary to emphasize the importance of ethics and legal issues in the real estate brokerage industry because the negative impact of price competition and broker violations of the obligation for integrity and honesty serve to increase transaction costs and are detrimental to consumer rights. Hence, if brokers behave ethically, homebuyers are more likely to trust them; in turn, the level of mutual trust increases and transaction costs decrease. Based on the above arguments, the current paper incorporates sales ethics into the research structure and proposes the following two hypotheses:

H9: The reasons for agency problems and transaction costs have a negative influence on the sales ethics of the brokerage industry.

H10: The sales ethics of the brokerage industry have a negative influence on transaction costs.

The research structure of this paper is illustrated in Figure 1 below.

Figure 1   The Proposed Research Model and Research Hypotheses.

4.   Research Methods

4.1   Questionnaire Development

The current paper is concerned with seven research constructs: the reasons for agency problems and transaction costs, transaction costs, service quality, customer satisfaction, intention, customer complaints and sales ethics. Appendix Ⅰ lists the operational definitions of the construct variables. The questionnaire consisted of three sections. The first section contained items that measure service quality. The second section pertained to the measurement of variables such as the reasons for agency problems and transaction costs, transaction costs, customer satisfaction, sales ethics, intention and customer complaints. The questions for these two sections were answered with a 5-point Likert scale that ranged from 1 (strongly disagree) to 5 (strongly agree). The third section collected basic demographic data including gender, marital status, age, education background, address, occupation and average monthly income. This section is measured by using nominal scales.

Before the formal survey, 30 respondents who had recently been assisted by a real estate advertising sales agent completed a pre-test questionnaire. These respondents focused on the length, format, wording and clarity of the questions. In this way, the questionnaire content validity was confirmed.

4.2   Sample and Data Collection

This study used a convenience sampling method with the population of new home projects by various construction companies, as published on the website of the Building Development Commercial Association of Kaohsiung. The population included sold-out building projects and new home projects in all administrative areas of Kaohsiung. A total of 59 building projects in 12 administrative areas of Kaohsiung were used in the sampling. The study assigned personnel to interview residents at the sites of building projects and potential homebuyers. The survey period ran from August 15, 2009 through to October 15, 2009. A total of 400 questionnaires were recovered. After eliminating 79 incomplete or incorrectly answered questionnaires, 321 effective questionnaires remained. The effective recovery rate was 80.25%. Among the effective sample, males accounted for 52% and females for 48%. Most respondents were married with children (76.6%), followed by singles (16.5%). The smallest group included those married without children. The main age group was 41-50 years old (49.2%). College graduates and participants with at least some college were the largest group in terms of educational background (35.4%). The majority of the respondents worked in the service industry (30.3%), while the smallest group included professional practitioners. In terms of personal monthly income, 16.8% of the respondents said they made NT$30,001-40,000, and 16.5% stated that they made NT$60,001-70,000 (US$1≒NT$29, 2011/4).

5.   Results

This study uses SPSS 14.0 and Amos 16.0 as the analytical tools. The data analysis methods included descriptive statistics, confirmatory factor analysis and structural equation modeling (SEM). As an analytical technique, SEM assists in analyzing the measurement and the structural models.

This paper examines the convergent and discriminant validities. The assumptions were validated by using SEM, and estimates were made by using the maximum likelihood method. The assessment of model fit can refer to χ^2/df as well as the goodness of fit index (GFI), adjusted goodness of fit index (AGFI), normal fit index (NFI), comparative fit index (CFI), incremental fit index (IFI), root mean square error of approximation (RMSEA), root mean square residual (RMR) or standardized root mean square residual (SRMR).

5.1   Analysis of the Measurement Model

According to Nunnally (1978) and DeVellis (1991), reliability values greater than 0.70 are considered high; values between 0.50 and 0.70 are considered acceptable. All α values in the research variables in the current study exceed 0.7. The values of the research variables were as follows: the measurement of service quality was 0.913; reasons for agency problems and transaction costs was 0.851; transaction costs was 0.761; satisfaction was 0.794; sales ethics was 0.815; intention was 0.845; and customer complaints was 0.723. As shown in Table 1, these figures indicate internal consistency across constructs, which suggests that the questionnaire results are acceptable.

