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# Evaluation of factors impacting the player loyalty in golf course business

Nguyen Thi Kim Thanha, Le-Anh Tuana\* and Nguyen Danh Nguyenb

<sup>a</sup>Faculty of Economics and Management, Eletric Power University, Vietnam

<sup>b</sup>School of Economics and Management, Hanoi University of Science and Technology, Vietnam

# CHRONICLE

#### ABSTRACT

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Keywords: Loyalty Service quality Perceived value Satisfaction Golf course image This paper evaluates factors influencing the player loyalty with golf courses. The main factors include service quality, perceived value, customer (player) satisfaction, and golf course image. The results indicate that in the golf course business in the Northern Vietnam, factors such as perceived value and customer satisfaction had significant impacts on player's loyalty. Service quality did not have any direct impact on player's loyalty but highly influenced player loyalty through other mediators. Golf course image that had not been studied in the golf tourism business before, was also proved its significant role on impacting the golfer loyalty.

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# 1. Introduction

As golfing is becoming popular sport nowadays, the golf-tourism business plays an increasingly important role in today's businesses of Vietnam. Federation (2018) gave a prediction that golf-tourism in Vietnam would become a billion-dollar business by 2020. This report also claimed that the number of golfing tourists to Vietnam increase threefold to 150,000 by 2020. Mai (2019) stated that Vietnam's golf market was growing quickly in a way seen in very few places around the world. Along with the raising of the number of golfing tourists, the number of golf-tourism facilities is increasing significantly recently in Vietnam (Mai, 2019) causing the competition among golf courses to keep their frequent players and to attract new players. This growing trend forces golf-tourism business to concentrate keeping their customers (players) by raising the player loyalty to the golf courses. Customer loyalty is an issue that is received a lot of intention in the field of business. The creation of customer loyalty helps the business (firms) retain existing customers, attracts more new customers towards increasing the efficiency of business operations. Customer loyalty has been studied in detail in many areas of the service, especially in the retail sector (Cho, 2015). In Vietnam, golf course business brings significant amount of profit. However, there is currently no research in Vietnam that assesses the impact of related factors on customer loyalty to golf courses, while golf courses are concerned about how to attract and retain customers. By evaluating loyalty studies in the service business, it is evident that factors of perceived value and corporate image had direct and indirect impacts on customer loyalty (Andreassen & Lindestad, 1998; Cronin Jr et al., 2000). However, these factors have been rarely considered in the golf course business research (Wu & Ai, 2016). Thus, one important contribution of this study is the verification of the role of perceived value and golf course image that directly affects players' (golfer in this case) loyalty. The study by Wang (2010) validated the direct impact of service quality, perceived value and corporate image on customer loyalty. Customer satisfaction has always affirmed direct impact on customer loyalty in many studies (Cronin & Taylor, 1992). Thus, this study aims to confirm the effects of these

E-mail address: tuanla@epu.edu.vn (L.-A. Tuan)

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<sup>\*</sup> Corresponding author.

factors on player loyalty in the golf course business of Vietnam. Due to limited time and resources, this study focuses on the subjects of golfers at the Northern golf courses of Vietnam.

### 2. Overview of customer loyalty and factors affecting customer loyalty

### 2.1 Loyalty and repurchase behaviour issues

Customer loyalty can be seen as a commitment to continue to purchase the product or use the service from a supplier (Ou et al., 2011). In fact, customer loyalty is a particular behaviour of the customer for the organization that demonstrates their intent to use the product/service of the organization in the future. In some cases, the intention to purchase or continue to use the product/service of the organization (Wong et al., 2015; Wu & Li, 2017) can be considered as a representation of loyalty. Loyalty or intention to repurchase is one of the most important goals of the enterprise, as it retains customers and brings profits to the organization in the long run.

