

An Integrated Model of Service Loyalty

Lu Ting Pong, Johnny
Dr. Tang Pui Yee, Esther

Department of Business Studies
The Hong Kong Polytechnic University
Hung Hom, Kowloon, Hong Kong
Email: bujlu@polyu.edu.hk
Tel: 852 27667948
Fax: 852 27650611

Academy of Business & Administrative Sciences
2001 International Conferences, Brussels, Belgium
23-25 July, 2001

ABSTRACT

In today's competitive environment, researchers and service marketers put great effort on developing customers' service loyalty in order to maintain competitive edge. However, there is no consensus on the antecedents in the creation of service loyalty and the domain of service loyalty is not yet clearly defined. This study primarily aims at developing a measurement model of service loyalty that incorporates behavioral, attitudinal, as well as cognitive measures, applying in a process-dominant service (i.e. phone-banking service) and an outcome-dominant service (i.e. Western restaurant dining service). A structural model of service loyalty highlighting the positive and significant relationships among perceived service quality, customer satisfaction and service loyalty is illustrated, in which customer satisfaction is identified as a significant mediator to enhance the impact of perceived service quality on service loyalty.

Furthermore, the findings indicate that loyal customers of process-dominant service are comparatively more willing to connect their loyalty status with favorable attitude or preference, whereas loyal customers of outcome-dominant service are comparatively more willing to express as cognitive loyalty. These findings provide insights for future research and management practice on how to cultivate service loyalty, as well as how to maintain and improve service loyalty by improving perceived service quality and customer satisfaction

Acknowledgement: I would like to express my gratitude to Dr. Ricky Chan and Dr. Sherriff Luk, who generously gave their valuable advice and suggestions for improving this study. Indeed, without the financial support from The Hong Kong Polytechnic University, this paper cannot be completed successfully.

INTRODUCTION

Though many researchers have extensively studied loyalty to tangible goods (i.e. brand loyalty), it is suggested that the existed findings in the field of tangible product loyalty cannot be generalized to service loyalty (Bloemer et al., 1999). The concept of loyalty must be further explored to the service aspect, but in fact, this area is still remained relatively underdeveloped with two obvious loopholes. The first loophole is that there is no consensus on the antecedent of service loyalty. Undoubtedly, it is argued that much of the research has only focused on assessing how perceived service quality affects service loyalty (Oliver, 1980; Tarloy and Baker, 1994). This single flow of service loyalty formation from perceived service quality seems to be too narrow. Thus, assessment of service loyalty should be elaborated to include the investigation of the effect of customer satisfaction.

The second one is concerning the ambiguous operationalization of service loyalty construct (Bloemer et al., 1999; Rust and Williams, 1994), as a number of service loyalty measures have emerged. Most of them only focus on either behavioral measure (Clark and Wood, 1998; Dawes and Swailes, 1999; de Ruyter et al., 1999; DeSouza, 1992; Disney, 1999; Guolla and Large, 1997; Hallowell, 1996; Kendrick, 1998; Loveman, 1998; Morgan and Dev, 1994; van Gorder, 1991; Zeithaml et al., 1996) or attitudinal measure (Bloemer et al., 1999; Czepiel and Gilmore, 1987). More specifically, different measures of service loyalty have been employed in different industries, like airline industry (Ostrowski et al., 1993) and retail banking industry (Jain et al., 1987). They were industry-specific studies and failed to generalize to different service industries. So the urgent task is to identify a reliable measurement tool that can be used for the later justification in different service industries.

This study attempts to measure service loyalty by incorporating behavioral, attitudinal and cognitive attributes. In fact, the cognitive component of loyalty was the first set of measures identified for the measurement of brand loyalty (Newman and Werbel, 1973), but only few recent researchers try to extend the concept of cognitive measure into the domain of loyalty in service perspective (Bloemer et al., 1999; Cauruana, 1999; Gremler and Brown, 1996). Thus, it can explore the effectiveness of the cognitive component in measuring service loyalty.

RESEARCH OBJECTIVES AND RESEARCH QUESTIONS

The primary objective of this study is to develop a measure of service loyalty incorporating behavioral, attitudinal as well as cognitive attributes at a global level, using two services for investigation. Thus, the first research question is:

Question 1: *Is a measure of service loyalty best conceived with behavioral, attitudinal and cognitive attributes?*

The second objective of this study is to investigate the relationship between perceived service quality and service loyalty, with customer satisfaction as a mediator, and to compare the influences of perceived service quality and customer satisfaction on service loyalty. Thus, the second research questions is:

Question 2: *Will customer satisfaction be a significance mediator on the relationship between perceived service quality and service loyalty?*

The final objective of this study is to investigate the differences in creating service loyalty between process-dominant service and outcome-dominant service. Thus, the third research question is:

Question 3: *Is there any significant difference in the formation of service loyalty between process-dominant services and outcome-dominant services?*

LITERATURE REVIEW

Evolution of the Conceptualization and Measurement of Service Loyalty

Evolution of the conceptualization and measurement of service loyalty can be classified into three phases. In the early literature, researchers and marketers simply defined customer loyalty as a behavior of customer (Jacoby and Chestnut, 1978; Tucker, 1964). Thus, customer retention with repetitive purchase in terms of volume and value was an important measure of customer loyalty in 1950s. However, it has been criticized that the domain of customer loyalty should conceptually go beyond customers' behavioral measures (O'Malley 1998) because customer behaviors can be induced by situational factors (Dick and Basu 1994), such as the lack of available alternatives, high switching cost or tendency of inertia. In fact, near 75% of customers' purchasing decision is based on their own attitude and emotion due to the difficulty in evaluating services (Gremler and Brown 1996). This implies loyalty measurement should be included customers' attitudes rather than repeat purchase behavioral pattern only (Andreassen and Linderstad 1998). But note that only attitudinal measure is also insufficient for measuring service loyalty because it is oversimplify to assume that dissatisfied customers will switch to other alternatives and satisfied customers will remain loyal (O'Malley 1998).

In the second phase, researchers, therefore, measured customer loyalty by incorporating behavioral and attitudinal measures simultaneously (Czepiel and Gilmore, 1992; East et al., 1998; Hallowell, 1996; Javalgi and Moberg, 1997; Snyder, 1986; Snyder, 1991; Tranberg and Hansen, 1986). Typically, Dick and Basu (1994) emphasized that true sustainable loyalty could only be attained when customers enjoyed a high level of positive attitude toward the object, together with high level of repeat patronage behavior. Otherwise, they only expressed the status of "spurious loyalty" or "latent loyalty". "Spurious loyalty" refers customers only behave with repeat patronage pattern but do not attach with a positive attitude toward the object, whereas "latent loyalty" refers customers only reflect a positive attitude toward the object but do not behave with repeat patronage pattern.

In the third phase, the composite measure of service loyalty consists of three kinds of attributes: namely behavioral, attitudinal and cognitive attributes. As suggested by Gremler and Brown (1996): service loyalty is determined by *"the degree to which a customer exhibits repeat purchasing behavior from a service provider, possesses a positive attitudinal disposition toward the provider, and considers using only this provider when a need for this service arises"* (p.173). According to the framework conceptualized by Oliver (1999), loyalty should be developed in a sequence of "cognition-affect-conation" pattern. It was argued that customers would first come in a stage called "cognitive loyalty", in which customers became loyal in a sense of cognition on the basis of prior knowledge or belief on the brand. Then, after several usage or interactions, a favorable attitude toward the brand would be developed on the

basis of accumulative satisfaction in the stage of “affective loyalty”. The next phase of developing loyalty was the conative stage, in which customers would hold strong commitment to have repurchase intention and to avoid any persuasion from other alternatives. Ultimately, the repurchase intention would be realized into action. Therefore, analysis of “true” customer loyalty required to assess customer beliefs (cognition), affection (attitude) and repurchase action (behavior) simultaneously.

Definition of Service Loyalty

Based on the conceptual ideas of Caruana (1999), and Gremler and Brown (1996), service loyalty in this study is defined as:

The willingness of customer to consistently re-patronize the same service provider/service company, that maybe the first choice among alternatives, thereby complying with actual behavioral outcomes and attaching with favorable attitude and cognition, regardless of any situational influences and marketing efforts made to induce switching behavior.

However, the service loyalty mentioned here does not imply the definition of 100% loyalty because very few customers will have 100% loyalty toward only a single service provider in reality. Instead, customers usually have two or three choices within any category from which they regularly buy (O’Malley 1998). In addition, the service loyalty defined here excludes the meaning of “membership” in order to avoid “locking-in” customers’ consumption behavior (Barnes 1994). Therefore, the formation of service loyalty in this study must satisfy three conditions (Barnes 1994): (1) the customer should have strong desire for the service continuously or periodically; (2) the customer should have freedom to choose their favorite service provider or service company; (3) there should have more than one service provider within the same service industry.

Measures of Service Loyalty

Based on the literature review, this study preliminary identifies eight measures in terms of behavioral, attitudinal and cognitive attribute.

Repeat Purchase Behavior: In fact, consistent repeat purchase is one kind of “loyalty-prone” behavior (Cunningham, 1956) by showing continuance commitment (Shemwell et al., 1998) on an entity.

Word of Mouth: It means recommending others to purchase through any common means. This indicator is important for assessing loyalty as stated by Gould (1995): “loyal customer is defined as those not only gladly use the services but they are so pleased with them that they tell other people about them” (p.16). Besides the meaning of external recommendation, the term of “word-of-mouth” also includes the meaning of internal communications with service staff. So it is believed that loyal customers are likely to give positive feedback to the service company (Söderlund, 1998).

