

Investigation of the Consumer Satisfaction with Quality of Mobile Phone Service -A Case Study of Viettel Telecom Company

Nguyen Huy Tan¹ Hsiao-Tseng Lin^{2*}

¹EMBA , Department of Business Administration, Meiho University
trang1189.acb@gmail.com

^{2*} Corresponding Author, Associate professor, Department of Information Management,
Meiho University x00002018@meiho.edu.tw

ABSTRACT

The objective of this research is to investigate customer satisfaction with quality of Viettel's mobile phone service. The following procedures are conducted in this work: (1) Research design, (2) Research process establishment, (3) Research limitation and theoretical background, (4) Participants confirmation and sampling, (5) Data collection, and (6) Data analysis.

Through direct interview with 250 questionnaire samples, data analysis results helped to test unsuitable variables and build final scales of the research with 20 observed variables of 5 factors, including (1) Network quality; (2) Price; (3) Promotion; (4) Value Added Services; and (5) Customer Care Service, to assess customer satisfaction with quality of Viettel's mobile phone service.

In this research, regression analysis is applied to identify factors affecting customer satisfaction. The Customer Care Service was one of the most important key factors among five research factor groups affecting the customers' satisfaction with the quality of Viettel's mobile phone service. The Quality of Mobile phone network is ranked the second which is followed by the Price.

Moreover, the customers' recommendations about how to enhance the quality of Viettel's mobile phone service are collected and analyzed.

The research had some shortcomings with sample size as well as analysis technique; however, research's results could be served as the basis for proposing relevant recommendations in policy making as well as service administration to improve competition for Viettel Telecom Company in Vietnam's telecommunications market.

1. Introduction

Over the last few years, telecommunications and information technology sectors in Vietnam have continuously developed, and led to the development of infrastructure system, actively contributed to socio-economic development. Although the economy still faced many difficulties in 2011 due to continuously negative influence of global economic crisis, telecommunications and information technology sectors have continued to develop and obtain many important achievements. Telecommunications infrastructure has been constantly modernized, synchronously developed, met international standards with nationwide coverage, and provided services with good quality and better satisfies the growing demands of users. As of December 2011, there

were 127.3 million mobile subscribers nationwide, with a density of 150 subscribers per 100 people. The number of mobile phone subscribers has been growing quickly with an average growth rate over the past five years at 31.3% in 2007 and 14.64% in 2011, respectively. In 2012, Vietnam telecommunications and information technology market had a lot of big changes due to new "rules". Some businesses gave up the market, for example, the case of the Vimpel com group, Russia; after struggling for 4 years, the investor had withdrawn from Vietnam by selling out its shares in Beeline network to Gtel Mobile network for \$ 45 million, which was because Vimpelcom considered that it could hardly get any more growth in Vietnam market. S - Fone Company, a joint venture company between SK - Telecom Co., Ltd, a Korea company with Saigon Posts and Telecommunications Joint stock company in Vietnam has sacked most employees since 2003 and suffered from salary debts. Vietnamese Government has issued Decision No. 32/2012/QD-TTg on July 27th, 2012 by the Prime Minister to approve National telecommunications development plan until 2020. Accordingly, each important telecommunications service, such as mobile phone, broadband internet, fixed long distance and international phone must have at least three service suppliers to ensure competition. This plan ensures that Vietnam telecommunications market will develop effectively on the basis of creating a fair competition environment for the market. Besides, it is necessary to reorganize that telecommunications businesses, especially state-owned enterprises which usually do not operate efficiently, allow them to transfer, purchase, and sell or merger telecommunications businesses to establish from three to four strong corporations, or companies.

Currently, Vietnam mobile telecommunications market still remains five major suppliers, including Viettel, Vina Phone, MobiFone, Vietnam Mobile, and Gtel Mobile. S-Fone is waiting for bankruptcy, basically, there are no customers using S- Phone network. According to the white paper (2012), market shares of these operators are Viettel (40.78%), Vina Phone (30.07%), MobiFone (17.90%), Vietnam Mobile (8.04%), and Gtel Mobile (3.21%). From the factors of the mobile telecommunications market Vietnam presented in the previous section, it can be observed that Mobile Telecommunications market has shown signs of saturation, market shares of network suppliers are relatively stable, and concentrates up to 88.75% in the three largest mobile operators including Viettel, Vina Phone and MobiFone; two rests of small mobile operators including Vietnam

Mobile and Gtel Mobile only account for 11.25%.

According to the latest statistical data published in the white paper on information technology and communications and statistics on Vietnam information technology and telecommunications 2012, market shares of mobile phone subscribers of all service providers in 2012 are tabulated as Table 1 and Figure1.

