A Study on Relationship between Service Quality and Payment Value in Mobile Communication Industry

Mincheol Kim*, Kyoosung Noh**

Contents

Key Words:Service Quality, Customer Satisfaction, Value, Post Behavior, Communication Industry

Abstract

In this paper, the conceptualization and the measurement of service quality and the relationships among service quality, consumer satisfaction, value, and post behavior (post behavior and recommendations to others) are investigated.

The results suggest that service quality is an antecedent of consumer satisfaction and that consumer satisfaction exerts a strong influence on payment value and post behavior.

* 064-754-3182, mck1292@cheju.ac.kr, Professor, Dept. of Management Information Systems, Cheju National University, #1, Ara-1dong, Jejusi, Korea.

** 041-530-2548, ksnoh@sunmoon.ac.kr, Professor, Dept. of BA, Sun Moon University, #100, Kalsan-ri, Tangjeong-myun, Asan-si, Chungnam, Korea

Ⅰ. Introduction

The research objective is to examine the relationships among service quality, customer satisfaction, value and post behavior. Though these relationships have been discussed theoretically (Cronin, 1992), they have not been subjected to a thorough empirical test. In particular, the purpose of study is to provide managers and researchers more information about (1) the causal order of the relationship among service quality and customer satisfaction, value and (2) the impact of service quality and customer satisfaction on post behavior. The managers of service providers need to know how to measure service quality, what aspects of a particular service best define its quality, and whether consumers actually purchase from firms that have the highest level of perceived service quality.

Thus, this study aims at understanding the quality properties of the mobile communication service keeping pace with the changing conditions of the market, and also measuring the value of specific quality properties through correlation among these properties at the market.

Ⅱ. Literature Review

Service literature has left confusion as to the relationship between consumer satisfaction and service quality. This distinction is important to man-agers and researchers alike because service providers need to know whether their objective should be to have consumers who are "satisfied" with their performance or to deliver the maximum level of "perceived service quality." The importance of this issue has led to several recent efforts to clarify the relationship between satisfaction and service quality [Bitner 1990; Bolton and Drew 1991; Parasuraman, Zeithaml, and Berry 1985, 1988]. Initially Parasuraman, Zeithaml, and Berry (1985, 1988) proposed that higher levels of perceived service quality result in increased consumer satisfaction, but more recent evidence suggests that satisfaction is an antecedent of service quality [Bitner 1990; Bolton and Drew 1991]. In particular, Bitner has demonstrated empirically a significant causal path between satisfaction and service quality in a structural equation analysis.

The current measurement of perceived service quality can be traced to the research of Parasuraman, Zeithaml, and Berry(1985). They subsequently developed SERVQUAL(1988), which recasts the 10 determinants into five specific components; tangibles, reliability, responsiveness, assurance, and empathy.

The basis for identifying these five components was a factor analysis of the 22-

item scale. developed from focus groups and from the specific industry applications undertaken by the authors [Parasuraman, Zeithaml, and Berry 1985, 1988; and Zeithaml, Parasuraman, and Berry 1990].

The scale development procedures employed appear to support the face validity of the 22 scale items (individual questions) included in the scale, but the issue of how the service quality measure should be constructed and whether the individual scale items actually describe five separate service quality components is problematic. In fact, some empirical evidence suggests that the proposed delineation of the five components is not consistent when subjected to cross-sectional analysis [Carman 1990]. Specifically, Carman found that some of the items did not load on the same component when compared across different types of service providers. However, though the veracity of conceptualizing the SERVQUAL scale as consisting of the five distinct components identified by Parasuraman, Zeithaml, and Berry (1988) has heen questioned [Carman 1990], the validity of the 22 individual performance scale items that make up the SERVQUAL scale appears to be well supported both by the procedures used to develop the items and by their subsequent use as reported in the literature [Carman 1990].

And given the importance of the service quality concept in communication service theory and pratice, the development of improved measures of service quality for communication service provider deserves further theoretical and empirical research.

But the quality property of Parasuraman has general expression, so is rather difficult to be applicable to the mobile phone service. Thus this article tries to draw quality parameters by asking about what quality properties the users of the mobile phone services perceive to be important.

Ⅲ. Research Models and Propositions

The structural model is identified in Figure Ⅰ.

Figure Ⅰ.