The questionnaire content was based on the research objective and modified with reference to past literature and questionnaires. To ensure the validity of the questionnaire, experts and scholars were asked to provide feedback prior to the formal survey. The questionnaire was modified based on the feedback received. Hence, this questionnaire carries certain content validity. This paper refers to factor loadings as the measurement of construct validity. Table 1 depicts the factor loading values of individual questionnaire items, all of which are statistically significant. To ensure the robustness and completeness of the results, a confirmatory factor analysis (CFA) was performed to validate the convergent and discriminant validities of the individual constructs.

Table 1   Measurement Reliability, Loading and AVE

Variable	Loading λ (standardized)	σ^2 or σ^2_δ	Measurement variable reliability	CR	AVE	SEM R^2	Cronbach's α
Service quality				0.916	0.684	—	0.913
Tangibility	0.652***	2.724	0.43				
Reliability	0.858***	2.419	0.74				
Responsiveness	0.810***	1.877	0.66				
Assurance	0.893***	1.372	0.80				
Empathy	0.892	2.021	0.80				
Reasons for agency problems and transaction costs				0.813	0.523	—	0.851
Information asymmetries	0.752***	0.990	0.57				
Opportunism	0.718***	0.354	0.52				
Goal incompatibility	0.774***	0.928	0.60				
Risk perception differences	0.637	0.698	0.41				
Satisfaction				0.779	0.579	0.581	0.794
With services	0.783	0.731	0.61				
With interactions	0.742***	0.747	0.55				
Intentions				0.861	0.674	0.760	0.845
Willingness to re-authorize	0.763	0.244	0.58				
Action to re-authorize	0.892***	0.128	0.79				
Recommendations to others	0.801***	0.233	0.65				
Customer complaints				0.863	0.532	0.087	0.723
In private	0.702	0.000	1.00				
To sellers	0.601***	0.516	0.36				
To third parties	0.485***	0.823	0.23				
Sales ethics				0.685	0.557	0.500	0.815
Honesty	0.421	1.701	0.18				
Avoid exaggeration or the hard sell	0.966***	0.972	0.93				
Transaction costs				0.767	0.460	0.824	0.761
Information collection costs	0.462***	1.640	0.21				
Negotiation costs	0.756***	0.287	0.57				
Monitoring costs	0.681***	0.375	0.46				
Residual losses	0.765	0.265	0.59				

Notes: * indicates p<0.1, ** indicates p<0.05, *** indicates p<0.01.

Table 2   Discriminant Validity of Individual Measurements.

Potential variable	Reasons for agency problems and transaction costs	Transaction costs	Service quality	Sales ethics	Satisfaction	Customer complaints	Intentions
Reasons for agency problems and transaction costs	0.723						
Transaction costs	0.324	0.678					
Service quality	0.261	0.235	0.827				
Sales ethics	-0.098	-0.072	0.183	0.746			
Satisfaction	0.121	0.026	0.542	0.091	0.761		
Customer complaints	0.143	0.307	-0.217	-0.132	-0.133	0.729	
Intentions	0.189	0.183	0.401	0.036	0.352	-0.072	0.821

Note: The square roots of the AVE individual construct values are displayed on the diagonal.

According to Anderson and Gerbing (1988), convergent validity can be measured with a structural model analysis to understand whether individual questions have appropriately evaluated all potential variables. As shown in Table 1, most of the factor loading values for the measured variables exceed 0.5, reaching statistical significance. Generally speaking, this questionnaire has good convergent validity. Moreover, Fornell and Larcker (1981) suggest that the square root of average variance extracted (AVE) of a potential variable must exceed the coefficient of other potential variables. This indicates good discriminant validity across constructs. The coefficient of reasons for agency problems and transaction costs, and transaction costs themselves, was 0.324, which is smaller than the square roots of the AVE values for reasons of agency problems and transaction costs, and transaction costs themselves (0.723 and 0.678, respectively). This suggests discriminant validity. As summarized in Table 2, all the measurements in this paper show significant discriminant validity.

5.2   Analysis of the Structural Model

The SEM analysis can be divided into two parts: estimates of the theoretic assumption model, which ensure that the overall model fit reaches the standard, and the linear structure model analysis.

5.2.1 Assessment of Theoretical Models

In terms of the assessment of model fit, Bagozzi and Yi (1988) suggest that it is necessary to consider preliminary fit criteria, overall model fit and the fit of the internal structure of the model. Each of these factors is analyzed below.

(1) Preliminary Fit Criteria

Table 1 indicates that the majority of the factor loading values for the seven potential constructs are statistically significant, as most exceed or approach 0.7. There is no negative value for the error variances measured. Overall, the preliminary fit criteria are acceptable.

