

FACTORS THAT IMPACT CUSTOMER SATISFACTION: EVIDENCE FROM THE THAILAND MOBILE CELLULAR NETWORK INDUSTRY

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ABSTRACT

Retaining current customers is one of the key success factors to survive in the mature market of the mobile cellular network industry in Thailand. The aim of this study is to identify key success factors of this industry. Adult users of mobile cellular networks are interviewed. The results from the multiple regression analysis show that from the mobile service perspective, the customer values network quality, emotional value, promotional value, quality of service at shops and quality of call center service. From a more holistic perspective, corporate image plays a significant role in enhancing customer satisfaction with mobile cellular networks in Thailand.

JEL: L96; M31

KEYWORDS: Customer Satisfaction, mobile phone networks, utilitarian value, hedonic value

INTRODUCTION

The Thai mobile network industry has nearly reached its saturation point, as indicated by the penetration rate of around 99% or 63 million mobile subscribers. Although the industry is characterized by a few big players in the market; namely, Advance Info Service (AIS), Total Access Communication (DTAC), and True Move, with a market share of 43%, 30% and 24%, respectively, competition intensifies during the industry maturity stage. It is often noted that once customers have been acquired and connected to a particular telecommunications network, long-term links with the focal operator are more importance to the company success in competitive markets than in other industries. A key motivation for the growing emphasis on customer satisfaction (CS) is that higher CS can lead to a stronger competitive position, resulting in higher market share and profit (Fornell, 1992). It can lower price elasticity, business cost, failure cost, and costs for attracting new customers. CS is also generally assumed to be a significant determinant of repeated sales, positive word-of-mouth, and customer loyalty. Satisfied customers return and buy more, and tell other people about their experiences (Fornell, Johnson, Anderson and Bryant, 1996). Firms that practice CS enhancement strategies usually gain a sustainable competitive advantage. Satisfaction has been widely studied as a predictor of customer loyalty (e.g., Cronin, Brady and Hult 2000; Fornell, Johnson, Anderson and Bryant 1996; Kim, Park and Jeong, 2004; Olsen, 2002; Yang and Peterson, 2004). CS is an important factor for the long-term relationship between a firm and a customer (Anderson and Srinivasan, 2003). In order to shed light on the success of the companies in the telecommunications industry, this study investigates factors affecting CS with mobile cellular networks.

The study begins with a literature review on the factors that impact customer satisfaction. Next the data and methodology are discussed. The following section discusses the results. Some concluding comments close the paper.

LITERATURE REVIEW

Many researchers have shown that CS is multidimensional (e.g., Sureshchandar, Rajendran and Anatharaman, 2002; Sweeney and Soutar, 2001; Woo and Fock, 1999). Generally, delivering customer values is a key means for marketers to satisfy customer needs. The factors that might affect customer satisfaction will be discussed in the remainder of this section.

Functional value relates to the proper performance of the cellular network, meaning that it should have a wide coverage, good voice quality, infrequent dropped calls, and instantaneous connection. Logically, consumers expect any products or services they buy to perform correctly. Unsurprisingly, network quality has garnered the attention of many researchers. It is a vital factor for CS of mobile networks (Lim, Widdow, Richard and Park, 2006; Woo and Fock, 1999).

Promotional value is an incentive for consumers to buy products or services. It can be a special package discount, coupons, a bonus gift, etc. It provides savings for consumers, and thereby creates economic value. In general, promotion value is a comparison between the perceived economic benefits received by consumers and the monetary cost of the service. Many researchers have found a significant role in consumers' perceived monetary value regarding satisfaction and future decisions (Chen, 2003; McDougall and Levesque, 2000). Lewis (2004) notices that promotional offers affect the observed service churn. Some subscribers may leave after a promotional period ends, not because of increased dissatisfaction with the service but simply because of the change in their price plan.

Innovative value covers the responsiveness of the mobile network company to the new coming technology of 3G. The company often introduces new products, and differentiates itself from competitors. Generally, new technology, new services and creative ideas are supposed to surpass outdated services. For instance, 3G enables people to send and receive pictures as well as provides faster data transmission than 2G. Similarly, the new services and creative ideas are often meant to deliver a better solution to consumer problems. In short, innovative value is likely to create CS.

