

Full Length Research Paper

Customer satisfaction, perceived value and customer loyalty: the mobile services industry in China

Feng-Cheng Tung

Department of Real Estate Management, Kun Shan University, Tainan, Taiwan. (R.O.C.).

Accepted 7 July, 2010

This research integrates the American Customer Satisfaction Model, perceived usefulness and perceived ease of use to propose a modified American Customer Satisfaction Model to study consumer satisfaction with the mobile services industry in China. The research finds that perceived expectations, perceived quality, perceived value, perceived usefulness and perceived ease of use have a major positive effect on customer satisfaction with mobile services. The research also finds that customer satisfaction has a significantly positive direct impact on customer loyalty. Customer complaints have significantly negative direct impact on customer loyalty. Customer satisfaction has a significantly negative direct impact on customer complaints. By analyzing 274 questionnaires collected from 360 current mobile phone subscribers, the research offers important recommendations to service providers, policymakers, and subscribers and helps the mobile services industry better understand the factors affecting customer satisfaction for mobile services in China. These recommendations could lead to an increase in customer satisfaction and customer loyalty.

Key words: Customer satisfaction, customer loyalty, perceived quality, perceived expectation, perceived usefulness, perceived ease of use, mobile services industry.

INTRODUCTION

The growth of China's mobile communication industry will be explosive in the future and coupled with its subscribers, will continue to increase at an average annual pace of 50 million in the coming years. With the number of subscribers and voice contents keeping pace, mobile data, other non-voice service and new applications will also speed up their growth rate. According to a survey conducted by the Industrial Economics and Knowledge Center, the number of mobile phone subscribers in China increased 4.8 million per month from 334 million at the end of 2004 to 390 million in 2005. It is expected that the number of subscribers will increase to 440 million by 2006 at average annual increase pace of 12.8%. The number of mobile phone subscribers is forecasted to reach 570 million by 2009. This research examines the relevant factors influencing customer

satisfaction regarding mobile service delivery in China.

Customer satisfaction has become a vital concern for companies and organizations in their efforts to improve product and service quality and maintain customer loyalty in a highly competitive marketplace. In the last decade, a number of national indicators have reflected that consumer satisfaction across a wide range of organizations has risen (for example, USA – ACSI, Fornell et al., 1996; Europe - ECSI Technical Committee, 1998; Denmark, Martensen et al., 2000). A standardized satisfaction measure provides the means for accurate regulatory objectives that capture both consumer interest and overcome the vagueness issue.

Regulators can adapt this standard measure for national benchmarking, competitive country assessment, longitudinal studies of regulation implications, etc.

Specifically, several mobile service studies conducted regionally have attempted to explore the antecedents of customer satisfaction, customer loyalty and customer retention (Gerpott et al., 2001; Kim et al., 2004). The American Customer Satisfaction Model (ACSM) is a general, cross-industry model that provides market-based performance measures for firms, industries, sectors and nations. It measures the quality of goods and services as experienced by consumers (Fornell et al., 1996) and gauges their actual and anticipated consumption experiences (Anderson and Fornell, 2000).

This research integrates the ACSM, perceived usefulness and perceived ease of use to propose a modified American Customer Satisfaction Model to study consumer satisfaction with the mobile services industry in China. This research found that perceived expectations, perceived quality, perceived value, perceived usefulness, and perceived ease of use were critical factors for customer satisfaction with mobile services.

THEORETICAL BACKGROUND

The American Customer Satisfaction Model

The American Customer Satisfaction Model (ACSM) is a general, cross-industry model that provides market-based performance measures for firms, industries, sectors and nations. It measures the quality of goods and services as experienced by consumers (Fornell et al., 1996), and gauges their actual and anticipated consumption experiences (Anderson and Fornell, 2000).

The American Customer Satisfaction Index (ACSI) of an individual firm represents its served markets, its customers' overall evaluation of total purchases, and consumption experience, both actual and anticipated (Fornell et al., 1996). The objectives of the ACSI are to generate exact and comprehensive information about customer satisfaction that can serve as an indicator for the economic success of companies, industries, and the national economy.

The ACSI measures the quality of the goods and services as experienced by the customers that consume them. Analogously, an industry ACSI represents an industry's customers' overall evaluation of its market offering, a sector ACSI is an overall evaluation of that sector, and the national ACSI gauges the nation's total consumption experience. Hence, ACSI represents a cumulative evaluation of a firm's market offering, rather than a person's evaluation of a specific transaction.

