Factors Affecting the Customer Loyalty of Subscribers in the Mobile Network Service Industry: A Case Study of Phnom Penh, Cambodia

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Abstract

The number of mobile network subscribers in Cambodia has been increasing so rapidly that many investors are interested in investing in mobile network service industry. The new providers enter the market, while some existing providers leave the market. The competition is very challenging. Thus, customer loyalty plays an important role for the providers to keep their existing subscribers. Drawing from the sample size of 416 mobile network subscribers for questionnaires and 15 mobile network subscribers for in-depth interviewing questions in Phnom Penh, Cambodia, the research is designed to study factors that affect the customer loyalty of subscribers in the mobile network service industry. The objectives of the study are (1) to study how service quality, brand image and pricing are related to customer satisfaction, (2) to study how customer satisfaction, alternatives attractiveness and switching cost are related to customer loyalty, and (3) to explore the competitive strategies for the mobile network providers in Phnom Penh, Cambodia. To answer the above objectives, a mixed-method of Creswell (2009) using a concurrent triangulation design is applied. The findings show that service quality, brand image and pricing are significantly related to customer satisfaction. The researcher also finds that customer satisfaction and alternative attractiveness are significantly related to customer loyalty, while switching cost is not significantly related to customer loyalty. Based on the research results, pricing is the main factor that convinces the subscribers to decide to use their mobile network providers. Service quality and brand image are the next considerable factors. Customer satisfaction is the main factor to predict customer loyalty. Alternative attractiveness is the secondary factors to predict customer loyalty. Switching cost does not have relationship with customer loyalty.

Keywords: Customer Loyalty, Mobile Network Service Industry, Phnom Penh, Cambodia

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ปัจจัยที่ส่งผลต่อความภักดีของผู้ใช้บริการใน อุตสาหกรรมธุรกิจเครือข่ายโทรศัพท์มือถือ: กรณีศึกษา กรุงพนมเปญ ประเทศกัมพูชา

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บทคัดย่อ

ปัจจุบันมีผู้ให้บริการเครือข่ายโทรศัพท์มือถือในประเทศกัมพูชาเพิ่มขึ้นอย่างรวดเร็ว ทำให้ธุรกิจนี้เป็นที่น่าสนใจต่อนักลงทุน มีผู้ให้บริการรายใหม่เข้ามาในธุรกิจนี้ ขณะเดียวกันก็มีผู้ให้บริการบางรายออกไปจากธุรกิจ ทำให้เห็นว่าการแข่งขันมีความเข้มข้นมาก ดังนั้นความภักดีของลูกค้ามีความสำคัญที่ผู้ให้บริการเครือข่ายต้องพยายามรักษาฐานของลูกค้านี้ งานวิจัยนี้เป็นงานวิจัยแบบผสมผสาน (Creswell, 2009) ในเชิงปริมาณใช้แบบสอบถามจำนวน 416 ชุด และเชิงคุณภาพใช้การสัมภาษณ์เชิงลึกจำนวน 15 คน เก็บตัวอย่างในกรุงพนมเปญเพื่อหาปัจจัยที่ส่งผลต่อความภักดีของผู้ใช้บริการในอุตสาหกรรมธุรกิจเครือข่ายโทรศัพท์มือถือ โดยมีวัตถุประสงค์ดังนี้ (1) เพื่อศึกษาคุณภาพการบริการ ภาพลักษณ์ตราสินค้าและราคามีความสัมพันธ์กับความพึงพอใจของลูกค้า (2) เพื่อศึกษาว่าความพึงพอใจของลูกค้า ความน่าสนใจต่อทางเลือกของลูกค้า ต้นทุนในการเปลี่ยนเครือข่ายมีความสัมพันธ์กับความภักดีของลูกค้าอย่างไร และ (3) เพื่อแสวงหากลยุทธ์เพื่อสร้างความได้เปรียบในการแข่งขันสำหรับผู้ให้บริการเครือข่าย ผลงานวิจัยพบว่า คุณภาพการบริการ ภาพลักษณ์ตราสินค้าและราคามีความสัมพันธ์กับความพึงพอใจของลูกค้าอย่างมีนัยสำคัญทางสถิติ นอกจากนี้ความพึงพอใจของลูกค้า ความน่าสนใจต่อทางเลือกของลูกค้ามีความสัมพันธ์กับความภักดีของลูกค้า ในขณะที่ต้นทุนในการเปลี่ยนเครือข่ายไม่มีความสัมพันธ์กับความภักดีของลูกค้าอย่างมีนัยสำคัญทางสถิติ จากงานวิจัยนี้ยังพบว่า ราคาเป็นปัจจัยหลักที่จูงใจให้ลูกค้าเลือกใช้บริการเครือข่ายโทรศัพท์ ปัจจัยรองลงมาคือคุณภาพการบริการ ภาพลักษณ์ตราสินค้า ส่วนความพึงพอใจของลูกค้าเป็นปัจจัยหลักที่ส่งผลต่อความภักดีของลูกค้า ปัจจัยรองลงมาคือความน่าสนใจต่อทางเลือกของลูกค้า ในขณะที่ต้นทุนในการเปลี่ยนเครือข่ายไม่มีผลต่อความภักดีของลูกค้า

คำสำคัญ: ความภักดีของลูกค้า ผู้ให้บริการเครือข่ายโทรศัพท์มือถือ กรุงพนมเปญ ประเทศกัมพูชา

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Introduction

The capital city of Cambodia is Phnom Penh, which is the center of politics, economics, security, diplomacy, and cultural heritage. Phnom Penh is located in the south-central region of the country. The populations of Phnom Penh are 1,501,725. The investment in Phnom Penh is three fourth of industrial investments in the whole country. Transportation in Phnom Penh is three fourth of the whole country. Tourism in Phnom Penh is about 950,000 people per year (Phnom Penh Capital Hall, 2015).