(2) Overall Model Fit

Bagozzi and Yi (1988) state that model fit cannot be determined by any single criterion or indicator. Rather, it is necessary to examine the overall test results. The absolute fit measure χ^2 of 650.7(p<0.000) reaches the 0.05 significance level; however, the normal chi-square value (χ^2/df=2.94) is within the acceptable range. Similarly, GFI (=0.851), AGFI (=0.814), NFI (=0.846), CFI (0.892), IFI (=0.893), RMSEA (=0.078), RMR (=0.280), and standardized RMR (=0.099) are mostly within the acceptable range.[8] Overall, the theoretical model fit is deemed acceptable.

(3) Fit of Internal Structure of Model

Bagozzi and Yi (1988) suggest the three most frequently used indicators for observing individual item construct reliability (described below). It is important to determine whether the factor loading exceeds 0.7 and whether each loading value reaches statistical significance. Most of the factor loading values in the results exhibit statistical significance, other than the values for customer complaints→complaints to third parties, sales ethics→honesty and transaction costs→information collection costs, which are slightly lower.

Composite reliability (CR) of potential variables: the CR of potential variables is the combined reliability of all variables measured. It is an indicator of the internal consistency of construct indicators. A higher reliability means a

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[8] Jöreskog and Sörbom (1989) indicate that chi-square tests of linear structural models are subject to the interference of sample sizes. The larger the sample sizes, the greater the chi-square values and the stronger the impact on the significance of p values. Hairs et al. (1998) also suggest that chi-square values are influenced by sample sizes, particularly when there are more than 200 samples.
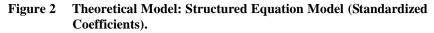
higher indicator consistency. Fornell and Larcker (1981) suggest that CR should exceed 0.6. All the CR values in this paper are within the acceptable range.

AVE of potential variables: AVE calculates the explanatory power for the variances of the potential variable measured. A high AVE signifies high reliability and convergent validity for a potential variable. Fornell and Larcker (1981) suggest that AVE should exceed 0.5. As shown in Table 1, all of the AVE values exceed the acceptable level of 0.5 except for transaction costs. However, this value is still deemed acceptable. These figures indicate that the internal consistency of the overall measurement is acceptable.

5.2.2 Analysis of Theoretical Structural Models

The results of the theoretical structural equation models should be examined by using standardized coefficients, as shown in Figure 2 and Table 3. Table 3 summarizes the results of the hypothesis validation, which indicate that within the SQM, all of the estimated coefficients are consistent with expectations, although neither H3 nor H4 attain significance. As such, all hypotheses are supported. For the relationship between sales ethics and SQM, the estimated coefficients of H5 and H6 are consistent with expectations and statistically significant. Therefore, both hypotheses are supported. For TCM, the results show support for H7 because its estimated coefficient is both consistent with expectations and statistically significant. With regards to the relationship between TCM and SQM, the estimated coefficient of H8 is neither consistent with expectations nor statistically significant. Finally, in terms of the relationship between TCM and sales ethics, the estimated coefficients of H9 and H10 are consistent with expectations and statistically significant. Most of the empirical findings support the hypotheses, with the exception of H3, H4 and H8.

The reasons for agency problems and transaction costs have direct effects on transaction costs, with an estimated coefficient of 0.734. They also indirectly affect transaction costs via sales ethics, with an estimated coefficient of 0.160 (-0.707*-0.226). The total effect value stands at 0.894. Obviously, sales ethics play an intervening role and influence intention via satisfaction. Finally, the reasons for agency problems and transaction costs affect satisfaction and customer complaints via sales ethics. This shows the importance of sales ethics in the homebuyer behavior model. Although TCM does not directly impact SQM, it does influence satisfaction and customer complaints via sales ethics.
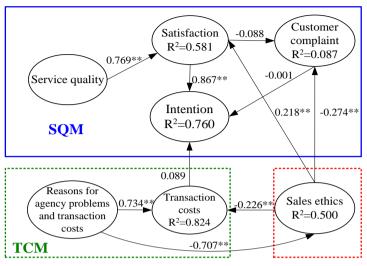
Figure 2   Theoretical Model: Structured Equation Model (Standardized Coefficients).

Table 3   Estimated Coefficients for the Theoretical Assumption Models.

