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Impact of Service Quality on Customer Satisfaction with Special Reference to Mobile Telecommunication Industry of Sri Lanka

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ABSTRACT

Along with globalization, new technologies are introduced to the mobile telecommunication industry in order to enhance service quality which is consequential to attract and retain rational customers. Empirical evident is available between service quality and customer satisfaction of mobile telecommunication industry in Sri Lanka. However, researchers saw that measurements of service quality are different from country to country. Hence, research findings of different other countries could not be generalized to Sri Lankan context. Thus, there is a requirement to research the impact of service quality on customer satisfaction in mobile telecommunication industry in Sri Lanka in order to enhance the customer satisfaction. Data were collected from 388 customers of mobile telecommunication industry. Convenient sampling method was used to select the sample. Data were collected through a structural questionnaire and SERVPERF model was used. Results revealed that the major dimensions of service quality which impact to customer satisfaction are empathy, tangible and reliability. Other dimensions are responsiveness, assurance and technical quality do not impact on customer satisfaction. And, perceived value doesn't moderate the relationship between service quality and customer satisfaction in mobile telecommunication industry in Sri Lanka.

Keywords: *Customer Satisfaction, Mobile Telecommunication, Perceived Value, Service Quality, Technical Quality,*

1. INTRODUCTION

1.1. Background of the Study

Parasuraman et al. (1988) defined service quality as "the overall evaluation of a specific service firm that results from comparing that firm's performance with the customers' general expectations of how firms in that industry should perform". Customer satisfaction is usually defined as a customer's sense or assessment of goods or services after use (Gupta & Bansal, 2012; Jamal & Anastasiadou,2009; Quan, 2010)

Studies argue that quality becomes increasingly important and it act as the major role in order to have competitive advantage and it's a critical success factor for any contemporary service company (Alhkami & Alarussi, 2016; Bahadori, 2015). Service quality is the crucial theme of this research, so it important to understand what the service quality is, what are the benefits and why it is needed to measure service quality. There has been extensive literature available on service quality in its measurement in various private and public sectors across the globe. Most of the literature is available on either banking, education, airlines, hotels and restaurant sectors. Customer satisfaction, service quality and loyalty are most important factors in today global economic downturn for retention, profitability and productivity of the business as a whole. Service quality contribution is the most important factor to investigate the outcome of the customer expected and perceived service attributes of any business. Whether manufacturing, service or retail firm's quality of service is of great importance to both customers and companies.

One of the most contributions in the field of service quality is by Parasuraman et al. (1998), which is one of the most popular scales which introduced in order to measure the service quality. Service quality has been described by Parasuraman et al. (1985,) where the companies need to use the technology for gathering data form customer demand and improve service quality, according to the way they want to be competitive.

Scholars recommend to investigate on the impact of service quality on customer satisfaction in various industries since existing empirical evidence is limited to few sectors (Shafei & Tabaa, 2016). Telecommunication Industry is highly competitive and on the front line of technological changes adaptation where it can make a considerable influence on other industries, Accordingly, it is an important context to research about the impact of service quality on customer satisfaction in MTI (Jeng and Bailey, 2012; Sur, 2012 as cited by Nawafleh 2017). MTI is one of the rapidly changing and expanding industries in the country as well as around the globe. This is mainly due to the introduction of new technology and the increasing demand (Nawafleh et al., 2017).

In consideration of the available historical data, telecommunication plays a dominant role in the expansion of the internet and borderless communication across the globe while engaging in fierce

market competition to secure their positions, the sector plays a crucial role in today's social, cultural and economic life, generating 4.2% of global GDP, amounting to more than \$3.1 trillion of economic value-added (GSMA, 2016). Just over the past 5 years, the sheer number of mobile-broadband subscriptions has grown more than 20% annually to reach 4.3 billion worldwide accounting for at least 3.6 billion internet users (ITU, 2017). In comparison of telecommunication companies with companies in other industries, the companies in telecommunication industry use the same equipment and set-ups. Therefore, customer satisfaction is a crucial factor due to high competition and rivalry in the market (Shafei and Tabaa, 2016).

