

Service Quality, Customer Satisfaction, and Behavior Intention in Service Factory and Professional Service - An Exploratory Research in Japanese Airline Service and Hair Salon Service

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Abstract

The present study explores the dominant dimensions of service quality (SQ) and the interrelationship among service quality (SQ), customer satisfaction (SAT) and behavioral intention (BI) in two different service categories (service factory and professional service) in Japan. A customer survey was conducted to examine moderation hypotheses, which was analyzed by factor analysis and covariance structure analysis. The results show that the dominant dimensions of SQ are different in the two service categories. However, although there are positive effects both in SQ→BI and SQ→SAT→BI, the indirect effect through SAT seemed more significant than the direct effect, regardless the difference between service categories.

Keyword

Japan, Service quality, Customer satisfaction, Behavioral intentions, Factor analysis

Introduction

Most countries can be defined as “service economies”, because the contribution of the service sector to GDP is considerably greater than that manufacturing and agriculture combined. Japan is the country that seems to lag behind the rest of the highly industrialized countries in both service industry contributions to GDP and the share of the workforce employed in the service sector (Patrik STROM, 2005). According to the date of Japanese Statistic Bureau (2006), the rate of employment in service industry increased 9.6% compared with other industries.

In both their general background and tendency, more and more researchers seem to become interested in service marketing and relationship marketing. In recent years, not only in academic world, relationship marketing has moved beyond the sphere of academia to be used to positively in the industrial world (Minami. C, 2006). However, many service managers have found that merely increasing service quality is not sufficient to induce high customer satisfaction and/or repurchase behavior (Michael K. Brady, et al, 2006). Therefore, the mechanism surrounding service quality, satisfaction and behavioral intention appears to interest both researchers and service managers.

In past decades, numerous studies have explored the interrelationship between service quality, satisfaction and behavioral intention between different nationalities. For example, R. Bruce Money et al. (1998) compared word-of-mouth behavior among Japanese and American customers. Nevertheless, studies based solely on the differences among nationalities do not go far enough; this present study concentrates on Japanese customers' behavior, highlights the difference of service typology, and tries to explore the interrelationship between service quality, satisfaction as well as behavioral intentions by comparing different service categories in Japan.

Conceptual foundations

Over decades, many researchers have attempted to classify the service industry by looking at what the dominant dimensions are in measuring service quality. They have examined whether positive behavioral intentions can be caused by increasing service quality or if satisfaction plays an essential mediatory role between service quality and behavioral intentions, as well as seeing if people from different cultures evaluate service quality in different ways. The following section reviews some of these previous works and draws a conceptual framework for the present study.

Service typology

How to classify whole service industry is one of the arguable problems which is discussed in numerous previous works. The traditional view has been that the heterogeneity of services means that little communication or learning can take place between different service businesses. However, a service typology which transcends narrow industry boundaries may lead to some cross-fertilization of ideas and to an understanding of the management methods and techniques appropriate to each service type (Rhian Silvestro et al 1992).

Certainly, issues that affect service quality have both marketing and operational orientations. Therefore, there is a need to explore classification schemes that may assist in understanding the nature and dimensionality of the service quality construct (Olorunniwo et al, 2006). In this respect, the classification scheme suggested by Schmenner (1986) seems to be more convincing. Schmenner (1986) divided service industry into four quadrants using "customer interaction/customization" and "labor intensity". The customer contact/customization axis refers to how frequently service providers contact customers and how flexibly service providers respond to customers' requests. "Labor intensity" does not mean how many employees work in a service business, but the ratio of labor cost incurred to the value of the plant and equipment. According to the service process matrix (Schmenner, 1986), service industry can be classified into the following four quadrants:

1. Service factory — LOW labor intensity and LOW in customer interaction/customization (e.g. airlines, trucking, hotels, resorts and recreation).

2. Service shop — LOW labor intensity and HIGH customer interaction/customization (e.g. hospitals, restaurants, auto and other repair services).
3. Mass service — HIGH labor intensity and LOW customer interaction/customization (e.g. commercial banking, retailing, schools, wholesaling).
4. Professional service — HIGH labor intensity and HIGH customer interaction/customization (e.g. law firms, accounting firms, hair salon service)

The present study employed the service process matrix (Schmenner, 1986) as a conceptual framework, and used two contrasting service categories as research objects. The two contrasting service categories are “service factory”, which has low labor intensity and low customer interaction/customization, and “professional service”, which has high labor intensity and high customer interaction/customization. Choosing two divergent categories may help clarify whether customers’ behavioral intentions are induced by the same cause if common dominant dimensions appear in both categories. In this study, the airline and hair salon services - typical examples of service factory and professional service respectively - were selected.

Service quality and service quality dimensions

Quality can be defined and measured as belief statements or attribute performance (Churchill and Suprenant, 1982). Service quality has been viewed as both an overall, holistic evaluation of the service and a summary evaluation of the components of the service (Iacobucci, 1998). However, numerous previous researchers have tended to believe that service quality is an individual judgment defined by the customer regarding the excellence or superiority of a service provider’s performance (Cronin & Taylor, 1994; Parasuraman, Zeithaml, & Berry, 1988; Teas, 1993; Adam Finn, 2005). Over the past two decades of research, there have been two main scales for measuring service quality: one is SERVQUAL and the other is SERVPERF. The present study employs SERVPERF, proposed by Cronin and Taylor (1992), which emphasizes how the customer’s perception of the performance of a service provides adequate assessment in terms of service quality (Cronin and Taylor, 1992; J. Paul. Peter et al., 1993; Brown et al., 1993; Bebeko, 2000).

Parasuraman, Zeithaml, & Berry (1988) conducted research across a broad spectrum of service industries and concluded that tangibility, reliability, responsiveness, assurance and empathy are good dimensions for measuring the service quality of the above four types of service. Based on the findings of PZB (1988), Schmenner (1986) proposed a general theory, implying that the following dimensions are likely to be dominant: “Tangibles”, “Responsiveness”, “Recovery” and “Knowledge” (Olorunniwo et al. 2006).

In the present study, I examined the following dimensions: “Tangibles” (includes the physical facilities, equipment and the appearance of service providers), “Responsiveness”

(includes the willingness of employees to provide the service), “Recovery” (includes the compensation of service business if some incorrect services are provided), “Knowledge” (the knowledge and necessary skills of service providers), “Reliability” (the reliability of service providers) and “Flexibility and Accessibility” (the probability of accessing service providers and the convenience of accessing service businesses). I used these as dimensions of the measuring the quality of airline and hotel service (Olorunniwo et al. 2006) because both are seen as the type of service belonging to the category of service factory (Schmenner, 1986). Moreover, one purpose of this study is to explore any differences in the dominant dimensions of service quality between service factory and professional service. Therefore, this study used the same dimensions which have been practiced in Olorunniwo et al. (2006) to measure the quality of professional service—hair salon service.