Technology has been having very significant effects on the society in Phnom Penh, as well as the whole Cambodia. It has been changing the people's lives to be easier and more meaningful. Telecommunication is a very simple example of technology, which is having significant effects on the society. Among many types of telecommunication, telephone services, which include fixed-line and mobile, are now very popular and attractive in Phnom Penh, Cambodia. People in Phnom Penh use telephone services for different purposes, such as business, work, family, and entertainment. The number of telephone subscribers has increased more than six times from year 2004 until 2008, but the number of fixed-line subscriber has grown slowly. Cambodian telephone-density at the end of 2008 was 30.93, of which 30.61 was occupied by mobile phone subscribers. In other words, 99% of all the telephone subscribers use mobile service (Council for the Development of Cambodia, 2015).

Table 1 Cambodia's key telecom parameters 2011-2014 (Harpur, 2015)

Category	2012	2013	2014 (estimate)
Total number of fixed-line service subscribers	584,000	420,900	450,000
Total number of mobile service subscribers	19.1 million	20.3 million	21.3 million

The number of mobile service subscribers increased rapidly from 4,100,000 people in year 2008 to 19.1 million people in year 2012. Moreover, the number of mobile service subscriber reached 20.3 million people at the end of year 2013 (BuddeComm, 2015).

Based on the above data, the mobile service industry is very fast-growing and good for investors to invest in that industry. In Phnom Penh, one person may subscribe to more than one mobile network provider. The reasons are due to the competitive strategies of each mobile network provider and the needs of subscribers. Because Phnom Penh is a center of economics, the competition is also very challenging. The charging prices of the mobile telephone network services used to be very high in the past. In 2000, there were only three companies that ran the mobile telephone network services, namely Mobitel, Camshin and Casacom (Minges, Gray, and Firth, 2002).

Those companies enjoyed their prime time without competition. Later, many investors have started to invest in such business. The competition has been very challenging, and the charging prices have started to be lower. Some new companies enter the market, while some existing companies leave the market. Nowadays there are six providers in Phnom Penh: Cellcard, Smart, qb, Metfone, Cootel and Seatel.

In Phnom Penh, it is very challenging for the mobile network providers to compete with each other. Those mobile network providers have been competing with each other to attract as many subscribers as they can. The companies try to improve customer satisfaction to keep old subscribers, while they also use strategies to attract subscribers from the competitors by offering better service quality, offering better pricing and building superior brand image. The better offerings the companies can provide to the subscribers, the more subscribers they can gain, and the larger market shares they can catch. The research is designed to study factors that affect the customer loyalty of subscribers in the mobile network service industry. The research focuses on the people either living or staying in Phnom Penh, Cambodia.

There are three objectives of the study: (1) to study how service quality, brand image and pricing are related to the customer satisfaction; (2) to study how customer satisfaction, alternative attractiveness and switching cost are related to the customer loyalty; and (3) to explore the competitive strategies for the mobile network providers in Phnom Penh, Cambodia.

Research Hypotheses

H1: Service quality is positively related to customer satisfaction.

H2: Brand image is positively related to customer satisfaction.

H3: Pricing is positively related to customer satisfaction.

H4: Customer satisfaction is positively related to customer loyalty.

H5: Alternative attractiveness is negatively related to customer loyalty.

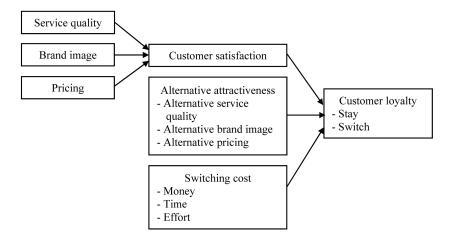H6: Switching cost is positively related to customer loyalty.

Figure 1 Conceptual framework

Review of Literature

Service Quality

Service quality is very important for businesses and researchers, for it has a significant impact on the business performances, customer satisfaction, customer loyalty, and profitability of a company. Service quality is usually used as a tool to measure how well the delivered services match the expectations of the customers (Santos, 2003). Parasuraman, Zeithaml and Berry (1988) suggested that service quality is the overall evaluation of a specific service firm that results from comparing the firm's performance with the customers' general expectations of how the firms in that industry should perform. Service quality is a form of attitude, but not equivalent to the satisfaction, which comes from the comparison of the actual performance with expectations of the customers. Grönroos (1984) defined perceived service quality as the outcome of an evaluation process, where the consumer compares the expectations with the service he or she perceives and received. Service quality is the judgment of the customers about the total excellence or superiority of a service that the customer faces (Zeithaml, 1988). Malik, Ghafoor and Iqbal (2012) studied the impact of brand image, service quality and price on customer satisfaction in Pakistan telecommunication sector and found that service quality has strongly positive relationship with the customer satisfaction.

Brand Image

Barich and Kotler (1991) described brand image as the overall impression made on the public's mind about a company. Brand image is related to physical and behavioral attributes of the company, such as business name, varieties of products and services, and architecture, and related to the impression on the quality which is communicated by each person interacting with the company's customers (Nguyen and Leblanc, 2001). Maclnnis and Price (1987) suggested that brand image is the result of a process. Yuillie and Catchpole (1977) commented that the process starts from ideas, feelings and consuming experiences with the firm that are retrieved from memory and transformed into the mental images. Brand image is the consequence of the evaluation process. Sometimes customers may not have

sufficient information about the company, but they can obtain information from many different sources, such as the advertisements and word of mouth, which will influence the process of establishing and reforming the brand image (Aydin and Özer, 2004). Malik et al. (2012) found that brand image is strongly associated with the customer satisfaction.

