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Impact of service quality and network quality on brand switching behaviour: With reference to internet service providers

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Abstract

Market across the world shows there is a competition between internet service brands due to new entrants. To minimize the number of brand switchers, internet service providers must attract customers and deliver an excellent service performance. Even though the number of internet service providers has reduced, competition remains fierce, primarily in the areas of innovative technologies. Established objective of the research seeks the impact among overall quality dimensions which are service quality and network quality towards brand switching behavior. Accordingly, the researchers interrogated interaction quality, physical environmental quality, outcome quality and network quality as independent variables and brand switching behavior as the dependent variable. Statistical evidence of this study demonstrates an understandable theoretical framework of the customer switching behavior pattern that is influenced by quality dimensions. The research study was constructed on the basis of existing theories and then statistically tested; hence this study employed quantitative approach. The target population of this study is comprised by consumers who use different Internet Service Provides (ISPs) in Sri Lanka. Customer who obtains the service of ISPs is identified as the unit of analysis. Responses were gathered using the convenience sampling technique over a cross-sectional time horizon. Questionnaire was distributed among 273 and the final sample consists of 183 responses. Accordingly, this study results shows physical environmental quality and network quality impacted negatively while interaction and outcome quality impacted positively towards brand switching behaviour. The findings of the study have implications for internet service providers in their efforts to expand their user base and, more importantly, to maintain customers' interest towards the organization.

Keywords: Brand switching; Broadband; Network quality; Service quality

1. Introduction

Switching customers to another service provider has become a vital concern and also an eye opener for an organization. Such a change reflects that the company is not in a position to meet the expected demand of the consumer and the new brand which has replaced the old is more appealing. Market across the world shows there is a competition between internet service brands due to new entrants. In order to attract and hold their customers, various internet service providers must be competitive in all areas of service performance [1]. If the customer's expected service performance is higher portion compared to the actual performance, then the service "customer gap" will increase. It makes customers dissatisfied, and eventually they will seek alternatives and develop an intention to switch their existing brand.

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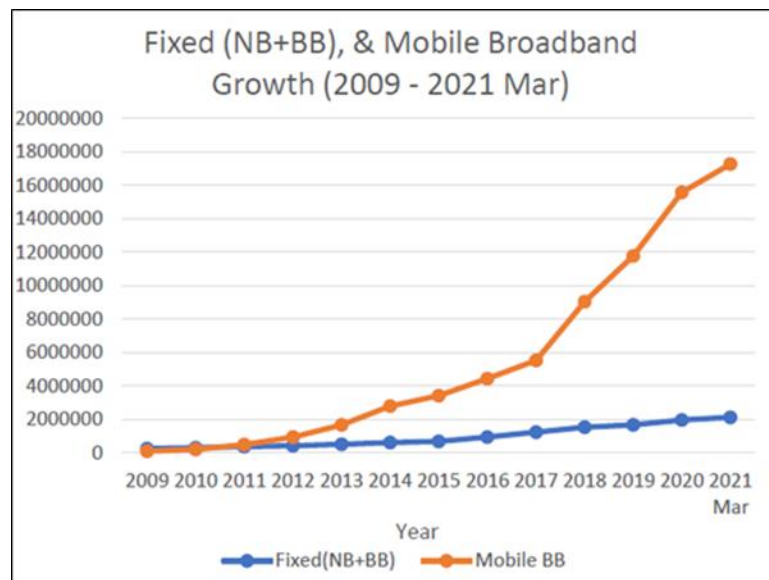
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Since Sri Lanka consists of lesser number of competitors in the internet service provider market and larger customer base, this market can be termed as an oligopolistic market structure [2]. The usage of the internet has increased exponentially over the last year, and internet service providers have rushed into the market to meet this demand. Even though the number of ISPs have reduced, competition remains fierce, primarily in the areas of innovative technologies. Firms must discover strategies to acquire new consumers, maybe by pulling them away from competitors, while also keeping those that they currently have. Several ISPs have begun to specialize in delivering services that appeal to certain market groups [3].

Companies must weigh other considerations in order to retain consumers and gain a good reputation in the market. According to [4], there is a significant link between independent factors such as cost per internet subscription, loyalty customer services, image of the brand, promotions, and quality of the network. High speeded broadband has a high degree of network performance, plays a role of a differentiator in ISP company competitiveness and four times more important than customer service performance [5].