Another issue is which of the dimensions of service quality will be dominant in the service factory and professional service. In service factory, given that the service factory delivers standardized service, the “Flexibility and Accessibility” dimension and the “Reliability” dimension are not expected to be dominant dimensions (Olorunniwo et al. 2006). On the other hand, as professional service has high customer interaction and high customization (Schmenner,1986), “the “Flexibility and Accessibility” dimension and the “Reliability” dimension are seemed to be important, whereas, “Responsiveness” and “Recovery” are not expected to be dominant ones compared with other dimensions. This leads the author to first proposition:

PI (a): In the service factory, the dominant dimensions of service quality will include the following: “Tangibles”, “Responsiveness”, “Recovery” and “Knowledge”, whereas, “Reliability” as well as “Flexibility and Accessibility” may not be dominant dimensions from perspective of Japanese customers.

PI (b): In the professional service, the dominant dimensions of service quality will include the following: “Tangibles”, “Knowledge”, “Reliability”, “Flexibility and Accessibility”, whereas, “Responsiveness” as well as “Recovery” may not be dominant dimensions from perspective of Japanese customers.

The interrelationship between service quality, satisfaction and behavioral intention

Customer satisfaction is regarded as a complex construct with both cognitive and affective components (Oliver, 1993), and is defined as “the consumer’s fulfillment response, the degree to which the level of fulfillment is pleasant or unpleasant” (Oliver, 1999). Another explanation of satisfaction is that it was originally viewed as primarily cognitive, although it is always conceptualized as a summary evaluative response (Howard and Sheth, 1969). Conversely, several studies seem to conclude that satisfaction is an affective construct rather than a cognitive construct (Olsen, 2002). Regardless of whether customer satisfaction is an affective or cognitive construct, most researchers and service managers believe that

satisfaction could help explain the relationship between service quality and behavioral intentions (Cronin et al., 2000; Cronin & Taylor, 1992; Gottlieb et al., 1994; Taylor, 1997; Taylor & Baker, 1994).

Zeithaml, Berry & Parasuraman (1996) presented a model to explain customer behavioral intentions, suggesting that behavioral intentions can be captured by repurchase intentions, word of mouth, loyalty, complaining behavior and price sensitivity. While an attitudinal measure such as customer satisfaction is not necessarily reliable, the behavioral measure of frequency or recency of purchase does not build relationships (Minami. C, J. Dawson, 2008). According to the model presented in the Japanese Customer Satisfaction Index (JCSI), behavioral intentions are captured by word of mouth and loyalty. Burton et al. (2003) explained behavioral intentions from a different perspective. They concluded that the more positive the customer's experience, the more likely he or she is willing to reuse the service.

The previous studies that tried to examine the interrelationship between service quality (SQ), satisfaction (SAT) and behavioral intention (BI) are numerous (e.g. R.A. Spreng et al. 1996; Rust & Oliver, 1994; etc). However, there is no clear explanation in the literature as to the cause of BI; in other words, it is not clear what is antecedent to BI, SQ or SAT (Brady and Robertson, 2001). Some researchers believe that SAT is antecedent to perceived service quality (Bitner, 1990; Bolton, Drew, 1991), whereas, others claim that perceived service quality is down to SAT (Michael K. Brady, 2002; PZB, 1988). Additionally, most researchers support the relationship of SAT→BI (e.g., Richheld, 1996; Woodside, et al, 1989), while a minority insist that there is no relationship between SAT and BI (Vikas Mittal, 1999; Naveen Dnthu et, 1998), and that satisfaction does not translate linearly into desired managerial outcomes, such as repurchase and loyalty (Schneider and Bowen, 1999). Furthermore, Keiningham et al. (1999) found that only when satisfaction scores exceed the upper threshold of a customer's zone of tolerance does a service experience have a lasting impact by creating customer delight. Nevertheless, customer delight has a weaker effect on word-of-mouth and loyalty compared to customer satisfaction (Ono, 2010).

I In summary, although there are various opinions regarding the interrelationship between SQ, SAT, and BI, the main tendency still seems to be an insistence on the linear relationship of SQ→SAT→BI (Cronin, JR et al, 2000; Spiros Gounaris, 2010; Cronin & Taylor, 1992; G. Fullerton & S. Taylor, 2002). According to the causal model developed in JCSI, SAT related positively to BI across all service categories. Consistent with this view, Oloruniwo (2006) found that there is a more significant effect between SAT and BI than SQ and BI in service factory. If SAT plays a significant mediating role between SQ and BI regardless of service categories, the second proposition in the present study will be:

P2 (a): The indirect effect through satisfaction is more significant than the direct effect from service quality to behavioral intentions in service factory.

P2 (b): The indirect effect through satisfaction is more significant than the direct effect from

service quality to behavioral intentions in professional service.

Research methodology and data

Scale development

Olorunniwo et al. (2006) suggested 6 dimensions (Tangibles, Responsiveness, Knowledge, Reliability and trust, Recovery, Accessibility and flexibility) that should be used in measuring service quality in the lodging industry. Originally, there were 29 items for these 6 dimensions. However, in their study, Olorunniwo et al (2006) modified them, dropping 13 because their factor loadings were smaller than 0.4, leaving a total of 16 items. As the lodging and airline industries are in the same quadrant (Schmenner, 1986), the dimensions used in measuring service quality in the lodging industry were used in the present study to measure service quality in the Japanese airline industry.

For the dimensions of service quality in the hair salon industry, the author of the present study conducted short interviews with managers or employees of 10 hair salons based in Osaka and Kobe, along with 20 customers. As the results of interviews show, managers and employees believed that all of the 6 dimensions (Olorunniwo et al., 2006) are very important in measuring service quality. However, customers took the position that they did not regard all of the dimensions with the same importance when evaluating the service quality of the hair salon they used. Nevertheless, one thing that was confirmed was that both service providers and receivers agreed that the 6 dimensions would be a good scale with which to measure hair salon service quality.

Based on the previous research of Olorunniwo et al. (2006) and short interviews, the dimensions used to measure service quality in the airline and hair salon industries in the present study are as follows: “Tangibles” (includes the physical facilities, equipment, and appearance of personnel), “Responsiveness” (includes the willingness or readiness of employees to provide service), “Recovery” (includes the probability of providing compensation and apology, the ability to deal with mistakes and provide relevant information), “Knowledge” (includes the knowledge of service providers and possession of necessary skills), “Reliability” (includes the correctness of information provided and reliability of company and service providers), “Flexibility & Accessibility” (includes the likelihood of service being adjusted to fit the needs or demands of customers, convenience of service facility’s location, and convenience of using the service). Each item was rated on a five-point Likert-type scale ranging from strongly disagree (1) to strongly agree (5).

In addition, two dimensions were used to measure customer satisfaction in both the airline and hair salon industries. These dimensions included customer satisfaction with their decisions and experience. Moreover, other dimensions that were used to measure the customers’ behavioral intentions included word of mouth and purchase intention. All items are presented in Table 1 (this includes the items modified by Olorunniwo et al. (2006) and original items).