### 2.2 Service quality, perceived value, and customer satisfaction

#### 2.2.1 Service quality

Perception of service quality is the result of comparing customer expectations with actual service received (Parasuraman et al., 1985). In order to evaluate the quality of perception, Grönroos (1984) presented three concepts: technical quality, functional quality and corporate image. Technical quality is the quality the customer receives when interacting with the service company. Functional quality is the way that customers receive the service quality. Corporate image is built from service quality and functional quality and may be from a number of other factors. Parasuraman et al. (1988) assessed service quality as the gap between perceived quality and expected quality. The authors provided a model of five service quality elements include: a) tangibles, b) reliability, c) responsiveness, d) assurance, e) empathy. This is one of the most consulted models in the field of service quality assessment. Cronin and Taylor (1992) and Cronin and Taylor (1994) provided quality assessments based on perceived quality. Cronin and Taylor (1994) showed that quality assessment using perceived quality have many advantages over service quality studied by Parasuraman et al. (1988). In the sport business, Ko and Pastore (2005) proposed a model to evaluate the service quality including four components: a) program quality, b) interaction quality, c) outcome quality, and d) physical environment quality. After Ko and Pastore (2005), other authors also confirm the effective of this quality scale.

#### 2.2.2 Perceived value

The perceived value can be viewed as the customer's overall assessment of the product value based on the value received and the value provided. Woodruff (1997) defined perceived value as a customer perception of product attributes, the effective attributes and consequences of use to achieve customer goals in use situations. The perceived value is an important factor influencing customer loyalty in practice. Parasuraman and Grewal (2000) offered four aspects of perceived value, essentially based on price perception. Boksberger and Melsen (2011) summarised the concept of servive quality form several authors, in which the authors stressed that determining the perceived value based on price is not enough. Since, price is closely related to benefits and expenses. The perceived value which is proposed on benefits and expenditures was given by (Paul & Richard, 1997; Zeithaml, 1988).

# 2.2.3 Customer Satisfaction

Customer satisfaction is often viewed as a personal perception of the perfection of the product/service relative to their expectations. According to Anderson et al. (1994), customer satisfaction was divided into two categories: transactional and cumulative. Transactional satisfaction is based on evaluation after purchase or use of the service. Cumulative satisfaction is based on a general assessment of the experience of using goods/services over time. Several authors stressed that customer satisfaction is built on the two components: satisfaction of attribute and satisfaction of information (Spreng et al., 1996; Yoon et al., 2010). The satisfaction of attribute is based on the customer evaluation of attribute perfection. The satisfaction of information is the evaluation of customers on information used to select a product/ service.

# 2.3 Impact of service quality, perceived value, and customer satisfaction on customer loyalty

Cronin Jr et al. (2000) modelled interactions between factors influencing customer loyalty, in which service quality, perceived value, and customer satisfaction have direct positive impacts on customer loyalty. The studies by Srivastava and Sharma (2013) and Wang (2010) confirmed the significant impact of service quality on customer loyalty, while other studies did not confirm this impact (Hu et al., 2009). Similar to the study by Cronin Jr et al. (2000), Hu et al. (2009) confirmed the positive effect of perceived value on purchase intention (a manifestation of customer loyalty). The positive impact of customer satisfaction on customer loyalty is confirmed by the studies by (Andreassen & Lindestad, 1998; Schirmer et al., 2016; Srivastava & Sharma, 2013). Among factors such as service quality, perceived value and customer satisfaction, customer satisfaction has the greatest impact on behavioural intent. However, the interaction of factors is not quite the same in different environments (Andreassen & Lindestad, 1998; Cronin Jr et al., 2000). In the field of sport and tourism, the interactions among factors such

as service quality, perceived value, customer satisfaction and customer loyalty share a lot of similarity with the corresponding ones in the service area in general (Howat & Assaker, 2013; Hutchinson et al., 2010). Howat and Assaker (2013) confirmed that service quality significantly impacted perceived value and customer loyalty, and customer satisfaction considerably influenced customer loyalty. This research also indicated that service quality did not have direct impact to customer loyalty.

