THE EFFECTS OF SERVICE QUALITY AND CUSTOMER SATISFACTION ON CUSTOMER LOYALTY: A CASE OF THAI MOBILE NETWORK INDUSTRY

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Abstract

This research proposes a conceptual framework to examine the effects of service quality and customer satisfaction on customer loyalty. In order to test and prove the conceptual framework, field research was conducted. The questionnaire was designed based on existing constructs in relevant literature. The research target sample consisted of 401 Bangkok-based customers of Thai major mobile service providers, AIS, DTAC, and Truemove. Reliability tests and statistical analyses were performed to confirm the validity and reliability of the data. Besides, these tests and analyses answered the questions concerning this research. The results of the research indicate that of all factors regarding service quality dimension, only customer service factor is significant to customer satisfaction. The other factors are insignificant to the satisfaction of the customers. Meanwhile, customer satisfaction is positively significant to customer loyalty. It is considered very important for mobile service providers operating in a very competitive market such as in Thailand to learn and realize what the exact drivers of customer loyalty are. The research produces useful and beneficial findings which can be adapted by mobile service providers in an attempt to build up and develop successful and sustainable customer loyalty strategies and competitive advantages.

1. INTRODUCTION

Can you imagine how one would live without having a mobile phone in these days? Currently, we can simply say mobile phones are a critical part of our daily life. Mobile phones are about everything. They are just everything one would love to have. They can be your television, internet, social network, music, camera, games, utilities, clock and etc. Above all, mobile phones connect people. The importance of them has been long realized. Recent studies suggest that cell phones have evolved into something more than a simple communication tool, gaining its own place in various aspects of social interaction. For instance, a qualitative study on Australian adolescents revealed that cell phones are a part in young Australians' life (Walsh, White, & Ross, 2008).

Other utilities can be perceived; for example, among the cell phone users in romantic relationships, the more voice calls, the better positive relationship qualities (Jin & Pena, 2010). Other studies showed that the presence of cell phones provide a higher sense of security in potentially harmful situations. This means an increasing value of cell phones, leading cell phone users to perceive cell phones as something they must have (Nasar, Hecth, & Wener, 2007; Walsh et al., 2008). Block (2008), Pies (2009), Choliz (2010) stressed that many people are dependent to new technological devices as they become more useful and important to their daily lives.

Other than their importance in people's life, the world nowadays is so advanced. There are way too many extremely advanced and from-the-future technologies existing already. Mobile phones have been developed to that of expectations too. Nevertheless, all mobile phones need a mobile service provider to provide its signal and other operations. Even the most advanced mobile phone will be totally useless without helps and transmissions from a mobile service provider. On the other side, mobile service providers also depend largely on their customers. Without them, no mobile service providers would survive in the industry. Mobile service providers are willing to do whatever it takes to attract new customers. However, retaining the existing customers is utmost cru-

cial, probably more important than attracting new ones. Experimental studies have shown that retaining customers makes more profits and benefits than acquiring new ones (e.g. Hogan et al., 2003; Lee-Kelly et al., 2003). Reichheld and Sasser (1990) pointed that only a 5 percent improvement of customer retention leads to an increasing profits ranging between 25 percent and 85 percent.

Knowing so, the service providers compete fiercely among each other. Competition is so high in order to win customers' hearts. It is very challenging not only to gain more new customers but also to try not to lose the existing customers to other competitors. One thing able to help a mobile service provider to differentiate itself from others is service quality. Many aspects in this factor may help a firm win customers' hearts, namely network, value-added services, customer service, for example. How can this help? Customers will acknowledge the benefits from being a subscriber of a particular service provider. It creates satisfaction. Yet it also leads to loyalty in the end. From what is mentioned so far, loyalty is what all mobile service providers seek from their customers. The importance of loyalty is that loyal customers are not prone to switch to a new provider because of price, meanwhile they are likely to suggest the business to others (Reichheld and Sasser, 1990; Reichheld and Teal, 1996). This study intends to investigate the impact of service quality and customer satisfaction on customer loyalty in Thailand mobile service industry sector. To be more exact, the study is to investigate 1. to investigate, from specific factors, what else can be a significant factor in term of service quality dimension which is positively significant to customer satisfaction and 2. to investigate how customer satisfaction affects directly on customer loyalty

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Service Marketing

In term of service marketing, services can be generally characterized in to 4 main characteristics which are intangibility, inseparability of production and consumption, heterogeneity, and perishability. The most basic difference widely cited by authors (e.g. Bateson 1977; Berry 1980; Lovelock 1981; Rathmell 1966, 1974; Shostack 1977) is intangibility. Services are simply performances. They are not objects and they cannot be seen, felt, tasted, or touched in the

same way like goods can be. Bateson (1979) cited that intangibility is the critical goods-services distinction from which all other differences emerge. Perishability means that services are unable to be saved (Bessom and Jackson 1975, Thomas 1978). As services are performances that cannot be stored, it is so difficult to synchronize supply and demand. Sometimes demand exists too much and sometimes it exists too little.