Table1: The survey instrument

(Likert-type scale used with answers ranging from strongly disagree (1) to strongly agree (5))

Tangibles

1. Interior of plane/store is clean
2. Outside appearance is attractive
3. Interior design is attractive
4. Employees are smartly dressed
5. Plane/store facilities are up-to-date
6. Seats are comfortable

Responsiveness

7. Employees are courteous
8. Requests are handled promptly
9. Employees adapt services to my needs
10. Employees adapt well to handling peak customer traffic
11. Employees give me special attention
12. Interior maintenance is adequate

Recovery

13. Employees compensate me for inadequate service
14. The airline company compensates me when the plane does not take off on schedule/The hair salon compensates me if my appointment is cancelled at short notice
15. Employees quickly apologize when service errors are made
16. Employees apologize to me when the plane is delayed or if they cannot provide the service within the expected allotted time.
17. Employees quickly deal with any service errors
18. The airline company provides information about other forms of transportation when the plane cannot take off on schedule because of bad weather or other factors/The hair salon provides information about other hair salons when they are fully booked

Knowledge

19. Employees' knowledge of aircraft/hair care or other relevant areas makes me feel comfortable
20. Employees' knowledge of ticket discounts or explanation of air miles/hair-care or other relevant services makes the me feel comfortable
21. Employees provide information on aircraft/hair-care or others
22. Employees are knowledgeable about interior equipment
23. Employees are aware of services provided by other airline companies/hair salons

Reliability

24. Employees provide a service I can rely on

25. Employees provide an error-free service
26. Employees answer my questions correctly
27. Planes are never delayed/reserved services are never withdrawn by the hair salon without good reason.
28. I can trust the service employees give to me

Flexibility and Accessibility

29. Services can be changed according to my requests at any time
30. Services are accessible to disabled guests
31. Individual service can be provided
32. The reservation system is easy to use
33. The airline company's flight-schedule is easy to understand/the hair salon is conveniently located
34. Employees are easily available when needed

Customer Satisfaction

35. "I am satisfied with my decision to use the airline company/hair salon"
36. "My choice of airline company/hair salon was a good one"
37. "I feel that my experience with the airline company/hair salon has been enjoyable"
38. "I think I did the right thing when I chose this airline company/hair salon"
39. "The services provided by the airline company/hair salon are better than I thought they would be"

Behavioral Intentions

40. Would you recommend the airline company/hair salon to people you know?
41. Do you intend to inform people you know of your experience using this airline company/hair salon?
42. Do you intend to use the same airline company/hair salon again?
43. Do you intend to try other services provided by the same airline company/hair salon?
44. Would you like to become a regular user of this airline company/hair salon?

The sample

Sampling took place in the Business and Administration department of Kobe University from November to December, 2009. The respondents included undergraduate students, graduate students and MBA students. 228 questionnaires were returned, with 47 dropped due to incomplete answers. Completed questionnaires totaled 181. Of the total number of questionnaires, eighty-one percent (81 percent) of respondents were men. Respondents had used airline services 3.2 times on average and the hair salon service 4.4 times on average in the previous 12-month period.

Fit indices between data and models

The author first tested mean and standard deviation, kurtosis, and the skewness of the sample. All of these provided a satisfactory distribution of data. Next, the author used an iterated factor analysis with item commonality estimated from squared multiple correlations, and maximum likelihood as the estimation method. Items with a loading smaller than 0.35 or those with cross-loadings greater than 0.35 on more than one factor were dropped, because they do not provide pure measures of a specific construct (Olorunniwo et. al 2006).

SPSS (16.0) and AMOS (17.0) were used as the analytical tools in the present study, as well as factor analysis and covariance structure analysis for the estimation of measurement and structural equation models discussed below. Structured models should be accepted or not depending on fit indices. Values greater than 0.9 are desirable for GFI and AGFI, while values greater than 0.75 are desirable for NFI. Moreover, a value smaller than 0.1 is acceptable for RMSEA (Toyota, 2007).

Results of the data analysis

Factor analysis of SQ, SAT and BI in two different service contexts

Data on SQ in the Japanese airline and hair salon industries

Regarding the data on the airline industry, the 34-item instrument relating to the service quality of the airline and hair salon service was analyzed by SPSS (16.0), which was used in an exploratory factor analysis (EFA) examining the 181 responses from Kobe University. The eigenvalues were fixed at 1 because the author intended to discover the best number of factors. Items with a factor loadings lower than 0.35 or with cross-loadings greater than 0.35 on more than one factor were dropped. The data analysis was repeated 3 times, and this process resulted in a four-factor model for both airline and hair salon services (see Table2). As each of the Cronbach alpha was greater than 0.70, this suggests that there is a good internal consistency among items within each identified dimension (Nunnally, 1978; Toyota, 2007).

Table 2: Factor Loadings for the underlying dimensions of SQ in the airline and hair salon services

No (airline)	F1	F2	F3	F4	No (hair salon)	F1'	F2'	F3'	F4'
4	.725				2	.839			
2	.712				3	.788			
6	.489				5	.525			
9		.752			6	.484			
8		.697			20		.892		
7		.639			19		.688		
10		.485			21		.670		
16			.712		23		.525		
15			.593		26			.941	

18			.522		25			.773	
17			.513		27			.592	
22				.689	31				.670
21				.592	29				.565
					30				.455
					34				.420
Cronbach alpha	.715	.791	.710	.704	Cronbach alpha	.787	.823	.802	.752

Notes: Factor loadings less than 0.35 are not shown; the number in this table is equivalent for Table 1; F1: Tangibles, F2: Recovery, F3: Responsiveness, F4: Knowledge, F1': Tangibles, F2': Knowledge, F3': Reliability, F4': Flexibility & Accessibility.

Assessing reliability and validity of constructs

It is important to emphasize that a more rigid procedure was also performed to assess the dimensions of service quality measurement. There is still well-grounded enough reason to argue that Tangibles, Responsive, Knowledge as well as Recovery are the most important dimensions of service quality in airline industry, and that Tangibles, Knowledge, Reliability as well as Flexibility and Accessibility are the most important dimensions of service quality in the hair salon industry. In an effort to achieve strong validity and reliability, confirmatory factor analysis (CFA) was employed.

The measurement Models 1 (a) and (b) (see pages 14-15) identified four factors as being common to service quality in the airline or hair salon industry. The metric for each scale was established by fixing the coefficient for one indicator to 1.00 for each of the four factors (each of the factors in the two industries). The standardized loadings are shown in Models 1 (a) and (b) and the composite reliabilities for each factors are 0.74 (Tangibles), 0.82 (Responsiveness), 0.73 (Recovery), 0.73 (Knowledge) in the airline industry, and 0.80 (Tangibles), 0.86 (Knowledge), 0.83 (Reliability), 0.79 (Flexibility & Accessibility) in the hair salon industry. The entire set of indicators has a standardized loading higher than 0.5 and the composite reliability scores for each of the four factors (each of the factors in the two industries) are higher than 0.7, suggesting that each of the factors is reliably measuring its respective constructs (Olorunniwo et al. 2006).