Pricing

Pricing refers how the providers set up the charging rates or prices. Different companies set different prices. Pricing is better when the customer feels that the company sets lower price, but pricing is worse when the customer feels that the company sets higher price. Zeithaml (1988) defined price as what is given up or sacrificed to obtain a product. Customer satisfaction is directly affected by price perception, and is indirectly affected by the perception of price fairness (Malik et al., 2012). Hermann, Xia, Monroe, and Huber (2007) commented that the perception of price fairness is negatively affected by the vulnerability of the customers. Ali et al. (2010) stated that price reasonability is significantly related to customer satisfaction. Oliver (1997) mentioned that the price is being judged by the consumers in accordance to the service quality which in turn creates the satisfaction or dissatisfaction, which depends on the principle of equity. The customers want to subscribe to the service provider when they perceive the price as the price fairness. The price perception can be calculated in two ways (Cheng, Lai, and Yeung, 2008). Firstly, price reasonableness tells how the customers perceive the price comparing to the competitors. The next one refers to the value for money that involves comparative position of the service provider based on the price. Malik et al. (2012) found that increase in price showed negative impact on customer satisfaction. This means customer satisfaction is worse when pricing is worse. In other word, customer satisfaction is better when pricing is better. Thus, pricing has positive relationship with customer satisfaction.

Customer Satisfaction

Oliver (1980) stated that customer satisfaction is a summary psychological state when the emotions surrounding disconfirmed expectations are coupled with the prior feelings about the consumption experience of the customer. Churchill and Surprenant (1982) defined that customer satisfaction is the output that is resulted from comparison of the customer's pre-purchasing expected performance with the actual performance and the incurred cost of a product or service. According to Kotler and Keller (2009), satisfaction is a person's feeling of pleasure or disappointment resulting from comparing the product's perceived performance (or outcome) in relation to his or her expectations. Customer satisfaction is significantly related to the expectations of the customers. Hutcheson and Moutinho (1998) claimed that the customer satisfactions are higher when the gaps between the customers' expectation and the actual performance of the product and service are narrower. Zeithamal and Bitner (1996) suggested that the customer's own perceptions of a product or service quality are the primary factor that determines the customer satisfaction. Garvin (1988) stated that the customer satisfaction reduces the consumer's price sensitivity by lessening the price elasticity and reduces the customer losses from the fluctuation in the offered service quality in the short period of time. Santouridis and Trivellas (2010) found that customer satisfaction has a very significant positive effect on loyalty. The same result was also found by Min and Wan (2009).

Alternative Attractiveness

Ping (1993) defined alternative attractiveness as a customer's estimate of the likely satisfaction available in an alternative relationship. It is a favorable situation to retain the customers when there is a lack of the alternative attractiveness offering (Ping, 1993). Sharma and Patterson (2000) commented that if the customers do not know the better alternative suppliers, they may still stay with the company although they perceive less than satisfactory. In contrast, if the customers know the better alternative suppliers due to the availability of better service, better location, full range of services, or lower fees, they will decide to terminate the relationship with the company and go to a new company. Jones, Mothersbaugh, and Beatty (2000) stated that

alternative attractiveness refers to customer perceptions regarding the extent to which viable competing alternatives are available in the market. Shi Zhou, and Liu (2010) commented that alternative attractiveness primarily indicates the consideration of the number of alternatives, brands, quality of products or services, and so on. Min and Wan (2009) found that there is no effect of alternative attractiveness on customer loyalty.

Switching Cost

Porter (1998) defines switching costs as one-time costs facing the buyer when switching from one supplier's product to another's product. Bloemer et al., (1998) and Klemperer (1987) suggested that besides mainly measured with the monetary costs, switching costs are also measured with the time and psychological effort that the customers spend when they deal with a new service provider's uncertainty. Therefore, some parts of switching costs are from the consumers (Shy, 2002). Switching costs are the constraints that discourage the customers not to demand a competitor's products. Switching costs play a key role in the process of establishing strong customer loyalty (Kotler, 1997). He suggested that there are two significant ways to keep loyal customers. The first one is to increasing the level of customer satisfactions, and the second one is to raise the switching costs. Min and Wan (2009) found that switching cost is positively related to customer loyalty.

Customer Loyalty

Oliver (1997) defined that loyalty is a deeply held commitment to rebuy or patronize a preferred product or service consistently in the future, despite situational influences and marketing efforts having the potential to cause switching behavior. Day (1969) commented that customer loyalty refers to a favorable attitude towards a particular brand in addition to purchasing it repeatedly. Repeated purchase alone is not sufficient to illustrate the antecedents and procedures of the development of loyalty, for it can be interrupted by the situational factors like the promotions and the stock availability of the alternatives at the time of making the purchases (Dick and Basu, 1994). Recommending a product or service to other customers and repeatedly patronizing the product manufacturer or service provider are the

most common ways to study the customer loyalty (Lam, 2004; Yang and Peterson, 2004). Dick and Basu (1994) suggested there are two factors to define the customer loyalty, namely: repurchase intention and attitudinal loyalty intention. Repurchase intention and word of mouth are used to evaluate the customer loyalty intention (Boulding, Kalra, Richard, and Zeithaml, 1993). Repurchase intention refers to the process that a customer buy goods or services from the same company. The reason for buying is significantly based on the past purchase experiences. Word of mouth is the process that a customer who has used a product or service shares their experiences to other customers who plan to buy the product or service through word of mouth (Westbrook, 1987). Word of mouth is the attitudinal loyalty intention. Kuo, Wu, and Deng (2009) stated that the customers who do not experience or fully understand the property of a particular product or service may normally depend on word of mouth to acquire the information. Lim (2006) claimed that word of mouth is very important and influential to the attitude and behavior of the customers.