Regan (1963) described that inseparability of production and consumption involves the simultaneous production and consumption which characterizes most services. Meanwhile, goods are produced first, then sold and later consumed. In term of services, they are first sold, then produced and consumed simultaneously. Inseparability is also perceived that the producer and the seller are the same entity; thus, this makes only direct distribution possible in most cases (Upah 1980). Gronroos (1978) added that such situation causes marketing and production to be highly interactive. Heterogeneity concerns the potential for high variety of performance of services. The quality and essence of a service can be various fro producer to producer, customer to customer, and day to day. Inconsistency of behavior is a problem when many employees have to be in contact with an individual customer (Langeard et al. 1981, p. 16) Service performance from the same individual can be different as well. Knisely (1979a, p. 58) stated that people's performance day in and day out fluctuates up and down. It is not a certain thing and inconsistent.

Service Quality

Service quality has been a spotlight to be focused on by researchers and practitioners for the past several decades. It has a strong effect on business performance, customer satisfaction, customer loyalty and profitability. Services have unique characteristics; intangibility, heterogeneity, perishability and simultaneously production and consumption (Zeithaml et al., 2009). Normally, it can be seen how well the level of the delivered services matches customer's expectations by using service quality as a measurement (Santos, 2003). For example, Gronroos (1984) pinpointed perceived service quality as "the outcome of an evaluation process, where the consumer compares his expectations with the service he perceives he has received". Moreover, Parasuraman et al. (1988) described service quality as "the overall evaluation of a specific service firm that results from comparing that firm's performance with the customers' general expecta-

tions of how firms in that industry should perform". To survive and increase market share in fiercely competitive market, service offerings which match with customer preferences are in need (Verma et al., 1999). Kekre and Srinivasan (1990) saw that variety of service offerings positively impacts the company's share and ROI while Bayus and Putsis (1999) and Gilbert and Matutes (1993) discovered that high-variety strategy not only develop the company's reputation but it can also be an effective approach to expand sales as it can prevent losing a company's customers to competitors.

Consumers will have a hard time trying to visualize services because they cannot be seen nor touched (Bateson, 1995). One of the service communication strategies that was suggested by Berry and Clark to overcome service intangibility is documentation strategy (Stafford, 1996). Berry and Clark (1986 cited in Stafford, 1996) clarified that facts or figures can be used to present the value of the service. This strategy purposes to assist consumers' evaluation through providing specific and concrete information or verbal tangible cue (Stafford, 1996). Stafford (1996) stated further that the tangibility of service can be increased by using documentation strategy; as a result, it increases advertising effectiveness by raising purchase intention. The company that has high market share finds variety of offerings important which implies that it has a diverse customer base i.e. more heterogeneous customer base (Stavins, 1995). Different offerings were described and considered as differences may be price sensitivity, different product requirements, different supports needed or even different occasions (Porter, 1996).

Network

The clarity of voice and the area coverage are the items to be considered according to Kim et al. (2004) and Lim et al. (2006). Signal strength and sharpness, network stability, availability of the network in remote areas, and ease and quickness of reaching other destinations (e.g. incoming and outgoing calls) are considered in the term of network.

Value-added Services

As value-added services can be seen as intangible objects such as SMS and MMS, WAP, GPRS, music, news, games, ring tones etc. Kim et al. (2004) used

the variety of the services, ease of use and how updated and advanced they are to measure how good the services are. In addition to those mentioned services, these days there are 3G, wifi, edge etc. available for consumers.

MOBILE DEVICES

This category can be measured by the quality, the variety and the design of the offered mobile devices, which were adopted from Kim et al. (2004). Availability of newly-launched mobile devices, availability and variety of each mobile device model are included in the aspect of mobile devices.

CUSTOMER SERVICE

The success of problem resolution, the courtesy of customer service representatives, the help provided by call-centers and the provision of consistent advice are to be evaluated to judge this factor. All of these were utilized by Lim et al. (2006).

