

# The Service Quality and Community Attribute Effect Impacts on Satisfaction for Marathon Event

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## Abstract

Perceived quality of service quality and community attributes are crucial factors to sport events. Since sports tourists' experiences are largely influenced by the services provided and the service quality of sports event requires to be detected the fitness for consumers. SERVQUAL is a popular model to measure the service quality for consumers, but it is not fit for outdoor recreation sports. Meanwhile the smaller recurring sport events such as local marathons tour may produce more sustainable economic impacts for host community. The success of sports event needs support by community residents. Community attribute also affects satisfaction of visitors. In order to measure the service quality and community attribute of marathon event simultaneously. The aim of study is to revise the Scale of Service Quality for Recreational Sports (SSQRS) and combine community attribute to design a questionnaire and make a survey for runners. The methods, exploratory factor analysis is adopted to extract the perceived quality into five main factorial dimensions, including outcome quality, facility quality, interaction quality, information quality, and community attributes for participants in marathon event. Regression analysis is performed to explore service qualities and community attribute impacts on satisfaction and intent to return for participants in running event. The results show that all of service quality factors have a significance impact on satisfaction for runners. The intent to return of participants is influenced by interaction quality and community attributes. The important conclusion contribution of this study reveals that community attribute of sports event impacts on satisfaction and behavioral intentions. The sport managers should pay attention to host community for supporting sports event. Offering a high service quality and community attribute to the recreational and sport consumers may promote the participation in recreational and sport activities and revisit these activities in future.

## Keywords

Service Quality, Community Attribute, Marathon, Sports Event

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## 1. Introduction

Sport is now regarded to be the world's biggest social phenomenon [1]. Sport events are also rapidly becoming a popularity recreational activity to attract tourists [2]. In advance, sports and tourism are the most popular leisure experiences in the world [3, 4]. Providing a high quality

service for consumers to the recreational and sport promotes the participation in recreational and sport activities [5]. Characteristics of host community are important to capture the attention of visitors, including massive community support in attitude and attendance. The success of an event requires the support by residents [6]. The host community may be contributed its ability about suitable environment, successfully programs, and, community effects, such as

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qualified personnel, excellent infrastructure, and local products [7]. Community attributes affect the perceived quality of visitors, and positively relates to their satisfaction and behavioral intention [8]. The characteristics of community should be included in service quality of sport events to measure perception of service quality for sport events. However, the relationships between service quality, customer satisfaction and future intentions were examined for spectators in sports events [9-11]. This research tries to explore the perception of community attributes and service quality for participants of sport events.

Service industry is largely influenced by service quality provided [12-14]. Parasuraman, Zeithaml, and Berry (1985) developed the gap model of service quality [15]. Subsequent empirical research narrowed the determinants down to a more manageable list of five dimensions: reliability, responsiveness, empathy, assurance, and tangibles, which has been developed to capture and measure perceived quality as SERVQUAL [16]. However, SERVQUAL was measured from repair and maintenance, retail banking, telephone, securities brokerage, and credit cards sectors, which is not fit for measuring on outdoor services [17]. Therefore, Yeh, Hua, and Huang (2016) modified SSQRS (Scale of Service Quality for Recreational Sports) model from Ko & Pastore (2005), and combined the model of Shonk and Chelladurai (2008) to extract five main factorial dimensions: interaction quality, outcome quality, facility quality, program quality, and information quality for swimming event [18-20]. This research follows the research of Yeh *et al.* (2016) to measure perceived quality and satisfaction for marathon participants [18].

Marathon running event is one the small-scale sports event that bring positively effects on host community [21]. The running event is becoming one of the most popular activities in Taiwan. There were 703 running events in 2016. Providing a great service quality is crucial for sport event. A higher service quality yields recreational benefits and high satisfaction for the participants. Tianzhong Marathon is hosted by community association. The community and residents have their own characteristics for running event. Even the atmosphere of host community contains with liminoid elements of sociocultural effect, which is one of the crucial factors positive to influence residents' subjective well-being [22]. The purpose of this study aims to explore the perception of service quality and community attributes for runners. Meanwhile, the main factors of perceived will be introduced into the regression function to examine the impact on satisfaction and return intention for participants.

## 2. Materials and Methods

The main items of the questionnaire on participants'

perceptions of service quality and community attributes were based on previous studies [18-20]. The attributes of community items will also designed in the questionnaire. Other items dealt specifically with the satisfaction and intention of return for Tianzhong Marathon. Based on subjects' responses, the administrators of the questionnaire who evaluate participants perception were required to rate all statements on a five-point Likert scale (1=Strongly disagree and 5=Strongly agree).