To increase the reliability of results that confirmed service quality's dominant dimensions in service factory and professional service, this study composed items which are included in each factor by seeking the average of these items instead of conducting a second factor analysis. In other words, this study changed latent variables into observed variables in order to increase reliability. The results were presented in Models 2 (a) and (b) (see pages 15-16).

The other purpose of the present study is to explore the interrelationship between SQ, SAT, and BI in different service categories. To test the P2, the author constructed a conceptual model based on Olorunniwo et al. (2006). According to previous studies, Models 3 (a) and (b)

(see pages 16-17) were constructed because service quality has both a direct effect (SQ→BI) and an indirect effect (SQ→SAT→BI) on behavioral intentions in service factory and professional service (see Models 3 (a) and (b)). The structural models fit the data well and Table 3 presents the detailed results. As expected, the hypothesized paths between service quality, customer satisfaction and behavioral intentions are all positive and significant in both service factory and professional service, thus supporting the P2. Furthermore, it is worthy to note that these findings indirectly give support to the important mediating role customer satisfaction plays between service quality and behavioral intentions regardless of the differences between service categories.

Table3: Fitness of Models

model	χ^2/df	RMSEA	GFI	AGFI	NFI
Model 1 (a)	1.104	.024	.960	.919	.909
Model 1 (b)	1.062	.077	.952	.940	.862
Model 2 (a)	2.225	.111	.982	.908	.948
Model 2 (b)	1.067	.019	.994	.970	.991
Model 3 (a)	2.267	.084	.921	.881	.820
Model 3 (b)	2.431	.106	.925	.886	.824

Conclusions and Discussion

Dominant dimensions of service quality in service factory and professional service

In the present study, the dominant dimensions of service quality in service factory are “Tangibles”, “Responsiveness”, “Recovery” and “Knowledge”, while “Tangibles”, “Knowledge”, “Reliability” and “Flexibility and Accessibility” were shown to be the dominant dimensions of service quality in professional service. However, “Reliability” and “Flexibility and Accessibility” in service factory were not deemed to play an essential role from the perspective of customers; “Responsiveness” as well as “Recovery” in professional service were also not seen as critical dimensions based on the results of the survey research. Moreover, “Tangibles” and “Knowledge” were regarded as the common dominant dimensions both in service factory and professional service, despite the fact that these items were treated by customers as being essentially different.

Another purpose of the present study is to find, within service factory and professional service, the inter-relationship between service quality, customer satisfaction and customer behavioral intention, which were thought to be different service categories (Schmenner, 1986). The findings indicate that although service quality is an important driver of customer behavioral intentions, its indirect effect through customer satisfaction is larger than its direct effect on behavioral intentions, regardless of the difference between service categories.

Comparing the airline and hair salon services in Japan

Dominant dimensions of service quality in different service categories

As many researchers and airline company managers have noted, an airline will lead the market if it offers superior quality services relative to its competitors. It is therefore of strategic importance for airlines to understand their relative competitive advantages in terms of service quality (Y.-h.Chang et al, 2001). Based on the customer survey, “Reliability” and “Flexibility and Accessibility” did not appear to be dominant dimensions in the airline service. Most customers believed that airplanes not being on schedule due to unforeseen circumstances is acceptable because even the best airline company cannot avoid delays brought about by bad weather or other factors beyond their control. Because the airline service is regarded as a so-called “routine service” by many researchers (e.g. Schmemmer, 1986) and managers working in airline companies, there is no great necessity to ask employees to suit individual customers’ needs.

On the other hand, as one of the professional services, the dimensions measuring the hair salon service do not include “Responsiveness” and “Recovery”. As mentioned above, the hair salon service’s customers, like those of other professional services such as law and accounting firms, tend to lay stress on the “Result” they will get. This means that if customers are satisfied with the hairstyle or hair-color that employees have given them, they will not pay too much attention to how promptly employees respond to their requests or whether they apologize for any errors.

Concentrating on the four identified service quality factors which appear to be important in the airline service, “Responsiveness” appeared to be slightly more important than the other three. The measure indexes in “Responsiveness” which were emphasized by customers during the survey were “employees’ courteousness”, “handling requests promptly” and “providing the appropriate service”. Excluding airline safety concerns, the airline service could be viewed as a service that where “Process” is emphasized. In other words, customers tend to regard the ‘process’ that employees provide during the service encounter as the most important thing when evaluating the service quality they received.

“Knowledge” appeared to play a slightly more important role in the hair salon service. As the hair salon service is one of the professional services, how much knowledge employees have is an essential aspect of evaluation of service quality from the perspective of Japanese customers. If employees have little knowledge about the service they are providing, customers will give a low evaluation of the service because they see the employees as lacking in professional knowledge.

“Tangibles” and “Knowledge” appeared to be the dominant dimensions both in the airline and hair salon services, but the items which were emphasized by customers are different. It can be said that “Tangibles” and “Knowledge” are common dimensions regardless of the differences in service categories. As service’s most significant feature is intangibility,

customers tend to rely on tangible things and information provided by employees to evaluate its quality.

Inter-relationship between SQ, SAT, BI in different service categories

Notably, the direct effect from service quality to behavioral intentions in the airline service (0.21) is smaller than in the hair salon service (0.47). This implies that the effect of service quality driving behavioral intentions in the hair salon service is more significant than in the airline service. The result can mainly be explained by the different service constructs. Although Schmenner (1986) claimed the difference between service factory and professional service largely depended on labor intensity and customer interaction/customization, this study tends to place emphasis on looking at which aspect customers regard as more essential — the service process or the service result. If customers emphasize how they feel during the service encounter, as happens in the airline and hotel services, customers may tend to evaluate the service quality they perceived during the service encounter based on their feelings or attitudes. This is because intangibility in those services is so significant that customers find it difficult to evaluate which service is best. Therefore, the indirect effect through satisfaction will be more significant than the direct effect in the service factory, which is highlighted in the providing process, making intangibility more significant.

On the other hand, if customers place more emphasis on what they have received from a service, as occurs with hair salons or law firms, there will tend to be a significant link between service quality and behavioral intentions. Compared with service factory, the feature of tangibility in professional service may be pronounced, meaning that customers will evaluate which service is best based on the result of that service. For instance, if a customer who is distressed due to a bad aspect of their hair-care receives some appropriate advice from a knowledgeable employee (“Knowledge”), the advice provided by the employee will impact greatly on both satisfaction and behavioral intentions. As a result, the study concludes that the direct effect of service quality on behavioral intentions in professional service, which emphasizes service result, is more significant than it is in service factory, which emphasizes service process.