Methodology

The researcher applies a mixed-method of Creswell (2009) using a concurrent triangulation design.

Quantitative Research

The population of this research is the customers who subscribe to the mobile network providers in Phnom Penh, Cambodia. The population of this study is unknown because every customer can buy a SIM card and use everywhere in Cambodia, and thus there is not exact number of customers who subscribes to the mobile network service in only Phnom Penh.

The researcher determines the sample size by using the unknown population formula, which determines the confidence level of 95% and the acceptable sampling error which is not exceed 5% (Yamane, 1967), and the result is 385. The researcher investigates both subscribers who are going to stay with the current mobile network providers and subscribers who are going to switch to other mobile network providers. The researcher adds other 31 samples to prevent errors during collecting the data because some respondents may miss to answer some points and thus their answer

is not valid for the questionnaire. The researcher wants to get the more accurate result as possible. Thus, the total sample size of this research is 416 people. Moreover, the researcher applies the non-probability convenient sampling method to select the respondents because of its convenient accessibility and proximity to the researcher.

The researcher asks three experts in the field of Business Administration to verify the items in the questionnaires by using the Indexes of Objective Congruence (IOC) scores on a range from -1 to 1. After the researcher revises the questionnaires, the researcher conducts a pilot study with 30 mobile network subscribers who are the sample group of the research in order to find out whether or not the individual scores from the instruments are consistent or reliable. The researcher uses Cronbach Alpha to validate reliability in order to insure the consistency. The Coefficient Cronbach Alpha should be equal or greater than 0.7 to ensure the reliability of the research instruments. After having tested, the researcher finds that the result of Coefficient Cronbach Alpha is 0.829.

The researcher goes to supermarkets and amusement parks in Phnom Penh in order to administer those 416 questionnaires. Those 416 questionnaires are administered by randomly selected respondents and collected back by the researcher. The researcher chooses supermarkets and amusement parks to conduct the questionnaires because varieties of people can go to these places.

The collected questionnaires are coded and analyzed in a statistical program called Statistical Package for Social Science (SPSS). The researcher uses SPSS Statistics Version 21 for Mac. The researcher uses descriptive statistic to analyze the demographical frequency of the respondents. Also, the researcher also uses linear regression and logistic regression to analyze and test the hypothesis of the study.

Qualitative Research

Nine interviewing questions are developed and translated to Khmer language by the researcher. The researcher asks help from three experts in Business Administration to check validity of the content of the interviewing questions and reviews the interviewing questions as the experts suggest.

The researcher goes to supermarkets and amusement parks in Phnom Penh in order to administer the questionnaires. At the same time, 15 respondents are selected and asked for help to devote some time for the face-to-face interviewing questions. Each interviewee spends around 20 to 30 minutes to answer the questions. The qualitative content analysis method is used to analyze the collected data. The qualitative content analysis method includes transcribing, coding and interpretation.

Research Results

Inferential Statistic Analysis

There are six hypotheses in the study. Multiple regression analysis and logistic regression analysis are employed to test the hypothesis.

Hypothesis 1
Service quality is positively related to customer satisfaction.
Hypothesis 2
Brand image is positively related to customer satisfaction.
Hypothesis 3
Pricing is positively related to with customer satisfaction.
Hypothesis 4
Customer satisfaction is positively related to customer loyalty.
Hypothesis 5
Alternative attractiveness is negatively related to customer loyalty.
Hypothesis 6
Switching cost is positively related to customer loyalty.

Table 2 Summary of multiple linear regression analysis of service quality, brand image, pricing, and customer satisfaction

				Model Summary			
Model	R	R Square	Adjust R Square	Std. Error of the Estimation	Durbin-Watson		
1	0.739	0.547	0.543	0.45545	1.878		
			ANOVA				
Model		Sum of Square	df	Mean Square	F	Sig.	
1	Regression	103.028	3	34.343	165.563	0.000	
	Residual	85.461	412	0.207			
	Total	188.490	415				
			Coefficients				
		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	0.770	0.160		0.481	0.631		
	Average_SQ	0.302	0.044	0.267	6.814	0.000	0.715	1.398
	Average_BI	0.317	0.052	0.256	6.124	0.000	0.629	1.590
	Average_PR	0.341	0.032	0.405	10.660	0.000	0.761	1.314

Note: a. Predictors: (Constant), Average_SQ, Average_BI, Average_PR

b. Dependent Variable: Average Customer Satisfaction

According to Table 2, R is 0.739, R Square is 0.547, F value is 165.563. R-squared is a statistical measure of how close the data are to the fitted regression line. R Square of 0.547 shows that 54.7% of the variability of the response data is around its mean.

Table 2 shows that the p-value of service quality is 0.000, with t value of 6.814 and VIF of 1.398. The p-value is less than 0.050. Therefore, the researcher rejects the null hypothesis H1. Thus, service quality is positively related to customer satisfaction.

Table 2 shows that the p-value of brand image is 0.000, with t value of 6.124 and VIF of 1.590. The p-value is less than 0.050. Therefore, the researcher rejects the null hypothesis H2. Thus, brand image is positively related to customer satisfaction.

Table 2 shows that the p-value of pricing is 0.000, with t value of 10.660 and VIF of 1.314. The p-value is less than 0.050. Therefore, the researcher rejects the null hypothesis H3. Thus, pricing is positively related to customer satisfaction.