There are over 10.9 million internet users in Sri Lanka, and it increased by over 7.9% each year and also there are a lot of internet service users for each year in Sri Lanka [6]. This upsurge created a competition among internet service providers to increase their customer base, so those internet service providers implement different marketing strategies to attract customers. In 2021 there are 17,254,073 Mobile Broadband Subscriptions and 2,116,909 Fixed Broadband Subscriptions in Sri Lanka [7].

The number of mobile broadband users in Sri Lankan ISPs has rapidly increased from 2017 to 2021 period time (Figure 1). As a result, internet usage increased and that caused to reach maximum capacity of internet service users. Hence, peak time internet users have to face a lot of internet traffic and connection issues. In the face of such problems, ISPs cannot quickly expand network coverage. It is a long-term process and in the meanwhile this directly or indirectly causes brand switching of customers and ISPs will lose their customers. Increasing coverage while holding the customer base is a big challenge for ISPs in the Telecommunication industry.



Source: Statistics - Telecommunications Regulatory Commission of Sri Lanka (2021)

Figure 1 Fixed Broadband, Narrowband and Mobile Broadband Subscriptions

Dialog Axiata PLC, SLT-Mobitel, Hutchison Telecommunications Lanka, and Bharti Airtel Lanka are the major ISPs in Sri Lanka. Dialog is the market leader in ISP market and also the largest mobile operator in Sri Lanka, which has 44.5% market share in the Sri Lankan Telecommunication industry. Understanding customer brand switching behavior is an important factor for ISPs to attract their target market. Sri Lankan internet service providers always try to increase their customer base, but it depends on factors such as signal strength, billing methods and satisfaction of the customer with the service. During the Covid-19 global pandemic situation, people became strongly accustomed to internet usage globally.

Internet users switch brands based on different cognitive, psychological as well as the physical factors [8]. Although, there exist many studies on brand switching in the mobile service market, very few studies have been conducted on

ISPs including internet broadband (fixed/wireless/wired/mobile) services. There are studies already conducted in foreign countries focusing on consumer switching behavior on various kinds of service providers. [9] developed a study on how service quality impacts the switching behavior of mobile service customers. [10] mentioned network service and network coverage directly influenced the customer satisfaction level and it cause the intensity to switch the brand of the customers. [11] reveals that brand switching cost has major effect on brand switching behavior. In Sri Lankan context, a minimum number of studies have been conducted exploring the factors affecting brand switching behaviour in ISPs. Therefore, present study attempts to address the impact of service quality and network quality on brand switching behaviour with relevance to ISPs in Sri Lanka.

1.1. Literature Review

1.1.1. Service Quality

When the organizational performance has significant impact on reduced costs, consumer satisfaction, and profitability; higher quality has substantially been a key focus to researchers in the field. Service quality is seen as a valuable organizational resource and a vital factor in business financial performance and marketing. In the literature on services marketing, service quality is described as a customer's overall opinion of a service. Moreover, service quality helps to understand the perceptions formed by comparing consumer requirements to real service achievement [12]. Moreover, [13] mentioned that the concept of service quality is formed on the premise of human mind comparison of expectations for a service and assessment of how it is delivered.

There's no common understanding on a single demonstrate for evaluating service quality whereas researchers have developed various models to present such area. [14] provided a three-dimensional perspective on service quality. They consider it to be made up of what they refer to as interaction, corporate and physical quality. Measuring and improving service quality is a tough undertaking since service quality is fundamentally intangible and difficult to describe [15]. Due to its diversity, complexity, and intangible character, quality is extremely essential inside service industry, but that also extremely difficult to calculate. To determine, monitor, and manage service quality [16] offers an Analytical Hierarchy Process method. The Analytical Hierarchy Process technique familiar with calculate relative values of quality dimensions. SERVQUAL model of [17] and SERVPERF model of [18] are the widely utilized models to measure service quality. [19] developed a multidimensional, hierarchical conceptual model to measure service quality. The Model consists of interaction quality, physical environment quality and outcome quality, developed based prior models. Accordingly, [20] stated that, the most suitable hierarchical model was presented by [19]. This model is suitable to a wide range of service sectors, with the ability and flexibility to include a number of parameters correspondingly based on the suitability of the business [21].