Period of Usage: It means the time interval in which the customer keeping consumption from a particular service provider continuously. It is also a very common indicator for assessing loyalty because it can definitely reflect the real situation of customer’s consumption from the same service provider continuously and especially emphasizes the long-term characteristic of service loyalty (Kendrick, 1998).

Price Tolerance: Undoubtedly, loyal customers willing to pay the premium even the price is increased because the perceived risk is very high, so they instead to pay the higher price for avoiding the risk of any change (de Ruyter et al., 1999; Morgan and Dev, 1994; Yoon and Kim, 2000). Generally, the developed long term relationship of service loyalty makes loyal customers more price tolerant, since loyalty discourages customers to have price comparison with others and to shopping around (de Ruyter et al., 1999).

Repeat Purchase Intention: Customer loyalty is basically referred as the extent of repeat purchase intention from the same service provider with affective commitment (Shemwell et al., 1998; Söderlund, 1998).

Preference: Customer's preference is the typical measure for the attitudinal dimension of service loyalty (Bloemer et al., 1999; Gremler and Brown, 1996), as "true" loyalty can be only attained when the customer expressed strong positive preference as well as high repeat patronage on an entity (Dick and Basu, 1994). Similarly, Zeithaml et al. (1996) suggested loyalty could be manifested by expressing preference over others.

Choice Reduction Behavior: Indeed, the recent literature suggested that choice reduction behavior was a definite resultant behavior of loyalty, as customers with a strong strength of loyalty would appear to reduce the search motivation, and hence eventually forgo the choice of other alternatives and reduce the competitive efforts on decision making (Dick and Basu, 1994; Gremler and Brown, 1996). Theoretically, for a loyal customer, the number of choices for particular decision will usually not more than three (Sheth and Parvatiyar, 1995).

First-in-mind: Consistent with choice reduction behavior, it is suggested that the extremely loyal customers will be ideally limited to only one choice that should be the first choice in their minds (Caruana, 1999). Therefore, high level of service loyalty will lead customers to consider the service provider as the first in his/her mind.

CONCEPTUAL FRAMEWORK

In this study, perceived service quality and customer satisfaction act as two antecedents of service loyalty. For the causal relationship between service quality and customer satisfaction, there is still considerable debate in recent years (Bitner, 1990; Brady and Robertson, 2001; Chenet et al., 1999; Nguyen and LeBlanc, 1998; Shemwell et al., 1998; Zeithaml et al., 1993). Despite of the dual relationship between perceived service quality and customer satisfaction, this study is attempting to find out the impact of perceived service quality on customer satisfaction first and then on the service loyalty as shown in Figure (1). It is because this direction is more supported by recent literature with highly empirical validation (Gotlieb et al., 1994; Lassar et al., 2000; Ostrowski et al., 1993; Spreng and Mackoy, 1996). For instance, Fornell (1992) suggested that customer satisfaction was exerted a stronger power for predicting service loyalty in the service industries like banking, insurance, and mail order than did service quality. In a similar vein, McDougall and Levesque (2000) resulted that customer satisfaction was a strong predictor of service loyalty in four different services: dentist, auto service, restaurant and haircut. In addition, Stank et al. (1999) resulted that service quality was failed to have significant influence on

customer loyalty, but it had significant indirect effect on customer loyalty through customer satisfaction.

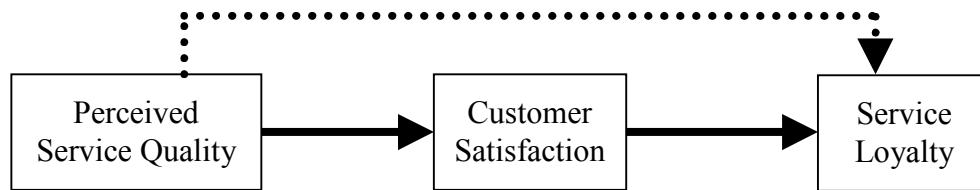


Figure (1): Proposed Integrated Model of Service Loyalty

It is proposed that there is a positive and significant linkage from perceived service quality through customer satisfaction to create service loyalty. Although the extant literature reports that customer satisfaction has stronger impact on service loyalty than perceived service quality, the direct impact of perceived service quality on service loyalty is also examined in this study. Consequently, perceived service quality exhibits both direct and indirect effects on service loyalty. The indirect effect of perceived service quality on service loyalty through customer satisfaction is indicated by the thick blackened solid arrows, and its direct effect on service loyalty is indicated by the dotted line.

RESEARCH HYPOTHESES

After reviewing the literature and establishing the proposed model, six hypotheses are developed accordingly for test.

- Hypothesis 1: Service loyalty is best conceived as a multidimensional structure with three distinct dimensions: behavior, attitude as well as cognition.*
- Hypothesis 2: Higher level of perceived service quality will lead to higher level of customer satisfaction with the service.*
- Hypothesis 3: Higher level of customer satisfaction of the service will lead to higher level of service loyalty.*
- Hypothesis 4: Higher level of perceived service quality will lead to higher level of service loyalty.*
- Hypothesis 5: Customer satisfaction has greater impact on service loyalty than perceived service quality.*
- Hypothesis 6: For process-dominant services, perceived service quality is largely determined by the process-related elements than by the outcome-related elements, whereas for outcome-dominant services, perceived service quality is largely determined by the outcome-related elements than by the process-related elements in creating high level of service loyalty.*

METHODOLOGY

The Sampled Services

Phone-banking service and restaurant dining service were selected for study based on the situation of many alternative competitors in the Hong Kong market. According to the Government's statistics in 1999¹, there are 156 licensed banks in the Hong Kong

¹ Statistics are provided from *Hong Kong Economic Yearbook 2000*, Economic Information & Agency.

market, including local and overseas bank. In the same year, approximately 3,000 Western restaurants² are available in the Hong Kong market. This indicates that customers can freely patronize other alternatives for consuming the services from any similar service providers. The phone-banking service refers to any banking services that are consumed by customers via the phone. The restaurant dining service only refers to the Western restaurants of any style, except the fast food restaurants and those restaurants that have only take away service.

Based on the classification method of Powpaka (1996), restaurant dining service is classified as the service with “search” outcome quality that can be evaluated accurately and efficiently by customers before and after consumption. Thus, it is an outcome-dominant service. Therefore, customers often base on the outcome or physical equipment for the evaluation of restaurant dining service and so restaurant dining service is considered as a kind of service that is mainly associated with the offer of tangible products (Bloemer et al., 1999; Garretson and Clow, 1997).

On the other hand, phone-banking service is classified as the service with “credence” outcome quality that cannot be evaluated accurately and efficiently even after extensively consumption because customers are not technically competent to evaluate the outcomes. Customers are mostly to base on the transaction process for the evaluation of phone-banking service as there was not much physical evidences that customers could be rely on (Oyewole, 1999). Thus, it is classified as process-dominant service.

Focus Group Study

The procedures of scale development follows the guidelines offered by Anderson and Gerbing (1994), Churchill (1979) and Hinkin et al. (1997). In the first stage, literature review was undertaken to identify the items that reflect the characteristics of these two services. Then, the identified items were justified through focus group study. Two focus groups were formed for exploring the meaning of service loyalty from both customer’s and service provider’s perspectives separately with seven customers and six service provider respectively.

Two main results were obtained. Firstly, two additional attributes were identified for the measure of service loyalty, including *change tolerance* and *tolerance on adopting service innovation*. The former means the extent of customer’s sensitivity to any change other than the price factor, for example, change of opening hours. As suggested by participants, a loyal customer would still keep repetitive consumption even though the change of the service became relatively unsatisfactory. At least the customer would come again for trial and seek for any improvement from the service provider. The later refers to the extent of customers’ willingness on trying new services (or food) introduced by the service provider. It is believed that loyal customers are willing to try any new services recommended by their particular service provider. Secondly, perceived service quality and customer satisfaction, in fact, affected service loyalty, in which process-related elements and outcome-related elements of perceived service quality had different impacts on service loyalty.

² The actual figure is 3,213 for non-Chinese restaurants in the Hong Kong market, provided from *Hong Kong Economic Yearbook 2000*, Economic Information & Agency.

DEVELOPMENT OF SURVEY INSTRUMENTS

Perceived Service Quality: Perceived service quality was measured by incorporating two sets of element: process related and outcome related (Luk, 1999; Powpaka, 1996; Stank et al., 1999). Process related elements concern the manner of interaction between customer and service provider whereas outcome related elements concern the actual outcome received from the service transaction (Luk, 1999). The process related elements in the measure of perceived service quality were adapted from the well-established original SERVQUAL instrument (Parasuraman et al., 1985) on the basis of the dimensions of *reliability*, *responsiveness*, *assurance* and *empathy*. On the other hand, the outcome related elements of perceived service quality were mainly adapted from the DINESERV scale developed by Stevens et al. (1995) that measured the service quality in restaurants as well as the tangibles related items of SERVQUAL instrument, resulting into two dimensions named *tangibles* and *outcomes*. It is important to note that the performance-based approach was used for measuring perceived service quality in this study with totally 31 identified items.

Customer Satisfaction: The construct of customer satisfaction was measured in the overall global perspective, because it was empirically suggested that overall satisfaction performed better on predicting its effect on loyalty when compared to transaction-specific satisfaction (Jones and Suh, 2000; Oliver, 1999). Thus, the measurement scale for the customer satisfaction in this study will be validated and adapted from the well-established scale from Taylor and Baker (1994) with 5 items.