Equation 1 (Unstandardized coefficients):

Customer Satisfaction = 0.77 + 0.302 Service Quality + 0.317 Brand Image + 0.341 Pricing+e

Table 3 Summary of binary logistic regression analysis of customer satisfaction, alternative attractiveness, switching cost, and customer loyalty

Model summary			
Step	-2 Log Likelihood	Cox & Snell R Square	Nagelkerke R Square
1	294.442	0.103	0.185

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	18.028	8	0.021

Classification Table				
		Predicted		
		CL31		
Observed		Switch	Stay	Percentage Correct
Step 1 CL28	Switch	7	52	11.9
	Stay	4	353	98.9
Overall Percentage				86.5

Variables in the Equation						
	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 Average_CS	1.476	0.254	33.697	1	0.000	4.375
Average_AA	-0.746	0.262	8.122	1	0.004	0.474
Average_SC	-0.126	0.233	0.294	1	0.588	0.881
Constant	0.032	1.174	0.001	1	0.978	1.033

Note:Variable(s) entered on step 1: Average_CS, Average_AA, Average_SC.

Table 3 shows that Cox & Snell R Square is 0.103, Nagelkerke R Square is 0.185, Chi-square is 18.028, and the Overall Percentage Correct is 86.5.

The Wald criterion demonstrated that customer satisfaction makes a significant contribution to prediction of customer loyalty (p-value = 0.000). Exp(B) value is 4.375. This indicates that when customer satisfaction is raised by one unit, customer loyalty to "stay" increases. Therefore, based on the statistical criteria, the researcher rejects the null hypothesis H4. Thus, customer satisfaction is positively related to customer loyalty.

The Wald criterion demonstrated that alternative attractiveness makes a significant contribution to prediction of customer loyalty (p-value = 0.004). Exp(B) value is 0.474. This indicates that when alternative attractiveness is raised by one unit, customer loyalty to "stay" decreases. In other word, when alternative attractiveness is raised by one unit, customer loyalty to "switch" increases. Therefore, based on the data analysis, the researcher rejects the null hypothesis H5. Thus, alternative attractiveness is negatively related to customer loyalty.

The Wald criterion demonstrated that switching cost does not make a significant contribution to prediction of customer loyalty (p-value = 0.588). Exp(B) value is 0.881. The null hypothesis H6 cannot be rejected. Thus, switching cost is not positively related to customer loyalty.

Qualitative Research

The results from qualitative research are from the interview of 15 mobile network subscribers in Phnom Penh, Cambodia. The researcher uses in-depth interviewing questions, and the respondents answer as the following.

Eleven interviewees are female, while four interviewees are male. Most of them are between 21 to 30 years old, a few of them are in between 31 to 40 years old and one of them is 20 years old. Most of them are office staff and a few of them are student, government officer and artist. 9 of them use Smart; 4 of them use Cellcard; 1 of them uses Metfone; and 1 of them uses Cootel. Additionally, 2 of them, P8 and P14, also use another as addition. P8 uses Smart as

addition to her official Cootel, and P14 uses Cellcard as addition to her official Smart. 7 of them ever changed the mobile network providers. As interviewed, they experienced the companies cut their money without notifying the reasons and most of their friends and relatives use other providers. Thus, they switched to use the same providers as their friends and relatives.

Table 4 The background of the interviewees and their background of using the mobile network service

Parti-cipant	Gender	Age	Occupation	Salary	Current Provider	Ever changed	Date	Place
P1	Female	21-30	Senior compliance officer	More than USD 600	Cellcard	Yes	07 Feb 2016	Aeon Mall
P2	Female	21-30	Office staff	USD 450 – USD 600	Cellcard	No	14 Feb 2016	Koh Pich
P3	Female	21-30	Office staff	USD 450 – USD 600	Smart	Yes	06 Mar 2016	Koh Pich
P4	Male	31-40	Office staff	USD 450 – USD 600	Cellcard	No	27 Mar 2016	Koh Pich
P5	Male	21-30	Government officer	USD 450 – USD 600	Metfone	Yes	03 Apr 2016	Aeon Mall
P6	Male	31-40	Office staff	UD 300 – USD 450	Smart	Yes	24 Apr 2016	Sovanna Super-market
P7	Female	21-30	Office staff	USD 300 - USD 450	Smart	No	24 Apr 2016	Sovanna Super-market
P8	Female	21-30	Office staff	USD 450 – USD 600	Cootel	No	30 Apr 2016	Koh Pich

Table 4 The background of the interviewees and their background of using the mobile network service (Continued)

Parti-cipant	Gender	Age	Occupation	Salary	Current Provider	Ever changed	Date	Place
P9	Female	25	Admini-strative officer	More than USD 600	Smart	Yes	01 May 2016	Koh Pich
P10	Female	32	Artist	USD 500	Cellcard	Yes	08 May 2016	Koh Pich
P11	Female	20	Student	USD 100	Smart	No	22 May 2016	Koh Pich
P12	Female	48	Farmer	USD 150	Smart	Yes	29 May 2016	Aeon Mall
P13	Male	22	Student	USD 50	Smart	No	29 May 2016	Aeon Mall
P14	Female	-	-	-	Smart	No	05 Jun 2016	Koh Pich
P15	Female	-	-	-	Smart	Yes	05 Jun 2016	Koh Pich

Most of the interviewees feel good about the service quality of their current providers. However, there is still something they want the providers to improve. Signal coverage is the prioritized matter. In some places, especially in the provinces, the signal coverage is poor or even unavailable. This leads to being unable to make calls or surf the Internet. Most of the interviewees say they can accept it but they hope the providers will improve this matter.