Table 1: The market share of all service providers in Vietnam in 2012

No	Suppliers	Number of subscribers	Market shares	Ranking *
1	Viettel	51,912,940	40.78%	1
2	Vina Phone	38,279,110	30.07%	2
3	MobiFone	22,786,700	17.90%	3
4	Vietnam Mobile	10,234,920	8.04%	4
5	Gtel Mobile	4,086,330	3.21%	5
Total		127,300,000	100.00%	

*: Ranking is based on the market shares.

(Source: The white paper on information technology and communications and statistics on Vietnam information technology and telecommunications 2012)

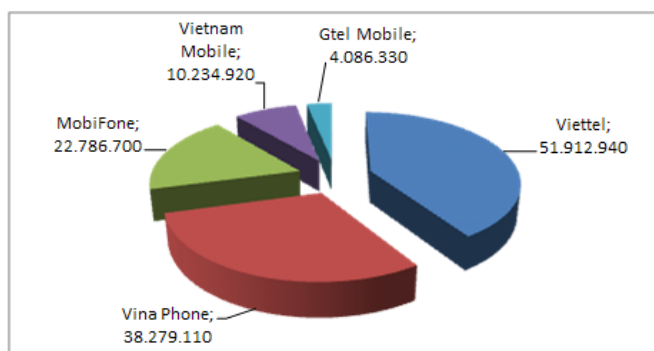


Figure 1: The Market Share of the Mobile Service Providers in 2012

After Vietnam has joined the WTO, competition in the telecommunications sector has become increasingly fierce. Mobile telecommunications suppliers are greatly influenced by consumer satisfaction. Therefore, the research on Researching Customer Satisfaction with Quality of Viettel's Mobile Phone Service has been chosen in order to give objective judgments about the first position in the consumers' mind as well as forecasts for the future of Viettel's mobile phone network in Vietnam's telecom market.

Viettel Telecom Company is a military-backed Vietnamese-owned telecommunications firm, which takes responsibility for inheriting rights, legal obligations and legitimate interests of Military Electronics Telecommunication Corporation. Viettel Telecom Company is completely owned and operated by the Ministry of Defense and it is a military enterprise dealing

business in the field of posts - telecommunications and information technology. With the slogan "Say it your way", Viettel always tries to develop firmly during its operation. Viettel is now the biggest Telecommunication and Information technology in Vietnam, which is listed among the world's fastest growing telecom operators and placed among 15 leading telecom companies in terms of subscribers. Viettel has currently operated in seven countries over Asia, Latin America and Africa, and had a total population of over 190 million people. In 2012, Viettel's revenue reached 7 billion USD with more than 60 million subscribers worldwide.

2. Literature reviews

2.1 Services and Service quality

According to the Oxford Dictionary, Service technology is defined as "Providing services, not commodities", and "Commodity" is defined as a kind of "Portable property". Among these definitions, it is assumed that manufacturing industry provides specific and tangible commodities; however, service industry provides something intangible. According to modern marketing researchers, Kotler and Armstrong, service can be defined as an activity or an advantage which is given by one party to another party which is basically intangible and will not affect any ownership. (Kotler and Armstrong, 1999)

American researchers Zeithaml and Bitner consider that service is the action, the process, and the method to perform a certain task in order to create useful value for customers (Valarie A Zeithaml & Mary J Bitner, 2002).

Mobile telecommunications service is a package of many activities, including intangible factors, creating value chain, bringing about aggregate profits for demands on transmitting, and receiving mobile information to customers. In particular, it can be divided into two categories: basic service and value added service. Basic service is a traditional service including calling and sending text messages with communication tasks from the speaker (sender) to the listener (receiver) without any changes in features or contents of information. Value added services are additional services creating more utility for customers. These services operate on the telephone network or Internet. There are a variety of value added services depending on each supplier such as ring back tones, missed call alert. (Xuan Duong, 2009).

On the other hand, service quality is a controversial and debatable concept; researchers had many difficulties in defining and measuring service quality without any consistency (Wisniewski, 2001). Every customer usually has different perceptions of service quality; therefore, the involvement of customers in developing and evaluating service quality is very important. In service sector, service quality is a function of customer perceptions. In other words, service quality is determined basing on customers' perceptions related to their individual needs. Understanding service quality is the basis to implement measure to improve service quality of mobile phone network. Thus, it plays not only an important role in establishing development goals, but also directing Viettel

to taking advantage of its strengths in the best ways. Based on the Industry standard TCN 68-186:2006, telephone services in terrestrial mobile telecommunications network - Quality standards, quality of telecommunications services defines that service quality is the aggregate result of indicators indicating satisfaction level of users with services (Industry standard TCN 68-186:2006). Service quality can be investigated by its characteristics. Generally, service quality includes preeminence, product specificity, supply characteristic, demand satisfaction, value creation.

