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THE RELATIONSHIPS AMONG SEA-FOOD RESTAURANT SERVICE QUALITY, PERCEIVED VALUE, CUSTOMER SATISFACTION AND BEHAVIORAL INTENTIONS USING STRUCTURAL EQUATION MODELS: A CASE OF PENGH

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Abstract

To identify the relationships among sea-food restaurant service quality/ perceived value/satisfaction and behavioral intentions, this research establishes a study structure and formulates six hypotheses from the related literatures reviews. Structural equation models were used to validate the relationship based on the surveyed sample collected from the restaurants' tourists. The findings indicate that overall sea-food restaurant service quality positively and significantly influences perceived value, and overall sea-food restaurant perceived value had a significant role in influencing satisfaction. Additionally, overall sea-food restaurant perceived value and satisfaction are significant predictors of customer's behavioral intentions. Customer satisfaction can act as a partial mediator in the relationship between overall sea-food restaurant service quality, perceived value and behavioral intentions. However, restaurant's service quality did not positively influence either the customer satisfaction or the behavioral intentions. Furthermore, the constructs including responsiveness, assurance, and reliability are the appropriate observations to measure sea-food restaurant service quality which significantly influences the perceived value. Therefore, upgrading the responsiveness, assurance, and reliability on service quality in sea-food restaurant is an effective way to increase the customers' perceived value, satisfaction and behavioral intentions. This research results can be referenced by the restaurant owners/ operators in operational management.

Keyword: sea-food restaurant, service quality, perceived value, customers' satisfaction, behavioral intentions

Introduction

During the peak seasons April to September, there are on average 500,000 tourists visiting Penghu Island to undertake the tourism/recreational activities related to humanities, geography, and natural scenery. Eating seafood became a very important activity while the tourists travel to Penghu. To satisfy the demand for sea-food, there exist a lot of seafood restaurants totaled 200 in 126.7 km^2 and most of them (215) are located in Makung Island where is political and economic center of the County and also the hub of traffic, having the density of 6.32 (215/34) (no of restaurant/ km^2) higher than the density of 2.33 (86,000/36,000) in Taiwan Island.

In addition, the tourism at the area has distinct seasons of peak and off-peak. The competitions among seafood restaurants in spatial and temporal dimensions are intensive and unavoidable, and therefore, how to increase the market share via the differentiation, attract the tourists via the special operational properties, and thereby establish the unique image to formulate the word of mouth and increase the royalty of consumers to retain and develop the sources of customers are the important issues for the owners or operators in operation management. Due to the inconvenience of traffic and the constraints of the geographical location such as less information received and six-months off-season. Penghu County only formulates the similar operational models of the seafood restaurant. In additional, the restaurant management tends to be conservative. Most of the seafood restaurants do not have much concept of service quality. Moreover, the concept of customers' perceived value needs to be introduced, identified and measured, even though customers' satisfactions are high lighted by the operators. For example, the owner usually ask the guests a common question such as are you full after finished meals? The operators care about customers' patronage but not understanding that both service quality and perceived value are the pre-causes of the customer satisfaction and also the important impact factors on the customer patronage. Therefore, the purpose of the study is to explore the relationship among service quality, perceived value, customer satisfactions and behavioral intentions in seafood restaurants and then provide the knowledge to the operators to improve the operational qualities.

Previous studies investigated the relationship among service quality, perceived value, customer satisfactions and behavioral intentions were abundant . In general, previous studies concluded that service quality directly influenced the customer satisfactions or via the perceived value to influence the customer satisfactions, and the customer satisfactions further influenced the behavior

intentions.

In addition, the service quality and perceived value can probably influence the behavioral intentions. From the study of Oh (2000) for the customers of the independent fine dining restaurant, the main factors influencing the behavioral intentions were perceived value, customer satisfactions, past consumption experience and its reputation. Yüksed and Yüksel (2002) explored the critical factors of customer satisfaction for the customers of independent non fast-food restaurant and found that the service quality was the significant factor on the customer satisfaction. Sulek and Hlensley (2004) explored the main crucial factors to the customer patronage and dining experience, and found that food quality was the significant factor on the customer patronage only.