PRICING STRUCTURE

Kim et al. (2004) took the reasonability of prices, the variety of pricing schemes and the degree of freedom to choose pricing scheme to consider and measure this factor. Speaking of price, customers can compare this issue among other mobile service providers. This factor can also be measured by customer perception in pricing structure of a mobile service provider compared with others.

BILLING SYSTEM

This dimension consists of the provision of accurate billing, the ease of understanding and resolving billing issues and the billing problem resolution speed, as advised by Lim et al. (2006). Nowadays, there are online service, counter service assistance, pay-via-ATM service etc. as choices for consumers in paying the service and telephone fees.

PLACE

Place is where a company tries to make its products/services available and accessible for consumers (Kotler and Keller, 2005). Freire (2009) added that

places are given their own meanings by consumers. Easy and convenient access to the branch, decoration and atmosphere, there can be measured concerning quality dimension

Customer Satisfaction

Researchers had always paid large attention to the study of satisfaction. It can be said that this is a subjective concept, as it can be inferred from a variety of definitions found in literature. (Kotler, 2003, p. 36) determined that "satisfaction is a person's feeling of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) in relation to his or her expectations". More specifically, the closer the gap between the expectation of the consumers and the actual performance of the product or service, the higher degree of consumer's satisfaction level (Hutcheson and Moutinho, 1998). Various offerings is a way which can help a company to create consumer's satisfaction. Bayus and Putsis (1999) mentioned that variety of offerings assists a company to satisfy heterogeneous consumers' needs and wants more precisely and broader offerings create higher chance that at least one of the company's offerings will meet and match an individual need or individual preference. From Hui (2004)'s perspective, variety of choices helps customers to have more chance to discover the product that meets their preference. Kim et al. (2002) stated as consumer preferences are heterogeneous, consumers demand for products where a variety is available. Schutte and Ciarlante (1998) described about heterogeneity from cultural perspective that in most of Asia countries, consumer needs become more diversified and customers become more demanding with the high growth in consumer buying power.

Customer loyalty

Customer loyalty is often examined from consumer's behavior by measuring items; for example, amount of repurchasing and purchase frequency. A widely-used assumption is that loyalty leads to a number of repeat purchases from the same supplier over a period of time (Egan, 2004). This links with Oliver (1999)'s definition which loyalty is defined as a deep commitment to repeatedly purchase a preferred product/service always in the future, thereby leading to repetitive purchasing same-brand products, despite strong influences and marketing efforts generated to cause switching behavior. Nevertheless, only the defini-

tion of loyalty based on repurchase behavior doesn't provide a holistic view of such complex concept. Hence, alternatives and more comprehensive definitions were proposed by researchers. Dick and Basu (1994) suggested that loyalty contains attitudinal and behavioral elements and debated that loyalty is determined by how strong the relationship is between relative attitude and repeat patronage. Examining loyalty under the attitudinal factors, psychology, favoritism and a sense of goodwill towards a particular product or service can be brought to make a measurement (Oh, 1995 cited by Kim *et al.*, 2004).

Due to the fact that there are many different approaches aiming at the definition and conceptualization of loyalty, there is a general convergence towards the view that both behavioral and attitudinal features must be included. The behavioral view is usually based on the monitoring of the frequency of repeated purchases and brand switches, while the attitudinal approach assumes that loyalty is derived from psychological involvement and preference and focuses on issues such as brand recommendations, resistance to superior products, repurchase intention and willingness to pay a price premium (Cronin and Taylor, 1992).

The purpose of the research is to examine critical factors which lead to customer loyalty in the mobile telephone in Thailand. To be specific, they are service quality and customer satisfaction. In addition to this, the mediation effect of customer satisfaction on the service quality and customer loyalty relationship could also be explored. The researcher adapts the model used by Ilias Santouridis and Panagiotis Trivellas (2010). It is a study which provides knowledge of two main factors, service quality and customer satisfaction, and their relationship with customer loyalty. In addition to the original model, place is further added into service quality dimension. The two mentioned factors do link and can lead to customer loyalty eventually. The model not only does provide such knowledge, it also provides the mediation effect of customer satisfaction on both the service quality and customer loyalty. To be exact, how service quality does lead to satisfaction and satisfaction results in loyalty.