Service Loyalty: It was based on the predetermined eight measures with the additional attributes of change tolerance and tolerance on adopting service innovation. As these ten measures were all observable variables that should be measured directly from the customers, it was assumed that most of them were measured with one single item in those measures. Consequently, the measure of service loyalty in this study totally included 13 items to reflect the predetermined outcomes of service loyalty.

All the items were measured with 7-points Likert scale from strongly disagree (1) to strongly agree (7). The whole questionnaire was translated into Chinese version by the outside expert translators for easy readiness of local respondents, and were presented in bilingual with both Chinese and English into one set of questionnaire. The survey instruments of each construct are listed in Appendix.

Pilot Study

The survey questionnaire was first pre-tested to ensure that the questions were understood by the potential respondents. This was achieved by selecting a panel of expert judges for their comments on the questionnaire. They were included three academic professors in Marketing, three postgraduates with major in Marketing, two managerial staffs from a local bank and restaurant respectively, and also four customers from general public. From their comments, some of the statements were rephrased. In addition, seven items were strongly recommended to be deleted due to the redundancy. They claimed that the present of those redundant items would make potential respondents confused. It was noted that those problematic items did not deleted immediately after collecting the comments of the “expert judges”, they were still constructed in their underlying dimensions for gaining statistical support in the pilot study.

A pilot test was then undertaken in the phone-banking service and dining service separately. Potential respondents were required to have experience in these two services at least twice in the last three months. This ensured they had fresh memory to complete the questionnaire. A total of 100 respondents were recruited with convenience sampling method in part-time postgraduate classes at a major university in Hong Kong, in which 46 completed questionnaires were collected from phone-banking service while 54 completed questionnaires were for restaurant dining service. Besides the respondents were asked to complete the questionnaire, they were also asked to comment on the wording of questionnaire items. According to the results of correlation matrixes, those problematic items that mentioned by the expert judges were statistically suggested to be deleted due to either highly correlation (i.e. >0.50) or insignificant correlation at the 0.05 significant level with most of the other items within the same construct (Churchill, 1979; Hinkin et al., 1997; Parasuraman et al., 1988). As a result, twenty-six items were retained for the measurement of perceived service quality, and eleven items were retained for the measurement of service loyalty.

The Field Survey

The target respondents were the customers who worked in managerial level and were regular users of phone-banking service and Western restaurant dining service. This study was performed in the form of mail survey with systematic sampling method based on the mailing lists provided by the Trade Development Council (TDC) which covered 13 different nature of service industries in Hong Kong as listed in Table (1). The total population was 2,673 respondents. Potential respondents for phone-banking service and Western restaurant dining service were systematically selected through the following procedures. The first potential respondent of each mailing list was selected for the survey of phone-banking service whereas the second one was selected for Western restaurant dining service, and the following respondents were selected systematically for the survey of phone-banking service and Western restaurant dining service one by one. For a 3-month collection period, a total of 557 usable questionnaires were received, representing a response rate of 20.84%.

Table (1): Sampling Frame

Service Industries	No. of Valid Sample
Accounting	462
Advertising & Market Research	451
Architecture & Planning	195
Business Management & Consultancy Services	448
Education & Training	197
Event Organization	149
Financial Institutes (excludes Banking)	130
Insurance	100
Media	58
Public Relations	61
Real Estate	98
Surveying & Quality Inspection / Testing	166
Telecommunication Services	115
Tourism	43
Total	2673

DATA ANALYSIS

Descriptive Statistics

Of the 557 returned questionnaires, 258 (46.3%) were collected from banking service and 299 (53.7%) from Western restaurant dining service. Both male and female respondents were evenly distributed with the percentage of 47.4 and 52.4 respectively. For the whole sample, 73.2% respondents fell in the age range of 26 to 45, and 51.9% completed tertiary/university degree or above. In terms of their occupation, 25.1% worked in the position of manager, 23.2% worked as professional and 6.6% worked as marketing executive. In terms of monthly income, 51.4% of respondents had monthly income ranging from \$15,001 to \$45,000. The demographic profile of the sample was compared with the population of Hong Kong³ where the study was undertaken. Comparisons were made on sex, age, education, and monthly income. No significant differences at the 0.05 significance level were found on those four demographic characteristics, indicating a high level of representativeness.

In order to test non-response bias, the respondents and the non-respondents were compared with the “known” information that was obtained from the sampling frame (Armstrong and Overton, 1977; Blackwell et al., 1999; Kanuk and Berenson, 1975; Scott, 1961). The mailing lists of this study provided readily useful variables in terms of receiver’s gender, service sector and firm size. In order to identify the characteristics of non-respondents, Scott (1961) suggested that incomplete responses or undeliverable responses could be assumed as a sample of non-respondents. Thus, Chi-square test and two independent samples t-test were employed to test whether there was any difference between respondents and non-respondents on the basis of gender, service sector and firm size. Both tests consistently resulted that there was no significant difference at the 0.05 significance level between respondents and non-respondents, indicating that non-response bias did not appear as a significant problem in this study.

For implementing the structural equation modeling technique, the assumption of multivariate normal distribution must be satisfied (Hoyle and Panter, 1995; West et al., 1995). Therefore, it should be tested by looking at the actual departure from normality of the measured items (Norusis, 1993). In which it is assumed that if all the individual item appear to be normally distributed, the overall sample distribution is multivariate normal (Noronha, 1999). For checking the extent of the actual departure from normality of each measured item, values of skewness, kurtosis, mean and standard deviation of total 44 measured items were computed (Hair et al., 1995; Li and Cavusgil, 1999; Norušis, 1993; Stevens et al., 1995; West et al., 1995). As all values of skewness and kurtosis were below the absolute value of one, except one item, the data obtained from the sample were not considered to be seriously deviated from normality and the existence of problems with the a non-normal distribution did not appear to be significant (Ferrando and Lorenzo-Seva, 2000).

Exploratory Factor Analysis

The overall sample was randomly split into halves, resulting into two independent samples namely sample 1 ($N_1 = 278$) and sample 2 ($N_2 = 279$), for exploratory factor

³ Figures of population characteristics of Hong Kong, include age, educational level and monthly income are obtained from *Hong Kong Census* (1996). On the other hand, updated figures (2000) of sex are obtained from the website: www.info.gov.hk.

analysis and confirmatory factor analysis respectively. Exploratory factor analysis was first performed. Eigenvalue greater than unity was used as the cutoff point to identify the factor structure. The test of KMO yields a value of 0.87, and the Barlett's test of sphericity obtains an approximated Chi-Square value of 1217.32 with an associated significance of 0.00, indicating that the data set is adequate for factor analysis. A 3-factor solution was extracted with the total variance of 64.86%. These three factors are defined as *behavior*, *attitude* and *cognition*, according to the meaning of the items that load on each of these factors. The factor structure, as presented in Table (2), suggests customer loyalty should be composed of cognitive loyalty, attitudinal loyalty and behavioral loyalty.

Table (2): Results of Factor Analysis for Service Loyalty (N = 278)

Items (version of dining service)	Factor Loadings	Cronbach's alpha (α)
<p><u>Behavior</u></p> <ul style="list-style-type: none"> • There is a very high probability that you will dine at this restaurant again. • You have recommended other people to patronize this restaurant. • You will say positive thing to other people about the service provided by this restaurant. • You will give positive feedback to this restaurant. • You will try the new food or drinks that are recommended by this restaurant. 	<p>0.72</p> <p>0.80</p> <p>0.80</p> <p>0.63</p> <p>0.46</p>	<p>0.82</p>
<p><u>Attitude</u></p> <ul style="list-style-type: none"> • You will continue to dine at this restaurant even if the price or service charge is increased somewhat. • You have strong preference on this restaurant. • You will keep dine at this restaurant, regardless of everything being changed somewhat. 	<p>0.66</p> <p>0.50</p> <p>0.85</p>	<p>0.65</p>
<p><u>Cognition</u></p> <ul style="list-style-type: none"> • This restaurant is the first choice in your mind when you consider to have dinner outside. • Assumed that you have only three choices when you are in need of having dinner, this restaurant must be one of them. • You have regularly dined at this restaurant for a long period of time. 	<p>0.81</p> <p>0.81</p> <p>0.82</p>	<p>0.82</p>

Cronbach's alpha test was performed to test the internal consistency of each factor, and obtained the alpha values of 0.82, 0.65 and 0.82 for the dimensions of behavior, attitude and cognition respectively. All exceed the suggested cutoff value of 0.70, revealing an acceptable level of reliability (Nunnally, 1978), except the attitudinal dimension. Although it is marginally below the suggested cutoff line, it is still retained as a reliable measure of service loyalty because the items contribute significantly to this dimension and show high item-to-total correction.

Confirmatory Factor Analysis

Prior to the confirmatory factor analysis, Cronbach's alpha reliability was first assessed for achieving acceptable measurement properties of the proposed model in this study with the use of the data obtained from. All Cronbach's alpha values exceed the suggested cutoff point of 0.70, from the highest of 0.95 to the lowest of 0.71, revealing an acceptable level of reliability (Nunnally, 1978).