Social value is related to the enhancement of social self-concept (Sweeney and Souter, 2001). In the use of technology-driven products or services, social image can be an important factor that affects consumers' decision making. Mobile phones are a medium through which users keep social contact (Ling, 2004). Consumers consider the possession of a technology-driven device as a symbol of social status as well as a fashion item. In this sense, the display and use of their mobile phones are important for mobile phone users to improve the way in which they are perceived by others (Ling, 2004; Lu, Yu, Liu and Yao, 2003). Hence, social value is expected to play an important role in the context of mobile service usage.

Customer service can add unique and sustainable value as it may be more difficult to imitate than product quality and price (Griffith and Krampf, 1998; Keeney, 1999; Parasuraman and Grewal, 2000). Additionally, technical service or core service quality e.g. voice quality, signal quality, etc, is often too difficult to differentiate by consumers. The functional quality of a service is potentially more important for CS (Gronroos, 1984). As for the relationship between service quality and CS, Oliver (1993) first suggested that service quality be antecedent to CS regardless of whether these constructs are measured for a given period or over time. Several studies empirically support the idea that CS is a consequence of service quality (Anderson and Sullivan, 1993; Anderson, Fornell and Lehmann, 1994; Spreng and Mackoy, 1996). In this study, customer service is divided into customer services at shops and call centers because they are the two major points of interactions between the company's personnel and customers. These two access points reflect partly the quality of corporate management practices.

Emotional value refers to utility derived from feelings or affective states that a service provider engenders (Sweeney and Souter, 2001). This may include feeling good, as well as enjoyment and happiness during

the use of the mobile network. Emotional value is expected to incorporate consumers' affective responses to service stimuli in a cognitive-oriented, means-end model. In a retailing context, Sweeney and Soutter (2001) found that emotional value is the strongest predictor of consumers' purchase intention. However, it was revealed that customers place higher priority on utilitarian benefits than to hedonic benefits (Chitturi, Raghunathan and Mahajan, 2007; Higgins, 1997, 2001). In general, research also supports the positive influence of the perceived emotional value of satisfaction (Eroglu, Machleut and Barr, 2005).

Corporate image refers to several attributes, including being fair, friendly, reliable, modern, adaptable to the changing environment, and responsible to society. Martensen, Kristensen and Gronholdt (2000) indicate that image is an important component of the CS model. In addition, Saeed, Khan and Hussain (2009) suggest that loyalty, corporate image, and expectations have a high impact on satisfaction. Andreassen and Lindestad (1998) posit that corporate image, through a filtering effect, impacts a customer's evaluation of service quality, value, and satisfaction. In other words, corporate image creates a halo effect on CS. In this study, a cumulative or relational level measure reflects a customer's overall impression, and mental picture of the firm represents corporate image (Bloemer, Ruyter and Peerters 1998; Zimmer and Golden, 1988). Consumers who develop a positive mental schema of a brand are likely to have high CS through a halo effect, where all things associated with the brand are similarly valenced. As such, corporate image is hypothesized to have a significant, positive effect on CS.

The determinants of CS are conceptualized in this study. They are customer values of utilitarian benefits, hedonic benefits and corporate image. These utilitarian benefits refer to the functional, instrumental, and practical benefits of consumption offerings, whereas the hedonic benefits refer to aesthetic, experiential, and enjoyment-related benefits (Batra and Ahtola, 1990; Chitturi, Raghunathan, and Mahajan, 2007; Dhar and Wertenbroch, 2000; Strahilevitz and Myers, 1998). In this study, the utilitarian benefits consist of functional value, promotional value, innovative value, social value, and service at shops and call centers. Hedonic benefits are called emotional value in this study.

DATA AND METHODOLOGY

The questionnaire was first pretested with a group of 20 MBA students. Then, personal interviews were conducted with twenty randomly sampled mobile network users of at least 18 years of age with at least four-month experience in using mobile phones. The questionnaire was assessed for its suitability, readability, and possible ambiguity and revised based on the feedback received from both groups.

Four hundred eligible respondents were interviewed in twenty department stores and discount stores spreading across Bangkok. The response rate was 69%. Many respondents (28%) have two mobile phones, and their major service providers are DTAC (41%), AIS (37%), and True Move (21%), respectively. Most of them pay for the bill by themselves (82%). They primarily use their mobile phones for personal matters, work and emergencies. In addition to voice calls, they use several other mobile services, including text messaging (SMS, MMS), wireless Internet access, picture messaging (picture exchange), music downloading, information services (e.g., news, stock quotes, weather, etc.), ringtones and icons downloading, games, voicemail and roaming services (using mobile phones in foreign countries). On average, they spend 53 minutes talking over their mobile phones each day and pay 657 Baht (approximately \$US 22) per month. The ones who use pre-paid and monthly billing programs are roughly equal in number in this study. Seventy-four percent of them have complained (either formally or informally) about the mobile services. Table 1 shows some summary statistics of the data.