Conceptual Framework

Figure 1 Conceptual Framework
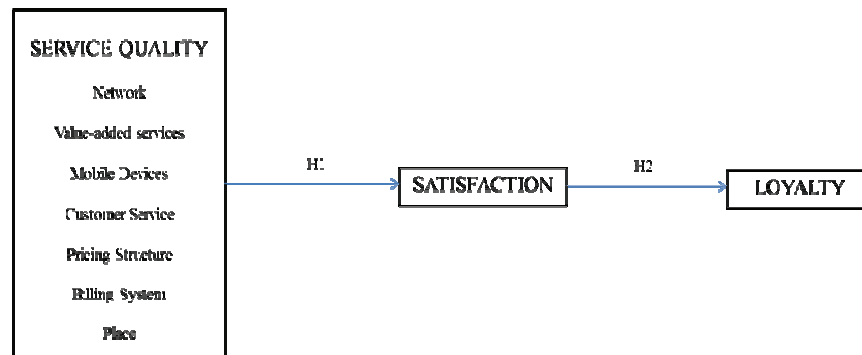
Source: Adapted from Ilias Santouridis and Panagiotis Trivellas (2010)

The causal relationship between service quality and customer satisfaction has been verified by research in several business sectors. As well, this applies in the mobile telephone sector, where a few studies confirmed the positive effect of service quality on satisfaction (Kim et al., 2004; Lee et al., 2001; Lim et al., 2006). From the statement, it can be concluded that service quality relates to customer satisfaction. Impressive service quality may lead to high satisfaction of a customer. In contrast, poor service quality may influence a customer to feel dissatisfied resulting to bad consequences to the company. Therefore, the following hypothesis is proposed;

Hypothesis 1: Service quality affects and has an impact on customer satisfaction.

Several authors have found a positive correlation between customer satisfaction and loyalty (Anderson & Sullivan, 1993; Bolton & Drew, 1991; Fornell 1992). Numerous studies in the service sector have also empirically validated the link between satisfaction and behavioral intentions such as customer retention and word of mouth (Anderson & Sullivan, 1993; Bansal & Taylor, 1999; Cronin & Taylor, 2000) The relationship was further added by Hart and Johnson (1999) mentioning that one of the conditions of true customer loyalty is total satisfaction. Given the fact mentioned above, customer satisfaction has an amount of impacts on customer loyalty. Hence, the following hypothesis is proposed;

Hypothesis 2: Customer satisfaction affects and has an impact on customer loyalty.

3. METHODOLOGY

The study intends to examine the factors which lead to customer loyalty in term of mobile service providers. The target samples will be normal mobile telephone users who live in Bangkok. Business users are not included in the sample because they are not the ones who decide to be a subscriber of a mobile telecommunication service provider nor extend the contract further due to satisfied service quality and his/her satisfaction. The respondents are expected to be 18 years old and above. Using Yamane (1976)'s formular, the sample size of this study is 400. The respondents will have enough experiences concerning their current mobile service providers' service and quality. 140 AIS users, 140 DTAC users, and 120 Truemove users are the amount of samplings wanted in this study.

Measurement Model

Information regarding key constructs and their corresponding scales was obtained by searching the relevant literature; therefore, all constructs were measured using existing scales drawn from literature with some adjustments to the international context. Nework (2 items); value added services (3 items); mobile devices (3 items); customer service (4 items); pricing structure (3 items); billing system (3 items); place (2 items) are adapted from Lim at.al. (2006), while customer satisfaction (18 items) and customer loyalty (5 items) are adapted from Cronin and Taylor (1992) and Aydin and Ozer (2005) respectively.

4. RESULTS

From the result, it shows that the respondents are mostly female with 72.3% out of total. 58.1% of the samples, they are in the age range of between 24 to 29 years old. In the aspect of educational background, 78.6% of all completed and achieved a bachelor's degree. Only 5% succeeded in achieving a level of education above bachelor's degree. The number of percentage of the samples who work as a private officer is as high as 69.6%. 15.7% are students, 8.5% are state officers, and 6.2% are entrepreneur respectively. Concerning mobile phone usage, the table above shows that 35.2% of the sample are a subscriber of DTAC, 34.9% AIS, and 29.9% Truemove. These amounts are with regard to the quota sampling set prior to launching the questionnaires. Out of 100%, 60.6% of the

samples normally spend in the range of 501 - 1,000 Baht for their monthly mobile phone fees. 76.8% of the samples have been subscribed to their respective mobile service providers for 2-5 years. The remaining 23.2% have experienced using the service of their respective mobile service providers for over 5 years.