Research model for covariance structural analysis

The following four additional propositions identify the questions addressed in this part of the study

P1: Perceived service quality has a significant impact on payment value

The first question considered is the causal order of the perceived service quality–payment value (P1). This analysis is also based on a consideration of the structural models identified on Figure 2. Specifically, P1 proposes that the path(γ11– γ16) should be statistically significant(p=0.05).

P2: Perceived service quality has a significant impact on customer satisfaction

The next question investigated is whether consumers' level of perceived service quality with a service provider affects customer satisfaction toward that firm (P2). Specifically, P2 proposes that the path(γ21–γ 26) should be statistically significant(p=0.05).

P3: Customer satisfaction is an antecedent of payment value.

Also, the next question considered is the causal order of the payment value–satisfaction relationship (P3). This analysis is also based on a consideration of the structural models identified in Figure 2. Specifically, P3 proposes that the path (β12) showing consumer satisfaction as an antecedent of payment value should be statistically significant (p=0.05).

P4: Customer satisfaction has a significant impact on post behavior.

The final question addressed is whether consumers' level of satisfaction with a service provider affects their post behavior toward that firm (P4). Again, the structural models are used to investigate this proposition. Specifically, P4 proposes that the path estimate (β32) for the linked satisfaction and purchase intention is examined to determine whether the effect is statistically significant(p=0.05).

Ⅳ. Sample data and measurement

The sample data: frequency analysis

This study drew up a questionnaire addressing mobile communication service. Analysis samples of 492 mobile communication subscribers in the metropolitan area (Seoul and Kyunggi Province) gathered were usable data. Gender distribution was 65.4% male and 34.6% female. The age group most represented was 20 to 29 years olds, accounting for 61.4%.

Measures

The measures needed for the study were perceptions of performance, a direct measure of service quality, a measure of consumer satisfaction, and a post behavior measure. The 26 performance (see Table Ⅱ, variables PI- P26) items were taken directly from the SERVPERF scale (Cronin, 1992). The direct measure of service quality was based on responses to a 7-point semantic differential question. And the measure of the value was based on response to communication fee payed per month. In addition, self-report measures of consumer satisfaction and post behavior were constructed similarly.

Regression analysis

Regression analysis was conducted with customer satisfaction as a dependent variable and the seven quality factors as the independent variables in order to examine if the customer satisfaction has a positive relationship with each factor and to find the most significant factor on the quality of mobile communication service. The result is as shown in Table Ⅰ.

This regression model shows that at significance level 0.00, the model is statistically significant. The determinant coefficient, R^2, of 0.412 means that the identified quality factors of mobile communication service have an effect on customer satisfaction of 41.2%.

Table Ⅰ. ANOVA Table

	df	sum of square	Mean Square	F ratio	p-value
Regression	6	202.470	33.745	56.723	0.0000
Residual	485	288.529	0.594		
Total	491				

Table Ⅱ. Estimators of regression coefficients

Factor	Coefficients	t	p-value
factor 1	0.1569	4.508	**0.000** **
factor 2	0.2486	7.143	**0.000** **
factor 3	0.2691	7.732	**0.000** **
factor 4	0.1735	4.986	**0.000** **
factor 5	0.4288	12.320	**0.000** **
factor 6	0.1986	5.707	**0.000** **

(※) ** 1% significance level, * 5% significance level

As shown in Table Ⅱ, all factors had a statistical significance. At the highest significance level (0.000), call quality as a basic quality factor is the main factor.

Ⅴ. Results 2: Relationships among Service Quality, Customer Satisfaction, Value and Post behavior

Structural Model Analysis

This step, which additionally analyzes the causation with service quality factors, customer satisfaction, payment value and post behavior uses the covariance structural model

The significance level of Chi-square value should be reviewed in order to understand the adequacy of the above model. The model comes to be proper when Chi square value is not significant. The values of chi square (24.978) and p-value (0.298) are not significant, so the model can be said to be adequate.

The GFI (goodness of fit index) was generalized to other estimation criteria. The GFI is given by where is the minimum value of the discrepancy function and is obtained by evaluating. GFI is always between zero and one, where 1 indicates a perfect fit.

The AGFI (adjusted goodness of fit index) takes into account the degrees of freedom available for testing the model. The RMR (root mean square residual) is the square root of the average squared amount by which the sample variances and covariances differ from their estimates obtained under the assumption your model is correct: The smaller the RMR is, the better. An RMR of zero indicates a perfect fit.