2.2 Tools for assessing service quality

There are four methods to assess service quality: (1) The importance and performance analysis model (Importance - Performance Analysis - IPA); (2). Service quality servqual model (Service Quality - SERVQUAL); (3) The performance-only measure of service quality (Just Performance - SERVPERF); and (4) The content-specific scale - LODGSERV - for assessing service quality.

Among these methods, SERVQUAL model is considered to be the most advantageous tool (Parasuraman, A., Zeithaml, V.A. and Berry, L.L. 1988). In this model, service quality can be explained based on the difference perceived service quality and expected service quality of customers. The bigger the difference is, the higher the service quality is, and service quality consists of five components. (Parasuraman, A., Zeithaml, V. A. and L. L. Berry, 1994)

2.3 Components for service quality

Among all the aspects of the marketing mix, price is the most important one, which creates sales revenue, the rest are all costs. Investigating consumers' opinions about pricing is important as it may indicate how they value what they are looking for as well as what they are willing to pay. Woodruff et al (1983) found that prices of the product will affect customer satisfaction. To formulate a reasonable price is an important mean to increase investor satisfaction. However, impacts of price on customer satisfaction are paid less attention to the researchers than other factors (Varki and Colgate, 2001). Zeithaml and Bitner considered that service price may have great impacts on awareness of service quality, satisfaction and value. Due to intangible characteristic of service product, it is very difficult to evaluate before purchasing, price is often considered as an alternative tool affecting satisfaction with services that consumers use.

Promotion is the business of communicating with customers. It may provide information that will assist them in making a decision to purchase a product or service. The pace and creativity of some promotional activities are not familiar with normal business activities. Chen found that different categories of promotional products in different ways under the willingness to buy, in which there are differences, positive effects on cognitive value (Chen 2005). Customer care can be considered as an activity, a measure of service quality of businesses. In the book "Customer care and its roles in current businesses", the author John E.G Bateson define that customer care is

directing businesses' activities toward customers. It is the process of analyzing and resolving relationship between service organization and target customers (John E.G Bateson, 2002).

2.3 Research Model

Based on the Industry standard TCN 68-186:2006, telephone services in terrestrial mobile telecommunications network is quality standards, and theoretical basis is mentioned above, especially, two research models on satisfaction research with mobile communication sector by Pham Duc Ky-Bui Nguyen Hung (2007).

The model of customer satisfaction with Viettel mobile communication network is established based on SERVQUAL scale, which included five components: Network quality, Price, Promotion, Value added services and Customer care service. This relationship and the variables of the framework can be illustrated by Fig.2 and Table as followings.

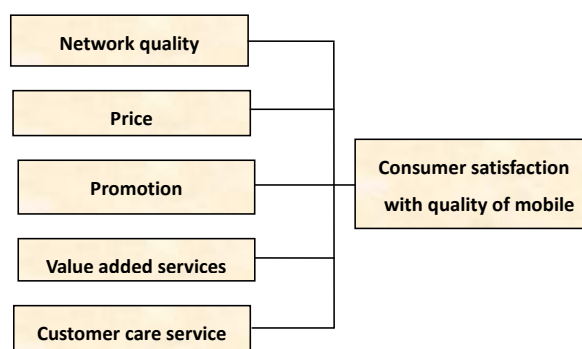


Figure 2: The Research Model of this work.

Table 2: Variables of the Framework

Variables	Sub-Variables	Theoretical Support
Network quality	Wide area coverage, Voice quality, Successfully set-up calls, Network congestion and dropouts, Accuracy of calculating charges	Philip Kotler (2002); Parasuraman (1994)
Price	Listed call and message charges, Listed value added services, Discounts	Philip Kotler (2002).
Promotion	Sales promotion, Advertising, Sales force, Public relations	Philip Kotler (2002)
Value added services	Various value added services, Ways to use value-added services easily	Philip Kotler (2002)
Customer care service	Easily contacting call centers, Many transaction and customer support centers, Friendly attitudes of reception staff, Quick and accurate settlement to complaints, Right implementation of commitments by network suppliers	Philip Kotler (2002)

2.4 Research hypotheses

Hypothesis H1: Network quality has positive relationship to consumer satisfaction with the quality of Viettel's mobile phone service.

Hypothesis H2: Price plays an important role in consumer satisfaction with quality of Viettel's mobile phone service.