Managerial implications

In terms of service quality and the interrelationship between service quality, customer satisfaction, and behavioral intentions, the conclusions of the present study lead to the following implications. First, because the dominant dimensions for measuring service quality are different in service factory and professional service, managers should emphasize these particular dimensions in order to improve service quality according to which service category they belong. This means that there is no common service strategy applied to all different businesses that belong to different service categories, and that service managers have to

develop the most appropriate plans or solutions to increase service quality.

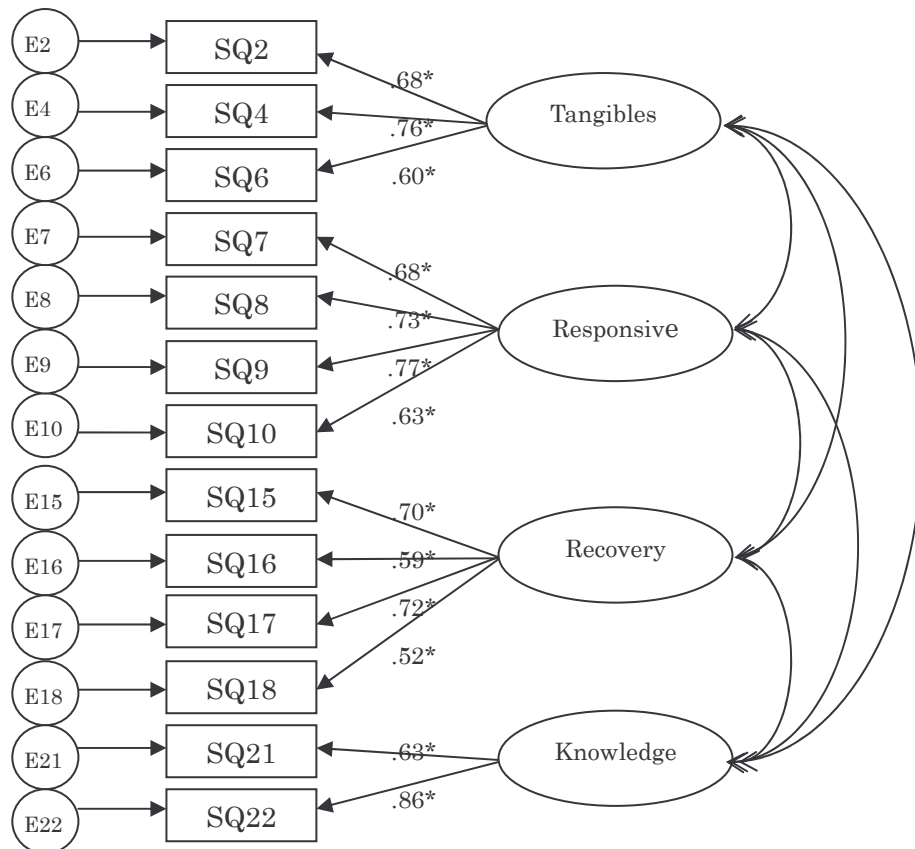
Moreover, because service factory may be a service which regards the “Process” as the most important aspect, managers need to focus on the process of providing service and know how to delight customers. On the other hand, professional service may be a service which sees the “Result” as the most important aspect; therefore, managers need to assure customers that they can get the most satisfactory results from that service.

For further study, the author will discuss concrete service businesses in both the airline and hair salon services as representative cases, and will make use of case study.

Limitation

This study developed the service process matrix (Schmenner, 1986) and the methodology of Olorunniwo (2006). This study explained its results from the new and different perspective of “Process or Result”. Nevertheless, this study only developed Olorunniwo’s (2006) conclusions and expanded only one other quadrant of the service process matrix (Schmenner, 1986). That is to say, further empirical research needs to investigate the other two quadrants of the service process matrix, selecting more than one service business in the same service category in order to explore the interrelationship between service quality, satisfaction and behavioral intentions.

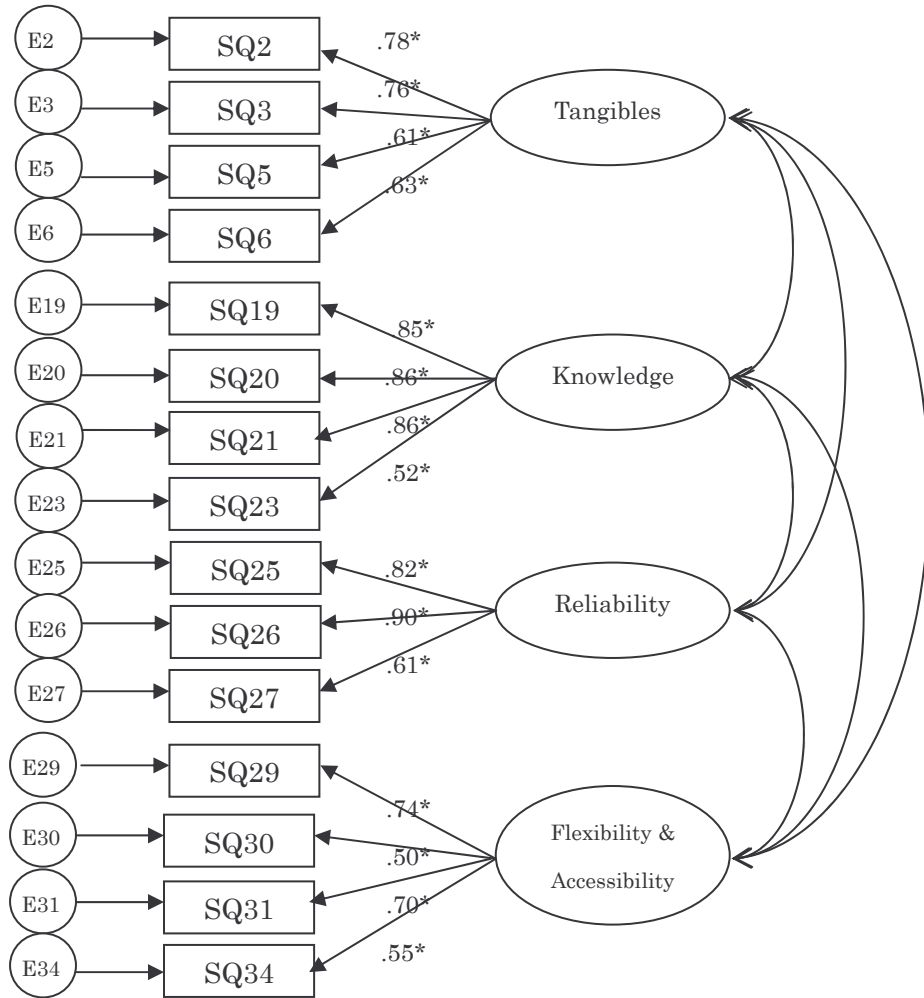
Model 1 (a)



Model 1 (a) notes:

「*」 Number refers to Table1; analysis is performed on the airline industry; *indicates significance at $p < 0.01$ level.