### 2.4 Corporate (destination, event, brand) image

Corporate image is viewed as the feeling of an organization reflected in the customer's memory (Hu et al., 2009). Corporate image is considered as one of the important factors influencing the loyalty or purchase intention of customers. The influence of this factor on customer loyalty is assessed in the models of many authors (Srivastava & Sharma, 2013; Wang, 2010). Andreassen and Lindestad (1998) showed that corporate image affects all service quality, customer satisfaction, and customer loyalty. This study even showed that corporate image influences customer loyalty rather than service quality and perceived value in some cases. In the field of business travel services, destination or event image, a variation of corporate image had received attention from several scholars (Wong et al., 2015; Wu and Li, 2017). In the field of golf-tourism business, it hard to find a study that confirm the impact of golf course image on customer loyalty.

# 3. Model of factors influencing the loyalty of golf players

# 3.1 Hypotheses

This study proposes a comprehensive model that examines the impacts of five key factors on customer loyalty to golf courses in Vietnam and the cross-interaction between several factors (Fig. 1). Service quality and perceived value used in this model are perceived service quality (Cronin & Taylor, 1992) and perceived value (Hutchinson et al., 2009).

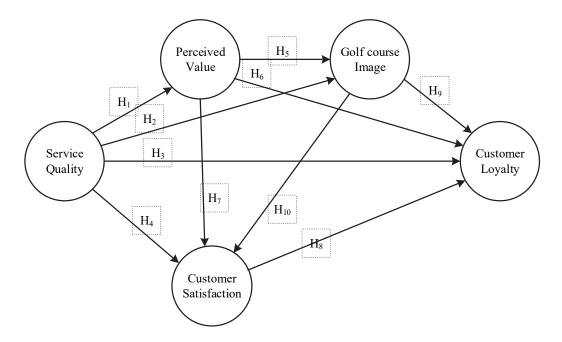


Fig. 1. Model examining the impacts of key factors on customer loyalty to golf courses

Service quality is one of the most important factors to be considered in the service business. Most studies confirm the positive effect of service quality on perceived value (Andreassen & Lindestad, 1998; Cronin Jr et al., 2000). However, the study by Hutchinson et al. (2009) did not confirm this association. Thus, the study aims to test the hypothesis:

Hypothesis H1. Service quality has a direct positive impact on the perceived value in golf course business.

Service quality is also expected to have a significant impact on corporate image (Kuo and Tang, 2013). We expect a similar effect in golf course business; therefore, we assume the following hypothesis:

Hypothesis H2. Service quality has a direct positive effect on image of the golf course.

Service quality is often considered one of the most important factors influencing customer loyalty (Srivastava and Sharma, 2013; Wang, 2010). However, studies by Hu et al. (2009) showed that this effect is negligible. Therefore, this study will test whether this hypothesis is appropriate for golf course business in Vietnam or not.

**Hypothesis H3.** Service quality has a direct positive influence on customer (player) loyalty.

Service quality has also shown significant impacts on customer satisfaction in service business in general (Cronin Jr et al., 2000) and in sport in particular (Hutchinson et al., 2009). This is also an important hypothesis to be tested:

Hypothesis H4. Service quality has a direct positive impact on customer (player) satisfaction with the services of the golf course.

Perceived value is one of the important factors in the service business, which has shown significant effects on corporate image in recent studies (Kuo and Tang, 2013). Thus, this study will test this hypothesis:

**Hypothesis H5.** Perceived value has a direct positive effect on image of the golf course.

In literature, many studies indicate the positive effect of perceived value on customer loyalty (Andreassen and Lindestad, 1998; Cronin Jr et al., 2000). Hence, the following hypothesis has been developed:

Hypothesis H6. Perceived value has a direct positive effect on the customer (player) loyalty.

In addition to affecting customer loyalty, perceived value has a significant influence on players' satisfaction shown in many studies (Hutchinson et al., 2009). Hence, the following has been hypothesised:

Hypothesis H7. Perceived value has a direct positive effect on customer (player) satisfaction.