Hypothesis H3: Promotion has positive relationship to consumer satisfaction with the quality of Viettel's mobile phone service.

Hypothesis H4: Value added services have positive relationship to consumer satisfaction with the quality of Viettel's mobile phone service.

Hypothesis H5: Customer care service has an important role in consumer satisfaction with quality of Viettel's mobile phone service.

3. Research method

3.1 Participants, sampling, and Data Collection

The participants of this research are Vietnamese customers living in Ho Chi Minh City and Tien Giang provinces. Respondents are people who directly adopt Viettel's mobile phone service. In this city/province, it has the biggest number of customers using Viettel's mobile phone service. The age of interviewed customers is ranged from 14 years or older. They can be male or female with all types of careers. As mentioned in research limitations, the survey was only carried out in some representative provinces/cities in Vietnam and a limited number of 250 customers using mobile phone service of Viettel Telecom Company. According to Uma Sekaran (2012), the sampling process is a procedure to select a sufficient number of elements of people; therefore, analyzing samples can be implemented to generalize characteristics or features of population factor. According to Anderson and Gerbing (1988, cited in Do, 2009), a sample with size of 150 or more is sufficient to achieve forecasted parameters with small standard deviation and supply suitable a convergence solution models. In addition, based on released sample size by Krejcie & Morgan (1970), to ensure the number of analyzed samples, 250 samples are surveyed in this study. In addition to main data collecting from contents of the survey, the research also used secondary data related to general information about customers using Viettel network.

To extend the scope of this research, non-probability sampling method is applied. Based on the information collected from consumers using Viettel's mobile phone service, I conducted the survey to choose position at pre-chosen location. Data collection was conducted in Mytho City of Tien Giang provinces and district 1 of Ho Chi Minh City from August 15th to October 30th, 2013. I decided to conduct a survey in My Tho City and District 1 of Ho Chi Minh City because these two places represent two urban areas of Vietnam. Besides, Viettel's transaction stores are widely operating in My Tho City and District 1 of Ho Chi Minh City. Here, there are such participants

taking in surveying as managers, workers, farmers, housewives, high school students; university students, salesmen, and officers. All of the respondents are Vietnamese, who are using Viettel's mobile phone service. Before giving out the questionnaires, I had to make sure that the respondents were using Viettel's mobile phone service. The survey was then conducted only if the respondents met this condition.

4. Research results

4.1 Characteristics of the consumers

Characteristics of consumers of this study are tabulated as Table 3.

Table 3: General information of interviewed customers

Variables	Frequency	Percent (%)
Gender	250	100.0
Male	127	50.8
Female	123	49.2
Place of residence	250	100.0
HCMcity	129	51.6
Tien Giang Province	121	48.4
Age	250	100.0
14 – 18	11	4.4
19 – 22	91	36.4
23 – 40	64	25.6
41 – 50	41	16.4
50 – 60	28	11.2
> 60	15	6.0
Occupation	250	100.0
Manager	49	19.6
Worker	21	8.4
Farmer	15	6.0
Housewife	28	11.2
Student	11	4.4
High school students	22	8.8
Salesman	42	16.8
Officer	62	24.8
Monthly income	250	100.0
< 2 M VND	45	18.0
2 to 5 M VND	105	42.0
5 to 10 M VND	85	34.0
10 to 20 M VND	13	5.2
> 20 M VND	2	0.8

4.2 Summary results of regression

Regressive results are shown in Table 4. And it is indicated that after factors F1, F2, F3, F4, F5 are used in the model, R-Squared coefficient are 0.256, 0.428, 0.480, 0.473, 0.499, 0.509, respectively.

Table 4: Regressive results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.740	0.045		82.905	0.000
customer care service	0.516	0.045	0.506	11.406	0.000
quality of mobile networks	0.422	0.045	0.414	9.329	0.000
value-added services	0.231	0.045	0.227	5.115	0.000
promotion	0.170	0.045	0.167	3.755	0.000
price	0.110	0.045	0.108	2.429	0.016

These results reveal that independent plays important roles in explaining changes in dependent variables. Thus, multiple linear regression model can be described as following.

$$Y_i = \beta_0 + \beta_1 F_1 + \beta_2 F_2 + \beta_3 F_3 + \beta_4 F_4 + \beta_5 F_5 + u_i$$

To measure multicollinearity between independent variables, variance inflation factor (VIF) is used. Variance inflation factor has close connection with Tolerance. In fact, it is the inverse of tolerance,

$$VIF = 1/(1 - R_i^2).$$

According to this rule, if VIF exceeds 2, multicollinearity will appear. Based on value in Table 3, it can be seen that variance inflation factor is less than 2. This means that multicollinearity does not appear in the model.