1.2. Research Problem

Telecommunication industry has recorded 11.1% growth during 2017 in comparison to the first quarter in 2017 (Department of Census and Statistics, 2017). The mobile telecommunication sector leads the telecommunication industry in Sri Lanka whilst the government is heading the fixed line business. The annual report of Telecommunication Regulatory Commission of Sri Lanka (TRCSL. 2017) shows that the mobile telecommunication companies make the major contribution to the tax income of the government, which stands at 67%. Unit price of call, Data and SMS are same in all companies in MTI (TRC, 2016). But, the mother companies' trend to sale Sri Lankan business units as such Etisalat UAE merged their Sri Lankan business operation with Hutchison telecommunication Lanka to provide better service to the customer (Operator's official Websites, 2017). Further, in reference to literature, mobile telecommunication service providers have mostly same equipment and setup. Therefore, there is an issue why companies are going to merge and sale developed business. A lack of empirical evident is available between service quality and customer satisfaction of MTI in Sri Lanka as well as measurements of service quality show differences from country to country (Hanaysha, 2017). Hence, research findings of other countries could not be generalized in Sri Lanka. Due to this situation of MTI, there is a requirement to research on the service quality aspect in order to enhance the customer satisfaction. Majid (2016) argues that perceived values is stronger on the relationship between service quality and customer satisfaction. Hence this study investigates service quality and customer satisfaction whilst addressing to perceived value as another requirement to examining with reference to mobile telecommunication sector in Sri Lanka. Above explanation justify the need of new knowledge to be gathered referring to MTI of Sri Lanka addressing the empirical and practical research gap. Therefore, this research attempts to address the research problem of *"To what extent the service quality impacts on customer satisfaction in mobile telecommunication industry of Sri Lanka"*. Also this research study is going to explore the role of perceived value as a moderator within the relationship between service quality and customer satisfaction.

1.3. Research Objectives

The main objectives of this study are to investigate the impact of service quality on customer satisfaction in MTI. Further, the following objectives are also established to facilitate the achievement of the main objective.

  i. To investigate the major elements of service quality that are influencing on customer satisfaction in mobile telecommunication industry in Sri Lanka.

  ii. To examine perceived value as a moderator among the relationship between service qualities and customer satisfaction.

2. LITERATURE REVIEW

2.1. SERVQUAL & SERVPERF Model

It can be said that the origin of SERVQUAL Model is derived from the study of Parasuraman, ZeithamI, and Berry (1985) based on expectation – perception gap model. Parasuraman, ZeithamI, and Berry (1985) illustrated that consumers' quality perceptions are influenced by a series of four distinct gaps occurring in organizations. These gaps on the service provider's side, which can block delivery of services those consumers, perceive to be of high quality, which are:

- Gap1: Difference between consumer expectations and management perceptions of consumer expectations.

- Gap2: Difference between management perceptions of consumer expectations and service quality specifications.

- Gap3: Difference between service quality specifications and the service actually delivered.

- Gap4: Difference between service delivery and what is communicated about the service to consumers.

- Gap5: Difference between service expectation and perceived service quality.

Figure 2.1: GAP Model - SERVQUAL
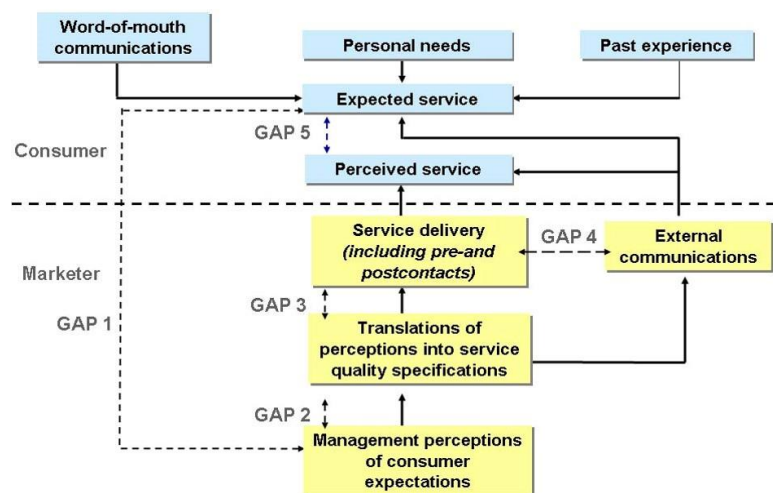
Source: *Parasuraman, ZeithamI, and Berry (1985)*

According to Parasuraman, ZeithamI, and Berry (1985), perceived service quality is defined in the model as the difference between consumer expectations and perceptions, which in turn depends on the size and direction of the four gaps associated with the delivery of service quality on the marketer's side.