Studies have shown that customer satisfaction is the most influential factor to customer loyalty in the service and sports industry (Andreassen and Lindestad, 1998; Cronin Jr et al., 2000). This study aims at testing the following hypothesis:

Hypothesis H8. Customer (player) satisfaction has a direct positive influence on customer (player) loyalty.

Brand image (Hwang and Lyu, 2015) or corporate image (Andreassen and Lindestad, 1998; Hu et al., 2009) has a positive influence on customer loyalty. The study model tests this hypothesis in the field of golf business in Vietnam.

**Hypothesis H9.** Golf course image has a direct positive influence on customer (player) loyalty.

Aside from direct customer loyalty, the image also has a significant effect on customer satisfaction (Kuo and Tang, 2013). Hence, the following hypothesis has been formulated:

Hypothesis H10. Golf course image has a direct positive effect on customer (player) satisfaction.

### 3.2 Research design

# 3.2.1 Sampling and data collection

The study focuses on players at northern golf courses of Vietnam. As there is not yet a full list of players at northern golf courses of Vietnam, in the study, author randomly selects golf contests held at the golf courses with a total of 350 questionnaires sent to golfers. The survey period is from June 2017 to December 2017. The questionnaires are distributed to all players at these events. Questionnaires are sent directly to the player and collected within the day. Those who have filled the questionnaire forms before will not fill out any more form. The questionnaires with answers will undergo a rough analysis of the appropriateness. The total number of questionnaires with answers is 315, the response rate was 90%, the number of questionnaires with answers that can be used is 269, and the rate of usable questionnaires and total received questionnaires is 85.4%. The questionnaires with answers undergo a rough analysis of the appropriateness; some of which are rejected due to a lack of information, an unusual distribution of data, for example the same level for all questions. Hair et al. (2014) suggested a good sample size of ten times as many indicators in the model. Then, 25 indicators in this study required a sample size of 250. Yet, according to Hair et al. (2017) for PLS-SEM analysis, to guarantee the statistical power of 80% and detect minimum R<sup>2</sup> values of 0.1 with four (max) arrows pointing at customer loyalty construct and significant level of 95%, the sample size should be at least 113. Therefore, in this research a sample size of 269 was appropriate for analysis. Data is analysed using SPSS and SmartPLS software. SPSS software is used to analyse the exploratory factor to confirm the suitability of the factors. SmartPLS software is used to measure the impacts of factors. This is specialized data analysis software using Partial Least Squares Structural Equation Modelling (PLS-SEM) techniques (Hair et al., 2017). The basic advantage of this method is the ability to analyse complex linear models with high reliability without requiring much data.

### 3.2.2 Measurement scales

The constructs and indicators of the model is largely derived from previous studies. Some indicators have been adapted to suit the case study of golf players in the northern golf courses of Vietnam, based on available indicators in conjunction with some consultancy of golf experts in Vietnam. For each question, the Likert 5-level rating scale is used in the questionnaire. The questionnaire is divided into two parts: a) the players' personal information and b) the information related to the survey variables. The questionnaires are consulted by five golf course professionals and tested on a group of 100 players to obtain the adjustable information, and then the official questionnaires are sent to the events at the golf courses randomly selected during the survey period. The player groups are classified according to the different characteristics of the model given in Table

. Questions for service quality are developed from service quality components developed by Wu and Ai (2016). Questions are taken partly from the study by Wu and Ai (2016) and from suggestions after discussion with some golf experts in Vietnam. Questions about golf course image are adjusted from the study by Hwang and Lyu (2015). Questions on perceived value, customer satisfaction, and customer loyalty are reviewed and adjusted from the study by Hutchinson et al. (2009) with the advice of golf experts in Vietnam.

# 4. Data analysis

4.1 Data characteristics and validity of measurement model

Table 1 presents the characteristics of golf players.