F-statistics is calculated from R-Square value of the full model equivalent to 52.66, with relatively small Sig. Value, which indicates that the considered multiple linear regression models are consistent with data sets and it can be adopted.

The measured partial regression coefficient β_k changes in mean value of dependent variable Y , when F_k changes in one unit and the independent variables remain constants. Testing results of partial regression coefficients with hypothesis $\beta_j = 0$ indicate that the regression coefficients have statistical significance with significance level equivalent to 0.01. Multiple linear regression models can be written as following:

$$Y = 3.74 + 0.422 * F_1 + 0.516 * F_2 + 0.11 * F_3 + 0.17 * F_4 + 0.231 * F_5$$

4.2 Summary of results of hypotheses

	Hypothesis	Test results
H1	Network quality has positive relationship to consumer satisfaction with the quality of Viettel's mobile phone service.	Accept
H2	Price plays an important role in consumer satisfaction with quality of Viettel's mobile phone service.	Accept
H3	Promotion has positive relationship to consumer satisfaction with the quality of Viettel's mobile phone service.	Accept
H4	Value added services have positive relationship to consumer satisfaction with the quality of Viettel's mobile phone service.	Accept
H5	Customer care service has an important role in consumer satisfaction with quality of Viettel's mobile phone service.	Accept

5. Conclusions and implications

Some important conclusions can be drawn from this research. For telecom service sector, service quality is an expression of preeminence and superiority in both qualitative and quantitative factors with some criteria, such as the quality of mobile networks, the price, the promotion, the value-added services, and the customer care service.

The research has discovered five groups of factors constituting quality of Viettel mobile phone services, and research results are measured by 20 observed variables from five groups directly affecting quality of Viettel's mobile phone services. After the regression analysis is applied, it is identified that there are five groups of factors affecting customer satisfaction with Viettel's mobile phone services, which include the quality of mobile network, the price, the promotion, the value-added services, and the customer care service.

For customer care service, while the mobile telecommunication market set up the general price, the priority is how to care the customers thoroughly so that they feel secure in using Viettel's mobile phone services and have loyalty to Viettel. As for quality of the network: Alongside the price element and customer care service, the good network quality will make the customers feel secure in using every time and everywhere without network failure. Hence, we won't need to change or complement any other network services. Finally, for promotion program and the value-added services, these are two significant factors because the customers will recognize that they are given the priority with lots of advantages in using Viettel's mobile phone service.

This research may provide some solutions to improve quality of Viettel's mobile phone services to bring about practical results to further improve service quality, and to meet the high demands of customers. From the survey data, it can be observed that there are more than 50% of 250 respondents who assessed Viettel's current network quality are good. In comparison to other two large operators - Mobifone and Vinaphone, the number of broadcast stations Viettel are dominant. However, here are still some trough regions. Therefore, continuously investing in network infrastructure to ensure network quality is a compulsory to perform. Solutions to improve

network quality include setting up more BTSs in rural areas, mountainous areas, which provide the remedy of enhancing repeater solutions, expanding coverage for high-rise buildings, schools, hospitals and residential corners in urban areas. Another keypoint is to optimize coverage areas, frequency and technical parameters have to be regularly inspected to ensure network quality. Possible solutions are anti-interference, anti-congestion, anti-dropouts. During festivals, Tet holidays, it's necessary to have mobile broadcast vehicles at crowded places to serve customers.

As for the price, company should regularly provide preferential charge programs such as discounts for roaming charges, monthly subscription charge reduction in the major holidays of the nation and industry, design gifting programs for subscription paying on time. When having new network subscriber, some programs will be supplied such as giving the gift of messages, giving the gift of hearing and calling every day, offering money etc., to encourage new network subscribers. For postpaid subscribers, it has better to have special discount policy for customers paying in advance or on time. In fact, there are many customers willing to use mobile services but the price is a key issue, and they may consider which firms to choose, and compare price and quality among firms as well. Maybe they're waiting for discounts, promotions, but they do not recognize that Viettel is implementing promotions. Therefore, it is necessary to be more active in noticing, communicating about promotions, price policies, product policies to customers on all means of communication such as TV, electronic media, newspapers, radio, tape banners, leaflets etc. Information needs to be quickly and timely updated in Viettel's website.

These suggestions are important and necessary because they play important roles and interactive relations with each other in the process of creating competitive advantages for Viettel. However, at present, it is necessary to focus on solutions to enhance quality of customer care because "the customer is always right". If the customers are interested in and pay attention to their products, the branch will continuously develop in a positive sustainable direction.

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