The two-step modeling procedures, recommended by Anderson and Gerbing (1988), were then followed to develop the proposed structural model with the use of sample 2 ($N_2 = 279$). In the first step, all the forty-two questionnaire items were forced to group into their own predetermined dimension based on the literature review and the results

of exploratory factor analysis, resulting into three measurement models at the first order level. Each of the three measurement models was then evaluated separately with the use of confirmatory factor analysis on the basis of maximum likelihood (ML) estimation method at the level of first order constructs. Next, each first order construct was transformed into composite score for estimating the measurement model at the second order level. In this study, all standardized estimates are statistically significant in three measurement models (i.e. perceived service quality, customer satisfaction and service loyalty) with acceptable discriminant validity and overall model fit as stated in Table (3). In fact, discriminant validity for the measurement models is assessed by determining the inter-correlation among the scales (Fornell and Larcker, 1981; Taylor and Baker, 1994). The results of a correlation matrix among the first order factors in the measurement models indicated that most of the correlations between the scales that measuring the same concept (such as reliability and responsiveness) are larger than the correlations between the scales that measuring different concepts (such as reliability and behavior). Therefore, discriminant validity is achieved.

Table (3): Goodness-of-fit Indices for Measurement Models of Perceived Service Quality, Customer Satisfaction and Service Loyalty

Goodness-of-Fit Indices	Perceived Service Quality	Customer Satisfaction	Service Loyalty
Chi-square (χ^2) test	$\chi^2 = 150.46$ d.f. = 9 p = 0.00	$\chi^2 = 38.26$ d.f. = 5 p = 0.00	$\chi^2 = 0.00$ d.f. = 0 p = 1.00
Root mean square error of approximation (RMSEA)	0.24	0.16	0.00
Incremental fit index (IFI)	0.98	0.99	1.00
Normed fit index (NFI)	0.98	0.99	1.00
Comparative fit index (CFI)	0.98	0.99	1.00

Estimation of Structural Model

In the second step, the overall structural model was estimated with the prescribed relationships between the fixed measurement models. Figure (2) presents the proposed structural model, in which the three measurement models are connected with each other by specifying the hypothesized relationships with the parameters $\gamma_{i,j}$ and $\beta_{i,j}$. The latent variables measuring customer satisfaction (CS) and service loyalty (SL) are represented by the symbol η_i . The latent variable measuring perceived service quality (SQ) is represented by the symbol ξ_i . The parameters $\delta_{i,j}$ and $\varepsilon_{i,j}$ represent the error variance of the observed variables, while $\zeta_{i,j}$ represent the error variances of those endogenous variables. Since this structural model is a second order factor model in which the first order factors determine the corresponding indicators and they are themselves determined by a second order factor, composite scores of the first order factors are computed and represent the observed variables on the corresponding second level construct. $\lambda_{x,i,j}$ and $\lambda_{y,i,j}$ indicate the relationship between observed first order variables and the underlying latent independent and dependent variables respectively.

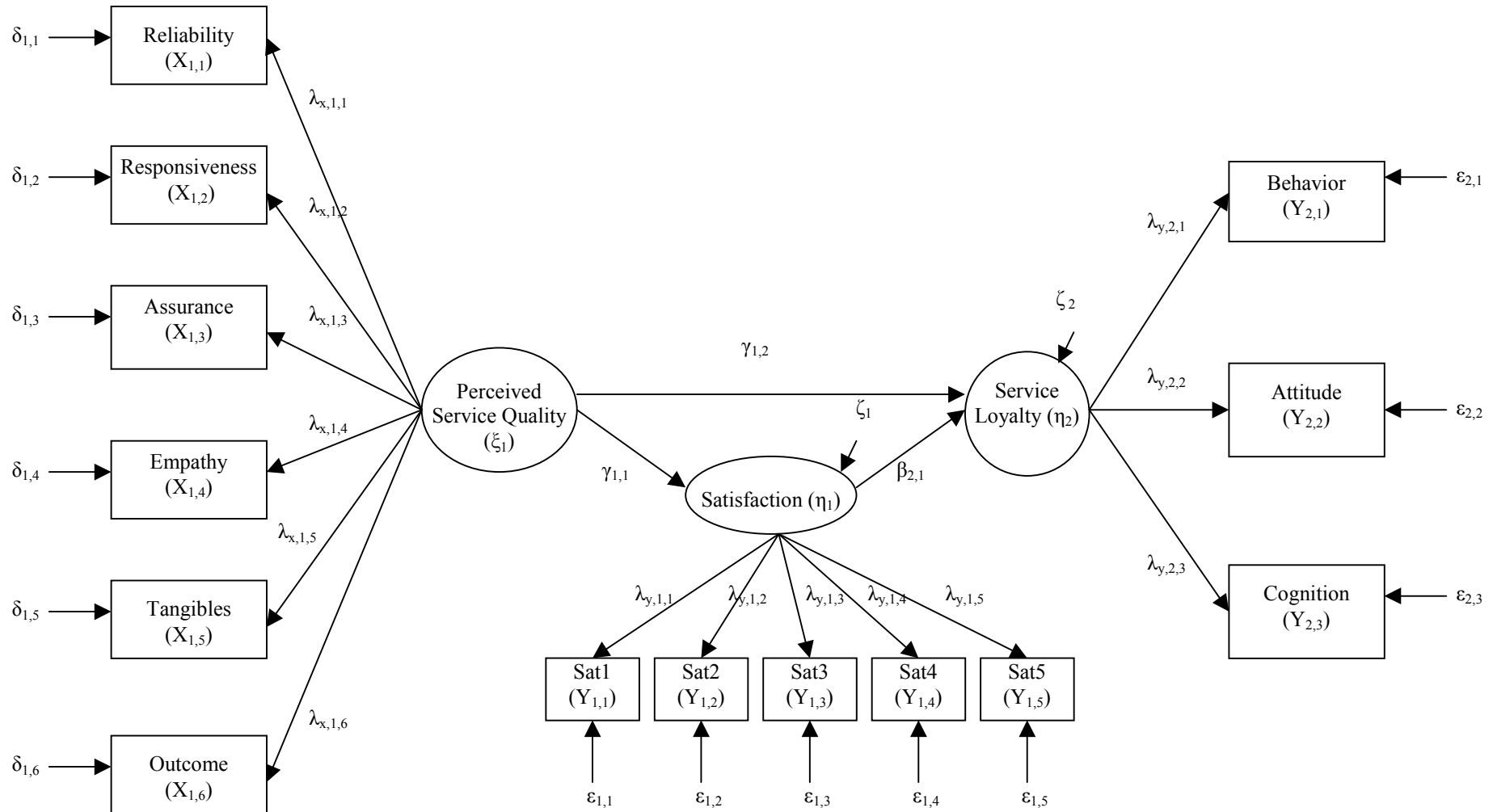


Figure (2): The Proposed Structural Model

As shown in Table (4), all the observed first order factors have a high standardized estimated loading on the corresponding construct with a critical ratio larger than 1.96, indicating the first order factors were statistically significant in measuring the corresponding concept at the 0.05 significance level (Arbuckle, 1997).

Table (4): Results of Confirmatory Factor Analysis of the Proposed Structural Model

Parameters	Standardized Estimate	Standard Error	Critical Ratio**	Error Term	Critical Ratio of Variance**	Variance Estimate of Error Term
Paths						
SQ → CS ($\gamma_{1,1}$)	0.86	0.07	15.45	--	--	--
SQ → SL ($\gamma_{1,2}$)	0.41	0.12	4.21	--	--	--
CS → SL ($\beta_{2,1}$)	0.44	0.10	4.63	--	--	--
SQ					8.28	0.72
SQ1 $\lambda_{x,1,1}$ *	0.82	--	--	$\delta_{1,1}$	10.18	0.34
SQ2 $\lambda_{x,1,2}$	0.85	0.06	17.22	$\delta_{1,2}$	9.79	0.32
SQ3 $\lambda_{x,1,3}$	0.86	0.07	17.35	$\delta_{1,3}$	9.71	0.34
SQ4 $\lambda_{x,1,4}$	0.79	0.07	15.48	$\delta_{1,4}$	10.51	0.51
SQ5 $\lambda_{x,1,5}$	0.76	0.05	14.62	$\delta_{1,5}$	10.76	0.32
SQ6 $\lambda_{x,1,6}$	0.84	0.06	16.89	$\delta_{1,6}$	9.93	0.29
CS				ζ_1	6.98	0.27
b1 $\lambda_{y,1,1}$ *	0.83	--	--	$\epsilon_{1,1}$	10.52	0.45
b2 $\lambda_{y,1,2}$	0.91	0.06	19.99	$\epsilon_{1,2}$	9.03	0.25
b3 $\lambda_{y,1,3}$	0.88	0.05	18.91	$\epsilon_{1,3}$	9.81	0.30
b4 $\lambda_{y,1,4}$	0.88	0.06	18.75	$\epsilon_{1,4}$	9.90	0.31
b5 $\lambda_{y,1,5}$	0.91	0.05	19.84	$\epsilon_{1,5}$	9.17	0.23
SL				ζ_2	6.43	0.37
SL1 $\lambda_{y,2,1}$ *	0.94	--	--	$\epsilon_{2,1}$	3.34	0.16
SL2 $\lambda_{y,2,2}$	0.71	0.06	13.54	$\epsilon_{2,2}$	10.36	0.66
SL3 $\lambda_{y,2,3}$	0.61	0.08	10.96	$\epsilon_{2,3}$	11.05	1.40

* The corresponding parameter was constrained to unity (1.00) to ensure model identification

** Significant at the 0.05 significance level

When considering the extent of goodness-of-fit of the proposed structural model, Chi-square test (χ^2) was initially employed to evaluate model fit (Bagozzi and Yi, 1988; Hu and Bentler, 1995). Even though the chi-square statistics ($\chi^2 = 348.17$, d.f. = 74, $p = 0.00$) are statistically significant, the proposed structural model should not be rejected (Anderson and Gerbing, 1988). Instead, model fit of a structural model can be assessed by a relative Chi-square ratio that is yielded by dividing the Chi-square value over the corresponding degrees of freedom (Armstrong and Tan, 2000). A relative Chi-square ratio of 4.71 is yielded for the proposed structural model, indicating a reasonable model fit with a ratio lower than 5 (Armstrong and Tan, 2000; Marsh and Hocevar, 1995). The other goodness-of-fit indices: RMSEA (0.11), IFI (0.98), NFI (0.98) and CFI (0.98) all reached the acceptable level that suggested by Hair et al. (1995), and Hu and Bentler (1995), indicating a good model fit, except that RMSEA which indicated that there was a room for improvement.