Initial Analysis

Each of the items was first checked for skewness and kurtosis, and the presence of normality and outliers. In order to obtain a holistic picture of each of the variables across a small range of scores (1-7), histograms and box plots were deemed appropriate. The histograms and box plots were visually examined. Furthermore, an examination of another regression assumption of independent errors which requires no serial correlations between errors in regression model was necessary. Regarding the assumption of independent errors, the residuals should be uncorrelated for any two observations in regression (Field, 2005). The Durbin-Watson test was used to assess this assumption. A test value close to 2 indicates that the residuals are uncorrelated (Field, 2005). The results of the regression analysis in Table 1 revealed that the Durbin-Watson statistics was close to 2.0, therefore, the assumption of independent errors was not violated.

Hypothesis Testing Results

Other than using initial analysis to examine if the data is normally distributed, multiple regression assumption also needs to be met. Based on the assumption of independent errors, the residuals should not be correlated in term of any two observations in regression (Field, 2005). The Durbin-Watson test is utilized to prove this assumption. A result close to 2 predicts that the residuals are not correlated (Field, 2005). Furthermore, the Durbin-Watson score in table 4.4 is found to be close to 2.0. This means the assumption of independent errors are not infringed.

In addition, multicollinearity is in need to be observed (Cavana et al., 2001). Multicollinearity refers to a condition which two or more variables are tightly related. It is indicated by Variance Inflation Factor (VIF). A common threshold value of VIF is 10.0 (Hair et al., 1998; Field, 2005). According to Table 4.4, all VIF values shown in the table are less than 10. Therefore, multicollinearity does not occur. To conclude, the assumption of multiple regressions is not infringed.

Table 1 Multiple Regression Results of Hypothesis 1

H:	Service Quality Dimension (Independent Variable)	Dependent Variable	β	t	Sig	VIF	R²	Durbin-Watson
1.1	Network		0.092	1.803	0.072			
1.2	Value-added services		0.041	0.821	0.412			
1.3	Mobile devices		-0.044	-0.801	0.424			
1.4	Customer Service	Satisfaction	0.137	2.598	0.010	1.560	0.049	2.010
1.5	Pricing structure		-0.009	-0.169	0.866			
1.6	Billing system		0.050	0.937	0.349			
1.7	Place		0.081	1.600	0.110			

Based on the results of multiple regression analysis shown in Table 1, only hypothesis 1.4, customer service has a positive correlation to satisfaction of the customer ($\beta = 0.137$, $t = 2.598$ and $p < 0.05$). On the other hand, the other hypotheses do not have a positive correlation to satisfaction. Hypothesis 1.1, network, does not influence satisfaction ($\beta = 0.092$, $t = 1.803$ and $p > 0.05$). Hypothesis 1.2, value-added services, is not significant to satisfaction ($\beta = 0.041$, $t = 0.821$ and $p > 0.05$). Hypothesis 1.3, mobile devices, does not significantly predict satisfaction ($\beta = -0.044$, $t = -0.801$ and $p > 0.05$). The same way goes to hypothesis 1.5, pricing structure, as it does not significantly predict satisfaction ($\beta = -0.009$, $t = -0.169$ and $p > 0.05$). Hypothesis 1.6, billing system, is not found to be a significant predictor of satisfaction ($\beta = 0.050$, $t = 0.937$ and $p > 0.05$). Lastly, hypothesis 1.7, place, does not influence satisfaction ($\beta = 0.081$, $t = 1.600$ and $p > 0.05$). According to this analysis, service quality dimension, network, value-added services, mobile devices, customer service, pricing structure, billing system, and place, explains only 4.9% of the variation in customer satisfaction.

Table 2 Regression Results of Hypothesis 2

H:	Independent variable	Dependent variable	β	t	Sig
2	Customer satisfaction	Customer loyalty	0.274	5.692	0.000

Based on the result of bivariate regression analysis shown in Table 2, hypothesis 2, customer satisfaction, significantly affects customer loyalty ($\beta = 0.274$,

t = 5.692 and p < 0.05). In conclusion, this chapter presents both significant and insignificant results of the relationship between service quality, customer satisfaction, and customer loyalty. The output shows results which prove service quality does not have a significant impact on customer satisfaction. Meanwhile, customer satisfaction is significant to customer loyalty. As demonstrated in Table 4.4 to Table 4.5, hypothesis 1 is statistically insignificant. On the other hand, hypothesis 2 is significant statistically.