Exploratory factor analysis was adopted to extract the major factorial dimension. After extracting the major factorial dimension, regression analysis was then implemented to examine the effect of the perceived quality and community attribute on satisfaction and intention of return.

### 2.1. Study Event

The small-scale recurring events, such as marathon running can involve a large number of participants. These sport tourists can derive various benefits from event participation [23]. Tianzhong is the main area of farmland cultivated with rice and locates in central Taiwan. Tianzhong Marathon hosted here since 2012, which is hosted by community association. The participants were over 10 thousand, and increased to 23 thousand in 2016. The residents of Tianzhong are kindly and friendly to support and to attend marathon event. In addition, the community has attractive natural landscape and agricultural products. The attributes of Tianzhong community are popular for runners.

### 2.2. Sampling and Data Collection

On-site samples are conducted on November 12 in 2016. During this period, 580 people were asked to complete a questionnaire. Data were collected with face-to-face interview questionnaires by trained interviewers. A total of 500 complete responses were obtained, yielding a response rate of 86.21%.

## 3. Results

### 3.1. Perceived of Quality for Participants

Before performing factor analysis, Bartlett's test of sphericity and the KMO (Kaiser Meyer Olkin) test were used to examine the appropriateness of the sample data [24]. The results show that the KMO value is 0.94, and the Bartlett test of sphericity has a *p* value smaller than 0.01, which indicates that the variables were correlated and the factor analysis is appropriate.

The principal component method and varimax rotation were used to extract 35 items of perceived qualities into 5 factorial dimensions. Calculation of the factor scores enables extraction of the interrelated variables and a smaller number of the

uncorrelated variables. Thus, this study dropped 7 items with factor loading lower than 0.5, and indicating a high correlation between the delineated factors and individual items. Table 1 lists the results of factor analysis that the Eigen-values are exceeding 1, and explained 64.96% of the total variance.

The first dimension was the 'Outcome quality', which accounted for 40.49% of the total variance with reliability of 0.91. The relatively large proportion of the total variance can be attributed to the fact that the 'Outcome quality' was the central of the factors. The other dimensions were 'Facility quality', 'Interaction quality', 'Community attributes' and 'Information quality' factors, which accounted for total variance of 7.54%, 6.68%, 65.48% and 4.78%, respectively. The coefficients reliabilities were 88%, 87.3%, 82.9% and 79.3%, respectively. After factor analysis, five dimensions of service quality perceptions will be introduced into regression model to examine the impacts on satisfaction and intentions of return for participants.

### 3.2. Perceived Quality Impacts on Satisfaction and Intent to Return

This study adopted ordinary least squares estimation to

examine whether the satisfaction of participants can be explained by perceived quality. The variable of intent to return was dummy for 0 and 1, logit regression is suitable to predict participants' intentions.

The regression models passed the goodness of fit test at a one percent significance level (F value is 61.9 and Chi-squared is 4.43 for logit model), which indicated that all coefficients of independent variables were not equal to zero, the null hypothesis was rejected. The variance inflation factors (VIF) were calculated to test for collinearity of the independent variables, and shown that the independent variables were linearly independent for VIF equal to 1. The results presented that all five perceived qualities factors were positive and significantly related to satisfaction for participants (Table 2). The five factors predicted 38.4 percent of the variance on satisfaction. The perceived qualities factors were also positive related to intent to return. Only 'Interaction quality' and 'Community attributes' had positive effect on intent to return. Both satisfaction and intent to return is influenced by community attributes positively and significantly. The results are in concert to the prediction of this study.

Table 1. Factor analysis of participant perceptions of perceived quality.