Reliability and Validity Assessment

To assess the construct reliability, the composite reliability of each construct as well as the AVE value were calculated on the basis of equation stated by Hair et al. (1995). The calculated construct reliability of each second order construct are presented in Table (5). All composite reliability of constructs exceed the recommended level of 0.70 (Hair et al., 1995). Similarly, all AVE value exceed the suggested cut-off value of

0.50 (Fornell and Larcker, 1981; Hair et al., 1995), providing supportive evidence on high construct reliability of the latent constructs.

Table (5): Construct Reliability of Latent Constructs

Second Order Construct	Construct Reliability	Average Variance Extrated
Perceived Service Quality (SQ)	0.93	0.68
Customer Satisfaction (CS)	0.95	0.78
Service Loyalty (SL)	0.71	0.58

As shown in Table (4), all of the first order factors result in the critical ratio exceeding 1.96 and associated with a small standard error that was smaller than half of the standardized estimates, indicating the relationship between first order factors and their underlying second order constructs are statistically significant at the 0.05 significance level (Arbuckle, 1997). It provides great evidence of adequate convergent validity on the proposed structural model (Anderson and Gerbing, 1988; Armstrong and Tan, 2000; Bagozzi et al., 1991; Brady and Robertson, 2001; Fornell and Larcker, 1981).

Discriminant validity of the proposed structural model was assessed by a series of model estimation in which the latent constructs were allowed to freely correlate with each other, but the correlation between a pair of latent constructs was constrained to unity at a time (Anderson and Gerbing, 1988; Bagozzi and Yi, 1988; van Birgelen et al., 2000; Walter et al., 2000). Then, Chi-square difference test was performed on the values obtained for the comparison between the unconstrained model with each constrained model (i.e. M1, M2 and M3). M1 constrained the relationship between perceived service quality and customer satisfaction. M2 constrained the relationship between perceived service quality and service loyalty and M3 constrained the relationship between customer satisfaction and service loyalty. In Table (6), except the comparison between M0 and M1, Chi-square difference tests are statistically significant at the 0.01 significance level as the values of $\Delta\chi^2$ are greater than the threshold value of 6.63 corresponding to 99% probability level with one degree of freedom (Churchill, 1995). These results indicated that the latent constructs were not perfectly correlated and thus discriminant validity was achieved with a significantly lower χ^2 value for the unconstrained model.

Table (6): Results of Chi-square Difference Test on Unconstrained Model and Constrained Models

	χ^2 value	d.f.		$\Delta\chi^2$	Δ d.f.
M0 (Unconstrained)	348.17	74		--	--
M1 (Constrained SQ↔CS)	348.80	75	M1-M0	0.63	1
M2 (Constrained SQ↔SL)	362.03	75	M2-M0	13.86*	1
M3 (Constrained CS↔SL)	374.96	75	M3-M0	26.16*	1

* Significant at the 0.01 significance level

RESULTS AND DISCUSSION

For the measurement scale of service loyalty, totally 11 measures were identified as described and they were grouped into three dimensions, namely behavior, attitude and cognition through exploratory factor analysis. As presented in Table (4), these significant estimates supported the hypothesis 1 that service loyalty was best conceived as multidimensional structure with behavioral, attitudinal and cognitive attributes with the standardized path coefficients of 0.94, 0.71 and 0.61 respectively.

An examination of the estimated path coefficient among the second order constructs in the proposed structural model indicated the relationships among perceived service quality, customer satisfaction and service loyalty were statistically significant at the 0.05 significance level. Therefore, hypothesis 2 is supported that perceived service quality is positively and significantly related to the customer satisfaction with a standardized path estimate ($\gamma_{1,1}$) of 0.86. Similarly, hypothesis 3 is also supported that customer satisfaction of the service is positively and significantly related to the service loyalty with a standardized path estimate ($\beta_{2,1}$) of 0.44. In addition, hypothesis 4 is supported that perceived service quality is positively and significantly related to the service loyalty with a standardized path estimate ($\gamma_{1,2}$) of 0.41.

Hypothesis 5 states that customer satisfaction is a significant mediator on the relationship between perceived service quality and service loyalty, and that it should have comparatively greater impact on service loyalty than perceived service quality. As shown in Table (7), the standardized direct effect of customer satisfaction on service loyalty (0.44) is greater than that of perceived service quality (0.41). On the other hand, perceived service quality also exhibits indirect effect on service loyalty through customer satisfaction with a standardized value of 0.38, resulting a total standardized effect of 0.79 on service loyalty. This shows that customer satisfaction acted as a mediator in providing the enhancing effect of perceived serviced quality on service loyalty and thus, hypothesis 5 is supported.

Table (7): Direct, Indirect and Total Standardized Effects of Perceived Service Quality and Customer Satisfaction on Service Loyalty

Variables	Standardized Direct Effects	Standardized Indirect Effects	Standardized Total Effects
(M _p) Perceived Service Quality	0.41	0.38	0.79
Customer Satisfaction	0.44	--	0.44

Hypothesis 6 states that the development process of service loyalty between process dominant services industry and outcome dominant services industry should be different. Therefore, a multi-groups analysis (Bagozzi and Yi, 1988) was conducted with two different samples which were obtained by further splitting sample 2 (N = 279) into two sub-samples: phone-banking sample (N₁ = 129) and Western restaurant sample (N₂ = 150) respectively.

First of all, in order to test whether any significant difference on the evaluation of perceived service quality in different nature of services for ultimately building up service loyalty, two independent samples t-test was performed. The results in Table (8) show that there are statistically significant differences in the dimensions of Empathy, Tangibles and Outcomes at the 0.01 significance level. Customers of Western

restaurant dining service express a more favorable perception on outcome-related elements in creating high level of service loyalty. Besides, customers of Western restaurant dining service also place greater emphasis on the dimension of Empathy in developing service loyalty than customers of phone-banking service. As the dimension of Empathy relates to the extent of service staff in caring and knowing the customers, this finding illustrate how the service staff's care about the customers' feelings and the understanding on the customer's personalized taste will significantly affect the customers' perception of service quality.

Two independent samples t-test was again employed for testing any difference between two samples in the three dimensions of service loyalty: Behavior (SL1), Attitude (SL2) and Cognition (SL3). The results in Table (8) show that there is statistically significant difference in the cognitive dimension of service loyalty at the 0.01 significance level, indicating cognitive attributes are more important for determining a loyal customer in consuming phone-banking services. In contrast, attitudinal attributes are more important for determining a loyal customer in consuming Western restaurant dining service. Therefore, these findings reflect that customers in different nature of services are resulted in different consequences of service loyalty in terms of behavior, attitudinal and cognitive attributes.

Table (8): Results of Two Independent Samples T-test with Phone-Banking and Restaurant Samples in term of Perceived Service Quality and Service Loyalty

	Phone-Banking (N=129)		Restaurant (N=150)		Sig. Level
	Mean	S. D.	Mean	S. D.	
Reliability (SQ1)	4.97	1.04	4.85	1.03	0.34
Responsiveness (SQ2)	4.91	1.01	4.77	1.14	0.27
Assurance (SQ3)	5.03	1.04	4.94	1.20	0.50
Empathy (SQ4)	4.12	1.23	4.49	1.10	0.01*
Tangibles (SQ5)	4.53	0.88	5.06	0.79	0.00*
Outcomes (SQ6)	4.63	0.96	5.01	1.00	0.00*
Behavior (SL1)	4.71	1.09	4.69	1.18	0.92
Attitude (SL2)	3.84	1.16	3.97	1.15	0.33
Cognition (SL3)	4.89	1.17	3.72	1.52	0.00*

* Significant at the 0.01 significance level

Then, the proposed structural model had been used for both samples so as to investigate whether the causal parameters would be different or not. As shown in Table (9), the phone-banking sample placed greater concern on process-related elements (i.e. SQ2 "Responsiveness" and SQ3 "Assurance") to evaluate perceived service quality. In contrast, the restaurant sample placed consistent concern on both elements to evaluate perceived service quality, but they placed relatively higher concern on the outcome-related elements (i.e. SQ4 "Tangibles" and SQ5 "Outcomes") than phone-banking sample. In addition, another obvious difference between these two samples appeared in service loyalty. Both samples indicate behavioral attributes contribute more to service loyalty with the value of 0.91 and 0.95 for phone-banking service and restaurant dining service respectively. Comparatively, the findings show that the cognitive attributes (SL3) are more important to perform high level of service loyalty for the phone-banking service, indicating by the higher path coefficient (0.80) when compares with that of restaurant dining service (0.58). In contrary, the attitudinal attributes (SL2) seem to be more important to perform high level of service loyalty during the

consumption on the restaurant dining service, indicating by the higher path coefficient (0.72) when compares with that of phone-banking service (0.68).