Path	Expected Sign	Path coefficient	t-value	Hypothesis
H1 Service quality →Satisfaction	+	0.769**	12.406	Supported
H2 Satisfaction →Intention	+	0.867**	11.708	Supported
H3 Satisfaction →Customer complaints	–	-0.088	-1.454	Not supported
H4 Customer complaints →Intention	–	-0.001	0.975	Not supported
H5 Sales ethics →Satisfaction	+	0.218**	3.717	Supported
H6 Sales ethics →Customer complaints	–	-0.274**	-4.212	Supported
H7 Reasons for agency problems and transaction costs →Transaction costs	+	0.734**	4.918	Supported
H8 Transaction costs →Intention to act	–	0.089	1.817	Not supported
H9 Reasons for agency problems and transaction costs →Sales ethics	–	-0.707**	-5.563	Supported
H10 Sales ethics →Transaction costs	–	-0.226**	-2.866	Supported

Note: * indicates $p<0.05$, ** indicates $p<0.01$.

6.   Discussion

This paper aims to explore the service behavior of the real estate brokerage industry. With regards to the explanatory power of the model, the R^2 values for transaction costs, sales ethics, satisfaction, intention, and customer complaints are 82.4%, 50%, 58.1%, 76%, and 8.7%, respectively. These figures demonstrate the explanatory power of the linear structural model on the service assessment of real estate advertising sales agents. The standardized coefficients listed in Figure 2 and Table 3 explain the results of the theoretical structural equation model.

According to the TCM shown in Table 3, the reasons for agency problems and transaction costs have a positive influence on transaction costs, with a coefficient of 0.734 (significance at the 1% level). This is consistent with expectations and validates H7. The results show that increased reasons for agency problems and transaction costs between homebuyers and brokers lead to higher rates of information asymmetry, opportunism, incompatible goals and differences in risk perception. In turn, mistrust, suspicion and conflicts of interest become more prevalent. Both parties face an increase in transaction costs based on reasons for agency problems and transaction costs. Therefore, most homebuyers do not think highly of real estate advertising sales agents, who often use their access to information to conceal or distort the information sought by homebuyers. Sales agents may engage in these types of behavior to push through transactions, earn greater profits or cover up defects in the real estate property in question. Each of these factors increases the transaction costs for homebuyers.

Furthermore, although transaction costs have a positive influence on intention, the coefficient is not consistent with the expected sign and does not attain significance. Hence, it is not possible to validate H8. The empirical results that pertain to H9 show that the reasons for agency problems and transaction costs have a negative influence on sales ethics, with a coefficient of -0.707. In the presence of variance in terms of reasons for agency problems and transaction costs (e.g., information asymmetry, opportunism, incompatible goals and differences in risk perception), real estate advertising sales agents retain advantages by possessing market or product information not readily available to buyers. This leads to conflicts of interest or distortions in risk perceptions. All of the above behaviors are violations of general sales ethics.

All the hypotheses in this paper that pertain to sales ethics are validated. The empirical result for H5 indicates that real estate brokerage industry sales ethics have a positive influence on customer satisfaction, with an estimated coefficient of 0.281. The most criticized behaviors among advertising sales agents include lying, exaggerating the credibility of products, malicious competition and improper sales. The results of this study show that ethical advertising sales agents increase homebuyer satisfaction with the levels of

service and interaction provided. Ethical behavior includes honest replies to inquiries and no exaggerations or lies. The empirical result for H6 finds that the sales ethics of agents have a negative influence on complaints from homebuyers, with an estimated coefficient of -0.274. Specifically, ethical sales behavior results in fewer customer complaints. The empirical result for H10 suggests that real estate brokerage industry sales ethics have a negative influence on transaction costs, with an estimated coefficient of -0.226. As such, honest replies to questions that avoid both exaggeration and dishonesty can effectively reduce transaction costs. For example, when homebuyers do not face unethical agent behaviors, they do not have to spend money on information collection, negotiation, or monitoring of inappropriate behaviors, and they are unlikely to suffer losses due to conflicts of interest.

Sales ethics have direct effects on transaction costs, customer complaints and satisfaction. The reasons for agency problems and transaction costs also influence transaction costs, customer complaints and satisfaction via sales ethics. Further, sales ethics influence intention via satisfaction and exhibit a significant influence on the behavior of homebuyers during the transaction process. Ethical agent behavior helps to reduce transaction costs for both buyers and sellers. If homebuyers feel that sales behavior is honest rather than exaggerating or cheating, they will be more satisfied with the services and complain less. Sales ethics have rarely been discussed in the existing literature on real estate transactions.