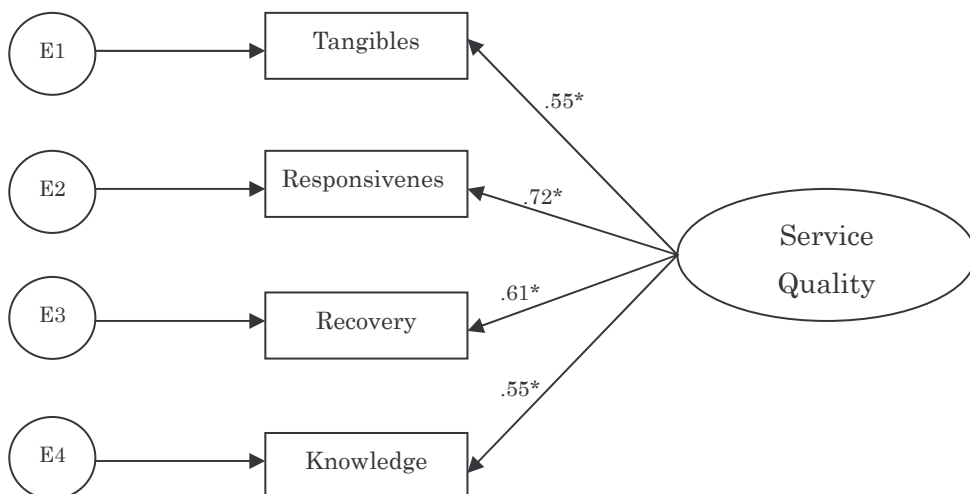
Model 1 (b)



Model 1 (b) notes:

「*」 Number refers to Table1; analysis is performed on the hair salon industry; *indicates significance at $p < 0.01$ level.

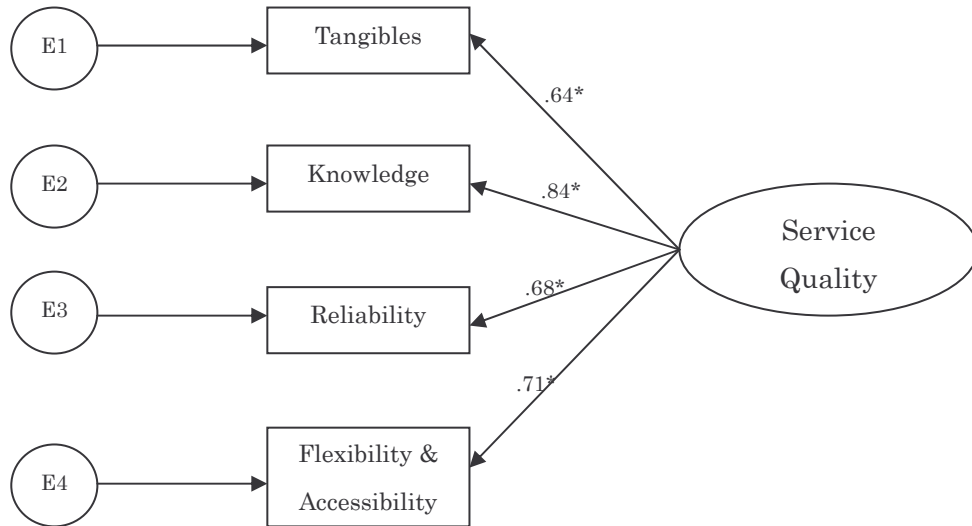
Model 2 (a)



Model 2 (a) notes:

Number refers to Table 1; analysis is performed on the airline industry; “Tangibles” adopted Model 2 (a) refers to No.2,4,6, and “Knowledge” adopted Model 2 (a) refers to No.21, 22; 「*」 indicates significance at $p < 0.01$ level

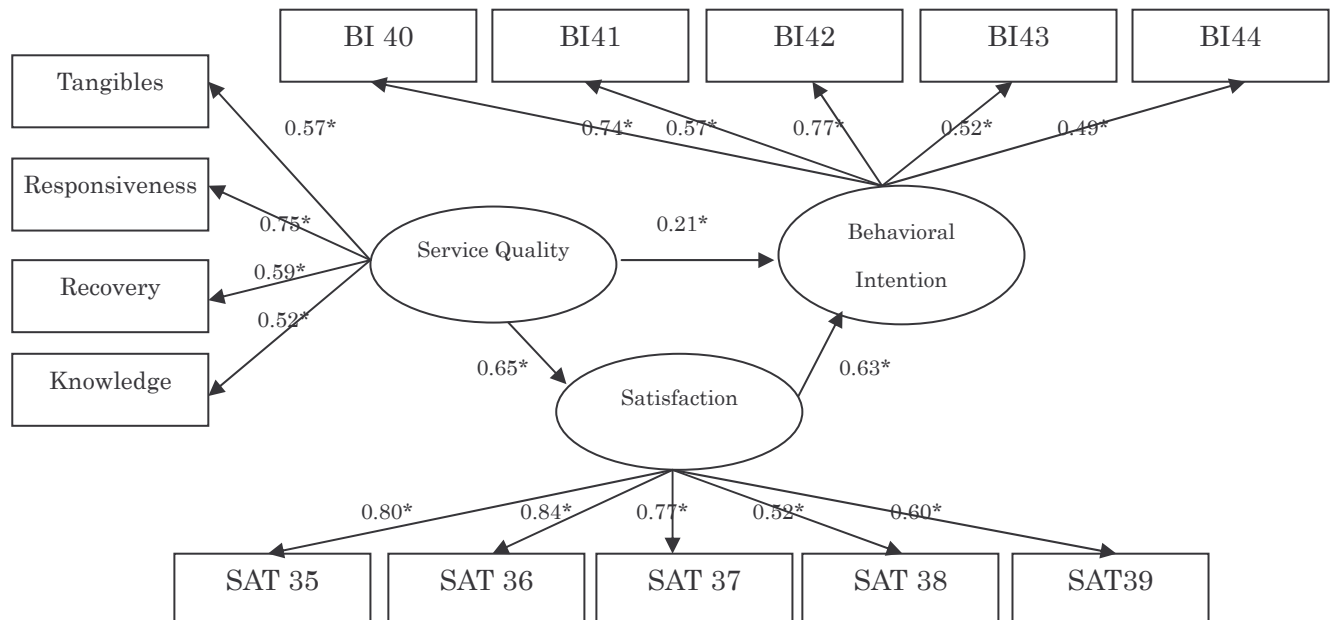
Model 2 (b)



Model 2 (b) notes:

Number refers to Table 1; analysis is performed on the hair salon industry; “Tangibles” adopted Model 2 (b) refers to No.2,3,5,6, and “Knowledge” adopted Model 2 (b) refers to No.19, 20, 21,23; 「*」 indicates significance at $p < 0.01$ level

Model 3 (a)