Thus, the hypothesis that when mobile communication users feel satisfied with many quality factors and perceived quality has impact on payment value and they will recommend the service to others and repurchase intentions seems to be correct.

Ⅵ. Study conclusion

The major conclusion from this study is that the relations among service quality, payment value and satisfaction are analyzed. The results suggest that service quality is an antecedent of consumer satisfaction and that consumer satisfaction exerts a strong influence on payment value and post behavior. Thus, managers may need to emphasize total customer satisfaction programs over strategies focusing solely on service quality.

Finally, the results also suggest that the scale items that define service quality in communication industry may be different in

other industries. Managers and researchers therefore must consider the individual dimensions of service quality when making cross-sectional comparisons.

Investigations of the roles of satisfaction, payment value and service quality also appear well directed and may enhance the understanding of the role of these constructs in the formation of post behavior.

References

1. Babakus, E., and Boller, G.W.(1992) "An Empirical Assessment of the SERVQUAL Scale," *Journal of Business Research*, Vol.24, pp.252-268.
2. Bagozzi R. and Y. Yi (1998), "On the Evaluation of Structural Equation Models', *Journal of Academy of Marketing Science*, Vol.16, pp.405-425.
3. Bateson.J.E.(1989), "Consumer Perception of Service Quality : An Assessment of the SERVQUAL Dimensions," *Journal of Retailing*, 66(1), pp.33-55.
4. Berry, L. L., Zeithaml, A. and Parasuraman, A.(1989), "Five imperatives for improving service quality", *Sloan Management Review*, Vol. 31-32, pp. 89-91.
5. Bolton, R. N. and J. H. Drew (1991), "A Longitudinal Analysis of the Impact of Service Changes on Customer Attitudes," *Journal of Marketing*, Vol. 55, pp.1~9.
6. Boulding, W. Kalra, A. Staelin, R. and Zeithaml, V. A.(1993), 'A dynamic process model of service quality: from expectations to behavioural intentions', *Journal of Marketing*, Vol. 57, February, pp.7-27.
7. Carman, j. M,(1990) " Consumer Perceptions of Service Quality: An Assessment of the SERVQUAL Dimensions," *Journal of Retailing*, Vol.66, pp.33-55.
8. Cha, dong-wan(1997), "Information Communication World in view of Conception," *Young-ji Corp.*
9. Cronin Jr. and Steven A. Taylor (1992), Measuring Service fluality: A on Reexamination and Extension, *Journal of Marketing*, July, pp.55-68.
10. Cronin, J. J. and Taylor, S. A. (1994), 'SERVPERF versus SERVQUAL: Reconciling performance-based and perception-minus-expectations measurement of service quality', *Journal of Marketing*, Vol. 58, January, pp.125-131.

11. Daniel, B. (1973), The Coming of Post-industrial Society Forecasting, *N.Y., Basic Book,* pp. 12~13.
12. Desarbo, W. S.(1994), Huff, L., Rolandlli, M., and J. Choi, "On the Measurement of Perceived Service Quality." in Service Quality, Rust and Oliver, eds., *SAGE Publications,* pp.201-222. http://203.254.64.141:8080/faq/index1.htm
13. Kotler, P. (1991), Marketing Management - Analysis, Planning, Implementation, and Control, 7th Ed, *Prentice-Hall International Edition,* p. 456.
14. Kotler, Phillip (1994), Marketing Management, *Prentice Hall,* pp. 466-468.
15. Parasuraman A, Valarie A. Zeithaml, and Leonard L. Berry (1985), " A Conceptual Model of Service Quality and Its Implications for Future Research", *Journal of Marketing,* Vol.49, fall, pp.41-50.
16. Parasuraman A, Valarie A. Zeithaml, and Leonard L. Berry (1985), " A Conceptual Model of Service Quality and Its Implications for Future Research", *Journal of Marketing,* Vol.49, fall, pp.41-50.
17. Parasuraman, A., Zeithaml V., and L. Berry (1988), "SERVQUAL : A Multiple-Item Scale for Measuring Consumer Perceptions of Service Quality," *Journal of Retailing,* Vol. 64, pp. 12~40.
18. SmallWaters Corporation (1997), "Amos User's Guide Version 3.6", SPSS Inc.