As a result, hypothesis 6 is supported that customers are differed in evaluating perceived service quality for creating high level of service loyalty between process-dominant (phone-banking) service and outcome-dominant (Western restaurant) service, especially in the dimensions of Empathy, Tangibles and Outcomes. Moreover, the findings also support that customers are differed in displaying resultant consequences when perform high level of service loyalty between process-dominant and outcome-dominant services, particularly in the cognitive aspect.

Table (9): Comparison of Standardized Path Coefficients and Squared Multiple Correlation between Phone-Banking and Restaurant Dining Samples

Parameters	Phone-Banking (N=129)			Restaurant (N=150)		
	Std. Estimate	Std. Error	Critical Ratio**	Std. Estimate	Std. Error	Critical Ratio**
Paths						
SQ → CS ($\gamma_{1,1}$)	0.82	0.12	7.80	0.89	0.08	12.60
SQ → SL ($\gamma_{1,2}$)	0.43	0.19	2.80	0.43	0.14	3.79
CS → SL ($\beta_{2,1}$)	0.32	0.17	2.13	0.51	0.12	4.49
SQ						
SQ1 $\lambda_{x,1,1}$ *	0.77	--	--	0.88	--	--
SQ2 $\lambda_{x,1,2}$	0.88	0.10	10.98	0.85	0.08	14.16
SQ3 $\lambda_{x,1,3}$	0.83	0.11	10.14	0.89	0.08	15.65
SQ4 $\lambda_{x,1,4}$	0.75	0.13	9.03	0.84	0.07	13.97
SQ5 $\lambda_{x,1,5}$	0.78	0.09	9.49	0.80	0.06	12.63
SQ6 $\lambda_{x,1,6}$	0.83	0.10	10.19	0.87	0.07	14.97
CS						
b1 $\lambda_{y,1,1}$ *	0.76	--	--	0.88	--	--
b2 $\lambda_{y,1,2}$	0.88	0.11	10.65	0.93	0.06	17.81
b3 $\lambda_{y,1,3}$	0.89	0.11	10.78	0.89	0.06	16.00
b4 $\lambda_{y,1,4}$	0.79	0.11	9.34	0.94	0.06	18.20
b5 $\lambda_{y,1,5}$	0.88	0.11	10.62	0.94	0.06	18.33
SL						
SL1 $\lambda_{y,2,1}$ *	0.91	--	--	0.95	--	--
SL2 $\lambda_{y,2,2}$	0.68	0.09	8.45	0.72	0.07	11.11
SL3 $\lambda_{y,2,3}$	0.80	0.09	10.60	0.58	0.10	8.04

* The corresponding parameter was constrained to unity (1.00) to ensure model identification

** Significant at the 0.05 significance level

MANAGERIAL IMPLICATIONS

In the first instance, the findings provide insights for individual companies to guide their administrative policies aimed at creating and maintaining service loyalty. The findings exemplify that merely excellent perceived service quality is insufficient to develop long-term service loyalty without investigating the mediating effect of customer satisfaction. Thus, service managers should ensure that the performance on all components of delivered service is perceived as excellent by customers and also manage how to keep them in a high level of satisfaction. In order to meet this objective, service staff must be well trained for keeping good relationship with customers and for fulfilling customers' enquires. As suggested from the measure of perceived service quality, besides the quality of interactions between service staff and customers, physical outcomes are also important to be well managed. Especially in the

outcome dominant service, like restaurant dining service, the surrounding environment and food quality are the major attributes for customers to evaluate the service quality of a particular restaurant. Therefore, to enhance customer satisfaction in consumption restaurant dining services, a comfortable and clean environment must be attached with the provision of tasty food to the customers. The emphasis on Empathy illustrates that service staff should try to care about each customer's feeling throughout the whole consumption process, for example, to ask the customer feeling cold or not and to prepare the table napkin for customer individually before meal. In addition, service staff should try to understand each customer's taste by asking how does he/she feel about the dinner and by welcoming any comments about the service.

This study has identified that service loyalty is composed of three distinct components, they are behavioral loyalty, attitudinal loyalty and cognitive loyalty. Thus, the results of decomposing service loyalty into three distinct components provide service managers an idea that "loyal customers" can be divided into three types. Thus, service managers can identify the characteristics of "loyal customer" in different phases, and then employs different marketing strategies for capturing such kind of "loyal customers". For example, service managers should superficially notify customers that you have offered better service in your company than the other alternative companies. This can be achieved by extensive advertising promotion or incentive program (e.g. free coupon), so as to strengthen the customers' beliefs that the service provided is the best. After experiencing the service for several times on the basis of strong cognition, customers will form favorable attitude toward the service company and will eventually commit to repurchase. Therefore, cognition should not be ignored because it is the major factor for customers to build the initial status of service loyalty, especially in the restaurant dining service as projected from the findings.

The assessment of service loyalty also provides useful information to the service managers in terms of identified measures for determining the segment of their own "loyal customers" in different services settings. For the phone-banking service, service managers can place more attention on the attitudinal attributes for determining their loyal customer, such as whether the customer still consume the offered service if the service charges increase slightly. On the other hand, for the Western restaurant dining service, service managers can place more attention on the cognitive attributes, such as whether the restaurant is considered to be one of their choices or whether the restaurant is the first choice in the customer's mind. In effect, no matter what nature of services, all share the same key to success by carefully retaining the "loyal customer" group through effective segmentation and quality evaluation in the recent years.

LIMITATIONS AND FURTHER RESEARCH

Firstly, the proposed model developed in this study is limited to include perceived service quality, customer satisfaction and service loyalty as the major latent constructs. In order to focus on the inter-relationships among them, the effects of other important marketing variables or situational factors are omitted. Therefore, inclusion of other marketing variables or situational factors into the proposed model may provide further insights of the relationships among perceived service quality, customer satisfaction and service loyalty. For example, further study can focus on the new perspectives of service loyalty in answering the proposed questions like 1) how can the level of service loyalty be affected by situational factors? or 2) how can the level of service loyalty be affected by the quality of relationship with the contacted service staff?

Secondly, due to the time cost and limited budget, this study was performed in the form of cross-sectional design, in which the perceptions of respondents on the questionnaire items were captured at a time. Although this study can successfully determine the relationships among perceived service quality, customer satisfaction and service loyalty in the proposed model, the true nature of casual effects among these relationships have not been predicted in this study. This means the reinforcing effect of service loyalty on perceived service quality is not proven on a longitudinal basis.

As this study only attempted to generalize the proposed model in process-dominant service and outcome-dominant service, phone-banking service and Western restaurant service were selected as sampled services in testing the hypothesized relationships among constructs in the proposed model. Thus, the results from the methodology employed in this study may be only valid for the phone-banking service and Western restaurant service, and possibly other similar process-dominant services and outcome-dominant services. Therefore, the proposed model reported in the present study should be further validated by replicating with additional service settings. For example, loyalty of Internet business or electronic loyalty (e-loyalty) is a hot topic in the recent research. In addition, the data in this study were collected from only the source of respondents in Hong Kong, thus the resultant model of service loyalty can attempt to use other sampling subjects in other Asian countries as well, like Japan and China, so as to investigate the research question like “is there any difference on the impact of service loyalty in different countries with different cultural and social contexts?”.

Lastly, according to the goodness-of-fit indices, the proposed structural model resulted in a RMSEA value of 0.11 slightly larger than the recommended level (i.e. >0.90). Even though the resultant RMSEA value was considered to be marginally acceptable (Anderson and Gerbing, 1988), this value implied room for further improvement. The reasons for such high value perhaps the item pool used for those constructs could not capture all aspects of the domain, or perhaps the meaning of the measure was somehow distorted in the process of translation and edition. Also the most common problem is that the respondents were biased, or they were confused on the questions asked. Therefore, further justification and validation of the scales should be pay greater attention to minimize the adverse effects by generating more items for the measure of service loyalty. For instance, besides the favorable measures of service loyalty, it may argue that unfavorable behavioral consequences should also be operationalized as a construct of service loyalty (Zeithaml et al., 1996), like switching behavior and complaint behavior.

REFERENCE

1. Anderson, James C. and Gerbing, David W. “Structural equation modeling in practice: A review and recommended two-step approach”. *Psychological Bulletin*, Vol.103, No.3, pp.411-423 (1988)
2. Andreassen, Tor Wallin and Lindestad, Bodil “Customer loyalty and complex services”. *International Journal of Service Industry Management*, Vol.9, No.1, pp.7-23 (1998)
3. Arbuckle, James L., *Amos Users' Guide Version 3.6*. United States of America: SmallWaters Corporation, 600pp (1997).
4. Armstrong, J. Scott and Overton, Terry S. “Estimating nonresponse bias in mail surveys”. *Journal of Marketing Research*, Vol.14, pp.396-402 (1977).