1.1.2. Interaction Quality

Interaction quality is seemed as an important element in the service industry. [22] refers to the interaction as a physical, virtual, or cognitive encounter where firms can generate new social advancements. Quality parameter that arises from interactions between customers and interaction elements of the service organization is an important aspect of service organizations. Customers' perceptions of how service is delivered during service encounters are referred to as interaction quality. Evaluations of the service by a particular enterprise, as well as peer-to-peer contacts are also considered by a customer when making psychological judgements based on the experienced quality. Degree of greatness of the employees and staff in an organization worked with the customers are also linked to interaction quality [8]. Interaction elements can be categorized as interaction of persons, interaction of procedures, interaction of equipment in the service industry, which are the actual firms' resources in contact with customers [14]. Moreover, [23] investigated how the interaction quality affects the mobile service industry. As a result, the interaction quality was confirmed to be a strong impact in the mobile service industry that helps to retain the customers. Researchers thereby form the following hypothesis:

H1: Interaction quality has a negative impact on the brand switching behaviour.

1.1.3. Physical Environment Quality

Many studies have looked at how the physical or constructed environment affects customers of a particular service. Consumers are frequently available at the service venues and the service quality can be strongly affected by the location or the layout of the service venue [24]. All social interactions, according to [25], customers are influenced by the physical place in which they take place. According to studies, this physical surrounding of the service organization in other words, service-scape affects the character of social interactions in terms of the event's real progress or the duration of the communication. This is widely accepted by service marketing researchers that the physical environment influences the behavior of customers and employees of the firm by acting as a stimulus to the emotional, cognitive, and

psychological responses of them. The physical environment is becoming increasingly important for service firms. As a result, investigations on the subject are also required. [26] identified physical environment as an endeavor to build a purchasing atmosphere that increases the likelihood of a purchase intention and produces certain purchase effects. As a result, the following hypothesis was formed:

H2: Physical environment quality has a negative impact on brand switching behavior.

1.1.4. Outcome Quality

The performance of a service encounter is usually evaluated in two ways by the customer. Technical and functional quality are the two methods in which this might be accomplished. As aforementioned technical quality refers what a consumer obtains from a service provider, during the service contact or transactions. As a result, consumer impressions of the service quality are heavily influenced from the technical quality of a service experience [22]. The technical outcome of the service is alluded as the actuality service and argue that it is a factor in determining quality. Outcome quality includes tangibles, valance and waiting time [27]. Extant literature recognized the necessity of investigating all aspects of the outcome quality of a given service on consumer attitude. Outcome quality has an inverse relationship with brand switching behaviour with respect mobile users. If the outcome quality is below the expected level, customers will simply switch to other brands [28]. Accordingly, following hypothesis is formed.

H3: Outcome quality has a negative impact on brand switching behavior.

1.1.5. Network Quality

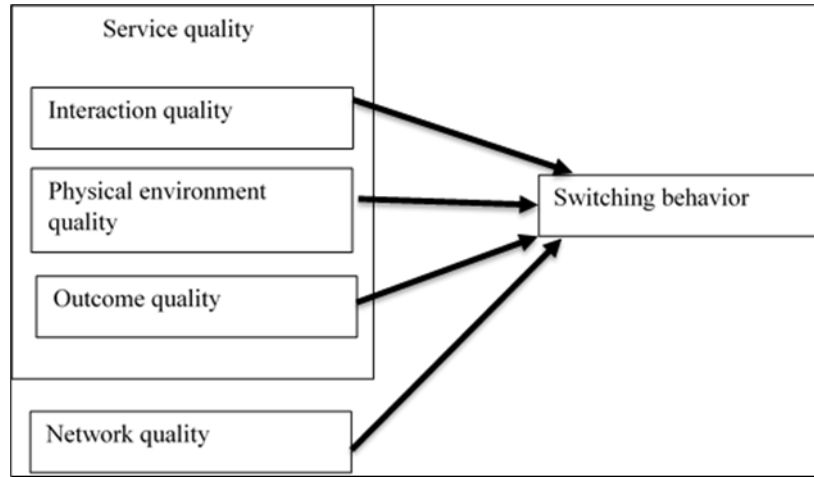
Network quality is a vital determinant to attract and retain customers in the Telecommunication industry. Whether it is mobile network and internet, network quality plays an important role for customers to enjoy uninterrupted service. Network quality has placed a most considerable determinants of total service quality [29]. Moreover, [30] pointed out that network performance metrics affect the quality of service and it directly influence the customer satisfaction level. [31] also concluded that there exists a relationship between service provider's poor network coverage and customer switching behaviour. Accordingly, network quality has the significant effect on a mobile broadband as well as the home broadband firm's success or failure [32]. Following hypothesis is formulated.

