

Service Failures and Customer Switching Behavior of Mobile Communication Services

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Study of Mobile Communication Service Sector of Sri Lanka

Abstract

Service quality strategies executed among mobile communication service providers of Sri Lanka have been aggressive due to intensive competition exists. Customers do have multiple options to bargain on mobile service providers, and customers switching behavior has been frequent evidence in this industry. This study focused on analyzing the impact of service failures on customer switching behavior. Three types of service failures namely Core Service Failure (CSF), Service Encounter Failures (SEF) and Response to Service Failure (RSF) had been observed on their impact on switching behavior. The sample consisted with 150 respondents selected out of pre paid customers, and the data were collected by using structured questionnaire. Two hypotheses were tested by using descriptive and inferential statistics. It was reported that CSF had the highest impact than SEF and RSF on switching behavior followed by 3.031 of mean value and 0.674 of standard deviation. CSF has found less correlation with SEF and RSF.

Keywords: Service quality, Switching behavior, Service failures, Mobile service industry

1. Introduction

1. Introduction to Mobile Communication Industry of Sri Lanka

Sri Lankan telecommunication industry has a long history compare to the other countries in the region. Start of the industry goes back as far as 19th century where first Telegraphic Circuit established between Galle and Colombo in 1858. The first telegraphic line covering 74 miles is drawn using coconut trees as poles and wooden brackets, instead of insulators, nailed to them.

It was not found a drastic change in the market structure of the Sri Lankan Telecommunication industry till late 1980s where Government of Sri Lanka (GOSL) took some reform initiatives. Until 1980, the telecommunications industry was organized on the lines of the Post, Telegraph and Telephone (PTT) model, with the state owning and operating both telecommunications and postal services. The first major reform involved a de-linking of the two services. This was a decision consistent with international experience that rapid technological developments in telecommunications tended to make it functionally incompatible with the less dynamic postal sector. (Jayasuriya and John, 2002: 3). The liberalization of telecommunications industry in Sri Lanka was a result of both the emergence of a new

market-based managerial approach in the 1980s and the financial, technical and managerial difficulties faced by the government of the day.(Balasooriya, 2008 :7)

Apart from above described fixed telephony and mobile telephony operators, telecommunication industry is basically consisting with few other vendor categories. Currently severe competition is present between the operators in;

- Fixed Telephony
- Mobile telephony
- ISP (Internet and Data)

Table 01: Telecommunication Operator Categories

Service Category	Number of Licenses
Fixed Access telephone services	4
Cellular Mobile telephone services	5
Data Communications (Facilities based)	6
Data Communications (Non-facilities based) & ISPs	16
Radio Paging	4
Trunk Mobile Radio	2
Leased Circuit Providers	1
Licensed Payphone Service Providers	1
External Gateway Operators	32
Total	75

Source: www.trc.gov.lk

Mobile communication is one of the booming areas in telecommunication industry, not only in Sri Lanka but also all over the world. In the history of the mobile communication, the first ever operational cellular communication system was deployed in Norway in 1981 and was followed by similar systems in USA and UK. These first generation systems provided voice transmission by using frequencies around 900MHz and analog modulation. The second generation (2G) of the wireless mobile network was based on low-band digital data signaling. The most popular 2G wireless technology is known as Global Systems for Mobile Communications (GSM). Focus of the third generation or 3G was on multimedia application where as the latest trend or the fourth generation 4G is focus on Broadband Mobile Communication.

During the last few years, Sri Lankan Telecommunication industry, especially mobile industry, has shown a significant growth compared to other Industries keeping up with the global trend and technological advancements.

Table 02: Mobile Subscribers in Sri Lanka

Year	Subscribers
1992	2,644
1993	14,687
1994	29,182
1995	51,316
1996	71,029
1997	114,888
1998	174,202
1999	256,655
2000	430,202
2001	667,662
2002	931,403
2003	1,393,403
2004	2,211,158
2005	3,361,775
2006	5,412,496
2007	7,983,489
2008 December	11,082,454

Source: www.trc.gov.lk

1.1 Background of the Study

Services, put in the simplest terms, are deeds, processes and performance (Zeithmal et. al. 2008:04). It is different from physical goods in term of tangibility, perishability, inseparability and variability (Kotler, 2000: 429). But in a broader definition, product also provides some kind of a service. Consumers use a product or a service to yield value and satisfaction. Delivering desired satisfaction effectively and efficiently than competitors is the key to sustain profitability (Kotler, 2000: 56) and achieve organization goals in the rapidly changing market place. Hence, it is same for the telecommunication industry as for the other service industries.