The National Quality Research Center of the University of Michigan Business School conducts the fieldwork for the ACSI. The ACSI is a project partnership of the American Society for Quality, the University of Michigan Business School, the National Quality Research Center, and Arthur Andersen (Fornell et al., 1995, 1996; Johnson, 1995; NQRC, 1994a, b). About 25 corporate sponsors

support the ACSI. The ACSI is based on a structural model that consists of six latent variables. Figure 1 presents the ACSM with the variables and their relationships (Fornell et al., 1996; NQRC, 1994a). The latent variables are measured by a multi-item approach.

The concept behind ACSI, namely, a measure of overall customer satisfaction that is uniform and comparable, requires a methodology with two fundamental properties. First, the methodology must recognize that ACSI and the other constructs in the model represent different types of customer evaluations that cannot be measured directly. Accordingly, ACSI uses a multiple indicator approach to measure overall customer satisfaction as a latent variable. The result is a latent variable score or index that is general enough to be comparable across firms, industries, sectors, and nations. Second, as an overall measure of customer satisfaction, ACSI must be measured in a way that not only accounts for consumption experience, but also is forward-looking. To this end, ACSI is embedded in the system of cause and effect relationships shown in Figure 1, which makes it the centerpiece in a chain of relationships running from the antecedents of overall customer satisfaction-expectations, perceived quality, and value-to the consequences of overall customer satisfaction-voice and loyalty. As was indicated, the primary objective in estimating this system or model is to explain customer loyalty. It is through this design that ACSI captures the served market's evaluation of the firm's offering in a manner that is both backward- and forward-looking.

According to the model, there exists a positive association between perceived customer expectations (PE) and perceived quality (PQ), perceived value (PV) and satisfaction. As shown in Figure 1, customer satisfaction has three antecedents: Perceived quality, perceived value, and perceived expectations.

The first determinant of customer satisfaction is perceived quality, which is the served market's evaluation of recent consumption experience. Perceived quality is expected to have a direct and positive effect on overall customer satisfaction. For perceived quality, we expect a positive association between increased perceived value and customer satisfaction. The second determinant of customer satisfaction is perceived value. Adding perceived value incorporates price information into the model and increases the comparability of the results across firms, industries. The third determinant of customer satisfaction is perceived expectations. Perceived expectations represent both the served market's prior consumption experience with the firm's offering, including non-experiential information available through sources like advertising and word-of-mouth-and a forecast of the ability of the supplier to deliver quality in the future. As such, the expectations construct is both backward and forward-looking. It captures all previous quality experiences and information from $t-1, t-2, \dots, t-m$. Hence,

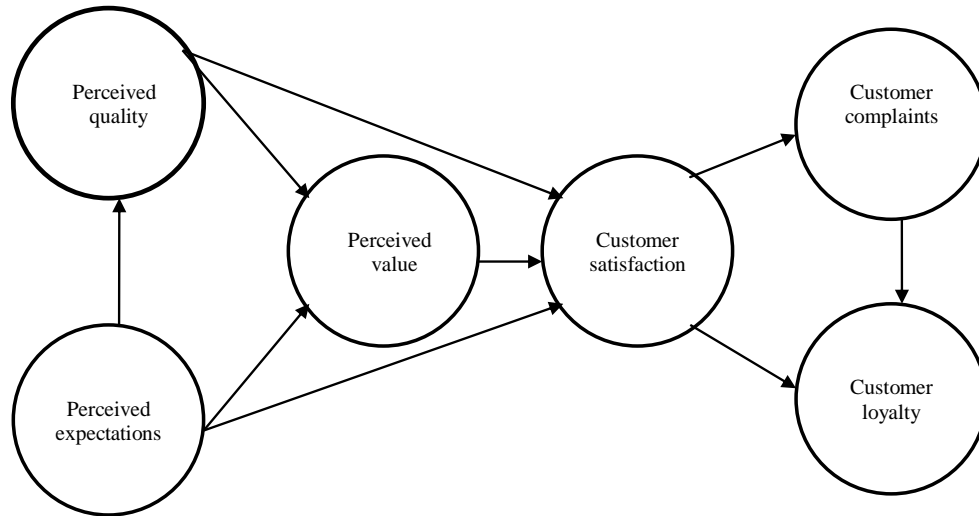


Figure 1. The American Customer Satisfaction Model (ACSI, 1999).