5. Armstrong, Robert W. and Tan, Boon Seng "Corporate-customer satisfaction in the banking industry of Singapore". *International Journal of Bank Marketing*, Vol.18, No.3, pp.97-111 (2000)
6. Barnes, James G. "Close to the customer: But is it really a relationship?". *Journal of Marketing Management*, Vol.10, pp.561-570 (1994)
7. Bagozzi, Richard P. and Yi, Y. "On the evaluation of structural equation models". *Journal of the Academy of Marketing Science*, Vol.16, pp.74-94 (1988)
8. Bagozzi, Richard P., Yi, Youjae and Philips, Lynn W. "Assessing construct validity in organizational research". *Administrative Science Quarterly*, Vol.36, No.3, pp.421-438 (1991)
9. Bitner, Mary Jo "The evolution of the services marketing mix and its relationship to service quality". In Gummesson, S., Brown, E. and B. Edvardsson, Gustavsson, eds., *Service Quality: Multidisciplinary and Multinational Perspectives*, Lexington, New York, pp.23-27 (1991)
10. Blackwell, Steven A., Szeinbach, Sheryl L., Barnes, James H., Garner, Dewey W. and Bush, Victoria "The antecedents of customer loyalty: An empirical investigation of the role of personal and situational aspects on repurchase decisions". *Journal of Service Research*, Vol.1, No.4, pp.362-375 (1999)
11. Bloemer, José M. M. and Kasper, Hans D. P. "The complex relationship between consumer satisfaction and brand loyalty". *Journal of Economic Psychology*, Vol.16, pp.311-329 (1995)
12. Brady, Michael K. and Robertson, Christopher J. "Searching for a consensus on the antecedent role of service quality and satisfaction: An exploratory cross-national study". *Journal of Business Research*, Vol.51, pp.53-60 (2001)
13. Caruana, Albert "The role of service quality and satisfaction on customer loyalty". In *1999 AMA Educators' Proceedings: Enhancing Knowledge Development in Marketing*, Vol.10, American Marketing Association, pp.139-145 (1999)
14. Chenet, Pierre, Tynan, Caroline and Money, Arthur "Service performance gap: Re-evaluation and redevelopment". *Journal of Business Research*, Vol.46, pp.133-147 (1999)
15. Churchill, Gilbert A. Jr. "A paradigm for developing better measures of marketing constructs". *Journal of Marketing Research*, Vol.16, pp.64-73 (1979)
16. Churchill, Gilbert A. Jr. *Marketing Research: Methodological Foundations*, The Dryden Press, Sixth edition, 1117pp (1995)
17. Clark, Mona A. and Wood, Roy C. "Consumer loyalty in the restaurant industry – a preliminary exploration of the issues". *International Journal of Contemporary Hospitality Management*, Vol.10, No.4, pp.139-144 (1998)
18. Cunningham, Ross M. "Brand loyalty – what, where, how much?". *Harvard Business Review*, Vol.39, pp.116-138 (1956)
19. Czepiel, John A. and Gilmore, Robert "Exploring the concept of loyalty in services". *Services Marketing Challenge: Integrating for Competitive Advantage*, pp.91-94 (1987)
20. Dawes, Jillian and Swailes, Stephen "Retention sans frontieres: Issues for financial service retailers". *International Journal of Bank Marketing*, Vol.17, No.1, pp.36-43 (1999)
21. de Ruyter, Ko, Wetzels, Martin and van Birgelen, Marcel "How do customers react to critical service encounters?: A cross-sectional perspective". *Total Quality Management*, Vol.10, No.8, pp.1131-1145 (1999)
22. DeSouza, Glenn "Designing a customer retention plan". *The Journal of Business Strategy*, March/April, pp.24-28 (1992)

23. Dick, Alan S. and Basu, Kunal "Customer loyalty: Toward an integrated conceptual framework". *Journal of the Academy of Marketing Science*, Vol.22, No.2, pp.99-113 (1994)
24. Disney, John "Customer satisfaction and loyalty: The critical elements of service quality". *Total Quality Management*, Vol.10, No.4&5, pp.S491-S497 (1999)
25. East, Robert, Harris, Patricia, Lomax, Wendy, Willson, Gill and Hammond, Kathy "Customer defection from supermarkets". *Advances in Consumer Research*, Vol.25, pp.507-512 (1998)
26. Ferrando, Pere J. and Lorenzo-Seva, Urbano "Unrestricted versus restricted factor analysis of multidimensional test items: some aspects of the problem and some suggestions". *Psicológica*, Vol.21, pp.301-323 (2000)
27. Fornell, Claes "A national customer satisfaction barometer: The Swedish experience". *Journal of Marketing*, Vol.56, pp.6-21 (1992)
28. Fornell, Claes and Larcker, David F. "Evaluating structural equation models with unobservable variables and measurement error". *Journal of Marketing Research*, Vol.18, pp.39-50 (1981)
29. Garretson, Judith A. and Clow, Kenneth E. "The impact of coupons on service quality evaluations, risk, and purchase intentions". *Journal of Restaurant & Foodservice Marketing*, Vol.2, No.4, pp.3-19 (1997)
30. Gotlieb, Jerry B., Grewal, Dhruv and Brown, Stephen W. "Consumer satisfaction and perceived quality: Complementary or divergent constructs?". *Journal of Applied Psychology*, Vol.79, No.6, pp.875-885 (1994)
31. Gould, Graham "Why it is customer loyalty that counts (and how to measure it)". *Managing Service Quality*, Vol.5, No.1, pp.15-19 (1995)
32. Gremler, Dwayne D. and Brown, Stephen W. "Service loyalty: Its nature, importance, and implications". In Edvardsson, B., Brown, S. W., Johnston, R. and Scheuing, E. E., eds., *Proceedings American Marketing Association*, pp.171-180 (1996)
33. Guolla, Michael and Large, David "A quality-satisfaction-loyalty framework for government services". *Optimum, The Journal of Public Sector Management*, Vol.27, No.2, pp.49-57 (1997)
34. Hair, Joseph F. Jr., Anderson, Rolph E., Tatham, Ronald L. and Black, William C. *Multivariate Data Analysis with Readings*. Fourth edition, Prentice Hall, 745pp (1995)
35. Hallowell, Roger "The relationships of customer satisfaction, customer loyalty, and profitability: An empirical study". *International Journal of Service Industry Management*, Vol.7, No.4, pp.27-42 (1996)
36. Hinkin, Timothy R., Tracey, J. Bruce and Enz, Cathy A. "Scale construction: Development reliable and valid measurement instruments". *Journal of Hospitality & Tourism Research*, Vol.21, No.1, pp.100-120 (1997)
37. Hoyle, Rick H. and Panter, Abigail T. "Writing about structural equation models". In Hoyle, Rick H. eds., *Structural Equation Modeling: Concepts, Issues and Applications*, SAGE Publications, pp.158-176 (1995)
38. Hu, Li-Tze and Bentler, Peter M. "Evaluating Model Fit". In Hoyle, Rick H. eds, *Structural Equation Modeling: Concepts, Issues and Applications*, SAGE Publications, pp.76-99 (1995)
39. Jacoby, Jacob and Chestnut, Robert W., *Brand Loyalty: Measurement and Management*. John Wiley and Sons, Inc., New York, 157pp (1978)
40. Jain, Arun K., Pinson, Christian and Malhotra, Naresh K. "Customer loyalty as a construct in the marketing of banking services". *International Journal of Bank Marketing*, Vol.5(3), pp.49-72 (1987)

41. Javalgi, Rajshekhar G. and Moberg, Christopher R. "Service loyalty: Implications for service providers". *The Journal of Services Marketing*, Vol.11, No.3, pp.165-179 (1997)
42. Jones, Michael A. and Suh, Jaebeom "Transaction-specific satisfaction and overall satisfaction: An empirical analysis". *Journal of Service Marketing*, Vol.14, No.2, pp.147-159 (2000)
43. Kanuk, Leslie and Berenson, Conrad "Mail survey and response rates: A literature review". *Journal of Marketing Research*, Vol.12, pp.440-453 (1975)
44. Kendrick, Alice "Promotional products vs price promotion in fostering customer loyalty: A report of two controlled field experiments". *The Journal of Services Marketing*, Vol.12, No.4, pp.312-326 (1998)
45. Lassar, Walfried M., Manolis, Chris and Winsor, Robert D. "Service quality perspectives and satisfaction in private banking". *Journal of Services Marketing*, Vol.14, No.3, pp.244-271 (2000)
46. Li, Tiger and Cavusgil, S. Tamer "Measuring the dimensions of marketing knowledge competence in new product development". *European Journal of Innovation Management*, Vol. 2, No.3, pp.129-145 (1999)
47. Loveman, Gary W. "Employee satisfaction, customer loyalty, and financial performance". *Journal of Service Research*, Vol.1, No.1, pp.18-31 (1998)
48. Luk, T. K. Sherriff "The contribution of the outcome dimension to room service quality". Forthcoming paper in *International Journal of Hospitality Management* (1999)
49. Marsh, H. W. and Hocevar, D. "Application of confirmatory factor analysis of the study of models and their invariance across groups". *Psychology Bulletin*, Vol.97, pp.562-582 (1985)
50. McDougall, Gordon H. G. and Levesque, Terrence "Customer satisfaction with services: Putting perceived value into the equation". *Journal of Services Marketing*, Vol.14, No.5, pp.392-410 (2000)
51. Morgan, David L. *Focus Groups As Qualitative Research*. Sage Publication: Qualitative Research Series, Vol.16, Second edition., 80pp (1997)
52. Newman, Joseph W. and Werbel, Richard A. "Multivariate analysis of brand loyalty for major household appliances". *Journal of Marketing Research*, Vol.10, pp.404-409 (1973)
53. Nguyen, Nha and LeBlanc, Gaston "The mediating role of corporate image on customers' retention decisions: An investigation in financial services". *International Journal of Bank Marketing*, Vol.16, No.2, pp.52-65 (1998)
54. Noronha, Carlos "Confirmation of a four-variable quality management model". *Managerial Auditing Journal*, Vol.14, No.1/2, pp.12-19 (1999)
55. Norušis, Marija J. *SPSS® for Windows Base System User's Guide Release 6.0*. SPSS Inc., United States of America 828pp (1993)
56. Nunnally, J. C. *Psychometric Theory*. 2nd edition, McGraw-Hill, New York, 701pp (1978)
57. O'Malley, Lisa "Can loyalty schemes really build loyalty?". *Marketing Intelligence & Planning*, Vol.16, No.1, pp.47-55 (1988)
58. Oliver, Richard L. "A cognitive model of the antecedents and consequences of satisfaction decisions". *Journal of Marketing Research*, Vol.17, pp.460-469 (1980)
59. Oliver, Richard L. "Whence consumer loyalty?". *Journal of Marketing*, Vol.63, Special Issue 1999, pp.33-44 (1999)