In telecommunication industry both core service as well as support services are considered to be very important to a customer. Here, the core product includes the generic product being subscribed for, with a set of expected product features. Customer service includes peripheral services such as dealing with billing issues, handling customer complaints, maintenance and repairs etc.

When perceived service fall short of expected service, customers are tend to leave the current service provider and subscribe for another service provider. In the telecommunication industry, this phenomena, the churn, is very much prominent, especially in mobile communication. Main reasons for most of the switching decisions are mainly related to service quality matters. But there are some factors fall outside the service quality related issues.

Switching decisions can be due to the failure of the service provider to deliver desired service in the core service or it can be due to some problem in customer services. Both kinds of failures could be boiled down to the issues related to service quality delivered to the customer. But this is not always applicable for all

the service switching scenarios. Switching decision of the customer will affect the overall performances of the service provider and it is very important them to understand the reasons for such a decision by their existing customer and what kind of a change they should done to their current level of service quality.

Switching behavior is prominent among pre-paid subscribers than post-paid subscribers due to the fact that the strength of the link between the service provider and the subscriber in pre-paid connection is less. In a pre-paid connection, the legal requirements as well as other bonds which would act as switching barriers are less. In Sri Lankan market one can obtain pre-paid connection free of charge or to a nominal fee by just providing a photo copy of his or her National Identity Card to the operators or their agents/ dealership locations where there is no any other restriction. Over 90% mobile subscribers in the market being pre-paid users, mobile communication companies have less control over imposing switching barriers. Due to severe competition, controlling churn rate is becoming a challenge to Sri Lankan Mobile Operators and identifying reasons for switching is even a greater challenge as it is highly dependent on the service, price benefits, values, culture, attitudes and perception of the different segments.

1.2 Research Problem and Objectives

Due to rapidly growing and intensive competition of mobile communication market and the fast tracking customer sophistication, the bargaining power of customers in switching service providers has been a benefited option rather being loyal to one subscriber. Both financial and non financial determinants had been reasoning to make them switched to one another. Therefore, the study is focused on the problem of;

To what extend the service failures impact on customer switching behavior of mobile communication market of Sri Lanka.

The purpose of this study is to identify the factors cause switching behavior in Sri Lankan mobile industry and the level of influence of these factors which would enable the respective managements of service providers to articulate their strategies to tackle these factors. In addition to that, it has focused on understanding relationships among service processing factors and their impact on making customers switched to competitive subscribers.

2. Literature Review

The way in which services are created and delivered to customers is often hard to grasp since many inputs and outputs are intangible (Loveloock and Wright, 2002: 3). Put in the simplest terms, services are deeds, processes and performance (Zeithaml et.al.2008: 04). In a more formal definition, Kotler (2000) has defined service as any act or performance that one party can offer to another that is essentially intangible and does not result in the ownership of anything. Its production may or may not be tied to a physical product. On the other hand, services are economic activities that create value and provide benefits for customers at specific times and places, as a result of bringing about a desired change in—or on behalf of the recipient of the service.

Services have four major characteristics that make services distinguish from physical products and those are greatly affecting the design of marketing programs, namely intangibility, inseparability, variability, and perishability. Services are intangible. Unlike physical products, they cannot be seen, tasted, felt, heard, or smelled before they are bought (Zeithaml and et.al 1996).

Quality is often defined as “conformance to specification”, but this phrase can be misleading. Quality conformance to customer specification, it is the customer’s definition of quality, not management’s, that count (Zeithaml, Parasuman and Berry, 1988) Delivering quality service is considered an essential strategy for success and survival in today’s competitive environment.

Satisfaction is the customers fulfillment response and it is a judgment that a product or service feature, or the product or the service itself, that provides a pleasurable level of consumption related fulfillment.(Oliver, 1980: 460) In other words, satisfaction can be defined as the customer’s evaluation of a product or a service in terms of whether that product or service has met the customer’s needs and expectations. Customer satisfaction also can be defined as a customer’s overall evaluation of the performance of an offering to date (Johnson and Fornell 1991: 267). This overall satisfaction has a strong positive effect on customer loyalty intentions across a wide range of product and service categories, including telecommunications services (Fornell 1992;08).

The term quality and the satisfaction are sometime used interchangeably. However some researchers believe that perceived service quality is but one component of customer satisfaction, which also reflect price/ quality tradeoff as well as personal situational factors. (Loveloock and Wirtz, 2004: 66).