Table 5 Summary of the thoughts about the service quality of the interviewees'
current providers

Participant	Coverage area		Voice quality		Connected at first attempt		Calls at peak hours		Additional service	
	(+)	(-)	(+)	(-)	(+)	(-)	(+)	(-)	(+)	(-)
P1	-	Yes	Yes	-	Yes	-	-	-	-	-
P2	Yes	-	Yes	-	Yes	-	-	-	Yes	-
P3	-	Yes	-	-	-	-	-	Yes	-	Yes
P4	Yes	-	Yes	-	Yes	-	-	-	Yes	-
P5	Yes	-	Yes	-	-	-	-	-	Yes	-
P6	-	Yes	-	-	-	-	-	Yes	-	Yes
P7	Yes	-	Yes	-	-	-	-	-	Yes	-
P8	-	Yes	Yes	-	Yes	-	Yes	-	Yes	-
P9	-	Yes	-	-	-	Yes	-	Yes	-	-
P10	Yes	-	Yes	-	Yes	-	-	-	Yes	-
P11	-	Yes	Yes	-	Yes	-	-	-	Yes	-
P12	-	Yes	-	Yes	-	Yes	-	-	-	-
P13	Yes	-	Yes	-	-	-	-	Yes	-	Yes
P14	Yes	-	Yes	-	-	-	-	-	Yes	-
P15	Yes	-	Yes	-	-	-	-	Yes	Yes	-
Total	8	7	11	1	6	2	1	5	9	3

More than two thirds of the interviewees say that their current providers have good brand image. The providers are popular, have a lot of users and always introduce new technology for the users. Furthermore, the providers also have good cooperate social responsibility. They have programs and events to help the community, natural disaster victims and hospitals. They give chances to disabled people to work at their offices. They also put on concerts in the provinces to entertain the people there too. However, there are a few interviewees that do not think their current providers have good brand image. They feel their conversations are listened to by the company. They feel insecure.

Table 6 Summary of the thoughts about the brand image of the interviewees' current providers

Participant	Be stable		Be innovative and forward-looking		Has social contribution		Be the leading company		Has positive image	
	(+)	(-)	(+)	(-)	(+)	(-)	(+)	(-)	(+)	(-)
P1	Yes	-	-	-		-	Yes	-	-	-
P2	-	-	Yes	-		-	Yes	-	-	-
P3	-	-	-	-	Yes	-	-	-	Yes	-
P4	-	-	Yes	-	Yes	-	-	-	Yes	-
P5	-	-	-	-	-	-	-	-	-	Yes
P6	-	-	Yes	-	-	-	Yes	-	-	-
P7	-	-	-	-	Yes	-	Yes	-	-	-
P8	-	-	Yes	-	-	-	-	-	-	-
P9	-	-	Yes	-	-	-	Yes	-	-	-
P10	-	-	Yes	-	-	-	Yes	-	Yes	-
P11	Yes	-	-	-	-	-	-	-	Yes	-
P12	-	-	-	-	-	-	-	-	-	Yes
P13	-	-	Yes	-	Yes	-	Yes	-	Yes	-
P14	-	-	-	-	Yes	-	-	-	Yes	-
P15	-	-	-	-	-	-	-	-	Yes	-
Total	2	0	7	5	5	0	7	0	7	2

Almost all users say the providers' pricing is good and acceptable. The companies have a money exchange program. They can exchange USD 1 of main balance to USD 30 off-net balance. With that USD 30, they can call, text and surf the Internet within the same network. This saves them a lot. However, there was the time that providers cut their money, and they did not know why. They ask the operators, and the companies automatically connect their numbers to some services. So the companies charge them the money, and they do not know in advance at all.

Table 7 Summary of the thoughts about the pricing of the interviewees' current providers

Participant	Charge reasonable price		Has honest pricing structure	
	(+)	(-)	(+)	(-)
P1	Yes	-	Yes	-
P2	-	Yes	Yes	-
P3	Yes	-	-	Yes
P4	Yes	-	-	-
P5	Yes	-	Yes	-
P6	Yes	-	-	Yes
P7	Yes	-	-	Yes
P8	Yes	-	Yes	-
P9	Yes	-	-	Yes
P10	-	Yes	-	-
P11	Yes	-	-	-
P12	Yes	-	-	Yes
P13	Yes	-	-	Yes
P14	Yes	-	Yes	-
P15	Yes	-	-	-
Total	13	2	5	6

8 out of 15 people say that they feel very satisfied with their current service providers. They feel very satisfied with it. Also, the service quality is fairly good as the signal coverage is also available at the rural areas, and country borders. 6 out of 15 are satisfied with their current providers so-so. Even though the service quality is good, the rate is still high. The service quality may be the problem, but the price is low.

Table 8 Summary of how satisfied the interviewees feel with their current providers

Participant	Meet all pre-purchase expectations		Be satisfied with your provider	
	(+)	(-)	(+)	(-)
P1	-	-	Yes	-
P2	-	-	Yes	-
P3	-	-	Yes	-
P4	-	-	Yes	-
P5	-	-	Yes	-
P6	-	-	Yes	-
P7	-	-	Yes	-
P8	-	-	Yes	-
P9	-	-	Yes	-
P10	-	-	Yes	-
P11	-	-	Yes	-
P12	-	Yes	-	Yes
P13	Yes	-	Yes	-
P14	Yes	-	Yes	-
P15	-	-	Yes	-
Total	2	1	14	1

Most interviewees respond that other providers are better than their current providers at some point, but at least there are some points where their current providers are superior to other providers. Their current providers are better in terms of service quality and brand image, but their companies charge higher rates than other providers. In terms of service quality and brand image, there may be other providers better than their providers. But in term of pricing, their current providers are ahead of the others. Some interviewees say that they have very little knowledge about some other providers. They just used to hear the names of the providers, but they never knew them in more detail.

