Empirical Study on the Relationships among Service Quality, Customer Satisfaction and Customer Loyalty: Evidences from the Carrefour

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Abstract

The purpose of this study is to explore the relationship among service quality, customer satisfaction and customer loyalty for Carrefour Corporation in Taiwan. A questionnaire survey was conducted to fulfill this purpose using a sample of 290 effective questionnaires gathered from customers in five service areas of Carrefour hypermarket at Tainan branch. The analysis of statistics such as hierarchical regression analysis, path analysis and canonical correlation analysis were used to analyze the data. We found that service quality is significantly associated with customer satisfaction. Service quality and customer satisfaction both have a significantly positive effect on customer loyalty. Finally, customer satisfaction mediates the effects of service quality on customer loyalty.

Keywords: customer loyalty, customer satisfaction, service quality

1.Introduction

The Taiwan hypermarket industry developed in the 70's when the Peak Company set up the first hypermarket in Taipei. In the following years, more and more foreign direct investment was attracted to retail trade industry. In 1989, a Holland-based corporation established a first Makro hypermarket in Taiwan, which is not open to the general public, but only to businesses which have to be registered members in order to gain entry to the store. This retail trade approach has deeply affected the shopping style and marketing channel environment in Taiwan since then. Under these circumstances, warehouse supermarkets such as Carrefour, Costco, Amart, and RT-MART which are well-known and have operated overseas for decades increase rapidly in Taiwan. They offer customers a better quality of life.

The hypermarket industry has been characterized by increasing competition and greater customer expectations. According to Commercial Sales Survey, retail sales of general merchandise in the hypermarket amounted to US$ 6 billion. In comparison, it grew by an average of 2.61% over last decade. Consumers prefer most shopping in the hypermarkets. Next came in the chained convenient stores and then in the supermarkets. Comparison with last year, the numbers of hypermarket were marginally higher by 0.96%. These facts show that the hypermarket industry has recently faced intensive competition by the newcomers and plays a more important role in the market channel.

With the remarkable advances in science and technology, consumers are more demanding in the domain of service quality. Customers nowadays prefer a more convenient mode of service supply. What should business do to satisfy customers and then stimulate the customer loyalty to ensure their competitive advantage, besides good service quality? This paper attempted to explore service quality, customer satisfaction and customer loyalty relationships, and examined whether have significant influence among them, using the Carrefour hypermarket as a case study.

2.Literature Review

2.1   Service Quality

Research indicates that service quality is the most frequently accredited antecedents of satisfaction (Anderson & Sullivan 1993; De Wulf et al., 2001). Service quality has been found to significantly influence customer satisfaction, especially in the case of retailers such as supermarkets. It has been lined most often with satisfaction (Chang & Tu, 2005). A business with high service quality will meet customer needs whilst remaining economically competitive. It is generally known that there is a positive relationship between service quality and satisfaction.

2.2   Customer Satisfaction

The importance of customer satisfaction research is proportional to its increased managerial importance (Slevitch & Oh, 2010). Customer satisfaction has often been regarded as an antecedent of customer loyalty (Bitner, 1990). It can be defined as the outcome of the subjective evaluation that the chosen alternative meets or exceeds expectations (Engel et al., 1990). According to this paradigm, customers' overall satisfaction is believed to occur through a matching of expectations and perceived performance. The fewer difference gaps between expectations and perceived performance, the more satisfaction is achieved.

2.3   Customer Loyalty

Loyalty is a central construct in relationships and customer loyalty is indicated by an intention to perform a variety of behaviors that signal a motivation to maintain a relationship with the retailer, including engaging in positive word-of-mouth and repeat buying behavior (Sirohi, McLaughlin & Wittink 1998; Zeithaml, Berry & Parasuraman 1996). Service quality and customer satisfaction have all been linked with the loyalty construct as either direct or indirect antecedents. We assume that service quality translates into higher level of customer satisfaction which, in turn, results in higher level of customer loyalty. Taking these literatures into account, we postulate three hypotheses which are detailed in the following section.