Almost all the measures are multi-item scales, including functional value, promotional value, innovative value, social value, emotional value, and corporate image. Generally, the underlying ideas of the measurement have been derived from a previous literature review and the particular items of the scales

are an adaptation of those ideas. Exploratory factor analyses have been conducted on those multi-items, which are supposed to make up the unidimensional scales. For instance, functional value is measured by four items, namely; network coverage, voice quality, frequency of dropped calls, and instantaneous connection. These four items have been factor analyzed and extracted by using a principal component analysis. It was found that these four items load high on a quality factor. Then, the reliability of this unidimensional scale was assessed. The Cronbach’s alpha of 0.9 shows that the functional value is highly reliable. Likewise, other multi-item scales have gone through similar processes. It was found that they are all unidimensional. Promotional value, innovative value, social value, emotional value, and corporate image all exhibited high reliability, with a Cronbach’s alpha of 0.92, 0.88, 0.95, 0.91 and 0.92, respectively.

Table 1: Summary of the respondents’ data

Item	Details
1. Demographic Characteristics	
Gender	Female 65.20%, Male 34.80%
Age	Mean = 28.3 years old (Min 18, Max 62)
Education	61.2 % Bachelors degree, 21.6% High School, 13.8% graduate degrees
Marital status	81.2% single 17.8% married
Income per month	Mean = 21,219 Thai Baht or USD 707 (Min 3,000 or USD 100; Max 300,000 or USD 10,000)
Employment status	68.2% employed, 28.2% students, 3% Housewives and 2.5% unemployed
2. Mobile Phone Usage Behavior	
Network providers	41% DTAC, 37% AIS, 21% True Move
Type of payment	51.25% prepaid, 48.55% postpaid
Length of use per day	53 minutes (Min 2, Max 600)
Amount of payment per month	657 Thai Baht or USD 22 (Min 20 or USD 0.67, Max 7,000 or USD 233)
Compliant	74% yes, 26% No
Satisfaction level	Mean 7.44 from a scale of 1-10 (Min 2, Max 10)

This table shows the summary of the 400 respondents’ data. The first column shows the items on demographic data of the respondents and their mobile phone usage behavior. The second column provides detailed information of the item.

Utilitarian benefits, hedonic benefits, and corporate image are likely to be positively related to CS. In order to determine whether this notion is true, a regression analysis was conducted. Specifically, functional value, promotional value, innovative value, social value, customer service at shops, customer service at call centers, emotional value, and corporate image were regressed on CS.

Ordinary Least Squares estimates were obtained for the following regression equation:

$$\begin{aligned}
 \text{Customer Satisfaction (CS)} = & \alpha + \beta_1(\text{Quality}) + \beta_2(\text{Promotion}) + \beta_3(\text{Innovation}) + \beta_4(\text{Social}) + \\
 & \beta_5(\text{Quality of shop service}) + \beta_6(\text{Quality of call center service}) + \beta_7(\text{Emotion}) + \beta_8(\text{Image})
 \end{aligned}
 \tag{1}$$

RESULTS

The results of the Equation 1 regressions are presented in Table 2. As indicated by the standardized beta coefficients, promotional value, quality of customer service at shops, and corporate image are the three most important factors that have a positive influence on CS. Functional value or mobile network quality comes after these three factors, followed by quality of customer service at call centers. Emotional value has the least positive impact on CS, whereas innovative value and social value have no influences on CS.

In a developing country such as Thailand, the economic benefit of saving through promotional activity has a vital role on CS. This may include promotion based on customer’s usage rates and the compatibility

of promotion with the consumers' lifestyles. Moreover, severe competition during the mature stage of product life cycle for the mobile phone industry triggers users to pay more attention to the promotion.