Information on golf players

Characteristics	Classification	Quantity*	Percentage ** (%)
Gender	Male	209	85.0
Genuer	Female	37	15.0
	Less than 23	18	6.9
	From 23 to 35	76	29.2
Age	From 36 to 45	95	36.5
	From 46 to 60	54	20.8
	Over 60	17	6.5
	Student	1	0.4
	Public servant/ Official	55	20.8
Occupation	Business men	173	65.5
•	Retired	14	5.3
	Other	21	8.0
	Less than 10	20	7.4
L ( . : H: IAID)	From 10 to <35	110	40.9
Income (million VND)	From 35 to 50	78	29.0
	Over 50	61	22.7
	From 1 to <3	122	45.4
Years of playing (years)	From 3 to 5	82	30.5
	Over 5	65	24.2
	<1	35	13.1
DI :	1-2	157	58.8
Playing frequency (times per week)	3-5	71	26.6
	> 5	4	1.5
	< 50	126	48.1
Distance of golf course (km)	50 - 100	116	44.3
	> 100	20	7.6
M. I. G. H.	Yes	66	29.2
Member of at least one golf course	No	160	70.8

<sup>\*:</sup> Because some questionnaires have missing information (but still acceptable for analysis), the total number corresponding to the classification factors may be less than 269 (total questionnaires used for analysis).

Preliminary analyses were performed to eliminate unsatisfactory variables (observations and variables lacking too much data, greater than 15% and greater than 5% respectively).

# 4.2 Model evaluation

As the indicators of the constructs were adjusted rather than taken entirely from previous studies, the exploratory factor analysis (EFA) using Principal Axis Factoring with Promax rotation was applied to ensure the validity of constructs. Principal Axis Factoring is appropriate for data which is not necessarily assumed to be normal distribution (Costello & Osborne, 2005) and Promax rotation helps to reduce simple structure bias (Gorsuch, 1997). The results in Table 2 show that the constructs assure validity with the loading factors of the indicators are greater than or equal to 0.5, Cronbach's Alpha is greater than 0.6, KMO is greater than 0.5, the AVE is greater than 50% (Hair et al., 2014). Data is further analysed using SmartPLS software. The data analysis process follows the Reflective Model analysis described in the book by Hair et al. (2017). The candidate variables for elimination are variables with "outer loading" coefficients less than 0.4, load coefficients greater than 0.4 and less than 0.7 and if removed, it helps to improve statistical criteria to the required level (Hair et al., 2017).

<sup>\*\*:</sup> Percentage is calculated on the total number of questionnaires with answers.

Table 2
Summary of constructs and indicators

Constructs and indicators		Load EFA*	Load facto
Service quality	$Cronbach's\ Alpha = 0.939$		PLS-SEM**
Grass at the golf course is guaranteed to be of good quality		0.791	0.779
Wardrobes, dressing rooms and bathrooms are very safe an	d clean	0.763	0.846
Coffee shops and restaurants are modern		0.721	0.793
Food and drinks at coffee shops and restaurants at the golf of	courses are diversified	0.711	0.792
Pro-shops at the golf course have a variety of items		0.704	0.750
Security in the golf course is always well secured		0.701	0.828
Parking areas at the golf course are sufficient and convenien	nt for the players	0.697	0.810
Golf courses in Vietnam are built in the convenient location		0.671	0.761
Customers are provided with complete information about the	ne activities of the golf course	0.632	0.738
Golf course staff provides professional services with a profe	essional attitude	0.608	0.811
Caddies always give good advices to players about the golf	playing rules	0.530	0.700
Perceived value	$Cronbach's\ Alpha = 0.810$		
The golf experience is great compared to the cost		0.742	0.759
Receive the service quality as expected at the golf course		0.688	0.774
Receive the service value higher than expected	0.627	0.82	
Have new social connections at the golf course		0.573	0.832
Customer satisfaction	Cronbach's Alpha =0.870		
Be satisfied with your choice of the golf course		0.831	0.898
Be satisfied with your experience at the golf course		0.793	0.902
Feel the golf course you are attending is the right choice		0.616	0.876
Golf course image	$Cronbach's\ Alpha = 0.873$		
The golf course you are attending is well-known		0.820	0.817
The golf course you are attending attracts a lot of players in	the country and the region	0.800	0.832
The golf course you are attending is included in the list of g		0.740	0.887
The golf course you are attending is suggested by golf mag	azines as a point of reference for players	0.511	0.867
Customer loyalty	$Cronbach's\ Alpha = 0.803$		
You will register as a permanent member of the golf course	you are attending	0.886	0.826
Introduce others to the golf course you are attending		0.839	0.882
Select the golf course you are attending as your favourite or	ne	0.824	0.822