Table 9 Summary of what the interviewees think about other providers

Participant	Alternative service quality		Alternative brand image		Alternative pricing	
	(+)	(-)	(+)	(-)	(+)	(-)
P1	-	-	-	Yes	Yes	-
P2	-	Yes	-	Yes	Yes	-
P3	-	-	-	-	-	Yes
P4	Yes	-	-	Yes	-	-
P5	-	Yes	-	-	Yes	-
P6	-	-	-	-	-	-
P7	Yes	-	-	-	-	Yes
P8	Yes	-	Yes	-	-	Yes
P9	-	-	Yes	-	-	Yes
P10	-	Yes	-	Yes	Yes	-
P11	-	-	Yes	-	-	Yes
P12	-	-	Yes	-	-	-
P13	Yes	-	-	Yes	-	Yes
P14	Yes	-	Yes	-	-	Yes
P15	-	-	-	-	-	Yes
Total	5	3	5	5	4	8

Most of them do not have concerns about money, time and effort if they have to switch to other providers. They would just spend a little only. It is very easy to change. The SIM card is cheap and available at the stores near home. However, 11 of them are concerned a lot about their relatives, friends or business partners who would call them at their old numbers and could not reach them. They need to send text messages to friends to inform them that they have changed number. Not all 100 people in their contact list that they would send messages to. They would just send to those who are closest to them. The remaining people still would not know their new number. 3 of them are not concerned much at all. They would not worry that other people would call them at old numbers because social media, like Facebook and Line, can help solve this concern. Their friends can contact them on Facebook if they cannot contact them by phone.

Table 10 Summary of what the interviewees will be concerned about if they have to switch to other providers

Participant	Spend a lot of money		Spend a lot of time		Spend much effort		Worry people would call previous number	
	(+)	(-)	(+)	(-)	(+)	(-)	(+)	(-)
P1	Yes	-	-	-	-	-	Yes	-
P2	Yes	-	Yes	-	Yes	-	-	Yes
P3	Yes	-	Yes	-	-	-	Yes	-
P4	-	Yes	-	Yes	-	Yes	Yes	-
P5	-	Yes	-	Yes	-	Yes	-	Yes
P6	Yes	-	-	-	Yes	-	Yes	-
P7	-	Yes	-	Yes		Yes	Yes	-
P8	-		Yes	-	-	-	Yes	-
P9	-	Yes	-	-	-	-	Yes	-
P10	-	Yes	-	Yes		Yes	Yes	-
P11	-	Yes	-	Yes	Yes	-	-	Yes
P12	-	Yes	-	Yes		Yes	-	-
P13	Yes	-	-	-	-	-	Yes	-
P14	-	-	-	-	-	-	Yes	-
P15	-	-	-	-	-	-	Yes	-
Total	5	7	3	6	3	5	11	3

Almost all of the interviewees show that they plan to stay with their current providers. They are satisfied enough with what their current providers offer to them. They hope their current providers will keep improving their weaknesses.

Table 11 Summary of how loyal the interviewees are toward their current providers

Participant	Recommend to friend or relatives		Say positive things to other people		Plan to stay with current provider	
	(+)	(-)	(+)	(-)	(+)	(-)
P1	-	-	-	-	Yes	-
P2	-	-	-	-	Yes	-
P3	Yes	-	Yes	-	Yes	-
P4	-	-	-	-	Yes	-
P5	-	-	-	-	-	Yes
P6	Yes	-	-	-	Yes	-
P7	Yes	-	-	-	Yes	-
P8	-	-	Yes	-	Yes	-
P9	-	-	-	-	Yes	-
P10	-	-	-	-	Yes	-
P11	Yes	-	-	-	Yes	-
P12	-	-	-	-	-	Yes
P13	Yes	-	Yes	-	Yes	-
P14	-	-	-	-	Yes	-
P15	-	-	-	-	Yes	-
Total	5	0	3	0	13	2

13 of them make suggestions and recommendations on service quality. 4 of them make suggestions and recommendations on brand image. 11 of them make suggestions and recommendations on pricing. 2 of them make suggestions and recommendations on number of users. 2 of them make suggestions and recommendations on customer service. Almost all of the interviewees are very concerned about service quality. They want providers to expand the signal coverage to be available throughout the whole country, to improve the network system and to speed up the Internet. Almost all of the interviewees are very concerned about pricing too. They want providers to charge lower prices.

The providers should charge a lower price, but they can gain a lot of users. A smaller margin but larger number of users is very good for business and the Cambodian people. And a lot of users will lead to more users because people who use the same providers spend less than using different networks. They also suggest that new providers increase their advertisements and promotions because she does not know much about some new providers. How can she switch to use new providers when she does not know about their products?

Table 12 Summary of the suggestions and recommendations that the interviewees give to the providers

Participant	Service quality	Brand image	Pricing	Number of users	Customer service
P1	-	-	Yes	-	-
P2	Yes	-	-	-	-
P3	Yes	-	Yes	-	-
P4	Yes	-	Yes	-	Yes
P5	Yes	-	Yes	-	-
P6	Yes	-	Yes	-	-
P7	Yes	-	-	-	-
P8	Yes	Yes	Yes	-	Yes
P9	Yes	Yes	Yes	-	-
P10	Yes	-	Yes	Yes	-
P11	Yes	Yes	-	-	-
P12	Yes	-	-	-	-
P13	Yes	Yes	Yes	-	-
P14	-	-	Yes	-	-
P15	Yes	-	Yes	Yes	-
Total	13	4	11	2	2

Discussions

The research findings are discussed based on the research objectives of the study as follows: (1) to study how service quality, brand image and pricing are related to the customer satisfaction, (2) to study how customer satisfaction, alternative attractiveness and switching cost are related to the customer loyalty, and (3) to explore the competitive strategies for the mobile network providers.