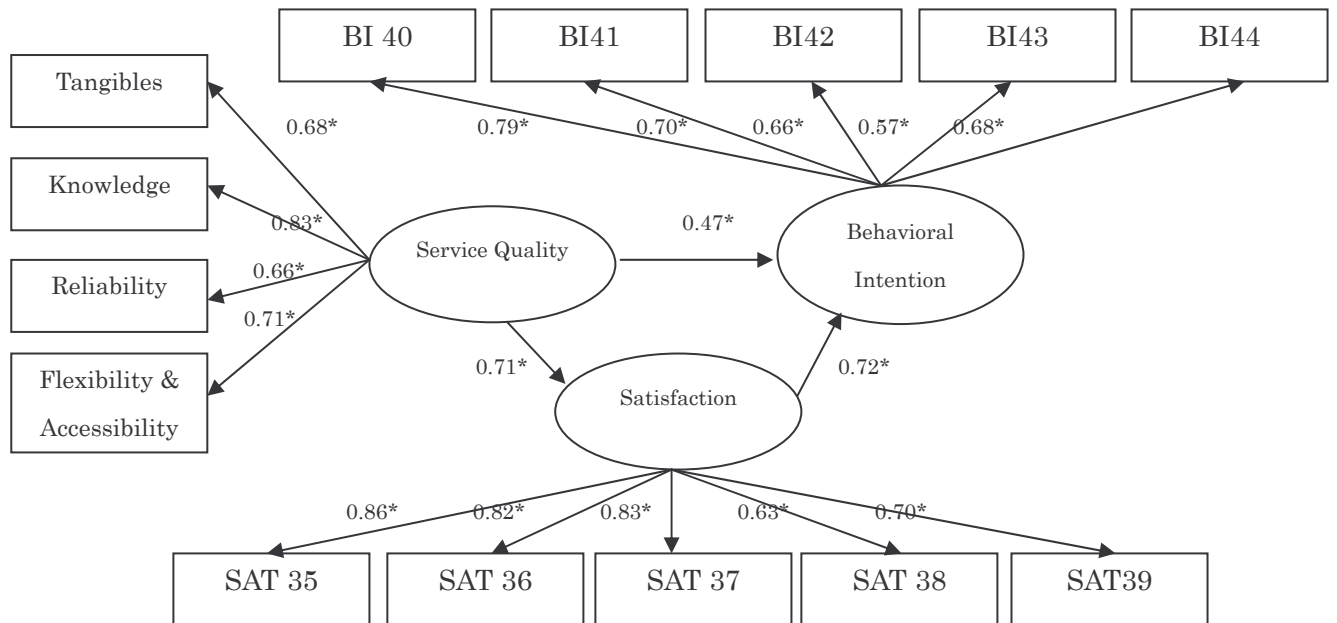


Model 3 (a) notes:

Number refers to Table 1; analysis is performed on the airline industry; “Tangibles” adopted Model 3 (a) refers to No.2,4,6, and “Knowledge” adopted Model 3 (a) refers to No.21, 22; 「*」 indicates significance at $p <$

0.05 level

Model 3 (b)



Mode 13 (b) notes:

Number refers to Table 1; analysis is performed on the hair salon industry; “Tangibles” adopted Model 3 (b) refers to No.2,3,5,6, and “Knowledge” adopted Model 3 (b) refers to No.19, 20, 21,23; 「*」 indicates significance at p < 0.05 level

References

Adam Finn (2005), “Reassessing the Foundations of Customer Delight”, *Journal of Service Research*, Vol. 8 No. 2, pp. 103-16

Andaleeb, S.S. and Basu, A.K. (1994), “Technical complexity and consumer knowledge as mediators of service quality evaluation in the automobile service industry”, *Journal of Retailing*, Vol. 70 No. 4, pp. 367-81

Babakus, E. and Boller, G.W. (1992), “An empirical assessment of the SERVQUAL scale”, *Journal of Business Research*, Vol. 24 No.3, pp. 253-68

Bansal, H. & Taylor, S.F. (1999), “The service switching model (SSM): A model of switching behavior in services industries”, *Journal of Service Research*, Vol. 2 No. 2, pp.200-218

Bebko, C.P. (2000), “Service intangibility and its impact on consumer expectations of service quality”, *Journal of Services Marketing*, Vol. 14 No. 1, pp. 9-26

Bitner. Mary Jo, Bernard H. Booms, & Mary Stanfield Tetreault (1990), “The Service Encounter: Diagnosing Favorable and Unfavorable Incidents”, *Journal of Marketing*, Vol. 64 No. 1, pp. 71-84

Brady and Robertson, C.J. (2001), “Searching for a consensus on the antecedent role of service quality and satisfaction: an exploratory cross national study”, *Journal of Business*

- Research*, Vol. 69 No. 1, pp. 53-60
- Burton, S., Sheather, S, and Roberts, J. (2003), “The effect of actual and perceived performance on satisfaction and behavioral intentions”, *Journal of Service Research*, Vol. 5 No. 4, pp. 292-302
- Carman, James M. (1990), “Consumer Perceptions of Service Quality: An Assessment of the SERVQUAL dimensions”, *Journal of Retailing*, Vol. 66 No.1, pp. 23-33
- Charlene Pleger Bebeko (2000), “Service intangibility and its impact on consumer expectations of service quality”, *Journal of Service Marketing*, Vol. 14 No. 1, pp.9-23
- Churchill, Gilbert A., Jr and Carol Surprenant (1982), “An Investigation into the Determinants of Customer Satisfaction”, *Journal of Marketing Research*, Vol. 19 No. 4, pp. 491-504
- Cronin, J., Brady, M., & Hult, G.T. (2000), “Assessing the effects of quality, value and customer satisfaction on consumer behavioral intentions in service environments”, *Journal of Retailing*, Vol. 76 No. 2, pp.193-218
- Cronin, J. & Taylor, S. (1994), “SERVPERF Versus SERVQUAL* Reconciling Performance-Based and Perceptions-Minus-Expectations Measurement of Service Quality”, *Journal of Marketing*, Vol. 58 No. 1, pp. 125-31
- Cook, D.P., Goh, C. and Chung, C.H. (1999), “Service typologies: a state of the art survey”, *Production and Operations Management*, Vol. 8 No. 3, pp. 318-38
- Gordon Fullerton & Shirley Talyor (2002), “Mediating, Interactive, and Non-linear Effects in Service Quality and Satisfaction with Services Research”, *Canadian Journal of Administrative Sciences*, Vol. 19 No. 2, pp. 124-36
- Gottlieb, J., Grewal, D., & Brown, S.W. (1994), “Consumer satisfaction and perceived quality: Complementary or divergent constructs”, *Journal of Applied Psychology*, Vol. 79 No. 6, pp. 875-85
- F. Olorunniwo, Maxwell K. Hsu, Godwin J. Udo (2006), “Service quality, customer satisfaction, and behavioral intentions in the service factory”, *Journal of Services Marketing*, Vol. 20 No. 1, pp.59-72
- Howard, John A. and Jagdish N. Sheth, (1969), *The Theory of Buyer Behavior*, New York: John Wiley.
- Iacobucci, D. (1998), “Services: What do we know and where shall we go? A view from marketing”, *Advances in services marketing*, Vol. 8, pp. 1-96. Greenwich, CT: JAI Press.
- Ikeo Kyoichi, Yukihiro Aoki, Chieko Minami and Akihiro Inoue (2010), *New Liberal Arts Selection: Marketing*, Yuhikaku Publishing Co., Ltd
- Ishii Junzo, Mistuaki Shimaguchi, Kei Kuriki, Takuro Yoda (2004), *Seminar -- Introduction to Marketing*, Nikkei Publishing Co., Ltd
- Japanese Customer Satisfaction Index (2010), <http://www.service-js.jp/jcsi/page0800.php>
- Japanese Statistic Bureau (2006), <http://www.stat.go.jp/data/service/2004/kakuhou/gaiyou/z1.htm>
- John Haywood-Farmer (1993), “A Conceptual Model of Service Quality”, *International*