The results of this study validate SQM, H1 and H2. Service quality has a positive influence on satisfaction, with an estimated coefficient of 0.769. Satisfaction has a positive influence on intention, with an estimated coefficient of 0.867. These results suggest that real estate advertising sales agents who offer higher service quality are associated with higher satisfaction on the part of homebuyers, who will be more likely to return for service in the future. This empirical finding is consistent with conventional SQM. On the other hand, while the direction of the influence for H3 and H4 is consistent with expectations, the values are not statistically significant. Customer complaints can be divided into complaints made privately, to sellers and to third parties. There are two main reasons that homebuyers may ultimately be dissatisfied and unable to obtain feedback by complaining. First, advertising sales agents may not have done their jobs or fulfilled their responsibilities.[9]

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[9] According to Article 22 of the Real Estate Broking Management Act, if any sale, exchange, leasing or brokerage of real estate is authorized by a broker or advertising sales agent, the following documents should be signed by the broker or sales agent:(1) letter of authorization for the leasing and sale of real estate; (2) offering documents for the lease or purchase of real estate; (3) receipts of deposits; (4) real estate advertising literature; (5) real estate descriptions; and 6) contracts for the lease or purchase of real estate. The regulations governing (1) and (2) are not applicable to brokers/advertising sales agents. The details regarding what is and is not allowed in the real estate descriptions in (5) are subject to the regulations set forth by the competent authorities.

Second, the exact responsibilities of advertising sales agents and developers are unclear. Under the current system, there are no contracts or documents that must be jointly signed by homebuyers and advertising sales agents. Therefore, homebuyers find it difficult to hold advertising sales agents responsible, and it is impossible to file complaints with a fair and just third party or pursue legal action. Moreover, homebuyers usually cannot differentiate between developers and advertising sales agents, and often confuse these two groups. As a result, consumers only complain to developers. This is evidenced by the fact that most litigation occurs between developers and homebuyers. However, customer complaints do not have a significant influence on intention. It may be that the number of real estate transactions in an individual lifetime is small, and there are few repeat purchases.

7.   Implications

This paper extends SQM and combines the TCM and sales ethics into an analysis of the relationship between the real estate brokerage industry and homebuyer intentions. The results of this paper illustrate the important management implications that pertain to sales ethics within the transaction process. Below is a summary of the research implications based on the empirical analysis that may serve as a reference for service quality in the brokerage industry.

7.1   Implications for Academics

In terms of theory construction, this paper attempts to combine new TCM concepts and sales ethics into the conventional SQM. The research model intends to assess the service quality offered by the real estate brokerage industry. The results offer three implications for the service quality rendered by advertising sales agents as assessed by homebuyers. First, reasons for agency problems and transaction costs in the TCM influence total transaction costs. Moreover, reasons for agency problems and transaction costs can influence satisfaction and customer complaints via sales ethics. Future studies can further improve the TCM by analyzing real estate transactions.

  Second, sales ethics have a negative influence on transaction costs and customer complaints, but they have a positive influence on homebuyer satisfaction. If homebuyers sense any unethical agent-based sales behaviors, transaction costs rise and complaints occur. As a result, the level of satisfaction drops. There is extensive literature in Taiwan on business ethics, but very few studies have investigated ethics in the real estate market (Lee, 2002; 2004; Lee and You, 2007). The current finding that sales ethics can influence homebuyer behavior should act as a stimulus for follow-up studies on ethics in the real estate market.

Finally, improved real estate service quality can boost customer satisfaction. Higher satisfaction is associated with a more positive influence on intentions. When homebuyers receive good service, their satisfaction increases and they show positive intentions. Future studies can evaluate the potential SQM influencing factors, explore how to improve the robustness of the model, and further examine how homebuyers perceive service quality.

7.2   Implications for Practitioners

According to the results of a survey on the demand for residential units conducted by the Institute for Physical Planning & Information under the commission of the Construction and Planning Administration in the first half of 2009, 22.84% of first-time buyers in Taiwan purchased their homes via advertising sales agents or developers. This demonstrates the importance of the real estate brokerage industry in Taiwan. However, while the security of real estate transactions has received increased attention, the positioning and responsibilities of advertising sales agents remain unclear. In the past, homebuyers were limited to the information provided by advertising sales agents when considering a purchase. Reasons for agency problems and transaction costs often put homebuyers at a disadvantage in terms of access to relevant information. As consumer demand continues to rise, homebuyers have become increasingly aware of the importance of fair transactions. The empirical results of the current study suggest that reasons for agency problems and transaction costs influence transaction costs. If advertising sales agents take advantage of information asymmetries and seek differing goals, transaction costs will likely increase and homebuyer satisfaction will decrease. According to the transaction cost concepts developed by Williamson, an efficient economy should seek to lower transaction costs. Therefore, advertising sales agents should work to mitigate information gaps faced by homebuyers, effectively reducing transaction costs and increasing transaction efficiency (Yinger, 1981; Yavas, 2007).