the construct naturally has a direct and positive association with a cumulative evaluation of firm performance, such as overall customer satisfaction. At the same time, the served market's expectations at time t forecast a firm's ability to satisfy its market in future periods $t + 1$, $t + 2$, ..., $t + n$. This role of expectations is important because the nature of the ongoing relationship between a firm and its customer base is such that expected future quality is critical to overall customer satisfaction. According to the model, there exists a positive relation between perceived quality, perceived expectations, perceived value and customer satisfaction. The final relationship in the model is between customer complaints and customer loyalty. Although there are no direct measures of the efficacy of a firm's customer service and complaint-handling systems, the direction and size of this relationship reflect on these systems (Fornell et al., 1996). When the relationship is positive, the implication is that the firm is successful in turning complaining customers into loyal customers. When negative, the firm's complaint handling has managed to make a bad situation even worse-it has contributed further to customer defection. The immediate consequences of increased customer satisfaction are decreased customer complaints and increased customer loyalty. When dissatisfied, customers have the option of exiting (e.g., going to a competitor) or voicing their complaints in an attempt to receive retribution. Loyalty is the ultimate dependent variable in the model because of its value as a proxy for profitability.

The American Customer Satisfaction Model (ACSM) and its adaptations have been utilized in many studies in various industries. For example, ACSM variations were used to examine banking services (Mukherjee et al.,

2003), transportation and communications sectors (Grigoroudis and Siskos, 2004). In the mobile services context, loyalty is defined as a favorable attitude toward a specific service provider that leads to a combination of repurchase likelihood for additional services from the same provider and tolerance to price increases from that provider (Fornell et al., 1996). In turn, satisfaction has a positive effect in terms of customer loyalty and a negative effect in terms of customer complaints. As such, loyalty is directly explained by customer satisfaction and also customer complaints regarding the product or service.

Perceived usefulness and perceived ease of use

The technology acceptance model (Davis et al., 1989), adapted from the theory of reasoned action (TRA) (Ajzen and Fishbein, 1980), appears to be the most widely accepted among information systems researchers. The objective of The technology acceptance model is to provide an explanation of the determinants of computer acceptance that in general, is capable of explaining user behavior across broad range of end-user computing technologies and user populations, while at the same time being both parsimoniously and theoretically justified (Davis et al., 1989). The technology acceptance model (Davis et al., 1989) originally suggested that two beliefs-perceived usefulness and perceived ease of use - are instrumental in explaining the variance in users' intentions. Perceived usefulness is the degree to which a person believes that using a particular system enhances his or her job performance (Lu et al., 2010). Perceived ease of use is the degree to which a person believes that using a particular system will be free of effort (Wang and Pho, 2009). These determinants are also easy to under-