Discussion and Implications

From the results acquired, firstly it shows that most respondents' ages are in the range of 24 to 29 years old. The amount of female respondents is almost three times more than male respondents. In term of educational and occupation background, majority of the respondents have obtained at least a bachelor's degree and are working for private companies. In the aspect of mobile phone usage, most respondents spend 501 to 1,000 Baht a month for their mobile phone fees. Almost four fifth of the total samples have experienced being a member their respective mobile service providers in the range of 2 to 5 years. The rest have experiences more than 5 years. The results obtained from the used regression analysis show that service quality barely and insignificantly leads to customer satisfaction. Of all factors gathered and included in this study's service quality dimension, only customer service factor is significant to customer satisfaction with a significant level of 5%. Unexpectedly, the other factors do not affect customer satisfaction at all. Some even have a negative correlation with. It is very surprising that this kind of result is found. As it could be expected, service quality should have an impact on and does lead to customer satisfaction. Anyhow, with a significant level of 5%, customer satisfaction impacts on customer loyalty. It is quite a big curiosity why this outcome of the study is gained via data gathered from Bangkok residences. What are the real factors and reasons behind? These need to be found and discussed.

The main objective of this research is to examine the effect of service quality and customer satisfaction on customer loyalty in mobile service provider industry in Bangkok. The analysis of the research data shows that service quality is clearly not a major predictor of customer satisfaction. Only one out of seven factors included in service quality dimension has a positive effect on satisfaction of the customers. Such factor is customer service. The other factors totally fail to have an impact on customer satisfaction. One of the reasons which drive to seeing and

getting such result shall be that, currently, the mobile phone users can only see a distinction in customer support offered by the mobile service providers. It can also be perceived in a reverse logic that all mobile service providers offer about the same things and quality in term of service quality. That is why only customer support is distinctive in the customers' point of view. In Bangkok, mobile phone signal can easily be found anywhere. Speaking of value-added services, every mobile service provider offers the very same things. Advanced technologies like 3G, internet, and smart phone utilities are commonly offered and available. So are mobile devices, especially smart phones which are highly demanded by the customers .In term of pricing structure, although there are some little differences among the mobile service providers', but the gap is not that of different. For billing system issue, it is definitely not a big deal. Every provider generates accurate billings and relevant issues are always solved with the customer's pleasures in mind. Lastly, place or service centers aspect, good-atmosphere, well decorated and organized service centers can be expected from all. The customers do not perceive these factors as something which stands out from others.

Going in the same direction with other literatures, this study also finds customer satisfaction positively and significantly affects customer loyalty. It can be easily explained and realized that if one does not feel satisfied, how one would be loyal to something which one is not pleased about. The results strongly and further confirm a positive relationship between customer satisfaction and customer loyalty. There are so many literatures which earlier found and strongly confirmed this positive relationship (e.g. Aydin and Ozer, 2005; Gerpott*et al.*, 2001; Kim *et al.*, 2004; Lee *et al.*, 2001). Based on many literatures regarding this research field, most agreed that customer loyalty is a very important factor for surviving and getting the upper hand in services market sector, especially in a very competitive mobile service provider market such as what it is currently in Thailand. Therefore, it is of great importance for managers and concerned parties of mobile service providers to understand what the drivers of customer loyalty exactly are. The useful findings of this research can be used by mobile telecommunication managers in an attempt to develop and implement practices that will lead to the customers being loyal. Customer satisfaction strongly influences customer loyalty. It should be taken under consideration in order to initiate satisfaction enhancement. Customer satisfaction can be affected by some specific service quality tactics. Most importantly, customer service is the factor which positively affects customer satisfaction. It must be provided with utmost quality.

Future Research

According to the results, the samples are mostly skewed towards particular profiles. Samples shall be aimed to be ones that would better represent Bangkok-resident mobile phone users. There is also a possibility to try adapting the results to other areas with different characteristics. Main provinces from different parts of Thailand shall be included. This would better represent the whole country rather than having just the capital city area only. Similar research projects shall be progressed and executed. Additionally, future study shall add other factors that influence loyalty such as trust and switching costs. Especially for switching costs, a model used to explain customer loyalty would be better if this factor is included. Many authors suggested that when such costs are high, the customers can be influenced to stay with the current mobile service provider in order to avoid these high costs. Therefore, there is a high chance that this factor would play its part in affecting loyalty.

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