<sup>\*:</sup> EFA – Exploratory Factor Analysis

The variables retained in the model in

Table have (PLS-SEM) loading factors greater than 0.7 that satisfies the statistical requirement.

Factors affecting the reliability of data

	Cronbach's Alpha	Cronbach's Alpha Composite Reliability Average Variance			
Service quality	0.937	0.946	0.614		
Perceived value	0.808	0.874	0.635		
Customer satisfaction	0.871	0.921	0.795		
Golf course image	0.873	0.913	0.724		
Customer loyalty	0.798	0.881	0.712		

Table 3 presents factors affecting the reliability of data. Cronbach's Alpha is a traditional measure of reliability; Composite Reliability is more commonly used for PLS-SEM analysis; Average Variance Extracted (AVE) is also an important indicator for evaluating data. Data assures reliability when the Cronbach's Alpha and Composite Reliability indicators are greater than 0.7 and Average Variance Explained (AVE) indicator is greater than 0.5. Thus, the data analysed here ensures the required reliability (Hair et al., 2014). Discriminant validity is guaranteed (Table 4) that all diagonal values (square root of AVEs) are higher than other values in the corresponding columns (cross loadings) (Fornell & Larker, 1981).

**Table 4**Discriminant validity

	Service quality	Perceived value	Customer satisfaction	Golf course image	Customer loyalty
Service quality	0.784				
Perceived value	0.599	0.797			
Customer satisfaction	0.629	0.569	0.892		
Golf course image	0.673	0.552	0.523	0.851	
Customer loyalty	0.627	0.61	0.712	0.627	0.844

Variance inflation factors (VIF) of latent variables in Table 5 are smaller than 5. So, we conclude that multi-collinearity is not occurred (Hair et al., 2014). Table 5 also includes the effect size f<sup>2</sup> of constructs. f<sup>2</sup> values are used to analyse the relevance

<sup>\*\*:</sup> PLS-SEM – Partial Least Squares - Structural Equation Modelling

of constructs in explaining selected endogenous constructs (Hair et al., 2017). Thresholds of 0.02, 0.15, and 0.35 are corresponding to small, medium, and large impacts. As shown in Table 5, service quality causes a little impact on customer loyalty, and golf course image influences customer satisfaction slightly. Levels of other interactions in the model are at medium levels or higher. The root mean square residual (RMSR) criterion (Dijkstra & Henseler, 2015) is used to guarantee the model fit. The RMSR of the estimated model (Dijkstra & Henseler, 2015; SmartPLS\_Team, 2020) equals 0.06 that is better than the good fit threshold (0.08).

**Table 5** Variance inflation factors (VIF), effect size  $f^2$ , and  $R^2$  values of constructs in the model

	Perce	Perceived value		Customer satisfaction		Golf course image		Customer loyalty	
	VIF	$f^2$	VIF	$f^2$	VIF	$f^2$	VIF	$f^2$	
Service quality	1.000	0.560	2.116	0.135	1.560	0.356	2.401	0.008	
Perceived value			1.665	0.084	1.560	0.067	1.806	0.047	0.359
<b>Customer satisfaction</b>							1.850	0.261	0.459
Golf course image			1.951	0.011			1.972	0.083	0.487
Customer loyalty									0.622

### 4.3 Test of hypotheses

Table 6 provides the results of model evaluation using SmartPLS software.