60. Ostrowski, Peter L., O'Brien, Terrence V. and Gordon, Geoffrey L. "Service quality and customer loyalty in the commercial airline industry". *Journal of Travel Research*, Vol.32, pp.16-24 (1993)
61. Oyewole, Philemon "Multi-attribute dimensions of service quality in the fast food restaurant industry". *Journal of Restaurant & Foodservice Marketing*, Vol.3(3/4), pp.65-91 (1999)
62. Parasuraman, A., Berry, Leonard L. and Zeithaml, Valarie A. "A conceptual model of service quality and its implications for future research". *Journal of Marketing*, Vol.49, pp.41-50 (1985)
63. Parasuraman, A., Berry, Leonard L. and Zeithaml, Valarie A. "SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality". *Journal of Marketing*, Vol.64, No.1, pp.12-40 (1988)
64. Powpaka, Samart "The role of outcome quality as a determinant of overall service quality in different categories of service industries: An empirical investigation". *Journal of Service Marketing*, Vol.10, No.2, pp.5-25 (1996)
65. Rust, Roland T. and Williams, David C. "How length of patronage affects the impact of customer satisfaction on repurchase intention". *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, Vol.7, pp.107-113 (1994)
66. Scott, Christopher "Research on mail surveys". *Royal Statistical Society Journal, Series A*, Vol.124, pp.143-205 (1961)
67. Shemwell, Donald J., Yavas, Ugur and Bilgin, Zeynep "Customer-service provider relationships: An empirical test of a model of service quality, satisfaction and relationship-oriented outcomes". *International Journal of Service Industry Management*, Vol.9, No.2, pp.155-168 (1998)
68. Sheth, Jagdish N. and Parvatiyar, Atul "Relationship marketing in consumer markets: Antecedents and consequences". *Journal of the Academy of Marketing Science*, Vol.23, No.4, pp.255-271 (1995)
69. Snyder, Don R. "Demographic correlates to loyalty in frequently purchased consumer services". *Journal of Professional Services Marketing*, Vol.8, No.1, pp.45-55 (1991)
70. Snyder, Don R. "Services loyalty and its measurement: A preliminary investigation". In Venkatejan et al. eds., *Creativity In Services Marketing: What's New, What Works, What's Developing*, American Marketing Association, Chicago, pp.44-48 (1986)
71. Söderlund, Magnus "Customer satisfaction and its consequences on customer behavior revisited: The impact of different levels of satisfaction on word-of-mouth, feedback to the supplier and loyalty". *International Journal of Service Industry Management*, Vol.9, No.2, pp.169-188 (1998)
72. Spreng, Richard A. and Mackoy, Robert D. "An empirical examination of a model of perceived service quality and satisfaction". *Journal of Retailing*, Vol.72, No.2, pp.201-214 (1996)
73. Stank, Theodore P., Goldsby, Thomas J. and Vickery, Shawnee K. "Effect of service supplier performance on satisfaction and loyalty of store managers in the fast food industry". *Journal of Operations Management*, Vol.17, pp.429-447 (1999)
74. Stevens, Pete, Knutson, Bonnie and Patton, Mark "DINESERV: A tool for measuring service quality in restaurants". *Cornell Hotel and Restaurant Administration Quarterly*, Vol.36, No.2, pp.56-60 (1995)

75. Taylor, Steven A. and Baker, Thomas L. "An assessment of the relationship between service quality and customer satisfaction in the formation of consumers' purchase intentions". *Journal of Retailing*, Vol.70, No.2, pp.163-178 (1994)
76. Tranberg, Hugo and Hansen, Flemming "Patterns of brand loyalty: Their determinants and their role of leading brands". *European Journal of Marketing*, Vol.20, No.3/4, pp.81-109 (1986)
77. Tucker, W. T. "The development of brand loyalty". *Journal of Marketing Research*, Vol.1, pp.32-35 (1964)
78. van Birgelen, Marcel, de Ruyter, Ko and Wetzels, Martin "The impact of attitude strength on the use of customers satisfaction information: An empirical investigation". *Online Paper of Activities*, Mansholt Graduated School, 20th September, 2000 (2000)
79. Walter, Achim, Mueller, Thilo A. and Helfert, Gabriele "The impact of satisfaction, trust, and relationship value on commitment: Theoretical considerations and empirical results". *Online Proceeding: The 2000 IMP Conference*, School of Management, University of Bath (2000)
80. West, Stephen G., Finch, John F. and Curran, Patrick J. "Structural equation models with non-normal variables: Problems and Remedies". In Hoyle, Rick H. eds., *Structural Equation Modeling: Concepts, Issues, and Applications*, Sage Publication, pp.56-75 (1995)
81. Yoon, Sung-Joon and Kim, Joo-Ho "An empirical validation of a loyalty model based on expectation disconfirmation". *Journal of Consumer Marketing*, Vol.17, No.2, pp.120-136 (2000)
82. Zeithaml, Valarie A., Berry, Leonard L. and Parasuraman, A. "The behavioral consequences of service quality". *Journal of Marketing*, Vol.60, pp.31-46 (1996)
83. Zeithaml, Valarie A., Berry, Leonard L. and Parasuraman, A. "The nature and determinants of customer expectations of service". *Journal of the Academy of Marketing Science*, Vol.21, No.1, pp.1-12 (1993)

APPENDIX

Items for Perceived Service Quality (version of dining service)	
Reliability	<ul style="list-style-type: none"> • When the restaurant promises to do something by a certain time, it does so. • When you have a problem, the restaurant shows sincere interest in solving it. • The restaurant performs the services right the first time. • The restaurant provides the service at the time it promises to do so. • The restaurant insists on error-free records.
Responsive-ness	<ul style="list-style-type: none"> • Service staff tell you exactly when the service will be performed. • Service staff give prompt service. • Service staff are willing to help you. • Service staff are never too busy to respond to your requests. • In emergencies, the service staff can make arrangements to assist you. (DELETED)
Assurance	<ul style="list-style-type: none"> • The behavior of service staff instills confidence in you. • Service staff are consistently courteous. • Service staff have sufficient knowledge to answer your questions. • You feel secure and comfortable in dealing with service staff. (DELETED)
Empathy	<ul style="list-style-type: none"> • Service staff give you personal attention. • Service staff have your best interests at heart. • Service staff understand the specific needs of you. • Operation hours of the restaurant are convenient to you.
Tangibles	<ul style="list-style-type: none"> • The waiting time for the service is acceptable. • Materials associated with the service are visually appealing (e.g. pamphlets, posters). • The decoration matches the restaurant's image and price range. • The menu is easily readable. • Serving areas of the restaurant are thoroughly clean. • The discount or coupon given from the restaurant is attractive. • Modern looking equipment. (DELETED) • Serving areas are visually attractive (DELETED)
Outcomes	<ul style="list-style-type: none"> • The restaurant serves your food exactly as you ordered it. • Quality of food is excellent. • The service is value for money. • The benefits provided by the restaurant really meet your expectations. • The time cost in having the service is low. (DELETED)
Items for Customer Satisfaction (version of dining service)	
Customer Satisfaction	<ul style="list-style-type: none"> • Compared to the previous experiences, you are happy in having dining service from this restaurant in the most recent experience. • The services provided by this restaurant do meet your satisfaction. • You believe that having dinner in this restaurant is usually a satisfying experience. • Overall, you believe that you are pleased with this restaurant's services when dining. • Until now, you are satisfied with the service delivered by this restaurant.
Items for Service Loyalty (version of dining service)	
Behavior	<ul style="list-style-type: none"> • There is a very high probability that you will dine at this restaurant again. • You have recommended other people to patronize this restaurant. • You will say positive thing to other people about the service provided by this restaurant. • You will give positive feedback to this restaurant. • You will try the new food or drinks that are recommended by this restaurant. • You have repeatedly consumed at the same restaurant in the past few years. (DELETED) • You will try to use other related services or products of this restaurant. (DELETED)
Attitude	<ul style="list-style-type: none"> • You will continue to dine at this restaurant even if the price or service charge is increased somewhat. • You have strong preference on this restaurant. • You will keep dine at this restaurant, regardless of everything being changed somewhat.
Cognition	<ul style="list-style-type: none"> • This restaurant is the first choice in your mind when you consider to have dinner outside. • Assumed that you have only three choices when you are in need of having dinner, this restaurant must be one of them. • You have regularly dined at this restaurant for a long period of time.