2.1 Relationship between Service Quality, Satisfaction and Service Switching Behavior

Service provider switching involves the flow of customers from one service provider to another (Bansal, Tylor and James, 2005: 96). According to Roos (1999) there are two categories of switching behaviour. In the first category the switch behaviour is based on a distinct decision, in the second one the switch behaviour is involuntary and a distinct decision does not precede the behavior. Review of the services and product literatures reveals a variety of potential, and sometimes conflicting, reasons that customers might switch services. The concept of service switching has been related to service quality, customer satisfaction.

In most of the prior studies into service switching consider delivering quality service is an essential strategy for retention of the customer. In the Model of Behavioral and Financial Impact of Service Quality suggested that superior service quality will create favorable behavioral intention which resulted in customer stay with the service provider and positive financial consequences where inferior service quality create unfavorable behavioral intention which make customer to defect or switch to another service provider. (Zeithaml, Berry and Parasuraman, 1996: 33).

Cronin and Taylor (1992) examined the causal relationships among service quality, customer satisfaction, and purchase intention. Each variable was measured by one item. There were 660 usable questionnaires randomly collected from customers of four types of businesses in the southeastern United States: banking, pest control, dry cleaning, and fast food. The results of correlation analysis have suggested that (1) service quality was an antecedent of consumer satisfaction, (2) service quality had less effect on purchase intentions than did consumer satisfaction, and (3) consumer satisfaction had a significant effect on purchase intentions.

2.2 Drivers Related To Service Failure/ Recovery in Switching Behavior

2.2.1 Core Service Failures

From a customer’s perspective, a service failure refers to a real or perceived service related problem, or where something has gone wrong in dealing with an organization. (Palmer, 2001: 74) Core service failure has been cited as the major reason for switching in Susan Keaveney’s study (1995) of the service sector, with 44% of the respondents mentioning this as the main reason for switching. Core service failure may be the only reason for the switch or it may be combined with other reasons, which tilt the balance towards switching to another provider.

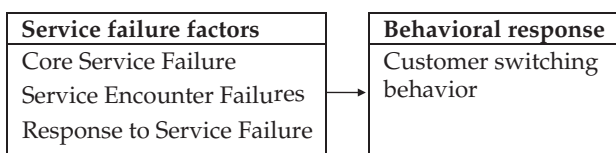
Even though customers and organizations increasingly seek a flawless delivery of core and supplementary services, this is virtually impossible in a service setting due to human involvement in service production and consumption. In addition, the inseparable and intangible nature of services also gives rise to service failures.(Palmer, Beggs & McMullan 2000: 513). Core service failures include all critical incidents that were due to mistakes or other technical problems with the service itself’ (Keaveney, 1995: 76). These include billing errors, service mistakes, and service catastrophes.

The first composed the largest subcategory. Core service mistakes included longitudinal problems, in which a series of mistakes or decreases in levels of service occurred over time. The subcategory also included multiple mistakes that occurred within the context of a single service encounter. A second subcategory of core service failures grouped billing problems. Customer complaints included incorrect billing and failures to correct billing in a timely manner. The third subcategory included service catastrophes. Here, core service failures not only failed to provide the appropriate service but actually caused damage to the customer's person, family, pets, or belongings. (Keaveney, 1995)

3. Conceptual Framework and Methodology

3.1 Conceptual Model

Service failure factors and their impact on customer switching behavior have been conceptually framed according the evidences provided in literature review abstracted in above phase.



Source: Literature survey

3.2 Defining Variables

The variables stated in conceptual frame work had been profiled below.

Dependent Variable : Switching Behavior is selected as dependent variable

Independent variables:

- **Core service failure :** Incidents related to technical problems or mistakes with the service itself
- **Failed service encounters :** Switching related to dissatisfaction or disappointment with the provider’s staff actions and attitudes
- **Response to failed service :** Incidents related to failure of service provider to handle the situation appropriately and be responsive

Table 3.2 Summary of Data Operationalization

Concept	Variable	Observation categories
Service Failures	Core Service Failures	Service mistakes
		Billing errors
		Service catastrophe
	Service encounter failure	Level of Politeness
		Level of Caring
		Level of Responsiveness
		Level of knowledge
	Response to service failure	Type of response
	Degree of customization of solution	
	Empathy	

3.3 Hypotheses.

Two hypotheses have been formed to test;

H1: There is a significant impact of Core Service Failures (CSFs) on switching behavior of mobile communication service users than other service failures.

H2: Core Service Failure (CSF) has a strong correlation with Service Encounter Failure (SEF) and Response to Service Failure (RSF) in the context of service switching behavior of users.