2.2. SERVPERF Model

Cronin and Taylor (1992) propose the SERVPERF model, in which perceived service quality is measured based on consumer perceptions of post-service performance alone, rather than on both pre-service expectations and post-service performance perceptions. SERVPERF model is utilized to measure service quality from functional aspects (Hashedi & Abkar, 2017). Very few scholars used this model to measure service quality in telecommunication industry (Elrahman, 2017; Hashedi & Abkar, 2017; Moreira, Silva & Moutinho, 2016). The SERVPERF measures quality as an attitude, not satisfaction.

However, it uses an idea of perceived service quality leading to satisfaction. But it goes further, and connects satisfaction with further purchase intentions. The SERVPERF is a modification of SERVQUAL, and thus uses the same categories to assess service quality (RATER model) (Rodrigues & Barkur, 2011). Dimensions are Tangibles, Reliability, Responsiveness, Assurance, and Empathy.

SERVQUAL directly measures both expectations and performance perceptions whereas SERVPERF only measures performance perceptions. SERVPERF uses only performance data because it assumes that respondents provide their ratings by automatically comparing performance perceptions with performance expectations. Thus, SERVPERF assumes that directly measuring performance expectations is unnecessary (Carrillat, Jaramillo & Mulki, 2007; Cronin & Taylor, 1992; Rodrigues & Barkur, 2011). Cronin and Taylor (1992) propose the SERVPERF model, in which perceived service

quality is measured based on consumer perceptions of post-service performance alone, rather than on both pre-service expectations and post-service performance perceptions.

SERVPERF is a SERVQUAL change and therefore utilizes the same dimensions to evaluate the quality of service (RATER model) (Cronin & Taylor, 1992; Rodrigues & Barkur, 2011).

SERVQUAL has criticisms because it is based on the difference between the expectations and performance (Buttle, 1995; Cronin & Taylor, 1992). Hence, this study used dimensions of SERVPERF model as functional dimensions of service quality to measure their impact on customer satisfaction in Sri Lankan mobile telecom companies.

2.3. Customer Satisfaction

Previous research strongly advocates that service quality leads to customer satisfaction and in turn affects their behavioral intentions (Clemes, Shu & Gan, 2014; Lee, 2013; Bhatti, Abareshi & Pittayachawan, 2016; Dabholkar, Thorpe, & Rentz , 2000 ; Kotler ,2003;Davis & Heineke, 1998). Dabholkar, Thorpe, and Rentz (2000) ; Kotler (2003) advocated that satisfaction was a broader concept which had two parts cognitive and affective whereas service quality was only cognitive, Satisfaction is the overall evaluation of a service by a customer against his expectations, It may or may not include service quality. Eboli and Mazzulla (2007) found that both cognitive andeffective components together leads to customer satisfaction, they identified that higher satisfaction is the result of improvements in both service planning and service reliability. According to Angelova and Zekiri (2011) if organizations want to ensure higher satisfaction of customers they must know how customers perceive their service quality and how they can measure it.

Oliver (1980) introduced expectancy theory of disconfirmation, the author shows that satisfaction level is an outcome between perceived performance and expected performance by consumers, positive disconfirmation occurs when companies provide better products and services than expected, If the performance of service or product is worse than expected results then it will lead to dissatisfaction (Negative disconfirmation). Most researchers use the concept of overall customer satisfaction with the firm (Gupta & Zeithmal, 2006; Busacca & Padula, 2005; Mittal,Katrichis & Kumar,2001), further reflecting the more global perspective, to be considered satisfaction as "overall evaluation based on the total purchase and consumption experience".Kant and Jaiswal (2017) shows that customer satisfaction is one of key performance measures in a company of highly competitive industry.

Winning in market place needs to builds customer relationship not only to build the products but also delivering superior value to target customers. Through customer's feedback on satisfaction it be analyzed that whether the company is providing qualitative service or not (Kotler & Keller, 2009).

2.4. Network Quality

Gronroos (1982) identified two service quality dimensions, which are the technical aspect ("what" service is provided) and the functional aspect ("how" the service is provided). The customers perceive what they receive as the outcome of the process by using resources, that is the technical or outcome quality of the process, but customers perceives how the process itself functions, that is the functional or process quality, for some services the "what" (or technical quality) might be difficult to evaluate (Kang & James, 2004). As an example, a bank is technically good, when customer pays a bill from his bank account. The payment happened immediately, may be difficult for a customer to evaluate technical quality, consumers depend on other measures of quality attributes associated with the process (the "how"). Parasuraman et al. (1985) suggested that quality evaluations are not made especially on the outcome of service; they also involve evaluations of the service delivery process. The measurement of service quality (SERVQUAL) does not explicitly reflect both dimensions, but a functional dimension only. The focus on a functional dimension is one criticism of SERVQUAL (Baker & Lamb, 1994; Mangold & Babakus, 1991; Richard & Allaway, 1993). Therefore, this study considers the technical aspect by using technical quality as a technical dimension.