This paper analyzes the behavior of the real estate brokerage industry from the perspective of homebuyers. The empirical results with regards to sales ethics show that when homebuyers believe that advertising sales agents behave ethically, negative impressions of advertising sales agents decline. In the past, homebuyers were forced to deal with exaggerations, lies and distortions by agents. The real estate brokerage industry should leverage its service advantages to improve transaction ratios and shorten transaction lead times. The results of the current study show that focusing on ethics is one of the best methods to improve customer satisfaction and reduce customer complaints. To ensure that transaction processes are ethically conducted, advertising sales agents are advised to reduce the reasons for agency problems and transaction costs as perceived by homebuyers. This will help to ensure ethical behavior and establish sustainable operations for the real estate brokerage industry, improving the currently negative public image of this industry.

7.3   Limitations and Future Research

This paper has several limitations with regards to the use of the survey tool. First, the questionnaire was released to individuals who had been served by real estate advertising sales agents. However, these respondents are difficult to locate, and obtaining a large sample size would prove costly. Future studies may seek assistance from advertising sales agents or transaction associations to widen the scope of the participants. Second, this paper uses a cross-sectional questionnaire survey. However, real estate transactions are highly subject to economic conditions. When the real estate market is booming, frequent transactions and high prices are more common than in a recessionary period. As such, service behaviors of advertising sales agents differ, which may lead to different effects in terms of the TCM or sales ethics. Future studies should consider longitudinal surveys to compare the influence of different real estate market conditions based on the structure proposed in this paper. Finally, future studies may refer to the extended TCM and sales ethics concepts as a foundation for relevant issues.

Acknowledgement

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Appendix I   Definition of Research Variables

Research Factors and Variables	Definition	Literature
Reasons for Agency Problems and Transaction Costs		
Information asymmetry	Understanding of product information and familiarity with market situations	Douma and Schreuder (1992)
Opportunism	Deceitful commitment or concealment of personal intentions in the pursuit of self-interest; selection of known information and distortion of information	Williamson (1975; 1985)
Goal incompatibility	Both parties pursue different goals, such as different benefit and cost targets	Fama (1980); Eisenhardt (1989)
Risk perception differences	Different levels of risk undertaken	Douma and Schreuder (1992)
Transaction Costs		
Information collection costs	Collection of a large amount of product and market response information	Coase (1937); Williamson (1975; 1985); Heide (1994)
Negotiation costs	Costs incurred by customers while negotiating and bargaining	Williamson (1975; 1985); Heide (1994)
Monitoring costs	Costs incurred by customers to prevent inappropriate behavior by monitoring brokers or providing incentives to brokers	Jensen and Meckling (1976)
Residual losses	Losses borne by customers due to conflicts of interest	Jensen and Meckling (1976)
Service Quality		
Tangibility	Venues, physical facilities and representations	
Reliability	Ability to deliver promised services in a reliable and accurate manner	
Responsiveness	Ability to provide real-time services and assist customers	Parasuraman et al. (1985; 1998; 1991)
Assurance	Professional knowledge, manners and ability to win trust and reliance from customers	
Empathy	Ability to provide personalized service and cater to specific needs	

(*Continued…*)

(*Appendix I Continued*)

Research Factors and Variables	Definition	Literature
Customer Satisfaction		
Satisfaction with services	Customer satisfaction and complaints	Taylor and Baker (1994); Parasuraman et al. (1991); Olorunniwo et al. (2006)
Satisfaction with interactions	Interaction with customers	
Intention		
	Possibility of making purchases	Reichheld and Sasser (1990)
Customer Complaints		
In private	Boycotting products or informing friends and family	
To sellers	Directly seeking damages from brokers	Singh (1988)
To third parties	Taking legal actions or filing complaints with consumer organizations	
Sales Ethics		
Honest	Sales personnel providing true product information and recommending appropriate products to customers	Román and Ruiz (2005)
No exaggerations or lies	Not exaggerating or painting an overly rosy picture of products	