Item	Outcome quality	Facility quality	Interaction quality	Community attributes	Information quality
I feel my fitness has increased after join the event.	0.835				
I feel my skill has increased after join the event.	0.808				
I feel my physical ability has increased after join the event.	0.791				
I think my sport performance has increased after join the event.	0.772				
Running has fun to me after join the event.	0.624				
I really enjoyed the social interaction after join the event.	0.590				
I think my more confidence has increased after join the event.	0.579				
The parking lot is enough.		0.771			
The facilities of shower room are enough.		0.748			
Transportation is convenient.		0.736			
The facilities are clean enough.		0.711			
The facilities of toilet room are enough.		0.655			
The facilities of medical are enough.		0.648			
The facilities layout is meet my requirement.		0.615			
The attitudes of employees are polite.			0.765		
The capacity of employees to resolve my problems are admirable.			0.752		
The employees help participants aggressively and deal the special needs effectively.			0.729		
The employees are very knowledgeable about their jobs.			0.598		
The programs offered are attractive to me.			0.580		
The service of employees is enough.			0.500		
The residents of community are friendly and passionately.				0.757	
The attributes of community are historical and cultural.				0.731	
The community has plentiful agricultural products.				0.706	
The atmosphere of community is suitable for running event.				0.652	
The registration of the event is convenient.					0.803
The information of the event is easy to obtain on web.					0.723
The information of the event is easy to obtain.					0.718
The information of the event is easy to obtain on mobile phone.					0.716
Eigenvalue	11.34	2.11	1.87	1.53	1.34
Variance (Cumulative %)	40.49	48.03	54.71	60.18	64.96
Reliability (Cronbach's $\alpha$ ,%)	91.3	88.0	87.3	82.9	79.3

**Table 2.** Regression analysis of perceived qualities on satisfaction and intent to return.

Independent variable	Satisfaction	Intent to return	VIF
Constant	4.41 (195.13)	4.38 (9.96)	
Outcome quality	0.14*** (6.22)	0.12 (0.73)	1.00
Facility quality	0.16*** (7.21)	0.49 (1.59)	1.00
Interaction quality	0.19*** (8.32)	0.52* (1.91)	1.00
Community attributes	0.26*** (11.54)	0.73 (3.02)***	1.00
Information quality	0.09*** (3.94)	0.05 (0.88)	1.00
F/ Chi-squared	61.69***	15.23***	
R <sup>2</sup> (%)	38.4	-	

1. \* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$ .

2. t values in parentheses.

## 4. Discussion

Service quality is important for sports event, the contents of service in sports event is different to traditional service industry. This study explored participants' perceptions of service quality and community attributes in Tianzhong Marathon. In according to exploratory factor analysis, perceived quality were extracted into five dimensions, including 'Outcome quality', 'Facility quality', 'Interaction quality', 'Community attributes' and 'Information quality' factors. The results of service quality factors for sports event are similar to the research of Yeh *et al.* (2016) and Ko and Pastore (2005) [18, 19]. All of services quality including 'Outcome quality', 'Facility quality', 'Interaction quality', and 'Information quality' factors were positively relates to satisfaction. The result is consists with previous researches [9-11]. But, the service quality of sports event only 'Interaction quality' impacted on intensions of participants. The result revealed that the interaction between participants and employees is important factor for intent to return in Tianzhong Marathon. The residents and employees of community association are friendly, passionate and enthusiasm to support and involve to the sports event. The result also approves the research of Gursoy and Kendall (2006) that success of an event requires the support by residents [6].

Especially, 'Community attributes' is based on the characteristics of hosting community, and it is positively related to satisfaction and participants' intentions. The results of this study are the same as the previous researches, such as Westerbeek *et al.* (2002) and Zabkar *et al.* (2010), which indicating the host community would contribute its characteristics to the sport event and concerning about the destination attributes for tourism [7, 8].

## 5. Conclusion

This study emphasizes the relationship between perceived quality, satisfaction and intent to return of participants for sports event. Perceived quality of marathon event for participants including service quality and community attributes. Not only service quality impacts on satisfaction and intensions of participants, but also community attributes does. The characteristics of Tianzhong Marathon including the natural landscape, agricultural products, qualified personnel, and residents support. Tianzhong community association hosting the running event and becomes unique attribute to attracting runners. This result is crucial in sport management field, and becomes a brand for Tianzhong Marathon. The atmosphere of host community will attract the participants would tend to re-visit the site, even the new tourists will participate to this event for the community attribute.

The major managerial implication is that, the scale of service quality for recreational sports (SSQRS) is more suitable than SERVQUAL. Since the factor dimensions of SSQRS include outcome quality, facility quality, interaction quality, and information quality are different to those of SERVQUAL that surveyed from repair and maintenance, retail banking, telephone, securities brokerage, and credit cards sectors. The main policy of this study reveals that the community attributes and atmosphere of host community are important to sport event, even the small-scale sports event. The policy is also the same as Yeh, Lin, and Huang (2018) found in recurring swimming event, that small-scale recurring marathon events may attract a large number of participants and bring positively effects on host community [25].

This study is first time to examine the effect of community attributes relatives to satisfaction and intensions of

participants by exploratory factor analysis. Future research should test the effect by confirmatory factor analysis and structural equation modeling (SEM) to investigate the factors paths between service quality, community attributes, satisfaction, and behavioral intentions.

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