The results of in-depth interview and multiple linear regression show that pricing has a strongly significant relationship with customer satisfaction. It is the main factor to predict the customer satisfaction. Subscribers use the providers who could offer them reasonable pricing and have fair pricing structures. Service quality is the following factor to predict customer satisfaction. Improving signal coverage, voice quality and additional services is the concern that most subscribers raise. Brand image is also another factor to predict customer satisfaction. Even though it has the least significance, providers cannot overlook it. Building up a good brand image needs budget, time and effort, but it gives back a lot of benefits to the providers. In the current trend, brand image is going on its way to be an important factor in the Cambodian people's purchasing behavior.

The results of in-depth interview and binary logistic regression show that customer satisfaction is positively related to customer loyalty. The satisfied customers are willing to continue to use the current providers and recommend the current providers to their friends and relatives. To improve customer satisfaction, providers need to improve service quality, brand image and pricing. Another finding is that alternative attractiveness has a negative relationship with customer loyalty. When the competitors offer better options, the subscribers tend to be attracted by them. It is the same thing for providers. When the providers want to attract subscribers from their competitors, they need to offer better options. The researcher also finds that switching cost is not positively related to customer loyalty. Subscribers do not think they would spend much money, time and effort if they need to switch to other providers. However, they are still concerned that their friends or relatives cannot reach them at their old numbers. Since the social media is now very popular, this issue is not the big problem for some subscribers.

Based on all hypotheses testing and interviewing questions, the researcher finds that pricing is the main factor that convinces subscribers to decide to use their network providers. Providers should charge lower prices, but they can have a lot of users. Smaller margins but larger number of users is very good for business and Cambodian people. And a lot of users will lead to more users because people who use the same providers spend less than different providers. Pricing structure should be clear and fair. Also, almost all of the interviewees are concerned much about service quality. They want providers to expand the signal coverage to be available throughout the whole country, to improve the network system and to speed up the Internet. The interviewees also feel good when their providers contribute to the community, hospital or natural disaster victims. Some interviewees do not have information of some providers at all, and thus the providers should improve their marketing strategy to make themselves known by potential users. The customer service should be friendly, resourceful and helpful. The interviewees experience unfriendly call center officer who asks them to wait and would call them back after finding answers of their encountered problems, yet they still do not get the answers till now.

Recommendations

For Providers

According to the research, 2 interviewees want to use the providers that have a lot of users. Making transaction within the same networks is cheaper than different networks. Therefore, providers should introduce marketing strategy to increase the number of their users. Most subscribers feel satisfied with their current providers' service quality. However, they still experience a lot of problems about service quality. Improving service quality is a need for providers as the research show positive relationship of it with customer satisfaction and 13 interviewees suggest in the in-depth interview.

New providers come into the market with reasonable charging rates. Their pricing is good, and they offer interesting promotion programs to the subscribers. It is the fact that people want good products with low prices. Therefore, providers

should try to minimize the operational costs to lower the charging rates to compete with other providers. Also, pricing structure should be fair and clear-cut according to actual uses of the subscribers. Pricing is the main factor to predict customer satisfaction and 11 of the interviewees suggest for a more reasonable pricing.

The research shows that brand image has weak effect on customer satisfaction and 4 interviewees suggest for better brand image form providers. Providers should have an amount of budget used to build their brand images. It is so sad that some subscribers do not have information about some providers. The providers have to make sure that their brand awareness, products, services, and promotion programs are known by the potential subscribers.

Other than above factors, communication is also very important. 2 interviewees suggest for better customer service. Customer service should be friendly, resourceful and helpful. This sounds easy, but not easy when you do. Dealing with people tasks is not easy. Providers should train their call center officers and front office staff to be professional while dealing with the subscribers. Also, notification message to subscribers should be in both Khmer and English. There are a lot of subscribers who cannot read English.

For Subscribers

When the subscribers experience any problems, they should report to their providers. Their feedbacks are very important for the providers to improve the lacks and for the subscribers themselves to receive better offerings. As in the research, some interviewees ignore when they meet the problem and do not feedback to the providers. Subscribers should seek for the information and promotion programs of other providers. There are other providers who are competing with their current providers to offer them better options. Lack of information of other providers makes them think that their current providers are already the best, but this may not be true.

Limitations

Because any customer can buy a SIM card and use it everywhere in Cambodia, there is not an exact number of customers who subscribes to the mobile network service only in Phnom Penh. Therefore the population of this study is unknown.

Due to the difficulty to differentiate those who live permanently or just commute to work in Phnom Penh, the researcher chooses to study all people in Phnom Penh, regardless of whether he/she lives there permanently or just commutes to Phnom Penh.

The main target of mobile subscribers the researcher studied is the individual subscriber. The researcher ignored corporate subscribers.

Due to the limited length of the study, the researcher used non-probability convenience sampling technique, which is where subjects are selected because of their convenient accessibility and proximity to the researcher. Due to the use of non-probability convenience sampling technique, the result of the study may not fully represent to the whole population at all.

Suggestion for Future Research

The future research should study the case study of whole Cambodia. The subscribers buy SIM cards and can bring to use anywhere in Cambodia, so it is more accurate to study the whole Cambodia. Also, the results of this research are based on the perception of subscribers. It would be more informational if the next researchers design the research to study the perception of providers about their strategies to compete in the market.

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