Table 2: Results of Multiple Regression of Factors Affecting CS

Model	Unstandardized Coefficients		Standardized Coefficients	t
	B	Std. Error	Beta	
(Constant)	0.972	0.368		2.639***
Quality	0.145	0.052	0.139	2.817***
Promotion	0.153	0.049	0.158	3.111***
Innovation	0.055	0.047	0.060	1.171
Social	-0.013	0.042	-0.015	-0.305
Quality of shop service	0.150	0.055	0.155	2.743***
Quality of call center service	0.112	0.047	0.129	2.385**
Emotion	0.117	0.056	0.114	2.089**
Image	0.168	0.068	0.150	2.461**

*This table shows the regression estimates of the equation: Customer Satisfaction (CS) = α + β_1 (Quality) + β_2 (Promotion) + β_3 (Innovation) + β_4 (Social) + β_5 (Quality of shop service) + β_6 (Quality of call center service) + β_7 (Emotion) + β_8 (Image). The first column shows the unstandardized beta coefficients and their standard error. The second column shows the standardized Beta coefficients. The third column shows the t-statistics. ***, ** and * indicate significance at the 1, 5, and 10 percent levels, respectively. $R^2 = .46$, $R^2 = .45$, $F_{8,391} = 41.34$ ****

The finding that customers are interested in promotional value does not come at a surprise as the mobile phone companies in Thailand utilize promotional activities to drive higher call volume and they allow customers to change the promotional packages whenever they need. In general, the mobile phone industry designs their promotion offer for both current customers and new ones. The promotional packages for new customers are generally more attractive to motivate switches from other operators. While there is no innovation in the industry such as 3G, the mobile phone operators depend more on promotional activities for customer acquisition and retention.

The quality of customer service at shops is more important than the quality of customer service at call centers, and takes precedence over mobile network quality. This service delivery should not be limited to the general perceptions of a firm's customer care but should also include the ways the service personnel conduct themselves (Adelman et al., 1994). In this case, customers only notice the observable attributes of the mobile phone service. In fact, the mobile phone operators have spent their budget setting up shops in malls all over Thailand and upgraded their call centers to serve the customers 24 hours. However, there are some activities in which the customers cannot execute through the websites or call centers such as requesting international roaming services, changing addresses (which requires supporting documents), purchasing a telephone number, etc. Customers may find it more convenient to contact the shops than the call centers.

In terms of corporate image, customers may feel more secure in dealing with a company having a strong corporate image. The image may signify reliable service, good maintenance, strong signals, etc. However, according to the finding, image is still secondary to promotional value and quality of customer service at the shop, as the corporate image is not as noticeable. Moreover, the fact that the largest mobile phone operator was previously owned by the controversial ex-prime minister Thaksin Shinawatra could result in some problems with the corporate image of the firm. However, the topic is beyond the scope of this study and is relegated to future studies.

Customers also can easily perceive the functional quality of mobile phone service, as the quality of the mobile phone function such as wide coverage, decent voice quality, infrequent dropped calls, and instantaneous connection, is often noticeable by customers. In other words, they can make judgment whether they are satisfied with the functional value of the mobile phone service.

Innovation is not a determinant of CS for Thais, perhaps because Thais are not willing to take risks. However, the biggest obstacle in the mobile phone industry at the present is the inability for the industry to launch the 3G service, as the National Telecommunications Commission is unable to grant the 3G licenses to any operator at the moment. Therefore, the respondents might not be able to judge or experience any innovation of the mobile phone operators to the full extent unless the 3G technology is offered. Therefore, there is no distinguished innovation in the industry that can result in their satisfaction.

Social value also does not result in CS for Thai respondents. The Telecommunications Consumer Protection Institute, under the National Telecommunications Commission, reports that billing error is the number one complaint of mobile network customers, followed by irresponsiveness of the service personnel. Keaveney (1995) identified factors that cause people to switch service providers. The most serious is a core service failure, such as billing errors or service mistakes. Others include service encounter failures (e.g., speaking with an uncaring or unknowledgeable representative) and inconvenience to the subscriber. Unlike the mobile phone units which are more conspicuous to the customers, the mobile phone operators do not function as status symbol and get recognized by others. This is because the mobile phone operators compete heavily for all groups of customers without any significant criteria for segmentation. Customers that do not see the social value can enhance their satisfaction.

It is noteworthy that the firm level factor, which comprises corporate image, the utilitarian benefits of promotional value and quality of customer services at shops contribute to CS. Specifically, to be competitive in delivering superior CS, the company should project an image in several ways, including: (1) being fair, i.e. it must not take advantage of the consumers; (2) being friendly; (3) being reliable or trustworthy, i.e. the company should do what it promises; (4) being modern; (5) being adaptable to the changing environment; and (6) being socially responsible.