3.4 Sampling Method

The population consider for this study was 150 of individual mobile users (pre-paid), whose current service provider is not the first service provider for them. A sample of users is drawn from this population to estimate the relative importance they put on the drivers relating to service failures. Subscribers of three mobile service providers had been considered for this survey and the number of subscribers from each operator in the sample is drawn proportionately to the number of active customer in of each provider’s network by the end of January 2009.

Following formula is used to calculate the sample size.

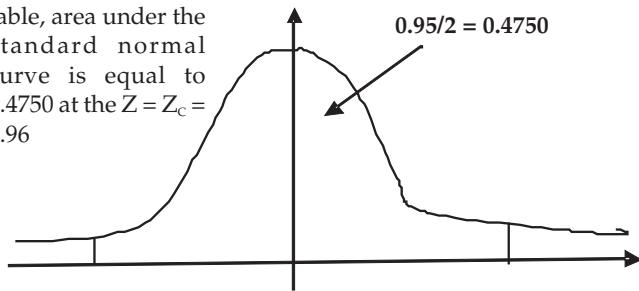
$$S = \frac{ss}{1 + \frac{(ss - 1)}{pop}} \quad \text{Where:} \quad ss = \frac{Z^2 p(1 - p)}{c^2}$$

- S = Sample Size
- Z = Z value of the selected confidence Level
- Pop = Population Size
- P = Response Distribution
- C = Confidence Interval / Margin of error

Following parameters are considering calculating the sample size;

- Confidence Level = 95%
- P= 50%=0.5
- Confidence Interval / Margin of error = 8%
- Z value corresponding to 95% confidence level = 1.96

From the Standard normal distribution table, area under the standard normal curve is equal to 0.4750 at the $Z = Z_c = 1.96$



$$S = Z^2 \frac{p(1-p)}{c^2}$$

$$S = 1.96^2 \times \frac{0.5 \times (1-0.5)}{0.08^2}$$

S = 150

The primary data were collected by using a structured questionnaire. In order to design the survey questionnaire, the service switching model of Keaveney as adopted by Christopher Lovelock and Jochen Wirtz is used. The questionnaire is designed to measure the relative importance of all the related issues in term of service failures in switching decision. Finally, the data are used to test the hypotheses under consideration.

Data were analyzed by using descriptive and inferential statistics to test the hypotheses and to do descriptive analysis too. Percentages, Correlation, Regression, and Standard deviation were calculated to discuss the empirical findings.

3.5 Reliability Testing

To test the internal consistency reliability of the measures used in the Likert scale rating the researcher used Cronbach’s Alpha reliability coefficients. According to the Cronbach’s Alpha

Table 3.5 Reliability Testing Values

Variable	Cronbach's Alpha	No. of Items
Core Service Failures	.708	7
Service encounter failure	.830	6
Response to service failure	.854	5

Source : Analyzed Data 2009/2010

reliability coefficients results were as bellow for main variables being tested.

The average alpha values for all the scales are above 0.7, and therefore, the variables are considered as acceptable reliable on the basis of internal consistency.

4. Data analysis and discussion of findings

4.1 Descriptive Statistical Analysis and Hypotheses Testing

Conceptual framework of the study has 3 independent variables and dependent variable has been figured out as switching behavior. The Operationalization of switching behavior has been quantified as high, moderate and soft switchers according to the degree of responsiveness to the different aspects of service delivery. The values were taken as mean values ranged between 1-5 Likert scale values. Two hypotheses were tested and discussed below.

4.1.1. H1: There is a significant impact of core service failures on switching behavior of mobile communication service users than other service failures.

The following tables indicate the descriptive statistic analysis and the mean values of the drivers related to Service Failure/ Recovery and Drivers related. With the analysis of these mean values together with standard deviations of respective variable, it can be assessed the degree of relative impact of these drivers in switching behavior.

Table 4.1 Overall Impact of Service Failure on Switching Behavior

	N	Minimum	Maximum	Mean	Std. Deviation
Core Service Failure (CSF)	146	1.14	4.43	3.0313	.67477
Service Encounter Failures (SEF)	146	1.00	5.00	2.2630	.75118
Response to Service Failure (RSF)	146	1.00	5.00	2.1826	.98811
Valid N (listwise)	146				

Source: Primary – SPSS Analysis Output

H1 is accepted.