3.Research Hypotheses and Framework

In this section, a conceptual framework was developed and the relationships between the variables are summarized in Figure 1. The research framework in this study was used to interpret and analyze the determinants of service quality, customer satisfaction and customer loyalty relationship for Carrefour hypermarket in Taiwan. Therefore, this research postulated the following null hypotheses, each of which will be examined later.

H1: Service quality is significantly associated with customer satisfaction.

H2: Customer satisfaction is significantly associated with customer loyalty.

H3: Customer satisfaction mediates the effects of service quality on customer loyalty.
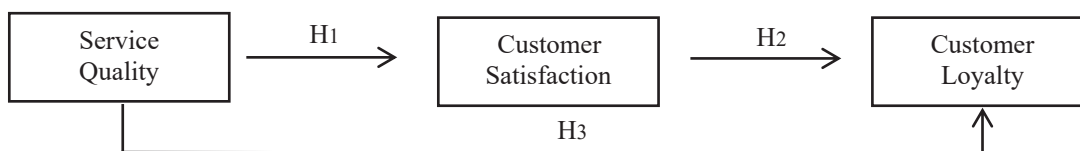

Fig. 1. Conceptual framework

4.Research Methodology

4.1   Sample

This paper attempted to explore the service quality, customer satisfaction and customer loyalty relationship, and examined whether have significant influence among them in the Taiwan hypermarket industry. A questionnaire survey was conducted to fulfill this purpose using a sample of 290 effective questionnaires gathered from customers in five service

areas of Carrefour hypermarket at Tainan branch. The effective response rate was 72.5%. In the gender aspect, the male and female proportion quite closely. Of the respondents, 49 per cent were male and 51 per cent were female. Age was between 21-30 year old primarily. In the degree of education aspect, occupies the majority by the university, amounts to about half of all samples. In the avocation aspect, white-color workers and staff occupied majority, amounts to almost 40% of all samples.

4.2 Questionnaire Design

The questionnaire used in this study mainly divided into four major parts, separately cited quite reliability and validity research questionnaires and literatures. Questionnaires were referred the literatures and the experts' advice revised. Service quality, customer satisfaction and customer loyalty were measured with scales containing seven-point Likert-scale items, ranging from 1 (=completely disagree) to 7 (=completely agree). We repeatedly conducted pretest and revised. The reliability analysis of these scales yielded favorable results. The constructs exhibited a high degree of reliability in terms of coefficient alpha. Cronbach's α for the service quality, the customer satisfaction and the customer loyalty scale were 0.94, 0.84 and 0.89 respectively. This research entire questionnaire Cronbach's α was 0.96. All values exceeded the recommended value of 0.7 (Nunnally, 1978).

5.Empirical Analysis

5.1 Correlation Analysis

The Pearson correlation coefficient was used to check the correlation of each variable in this paper, which was summarized in table 1. It presents an overview of the correlations between the main variables; service quality, customer satisfaction and customer loyalty. Table 1 shows a positive relationship between service quality and customer satisfaction ($r = 0.76$), service quality and customer loyalty ($r = 0.63$), and customer satisfaction and customer loyalty ($r = 0.69$). On the whole, the correlations between the various concepts are rather strong and statistically significant.

Table 1. Pearson correlations between the central variables.

	Mean	1	2	3
1 Service quality	5.07	.72(SD)		
2 Customer satisfaction	4.85	.76**	.85(SD)	
3 Customer loyalty	4.98	.63**	.69**	1.01(SD)

** $p<0.01$; SD: standard deviation

5.2 Hierarchical Regression Analysis

This section linked the service quality, customer satisfaction and customer loyalty for discussion. We adopted hierarchical regression analysis to examine hypotheses, and made confirmation whether relationships among them existed significantly.