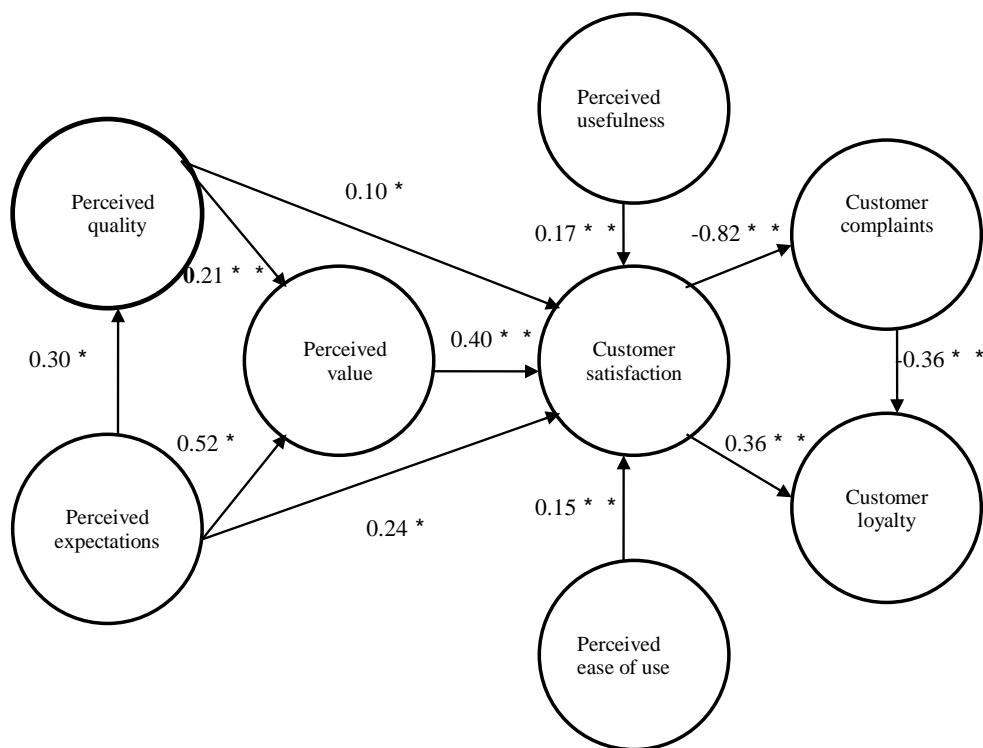


Figure 2. The modified American Customer Satisfaction Model.

stand for system developers, and can be specifically considered during system requirement analysis and other system development stages. These factors are common in technology-usage settings and can be applied widely to solve the acceptance problem.

KUO et al. (2005) found perceived ease of use have a positive effect on the customer satisfaction. Therefore, the research combines ACSM, perceived usefulness and perceived ease of use to propose the modified American Customer Satisfaction Model, to study consumer satisfaction of the mobile services industry in China. Figure 2 shows the modified American Customer Satisfaction Model with the variables and their relationships.

RESEARCH MODEL AND HYPOTHESES

Research model

The research model of this research is shown in Figure 2. We have integrated ACSM, perceived usefulness and perceived ease of use to propose a modified American Customer Satisfaction Model to study consumer satisfaction with the mobile services industry in China. The research involved 274 current mobile phone service users residing in China.

Hypotheses

This research applies the modified American Customer Satisfaction Model to study consumer satisfaction with the mobile services industry in China. Thus, we hypothesized:

- H1:** Perceived expectations will positively affect perceived quality of mobile services.
- H2:** Perceived expectations will positively affect perceived value of mobile services.
- H3:** Perceived expectations will positively affect customer satisfaction of mobile services.
- H4:** Perceived quality will positively affect perceived value of mobile services.
- H5:** Perceived quality will positively affect customer satisfaction of mobile services.
- H6:** Perceived value will positively affect customer satisfaction of mobile services.
- H7:** Perceived usefulness will positively affect customer satisfaction of mobile services.
- H8:** Perceived ease of use will positively affect customer satisfaction of mobile services.
- H9:** Customer satisfaction will negatively affect customer complaints of mobile services.
- H10:** Customer satisfaction will positively affect customer

Table 1. Sample demographics.

Gender	Percentage	Age	Percentage	Experience in using mobile services	
Male	53.28	< 18	17.52	< 1year	12.77%
Female	46.72	18 to 30	38.32	1 to 3 years	66.43%
		30 to 40	36.49	> 3 years	20.80%
		>40	7.67		

loyalty of mobile services.

H11: Customer complaints will negatively affect customer loyalty of mobile services.

METHOD

Sampling method

A sampling of 274 questionnaires was collected from 360 current mobile phone service users in China. We sent questionnaires by e-mail in May of 2009. After three months (August 2009), we had 278 that were returned. The rate of response for the questionnaire was 77.2%. Of the 278 basic questionnaires returned, we had to leave out 4, which some questions had not been answered, thus leaving the number of valid questionnaires at 274.

Instrument

To ensure content validity of the scales used, the items selected must represent the concept around which generalizations are to be made. Items selected for the constructs were adapted from prior studies in order to ensure content validity. All the 24 items used a ten-point Likert scales. The questionnaire contained nine parts. Those parts were: customer expectations, perceived quality, perceived value, customer satisfaction, perceived usefulness, perceived ease of use, customer complaints, and customer loyalty; there was an additional section for customer's personal data.

Sample demographics

The research involved 274 current mobile phone service users residing in China. Of the users who filled out answers in this questionnaire, 53.28% were male, and 46.72% were female. Most of the users were 18 to 30 years old, thus making up 38.32% of the sample. The majority of those replying to the questionnaire were people with one to three years' experience in using mobile services; they made up 66.43% of the sample. Sample demographics are depicted in Table 1.