**Table 6**Results and hypotheses testing

		Hypotheses		β	<i>t</i> -Value	<i>p</i> -Value	Results
H1:	Service quality	$\rightarrow$	Perceived value	0.599	11.070	***	Accepted
H2:	Service quality	$\rightarrow$	Golf course image	0.534	5.473	***	Accepted
H3:	Service quality	$\rightarrow$	Customer loyalty	0.083	1.346	0.179	Rejected
H4:	Service quality	$\rightarrow$	Customer satisfaction	0.393	3.108	0.002	Accepted
H5:	Perceived value	$\rightarrow$	Golf course image	0.232	2.515	0.012	Accepted
H6:	Perceived value	$\rightarrow$	Customer loyalty	0.180	2.818	0.005	Accepted
H7:	Perceived value	$\rightarrow$	Customer satisfaction	0.275	3.392	0.001	Accepted
H8:	Customer satisfaction	$\rightarrow$	Customer loyalty	0.427	7.590	***	Accepted
H9:	Golf course image	$\rightarrow$	Customer loyalty	0.249	4.596	***	Accepted
H10:	Golf course image	$\rightarrow$	Customer satisfaction	0.106	1.202	0.230	Rejected

Note: \*\*\* p < 0.001

The values in Table 6 are the results of the model estimation using Bootstrapping analysis in SmartPLS (Hair et al., 2017). This analysis allows measuring the impact of factors on the golfer loyalty using partial least square structural equation modelling technique. The value of R<sup>2</sup> on Table 6 is the variance explained by the latent variable in the model, which represents the level of prediction of the model. The R<sup>2</sup> value corresponding to customer loyalty variable can be considered quite high in this study case (0.622). Table 6 shows that service quality has a negligible direct effect on loyalty, while the other three factors (perceived value, satisfaction, and golf course image) have a significant direct effect (greater than 95% reliability). Service quality results do not significantly affect customer loyalty in contrast to previous studies (Srivastava and Sharma, 2013; Wang, 2010) but similar to that of Hutchinson et al. (2009) and Cronin Jr et al. (2000). Table 6 show service quality does not have direct effects on golfer loyalty to, but it has strong impacts through other intermediate links such as perceived value, golf course image and satisfaction. Test results confirm the positive effect of service quality on perceived value and on golfer satisfaction, as concluded in the studies by (Andreassen & Lindestad, 1998; Cronin Jr et al., 2000). It is consistent with the belief of several experts in the golf course business in Vietnam. These results are in contrast to the results in the study by (Hutchinson et al., 2009). But the study confirmed another finding consistent with the results in the study by (Hutchinson et al., 2009) that service quality has no direct impact on the loyalty of the players.

The confirmation that perceived value and customer satisfaction have a significant influence on customer loyalty is similar to the majority of previous studies (Andreassen and Lindestad, 1998; Cronin Jr et al., 2000; Hutchinson et al., 2009). This result further confirms that the impact of customer satisfaction is greater than perceived value. This has also been pointed out by some authors (Cronin Jr et al., 2000; Hutchinson et al., 2009). The new contribution of this study is the confirmation of the impact of the golf course image on customer loyalty (with a total impact of 0.294). This hypothesis has been tested in a number of other areas but has not been tested in the field of golf course business. The study does not confirm the effect of golf course image on the player satisfaction. However, the results confirm the impact of service quality and perceived value on golf course image. The results show that the golf course image has a significant impact on the loyalty of the players, which is consistent with the results of the studies by Hu et al. (2009) and Wu and Li (2017) in the hospitality industry. The results of the model reject Hypotheses H3, H10 and affirm the remaining hypotheses (H1, H2, and H4 - H9).