- Journal of Operations & Production Management*, Vol. 8 No. 6, pp. 19-29
- Keiningham, Timothy L., Melinda K. M. Goddard, Terry G. Vavra, and Andrew J. Iaci (1999), "Customer Delight and the Bottom Line", *Marketing Management*, Vol. 8 No. 3, pp. 57-63
- Mary Jo Bitner, Bernard H. Booms, & Mary Stanfield Tetreault (1990), "The Service Encounter: Diagnosing Favorable and Unfavorable Incidents", *Journal of Marketing*, Vol. 54 No 1. pp. 71-84
- Michael K. Brady, J. Joseph Cronin, Richard R. Brand (2002) "Performance-only measurement of service quality: a replication and extension", *Journal of Business Research*, Vol. 55 No. 1, pp. 17-31
- Michael K. Brady, Clay M. Voorhees, J. Joseph Cronin Jr and Braian L. Bourdeau (2006), "The good guys don't always win: the effect of valence on service perceptions and consequences", *Journal of Service Marketing*, Vol. 20 No. 2, pp.83-91
- Minami Chieko (2006), *Strategic Customer Relationship Management*, Yuhikaku Publishing, Co., Ltd.
- Minami Chieko and John Dawson (2008), "The CRM process in retail and service sector firms in Japan: Loyalty development and financial return", *Journal of Retailing and Consumer Services*, Vol. 15 No. 5, pp. 375-85
- Naveen Donthu, Boonghee Yoo (1998), "Cultural Influences on Service Quality Expectations", *Journal of Service Research*, Vol. 1 No. 2, pp. 178-86
- Nunnally. J (1978), *Psychometric Theory*, McGraw-Hill, New York, NY
- Oliver, R. (1993), "Cognitive, affective and attribute bases of the satisfaction response", *Journal of Consumer Research*, Vol. 20 No. 3, pp.418-30
- Oliver, R. (1999), "Whence Consumer Loyalty" (Special issue), *Journal of Marketing*, Vol. 63 pp.33-44
- Olsen, S.O. (2002), "Comparative evaluation and the relationship between quality, satisfaction, and repurchase loyalty", *Journal of the Academy of Marketing Science*, Vol. 30 No. 3, pp.240-9
- Ono Joji, (2010), *Knowledge of Customer Satisfaction (CS)*, Nikkei Bunko Publishing Co. Ltd, pp.112
- Patrik STROM (2005), "The Japanese Service Industry: An International Comparison", *Social Science Japan Journal*, Vol. 8, No. 2, pp. 253-66
- Parasuraman, A., Zeithaml, V., & Berry, L. (1988), "SEVQUAL: A multiple-item scale for measuring consumer perceptions of service quality", *Journal of Retailing*, Vol. 64 No. 1, pp.12-37
- Partibha A. Dabholkar, Dayle I. Thorpe, Joseph O. Rentz (1996), "A Measure of Service Quality for Retail Stores: Scale Development and Validation", *Journal of the Academy of Marketing Science*, Vol. 24 No. 1, pp. 3-16
- Richard A. Spreng, Scott B. Mackenzie, & Richard W. Olshavsky (1996), "A Reexamination of

- the Determinants of Consumer Satisfaction”, *Journal of Marketing*, Vol. 50 No. 3, pp. 15-32
- R. Bruce Money, Mary C. Gilly, & John L. Graham (1998), “Explorations of National Culture and Word-of-Mouth Referral Behavior in the Purchase of Industrial Services in the United States and Japan”, *Journal of Marketing*, Vol. 62 No.4, pp.76-87
- Rust Roland & Richard L. Oliver (1994), *Service Quality: New Directions in Theory and Practice*, Sage Publications
- Ruth N. Bolton & James H. Drew (1991), “A Longitudinal Analysis of the Impact of Service Changes on Customer Attitudes”, *Journal of Marketing*, Vol. 55 No.1, pp. 1-9
- Schmenner, R.W. (1986), “How can service businesses survive and prosper?”, *Sloan Management Review*, Vol. 27 No. 3, pp. 21-32
- Schneider, Benjamin and David E. Bowen (1999), “Understanding Customer Delight and Outrage”, *Sloan Management Review*, Vol. 41 No. 3 pp. 35-45
- Spiros Gounaris, Sergios Dimitriadis, Vlasis Stathakopoulos (2010), “An examination of the effects of service quality and satisfaction on customers’ behavioral intentions in e-shopping”, *Journal of Services Marketing*, Vol. 24 No. 2, pp. 142-56
- Taylor, S. (1997), “Assessing regression-based importance weights for quality perceptions and satisfaction judgments in the presence of higher order and/or interaction effects”, *Journal of Retailing*, Vol. 73 No. 1, pp. 135-59
- Taylor, S. & Baker, T. (1994), “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.163-78
- Toyoda Hideki (2007), *Analysis of covariance Structures—Structural Equation Modeling (AMOS)*, Tokyo Tosho Publishing Co. Ltd
- Vikas Mittal, Pankaj Kumar, & Michael Tsiros (1999), “Attribute-Level Performance, Satisfaction, and Behavioral Intentions over Time: A consumption - System Approach”, *Journal of Marketing*, Vol. 63 No.2, pp. 88-101
- Woodside AG. Frey LL. Daly RT. (1989), “Linking service quality, customer satisfaction, and behavioral intention”, *Journal of Health Care Marketing*, Vol. 9 No. 4, pp. 5-17
- Willm J. Kettinger and Tao Hu (2008), “Why People Continue to USE Social Networking Services: Developing a Comprehensive Model”, *International Conference on Information Systems*
- Yu-Hern Chang, Chung-Hsing Yeh. (2001), “Evaluating airline competitiveness using multiattribute decision making”, *The International Journal of Management Science*, Vol. 29 No. 5, pp. 405-415
- Zeithaml, V.A., Berry, L.L., and Parasuraman, A. (1996), “The behavioral consequences of service quality”, *Journal of Marketing*, Vol. 60 No. 2, pp. 31-46