Methodology of data analysis

This research has adopted structural equation modeling (SEM) for its data analysis to measure empirically, the data, to examine if it is in accordance with theory. Based upon our measurement model, we assay all possible effects, and for each hypothesis, we construct a structural model, then we analyze functions and dependencies among all parameters pursuant to each structural model. The statistical analysis software used for the research is LISREL 8.3 and SPSS 13.0. This research adopted structural equation modeling (SEM) for its data analysis to study the causalities among

all parameters constructed in each model. The estimation of the parameters used the Maximum Likelihood Estimation (MLE). When utilizing this method, sample size can not be too small. It is generally acknowledged that an appropriate sample size should lie between 100 and 400 to be suitable for MLE (Ding et al., 1995). Our sample size was 274, thus meeting that requirement. The data obtained was tested for reliability and validity, using confirmatory factor analysis (CFA).

DATA ANALYSIS AND RESULTS

Analysis of the measurement model

This research adopted structural equation modeling (SEM) for its data analysis to study the causalities among all parameters constructed in each model. The estimation of the parameters used the Maximum Likelihood Estimation (MLE), and the sample size could not be too small when utilizing this method. Structural model analysis examines the global fitness of the observed data in the research model, and the dependencies and correlations among all potential variables.

The data obtained were tested for reliability and validity, using confirmatory factor analysis (CFA). The model included 24 items that described eight latent constructs: perceived expectations, perceived quality, perceived value, customer satisfaction, perceived usefulness, perceived ease of use, customer complaints, and customer loyalty. In order to measure the reliability, convergent validity and discriminant validity of the theoretical constructs of this research, we selected for this research, three most frequently used indexes according to the suggestion of Bagozzi and Yi (1988): Individual Item Reliability, Composite Reliability (CR) and Average Variance Extracted (AVE) to rate the evaluation model.

Individual Item Reliability assessed the factor loading of a potential variable, stemming from its corresponding measurement item. Fornell and Larcker (1981) suggest that the CR value should be greater than 0.6. Fornell and Larcker (1981) propose that the AVE value should be greater than 0.5. As shown in Table 2, the average value of variables used for the research model accords with suggested values of the three indexes, which means these research variables have good convergent validity, and their total AVE is larger than their correlation value, these research variables have discriminate validity.

Table 2. Construct reliability, convergent validity and discriminant validity.

Construct	CR	Factor correlations								
		AVE	PE	PQ	PV	CS	PU	PEOU	CC	CL
PE	0.93	0.83	-							
PQ	0.94	0.84	0.30	-						
PV	0.95	0.90	0.58	0.37	-					
CS	0.95	0.88	0.67	0.37	0.67	-				
PU	0.96	0.86	0.51	0.15	0.28	0.52	-			
PEOU	0.96	0.84	0.49	0.15	0.29	0.53	0.68	-		
CC	0.89	0.80	-0.55	-0.31	-0.55	-0.82	-0.44	-0.42	-	
CL	0.94	0.84	0.44	0.24	0.44	0.66	0.35	0.34	-0.66	-

Perceived expectations (PE), Perceived quality (PQ), Perceived value (PV), Customer satisfaction (CS), perceived usefulness (PU), perceived ease of use (PEOU), Customer complaints (CC), Customer loyalty (CL).

Table 3. Goodness-of-fit measures of the research model.

Fit Indices	χ^2/df	GFI	NFI	NNFI	CFI	IFI	RMSEA
Recommended value	≤ 3.0	≥ 0.8	≥ 0.9	≥ 0.9	≥ 0.9	≥ 0.9	$\leq 0.05\sim 0.08$
Result value	2.65	0.84	0.97	0.98	0.98	0.98	0.078