CONCLUSION

This study investigated factors which impact customer satisfaction using the data from mobile cellular phone users in Thailand. Four hundred mobile phone users were interviewed using a multi-item scale questionnaire. Regression analysis was conducted to investigate whether the utilitarian, hedonic benefits and corporate image influence customer satisfaction. Promotional value, quality of customer service at shops and corporate image are found to be the three most important factors affecting CS. Emotional value has the least influence on CS while innovative value and social value has no impact on CS at all. Even though the findings from the study are interesting as it undermines the roles of emotional value, the findings may only be applied to the Thai respondents, which is the main limitation of this study. Future research is recommended to explore this issue in other geographical settings.

At the service level, utilitarian benefits, namely the quality of customer service at shops and promotional value, are significant factors enhancing CS. These factors are remarkably noticeable by customers. In addition, service is more difficult to emulate than promotional strategy, as marketing communication in the mobile phone industry focuses on sales promotion to the extent that promotion is indispensable in this industry. Network quality is found to be somewhat important to CS. Customers may expect that network quality e.g. the strength of the signals, the voice clarity, etc, must be the basic function that the operators have to provide. As they expect the functional value to be provided by the operators, CS level is not very high since the expectation only meets the performance expectations.

Hedonic benefits or emotional value of feeling good, being confident, experiencing enjoyment, and being happy, are the least significant contributors to CS. Surprisingly, the marketing communication of mobile phone operators has turned from a utilitarian focus to a hedonic one. For instance, the tagline of Advanced Info Service used to be “Anytime, Anywhere, Everyone” implying its strong signals and wide network coverage. Now, the tagline is “With you Always”, depicting the warmth and caring attitude

toward customers. The company has also launched a personality symbol, “Mr. Warmth”. Moreover, DTAC, the second largest operator also changed its tagline from “make it easy”, showing an operational attribute to “Feel Good” with 3 o’s to emphasize on the hedonic benefits. With the results from this study, it is questionable whether the customers actually perceive and value the hedonic benefit that both companies want to communicate. Even though several companies are trying to move brand benefits up from the utilitarian level to the hedonic, it is now uncertain whether the action would result in higher CS.

In the fast food industry, McDonald’s has done the same by changing the tagline from “Good Taste, Great Fun”, a utilitarian value to “I’m lovin’ it”, a hedonic one, while Starbuck emphasizes experiential benefits such as sofas and couches in addition to coffee. In several industries, while functional value is recognized by the customers, there is no need to continue emphasizing it. Instead, the marketers decide to move to the hedonic benefit so customers can perceive what they can expect to receive from the brand. However, it is surmised that the inconspicuous hedonic value may be difficult to recognize by customers and may take time to instill in their mind. However, it is interesting to identify other factors that affect CS when the company decides to offer higher brand benefits such as the hedonic or experiential levels. At the firm level, corporate image, which includes corporate social responsibilities, was found to have a positive influence on CS. Although the Thai mobile phone operators all possess strong corporate images and engage significantly in corporate social responsibility activities, these factors lag behind the promotional and quality of service at the shops. From this perspective, marketers in telecommunications network companies should focus on observable benefits instead of the unnoticeable ones that lead to higher CS.

APPENDIX

Appendix A: Results of Exploratory Factor Analyses of Customer Values

Factor and Item Description	Factor Loadings	Eigenvalue
Factor 1: Quality		3.07
Network Coverage	0.87	
Voice Quality	0.89	
Signal	0.87	
Connect	0.87	
Factor 2 : Promotion		4.24
Variety of promotion	0.75	
Fitness of promotion	0.88	
Fitness of lifestyle	0.86	
Save because of promotion	0.87	
Use more because of promotion	0.79	
Worthwhile because of promotion	0.89	
Factor 3 : Innovation		2.99
Good response to 3G	0.78	
Innovative	0.91	
Differentiate from others	0.89	
Creative	0.87	
Factor 4 : Social		3.49
Accept by others	0.92	
Impressive	0.95	
Accept by society	0.95	
Improve my perception by others	0.93	
Factor 5 : Emotion		3.15
Feel good	0.86	
Confident	0.89	
Experiencing enjoyment	0.91	
Feel Happy	0.89	
Factor 6 : Image		4.28
Fair company	0.84	
Friendly company	0.88	
Trustworthy company	0.86	
Modern company	0.86	
Adaptive company	0.84	
Corporate social responsibility	0.78	

This table shows the results of exploratory factor analyses of customer values. The first column lists the six factors and their item descriptions. The second column indicates the factor loadings and the third column lists the Eigenvalue of the six factors.

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