Lglesias and Guillén (2004) employed the linear structural equation model to validate the decisive factors to the restaurant customers' revisiting. From the study, they concluded that perceived value positively influenced the customer satisfaction. Chow et al. (2007) studies the relationship among service quality, customer satisfaction, and the frequency of customer patronage, by using the structural equation model for the customers of full service restaurant. It is found that the cause effect relationships between service quality and customer satisfactions, and service quality and customer patronage were significant. However, the relationships between customer satisfactions and patronage were not significant. Ryu et al. (2008) studies the relationships among restaurant image, perceived value, customer satisfaction, and behavioral intentions by using regression analysis for the customers of quick casual restaurant. The results showed that restaurant service quality significantly influenced perceived value, and image and perceived value affected customer satisfaction significantly. In addition, image, perceived value, and customer satisfactions positively influenced the behavioral intentions. Fan (2006) explored the relationships among service quality, utility value, recreational value, and behavioral intentions by using the structural equations model for the customers of chain-restaurants. The results showed that service quality positively affected consumer value, utility value, and recreational value. The perceptions of values such as utility and recreational value would be the sources of restaurant differentiation. Lin (2006) studies the relationships among service quality, perceived value, customer satisfactions, and behavioral intentions by using the structural equation model for the customers in hybrid restaurants. The results showed that the consumer's perceived sacrifices had the negative influence on the perceived value. The perceived service quality positively affected perceived value, customer satisfactions, and

behavioral intentions. The perceived value directly affected satisfactions and behavioral intentions. Wang (2006) explored the relationships among service quality, customer satisfaction, and loyalty to the customers of retrospective restaurants. From the results of regression analysis, service quality positively affected satisfactions, and satisfactions also positively influenced the loyalty. In addition, service quality positively influenced the loyalty.

From the literature reviews, we know that there are few studies aimed at the customers' behavioral intentions in the sea-food restaurants. Therefore, the study focused exploring on the relationships among service quality, perceived value, customer satisfactions and behavioral intentions in sea-food restaurants.

Research structure and hypothesis

Based on the literature reviews, the research structure is shown in Figure 1. Since conservational regression methods can not be used to analyze the cause-effect relationships between the latent variables with multiple constructs, six hypotheses will be validated by using the linear structural equation models.

The six hypotheses are listed as the following statements：

H_1: Sea-food restaurant service quality positively influences the perceived value.

H_2: Sea-food restaurant service quality positively influences the customer satisfaction.

H_3: Sea-food restaurant service quality positively influences the behavioral intentions.

H_4: Sea-food restaurant perceived value positively influences the customer satisfaction.

H_5: Sea-food restaurant perceived value positively influences the behavioral intentions.

H_6: Sea-food restaurant customers' satisfaction positively influences the behavioral intentions.
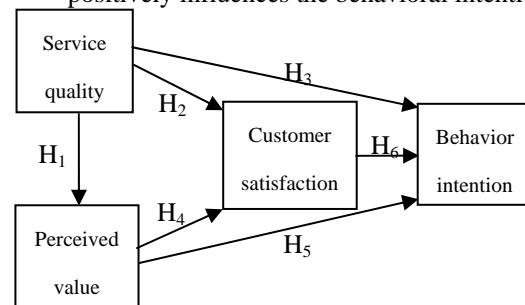

Figure 1 The research structure

Data collection

Eleven sea-food restaurants' customers (tourists) were surveyed via the questionnaires by using the convenience sampling method to collect the data for analysis, and 385 questionnaires were obtained. The effective questionnaires of 365 were used to conduct the analysis. The questionnaires are divided into six parts including basic data, dining characteristic, service quality, perceived value,

customer satisfaction, and behavior intention. Where the part of the service quality we used from the scale of DINESERV to obtain the measurements composed of five constructs with 29 items.

Perceived value is measured by using four items to present the perceived value of monetary price, and the customer satisfaction and behavioral intention have two items respectively. The measurement of each item employs the seven points of Likert scale including extremely disagree, strongly disagree, slightly disagree, no comment, slightly agree, strongly agree, and extremely agree.

Data analysis

The study firstly validated the simple construct by using confirmatory factor analysis, and then conducted the analysis of model fitting by using structural equation models. The values of construct reliability are in the range of 0.66~0.84, and the value of AVE are within 0.42~0.70. The factor loadings of the constructs conform to the standard suggested by Chin et al. (1997). Therefore, the four constructs fitting with internal consistency, and with constructs reliability. We used the computer software-LISREL for specifying, fitting, and evaluating structural equation models. The model fitting results are shown in Figure 2, and Table 1. From the Table 1, we can know that the models are well fitted, for example, the value of each index is greater than the suggested value. From Figure 2, the path diagrams show that service quality (SQ) significantly affects perceived value (PV), but not significantly influences customer satisfaction (CS) or behavioral intention (IB). The perceived value significantly affects the customer satisfaction and behavioral intension. The customer satisfaction significantly affects the behavioral intention. In effect, service quality via the

perceived value affects the customer satisfaction and then the behavioral intention. Table 2 summarizes the validation results of these 6 hypotheses. In addition, the service quality can be measured by using the items of the responsiveness, tangibles, and reliability, and the perceived value can be measured by using the items of food quality, reasonable price, accessibility.