Analysis of the structural model

In this research, we propose eight research constructs. After inspections of reliability and validity in order to achieve the specifications, and since the eight research constructs show good reliability and validity, we then study the hypotheses that we have made for this research, and examine them, so that we can understand the relationship between every research construct, and examine all the hypotheses. In this research, before we proceed with structural analysis on the collected questionnaires, we have to understand the confirmatory analysis of the research model. The main purpose of the confirmatory analysis of the research model is to determine whether the theory model constructed by the researcher is instrumental in explaining the observed data. Seven common model-fit measures were used to assess the model's overall goodness-of-fit: the ratio of χ^2 to degrees-of-freedom (χ^2/df); goodness-of-fit index (GFI); normalized fit index (NFI); non-normalized fit index (NNFI); comparative fit index (CFI); Incremental Fit Index (IFI); Root Mean Square Error of Approximation (RMSEA) As shown in Table 3. The ratio of χ^2 to degrees-of-freedom (χ^2/df) for the measurement model was calculated to be 2.34. The GFI was 0.84, which is greater than the 0.80 benchmark suggested by Hu and Bentler (1999). The NFI was 0.97, which is greater than the 0.90 benchmark suggested by Bentler (1989). The NNFI was 0.98, which is greater than the 0.90 benchmark suggested by Bentler (1989). The CFI was 0.98, which is

greater than the 0.90 benchmark suggested by Bentler (1989). The IFI was 0.98, which is greater than the 0.90 benchmark suggested by Bentler (1989). The RMSEA was 0.078, which was slightly greater than the recommended range of acceptability (<0.05 to 0.08) suggested by MacCallum et al. (1996).

The significant structural relationship among the research variables and the standardized path coefficients are presented in Figure 2. The data shows that perceived expectations had a positive effect on perceived quality of mobile services ($\gamma = 0.30$, $P < 0.01$). Therefore, hypotheses H1 was supported. Perceived expectations had a positive effect on perceived value of mobile services ($\gamma = 0.52$, $P < 0.01$). Therefore, hypotheses H2 was supported. Perceived expectations had a positive effect on customer satisfaction of mobile services ($\gamma = 0.24$, $P < 0.01$). Therefore, hypotheses H3 was supported. Perceived quality had a positive effect on perceived value of mobile services ($\beta = 0.21$, $P < 0.01$). Therefore, hypotheses H4 was supported. Perceived quality had a positive effect on customer satisfaction of mobile services ($\beta = 0.10$, $P < 0.05$). Therefore, hypotheses H5 was supported. Perceived value had a positive effect on customer satisfaction with mobile services ($\beta = 0.40$, $P < 0.01$). Therefore, hypotheses H6 was supported.

Perceived usefulness had a positive effect on customer satisfaction of mobile services ($\gamma = 0.17$, $P < 0.01$). Therefore, hypotheses H7 was supported. Perceived ease of use had a positive effect on customer satisfaction of mobile services ($\gamma = 0.15$, $P < 0.05$). Therefore,

hypotheses H8 was supported. Customer satisfaction had a negative effect on customer complaints of mobile services ($\beta = -0.82$, $P < 0.01$). Therefore, hypotheses H9 was supported. Customer satisfaction had a positive effect on customer loyalty of mobile services ($\beta = 0.36$, $P < 0.01$). Therefore, hypotheses H10 was supported. Customer complaints had a negative effect on customer loyalty of mobile services ($\beta = -0.36$, $P < 0.01$). Therefore, hypotheses H11 was supported.

DISCUSSION

Due to the explosive growth of China's mobile communication industry, it is one of the most important markets in the world. It is expected that the number of subscribers will increase to 440 million by 2006 at average annual increase pace of 12.8%. The number of mobile phone subscribers is forecasted to reach 570 million by 2009. The research proposed the modified American Customer Satisfaction Model by integrating ACSM, perceived usefulness and perceived ease of use to study consumer satisfaction with the mobile services industry in China. The research offers four major findings as discussed further.

- i. This research found that perceived expectations, perceived quality, perceived value, perceived usefulness, and perceived ease of use were critical factors for customer satisfaction with mobile services.
- ii. Perceived expectations have a positive effect on perceived quality of mobile services; therefore, as the level of perceived expectations increases, the level of perceived quality also increases. Perceived expectations and perceived quality have a great positive and direct impact on perceived value of mobile services.
- iii. Customer satisfaction has a significantly positive direct impact on customer loyalty. Thus, as the level of customer satisfaction increases, the level of customer loyalty increases. The research concluded that if China's mobile services industry wants to effectively increase customer loyalty, it should work out a way to improve customer satisfaction
- iv. Customer satisfaction negatively directly influences customer complaints. Thus, as the level of customer satisfaction increases, the level of customer complaints decreases. Customer complaints have significantly negative direct impact on customer loyalty. Thus, as the level of customer complaints increases, the level of customer loyalty decreases.