H4: Network quality has a negative impact on brand switching behavior.

Previous researchers predominantly employed the SERVQUAL model to assess the service quality. However, in the modern world, technology is changing rapidly and dimensions also updating and changing day-by-day. Customer expectations have evolved because of technological advancements, and they now expect more. This research therefore examines the theoretical gap by assessing the service quality from a modern proposed model. Consequently, study employs the hierarchical and multidimensional model which is developed by [19], to assess service quality by using its dimensions. Therefore, this study is to address the above research gap by identifying the factors that impact the brand switching behavior of Sri Lankan internet users towards different ISPs.

2. Material and methods

The study used quantitative research technique. The conceptual framework of the study is depicted in Figure 2. The unit of analysis is the customer of Internet Service Providers. Population is considered as the customers of ISPs of Sri Lanka. Due to lack of access to confidential customer databases, sample was selected using convenient sampling method, which is a non-probability sampling technique. Data were collected using a structured questionnaire with five-point Likert scale questions and demographic questions, distributed among 273 customers. A pilot test was carried out by distributing the questionnaire among 40 respondents to ensure the reliability and validity of the questionnaire.



Source: Authors

Figure 2 The Conceptual Framework

3. Results

Questionnaires were distributed among 273 respondents out of which 214 questionnaires were returned indicating the response rate of 85%. Responses were tested for outliers and 31 were removed based on the box plot diagram. Final sample size consists of 183 respondents. Reliability of the questionnaire was tested using Cronbach’s Alpha and according to [33] Cronbach’s Alpha of 0.7 and above is regarded as appropriate value for ensuring the reliability. The variables of the study satisfy this requirement ensuring the reliability of the constructs (Table 1).

Table 1 Reliability test - Total variables

Variable	Cronbach's Alpha Based on Standardized Items	Number of Items
IQ	0.763	8
PEQ	0.812	7
OQ	0.710	8
NQ	0.868	6
BSB	0.751	7

Source: Authors based on survey data

Table 2 Normality Test

Variable	Skewness	Std. error of Skewness	Kurtosis	Std. error of kurtosis
IQ	-0.678	0.180	0.848	0.357
PEQ	-0.144	0.180	-0.243	0.357
OQ	-0.489	0.180	-0.560	0.357
NQ	-0.081	0.180	-0.450	0.357
BSB	0.373	0.180	-1.040	0.357

Source: Authors based on survey data

The assumption that a variable or variables are normally distributed is required by many of the statistical methods that will be used. Variable, if its skewness and kurtosis are between (-1 to +1) and (-3 to +3) respectively stated as variables are in the accepted value range [33]. The results of the present study are within the accepted range of skewness and kurtosis (Table 2). The data collected were also tested for linearity and was satisfied. If the independent variables employed in the study are highly correlated, it will give rise to multicollinearity. The variance inflation factor (VIF) and

tolerance value contemplated in the multicollinearity. Any variance inflation factor (VIF) exceeding 10 and a tolerance value below 0.10 are thought to signal a potential multicollinearity problem [33]. The results show the values are in the accepted range, thus the result reveals that multicollinearity does not exist among all independent variables (Table 3).

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) test was carried out to ensure the sample adequacy. KMO value depicted 0.6 which is considered to have an average level of sample adequacy and deemed satisfactory.