Above table shows the contribution of each and every factors in the independent variables included in the conceptual model supported by literature evidences. As per the mean values provided in above table, core service failure (CSF) has recorded the highest value of impact (3.0313) than other two service failures namely SEF and RSF. It has been further justified with standard deviation of CSF compared to other standard deviation values of SEF and RSF. CSF records 0.674 of standards deviation and SEF and RSF record 0.751 and 0.988 respectively. Therefore, CSF indicates a less deviation of impact on service switching behavior. Finally, H1 can be accepted according to the statistical justification accompanied by both mean value and standard deviation.

Service encounter failures (SEF) had found second stronger impact out of those 3 variables to influence users to switch. The mean value 2.263 lays at below level of average value 3, and it reflects that its impact on customer switching decisions is lower. The standard deviation (0.751) had made a judgment to express how it deviates with bigger variance. Therefore, this behavior has found a less consistency among switched customers.

The response to service failure (RSF) has found the lowest impact on customer switching behavior with the mean value of 2.182, and its standards deviation 0.988 implies how it has been too deviated from central value. It refers that this behavior has been less consistent among switched customers.

4.1.2. H2: Core Service Failure (CSF) has a strong correlation with Service Encounter Failure (SEF) and Response to Service Failure (RSF) in the context of service switching behavior of users.

Table 4.1.2 Correlation Coefficient Table of CSF, SEF and RSE

	Core Service Failure	Service Encounter Failures	Response to Service Failure
Service Encounter Failures	-0.12253	1	-0.54534
Core service Failure	1	-0.12253	-0.08970
Response to Service Failure	-0.08970	-0.54534	1

Source: Primary – SPSS Analysis Output

H2 is rejected.

CSF had been less correlated with other two service failures because it had recorded miners and less significant coefficient with SEF and RSF given coefficient values -0.122 and -0.089 respectively. Therefore, it is clear that the failures take place in the context of CSF have no grater connectivity with all the operational factors and variables related to SEF and RSF. Aligned with these justifications, it has concluded that H2 is rejected providing statistical justifications given aforesaid.

5. Recommendations and Managerial Applications for Mobile Communication Service Operators

It was found in the study that main reason for mobile phone service users switch into competitors is due to core service failures (CSF) found in early service provider. Therefore, mobile operators should take measures to be better service provider in compression to the competitors. With the findings of the study followings can be recommended in order to operate more effectively than competitors.

- Coverage and capacity expansion; in order to maintain quality network, mobile operators should monitor the current capacity of the network and coverage. Once the capacity is used fully, the entire customer base will experience congestions as the network capacity is a used shared basis. Therefore, the capacity of the network and the

coverage should be planned and expanded with the increase of the customer base to provide core service excellence to provide them a benefit at why they use mobile phone service.

- Maintain network QoS (Quality of Service); QoS is very important in mobile communication. All the operators should have well defined QoS and mechanism to maintain the defined quality levels. This would provide better service to the customer.
- Upgrade the network with the technological advancement; mobile communication technology, being one of the fastest growing technological sectors, mobile service providers should have proper planning when to introduce the new technology, replacing the legacy system. Since it has found local experience on how introduction of new technology can make customers to switch to mobile operator with the latest technology and how it influence the performance of the mobile operators with the legacy system when Dialog introduce GSM technology to Sri Lanka. Therefore it is vital to a mobile operator to plan their network upgrading in well advance manner to provide core service matters to be dynamic with complexity of customer needs.
- Introducing Value Added Services (VASs) features; customer level of expectation of a mobile service has evolve over the time and making voice call is not the only requirement. Now with the evolution of the technology to fourth generation, mobile communication has entered into the broadband services. Unless one can provide these innovative VAS features it is difficult to keep their customers with them.
- Improve dealership coverage and customer service operations; customers should be able to access to the service provider through dealership very easily. Also, mobile operators should take measures to improve their customer service operation in a way that the waiting time for the customer is minimized to the maximum possible time where customer does not feel the waiting.
- In responding quickly, it is also critical to treat each customer fairly. Customers are expected to be treated fairly in term of outcome they receive, the process by which the service recovery take place and the interpersonal treatment they receive. Therefore, company should embed procedures in to the service recovery system to ensure fair treatment.

By implementation of well-designed loyalty programs; currently the benefits provided through loyalty programs targeted at pre-paid users are at minimal level. Loyalty programs would create reward based bond between mobile user and the company. Reward based bonds can be can be financial or nonfinancial in nature. Financial bonds are built when loyal customers are rewarded with incentives that have a financial value, such as discounts on activation of additional service features. Nonfinancial rewards provide customers with benefits or value that cannot be translated directly into monetary terms such as giving priority to loyalty program members for waitlists and queues in call centers, and access to special services.

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