Table 1 Model fitting indexes

Index	Suggested Value	Measure
χ^2/df	<3 (Carmines & McIver, 1981)	1.66
GFI	>0.9 (Bentler & Bonnett, 1980)	0.97
AGFI	>0.8 (Hu & Bentler, 1999)	0.95
NFI	>0.9 (Bentler & Bonnett, 1980)	0.99
NNFI	>0.9 (Bentler & Bonnett, 1980)	1
CFI	>0.9 (Bentler, 1990)	1
RMSEA	<0.08 (Hu & Bentler, 1999)	0.04

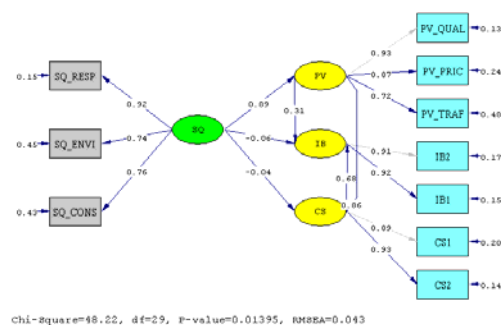Chi-Square=48.22, df=29, P-value=0.01395, RMSEA=0.043

Figure 2 Path diagrams
(standardized coefficients)

Table 2 Validation results of hypotheses

Hypotheses	Standardized coefficient (t-value)	Significant or not? ($\alpha = 0.05$)
H1	0.89 (19.04)	yes
H2	-0.04 (-0.31)	no
H3	-0.06 (-0.67)	no
H4	0.86 (7.16)	yes
H5	0.31 (2.59)	yes
H6	0.68 (9.37)	yes

Conclusions

(1) From the dining properties of tourists, most of the travel groups are composed of friends or relatives, and they obtained the messages of sea-food restaurants through the introduction of word-of-mouth and travel agents. The sea-food quality and price rationality are the main factors for tourists choosing the restaurants. Most of customers are over 5 persons in a party, and the average consumption amount per person is in range of NT$200~600. The dining frequencies of one time per half year are the most. The ratio of patronage is around 32.2%.

(2) From the results of t-test, the variable of sex

significantly affects the perceived value. That is female customers have lower recognition of perceived value than male ones.

(3) From the validation results of model fitting, sea-food restaurant service quality significantly affects the perceived value, but not to the customer satisfaction and behavioral intention. However, perceived value significantly affects the customer satisfaction and behavior intention. Customer satisfaction significantly influences the behavioral intention. There are four hypotheses are valid. In general, sea-food restaurant service quality via perceived value to affect the customer satisfaction and customer satisfaction further affects the customers' behavioral intention. In addition, the items of responsiveness, tangibles, and reliability can be used to present the latent variable of service quality, and the perceived value can be measured by using the items of food quality, rational price, and accessibility.

Suggestions

(1) Since sea-food restaurant service quality is via the perceived value to affect customer satisfaction and

behavioral intention, in operational management, the operators should emphasize on the properties of responsiveness, tangibles, and reliability, especially the responsiveness, for example, maintaining the service speed and quality (such as control of serving and the frequency of table cleaning), providing instant and speedy service (such as replenishment of warm or cold water and **dining utensils**), satisfying the special requirements of customers (such as cooked food without monosodium or garlic). To increase the tangibles, restaurants must have the attracting appearance, convenient parking lots, readable menu, comfortable decoration, clean toilet and dining area, comfortable seats, etc. Since these properties can increase the perception of value, the customer's satisfaction can be increased and then results in the increase of customer patronage. However, to formulate/build customers' perceived value is the main considering factors in management for the sea-food restaurant operators. For example, maintaining the high quality of seafood, pricing rationally, renewing or innovating menu, and creating or improving cooking methods are useful methods to increase the customers' perceived values. In addition, the establishment of brand and possession of word-of-mouth, and retaining good relationship with travel agents are also critical issues in operation.

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