Table 3 Multicollinearity Test

Model	Tolerance	VIF
IQ	0.781	1.280
PEQ	0.814	1.229
OQ	0.702	1.425
NQ	0.920	1.087

Source: Developed by Authors

3.1. Demographic characteristics of the respondents

Among the respondents, 34.9% were male and 65.03% were female. According to the descriptive study of the age of the respective respondents, 25.68% of the respondents are between 20-24 years old. 19% of the respondents are between the ages of 25 and 29, 26.7% are between the ages of 30-34 years old. 9.8% of the respondents are 40 years and above. 18.58% of the responses are from those between 35-39 years old. The descriptive statistics revealed that 38.24% of the respondents spent 7 hours and above per day for usage of internet, 28.24% represent that they spent 3-4 hours per day using internet, and 19.41% spent their time on internet for 5-6 hours per day. Lastly 6.47% and 7.65% represent as they spent less than one hour per day and 1-2 hours per day. More internet usage may also be backed by working from arrangements followed by the pandemic situation. Descriptive statistics further revealed that the 33.33% respondents have a current internet subscription for 5-6 years, 28.87% of the respondents have a subscription for 3-4 years, and 17.49% have a subscription for 1-2 years. Minorities account 12.57% and 8.74% of the respondents those who have had the subscription for 7 years and above and less than one year respectively.

3.2. Regression results

Table 4 depicts the model summary where the model is significant at 5% significance level ($p < 0.05$). Moreover, adjusted R squared value is 42.2% which indicates that the independent variables used in the study explain the brand switching behaviour.

Table 4 Model Summary

Model	R	R square	Adjusted R square	F	Significance
1	0.659	0.434	0.422	34.17	0.000

Source: Authors

Regression results pertaining to the study are depicted in Table 5. Statistical findings implies that Interaction Quality (IQ) has a positive impact on brand switching behavior (BSB). Nevertheless, relationship is statistically significant at 5% significance level ($p < 0.05$), H1 is rejected due to positive impact. The second hypothesis looked at how Physical Environmental Quality (PEQ) of the service quality affects brand switching behavior. Results reveal that there is a significant impact ($p < 0.05$), while the impact is negative. As a result, H2 is accepted. The third hypothesis was developed to test how the Outcome Quality (OQ) of service quality impact towards brand switching behavior. Results reveal a significant but positive impact which is significant at 5% significance level ($p < 0.05$). Accordingly, H3 is rejected due to the positive impact. Lastly the Network Quality (NQ) has a significant and negative impact on brand switching behaviour thereby accepting the 4th Hypothesis (H4).

Table 5 Regression analysis

Model	Unstandardized coefficients		standardized coefficient	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.855	1.393		0.576	0.565
IQ	0.313	0.107	0.211	2.937	0.004
PEQ	-0.206	0.100	-0.127	-2.063	0.041
OQ	0.843	0.114	0.564	3.418	0.000
NQ	-0.066	0.071	-0.055	-0.933	0.049

Source: Authors based on survey data

Dependent Variable: Brand switching behavior

4. Discussion

According to [23], interaction quality represents the level that customer's engagement with the service provider, during the service delivery. Indoor facility design or the layout of a service firm directly influence the physical environmental quality [34]. Authors further stated that the physical environment of a service firm has a negative impact towards the brand switching behavior. Physical environmental quality and the sub dimensions of the physical quality; equipment, layout, design, space and spatial arrangement also created a positive impact on customer satisfaction. However, findings reveal contradiction on interaction quality and outcome quality which show positive impact on brand switching behaviour. [2] also reveal similar findings that are contradicting with the previous literature. This could be further researched with increased sample size.

5. Conclusion

The physical environment is believed to perform a great position in providing a good customer experience. Therefore, it is recommended that the quality of the physical environment is seen as an important factor in building ISP stores. It is important to provide up to date equipment as well as ensure the equipment delivered to your client in good condition and to the required standard. Customers visit ISP store for to get a new connection or move to a new package, payment of a bill, solve customer issues regarding network and for value added services. It is important to consider having an easy access premises, store or showroom lay out should not be complicated to the client should be easy to find the required place to accomplish the service requirements. Further research may focus on customer switching cost. Nevertheless, poor service quality customers may choose to stay with a brand due to high switching cost and hassle involved.

Compliance with ethical standards

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Disclosure of conflict of interest

The authors declare that there is no conflict of interest that would affect the findings of this study.

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