### 5. Discussion and implications

### 5.1 Discussion

The results of the evaluation show that service quality is assessed as having an important impact on customer loyalty in the service business (Cronin Jr et al., 2000) but having a negligible direct impact on customer loyalty in the golf course business. However, service quality has the highest impact to player loyalty through other mediators (total effect  $\beta = 0.627$ ), even higher than customer satisfaction ( $\beta = 0.427$ ) for the golf course business in Vietnam (Table 7).

 Table 7

 Total effects of factors on customer loyalty

	Perceived value	Customer satisfaction	Golf course image	Customer loyalty
Service quality	0.599	0.629	0.673	0.627
Perceived value		0.3	0.232	0.366
Customer satisfaction				0.427
Golf course image		0.106		0.294

Most studies confirm the role of customer satisfaction. This factor also acts as an important mediator in a number of customer loyalty studies (Ou et al., 2011). Perceived value of service appears less frequently in loyalty studies, especially less noticeable in studies in the field of sport and tourism. The studies in golf course business mainly focus on service quality and satisfaction (Wu and Ai, 2016). Given the importance of this factor, the study of the impact of the perceived value factor is of interest in this study for the golf course sector. Test results show that perceived value remains important in golf course services. Corporate image and image of an event or a location are highly regarded in several studies on tourism and services (Hu et al., 2009; Wu and Li, 2017). Image is an important factor to attract customers and this study shows that golf course image has an important role influencing golf player loyalty ( $\beta = 0.249$ ). The results indicate the insignificant effect of golf course image on customer satisfaction that is different from the results of Wu and Li (2017). Practically, good image is likely to lead to expectations of good quality service and perceived value rather than satisfaction directly and these two factors lead to customer satisfaction. Another important observation of this research is to show the mediator effect of golf course image. Golf course image plays a role as a mediator which increases the impacts of service quality and perceived value on player loyalty. This mediator effect of golf course image had not been examined in the previous the sport and tourism studies. Table 6 shows that the mediator impact of golf course image is as strong as the role of customer satisfaction. This strong influence of golf course image is similar to the role of corporate image in the research of (Andreassen & Lindestad, 1998). Two important considerations of this study are the role of perceived value and golf course image in golf course business. These are two important factors that golf courses need to improve in order to keep loyal players and attract new ones.

### 5.2 Implications

The results of this research imply the strong role of golf course image as in the studies of Wu and Li (2017) and Andreassen and Lindestad (1998), while this factor has not been received enough attention of scholars in the sport research field. These results suggest that golf-tourism companies shall pay more attention on the role of golf course image in the golf-tourism business and propose solutions to raise the image of their golf course in order to retain current players and seek more new players. The results of this research confirm the crucial role of service quality with customer loyalty, despite its insignificant direct impact. This implies that golf-tourism companies need to put efforts to raise their quality of service they provide to their customers. This study also confirms the vital roles of perceived value and customer satisfaction in the golf course business.

#### 6. Conclusion

Study results have indicated that service quality had a negligible direct impact on golfer loyalty but had an indirect impact through intermediaries with the greatest total impact. Perceived value and satisfaction significantly affect the loyalty of the players. In addition to these results, the study has confirmed that golf course image has an important influence on golfer loyalty. This is an important result in the golf course business which has not been tested by other studies in the same field. Among factors that directly affect loyalty, the golfer satisfaction is most influential. In addition to the direct effects, the factors of perceived value, golf course image, and players' satisfaction are important mediating factors in the player loyalty study model in the golf course business. The results have indicated that golf courses should pay the greatest attention to service quality and customer satisfaction, and also focus on building the golf course image to attract new players and retain current players. One of the limitations of this study is that the impact of the regular client program has not been examined. This factor has a significant impact on the retail sector (Bridson et al., 2008; Ou et al., 2011) and is likely to have a significant impact on the golf course business. Regular client programs have been implemented by some golf courses but the impact of these programs has not been specifically assessed.

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