By analyzing 274 questionnaires collected from 360 current mobile phone subscribers, the research offers important recommendations to service providers, policy-makers, and subscribers, and helps the mobile services industry better understand the factors affecting customer

satisfaction for mobile services in China. These recommendations could lead to an increase in customer satisfaction and customer loyalty.

This research issues two suggestions regarding the future research direction. First, the research model can be applied in other industries to explore and compare further results. Second, the future research can attempt to discover other major elements affecting customer satisfaction.

REFERENCES

- Ajzen I, Fishbein M (1980). *Understanding attitudes and predicting social behavior*, Englewood Cliffs, NJ: Prentice-Hall.
- Anderson EW, Fornell C (2000). Foundations of the American Customer Satisfaction Index. *Total Qual Manage Bus.* 11(7):869-882.
- Bagozzi RP, Yi Y (1988). On the evaluation structural equation models. *Acad Mark Sci.* 16:74-94.
- Bentler PM (1989). *EQS Structural Equations Program Manual*, Los Angeles: BMDP.
- Davis FD, Bagozzi RP, Warshaw PR (1989). User acceptance of computer technology: a comparison of two theoretical models. *Manage Sci.* 35:982-1002.
- Ding L, Velicer W, Harlow L (1995). Effects of estimation methods, number of indicators per factor and improper solutions on structural equation modeling fit indices, In *Structural Equation Modeling* 2:119-143.
- ECSI Technical Committee (1998). *European customer satisfaction index, foundation and structure for harmonized national pilot projects*, Report prepared for the ECSI Steering Committee, October.
- Fornell C, Larcker DF (1981). Evaluating structural equation models with unobservables and measurement error. *J. Market Res.* 18:39-50.
- Fornell C (1992). A national customer satisfaction barometer: the Swedish experience, *J. Market.* 56(1):6-21.
- Fornell C (1995). The Quality of Economic Output: Empirical Generalizations About Its Distribution and Relationship to Market Share. *Market. Sci.* 14(3):203-211.
- Fornell C, Johnson MD, Anderson EW, Cha J, Bryant BE (1996). American customer satisfaction index: nature, purpose, and findings. *J. Market.* 60(4):7-18.
- Gerpott TJ, Rams W, Schindler A (2001). Customer retention, loyalty, and satisfaction in the German mobile cellular telecommunications market. *Telecommun Policy.* 25(4):249-269.
- Grigoroudis E, Siskos Y (2004). A survey of customer satisfaction barometers: Some results from the transportation-communications sector. *Eur J Oper Res.* 152(2):334-353.
- Hu L, Bentler PM (1999). Cutoff criteria in fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Struct Equ. Modeling* 6(1):1-55.
- Johnson MD, Anderson EW, Fornell C (1995). Rational and Adaptive Performance Expectations in a Customer Satisfaction Framework. *J. Consum Res.* 21(March):695-707.
- Kuo T, Lu IY, Huang CH, Wu GC (2005). Measuring Users' Perceived Portal. Service Quality: An Empirical Study. *Total Qual. Manage. Bus.* 16(3):309-320.
- Kim MK, Park MC., Jeong DH (2004). The effects of customer satisfaction and switching barrier on customer loyalty in Korean mobile telecommunication services. *Telecommun Policy.* 28(2):145-159.
- Lu CT, Huang SY, Lo PY (2010). An empirical study of on-line tax filing acceptance model: Integrating TAM and TPB. *Afr. J. Bus. Manage.* 4(5):800-810.
- MacCallum RC, Browne MW, Sugawara HW (1996). Power analysis and determination of sample size for covariance structure modeling, *Psychol. Methods* 1:130-149.
- Martensen A, Gronholdt L, Kristensen K (2000). The drivers of customer

- satisfaction and loyalty, cross-industry findings from Denmark. *Total Qual. Manage.* 11:8544-8553.
- Mukherjee A, Nath P, Pal M (2003). Resource, service quality and performance triad: A framework for measuring efficiency of banking services. *J Oper. Res. Soc.* 54(7):723-735.
- Wang JS, Pho TS (2009). Drivers of customer intention to use online banking: An empirical study in Vietnam. *Afr. J. Bus. Manage.* 3(11):669-677.