Table 2. Hierarchical regression analysis result

	Dependent Variables			
	CS	LOY	LOY	LOY
	Mode 1	Mode 2	Mode 3	Mode4
Control Variables				
Gender	-.026	-.012	-.002	-.016
Age	.033	-.027	-.042	-.026
Degree of education	-.079	.051	.038	-.002
Avocation	.016	-.022	-.001	.007
Independent variables				
Service quality	.753***		.248***	.631***
Customer satisfaction		.697***	.510***	
R^2	0.059**	.022	.022	.022
ΔR^2	0.534***	.457***	.482***	.376***
Adj. R^2	.586	.470	.493	.387
F-value	82.649***	52.191***	47.909***	37.561***
Degree of freedom	289	289	289	289
Durbin-Watson	1.866	2.065	2.115	2.022

p<0.01;*** p<0.001 ; SQ: service quality; CS: customer satisfaction; LOY: customer loyalty

According to table 2, mode 1 was shown that the hypermarket service quality has high predicted ability to the customer satisfaction (β=.753 and p-value=.000). Therefore, H1 was supported. In the mode 2, it demonstrated the customer satisfaction has a significant effect on the customer loyalty (β=.697 and p-value=.000). H2 was then confirmed. In the mode 3, it indicated that the service quality and customer satisfaction both show predicted ability to the customer loyalty (β=.248 and .510 respectively and p-value=.000). Comparison with mode 3, the positive relationship between service quality and customer loyalty in mode 4 is stronger (β=.631 > β=.248). This means that customer satisfaction mediates the effects of service quality on customer loyalty. H3 was verified. Control variables, however, in the aforementioned four modes were all insignificant. The values of Durbin-Watson statistics were around 2 and those of VIF were below 10, implying that there are no autocorrelation and multi-collinearity problems in the regression. Therefore, the results were quite acceptable.

5.3 Path Analysis

According to table 3, the (χ2/df) ratio was 2.526, and conformed to scholars' suggestion lower 5 scopes. GFI was .817 and RMSEA was .073, both of which meet ideal fitness request standard. AGFI was .784, a bit lower than scholar's request. These values suggested that the model was quite reliable.

Table 3. Goodness of fit indices.

	χ2/df	GFI	AGFI	RMSEA
Scholars' suggested values	1~ 3	>.8	>.8	<.08
Values obtained in the study	2.526	.817	.784	.073

Further observed in the AMOS mode, examined each independent latent variable and latent dependent variable relationship. In Figure 2 shown, standardized γ parameter estimates were significant between service quality and customer satisfaction, customer satisfaction and customer loyalty. Each of γ value was all above .86 (p-value=.000). However, the path analysis showed that service quality was insignificantly associated with customer loyalty, given customer satisfaction as another independent variable.
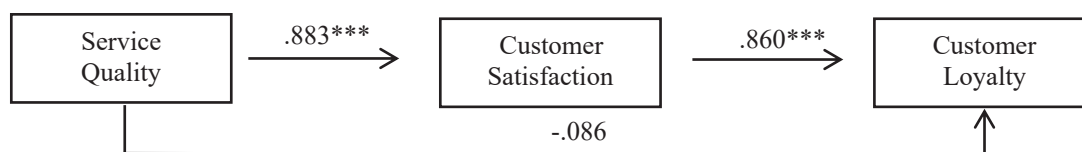

Fig. 2. Path results

6.Conclusions

In this paper, we have developed a framework for analyzing the relationships among service quality, customer satisfaction and customer loyalty. All the hypotheses were supported. The findings were briefly summarized as follows. Firstly, the hypermarket service quality can effectively predict the customer satisfaction. Secondly, the customer satisfaction has a significant effect on the customer loyalty. Obviously, these variables have quite position within the hypermarket industry. Hence, each manager of the hypermarket should pay attention with these factors, and make good use of them. Finally, this paper also found out that the hypermarket industry customer satisfaction acted an intermediation role between service quality and customer loyalty. Not only effective promotion customer's loyalty need good service quality, but also need the promotion customer satisfaction that can really effectively enhance and maintain the customer loyalty.

7.References

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