When consider the GSM (Global System for Mobile Communications) network which is composed as BTS (Base Transceiver Station connected to MSC (Mobile Switching Centre) via BSC (Base station control), basically the BSC handles radio resource management and handovers of the calls from one BTS (or cell/sector) to another BTS (Mishra, 2004). BTSs connect with devices such as mobile phone, tabs, dongles etc, the cellular network operates based on the frequency concept, which Offers very high capacity in a limited spectrum allocation.

Figure 2.2: Cellular Network Diagram
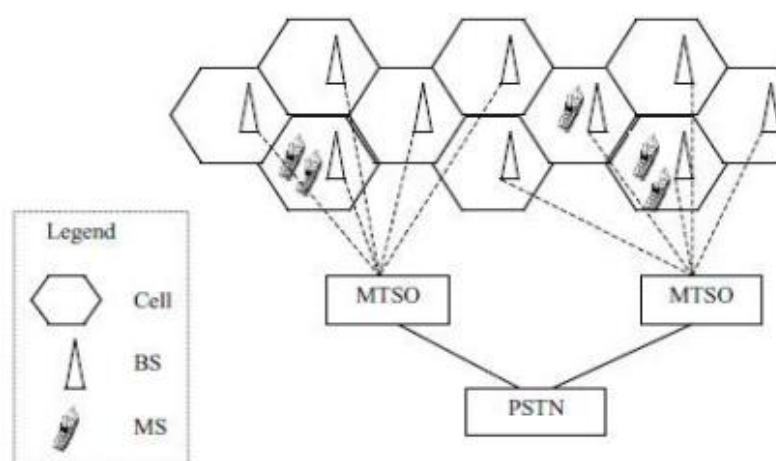
Source: Mtaho and Ishengoma, (2014)

The BTS is then used within a small geographic area called a cell. This process is to giving the network coverage and connecting customer to customer (Mtaho & Ishengoma, 2014). When the demand for service increases, the number of BTSs may be increased, this is to provide additional quality network coverage (Mishra, 2004). Hence, network quality falls under technical quality.

Currently telecommunication especially mobile devices are a part of life. Mobile phones and devices such as laptops, tabs are used service given by MTI. Therefore, the demand for the mobile services has continues to grow strongly. Hence, companies in MTI are required to set up a quality network (Munyanti & Masrom, 2017). Network quality is represented by network coverage area, call clarity (Shafei & Tabaa, 2016). It is important to remain connected to a solid mobile signal at all times. Recent businesses are not just confined to the office. Therefore, it is important to have excellent mobile coverage across the board, regardless of whether the customer is on the move or stationary. When consider the network coverage of service providers in Sri Lankan MTI, all provide same category of services (VOICE, SMS, DATA).

2.5. Perceived Value

Zeithaml (1988) identified four consumer definitions of product value for which supporting literature can be identified, these are:

(1) Value is low price
(2) Value is whatever I want in a product
(3) Value is the quality I get for the price I pay
(4) Value is what I get for what I give

These four definitions have been brought together and perceived value has been defined as the consumers' overall assessment of the utility of a product based on perceptions of what is received and what is given. There has been a general consensus that customer value involves a trade-off between benefits and costs (Chen & Dubinsky, 2003; Lee, 2013). Further Lee (2010) defined perceived value as outcomes or benefits customers gain relative to the total costs customers pay. Perceived value has been identified in marketing as an important concept in influencing preference, satisfaction, loyalty, and other important outcomes (Wang, 2011). According to Caruana (2000) customer satisfaction is not just depended on service quality but it is moderated by perceived value, further, the author suggested for future researches to confirm the moderation effect of perceived value on relationship between service quality and customer satisfaction. Raza et al. (2012) indicate that perceived value acts a moderating role in the relation of service quality and satisfaction in hotel industry.

3.   CONCEPTUALIZATION AND OPERATIONALIZATION

Since the study is followed as the deductive approach, the conceptual framework has been developed in line with the theoretical justification and empirical contribution. According to the derived conceptual framework, Service quality is the independent variable while customer satisfaction is the problem (dependent) and Perceived value moderates the relationship between independent and dependent variables.

Figure 3.1: Conceptual Framework
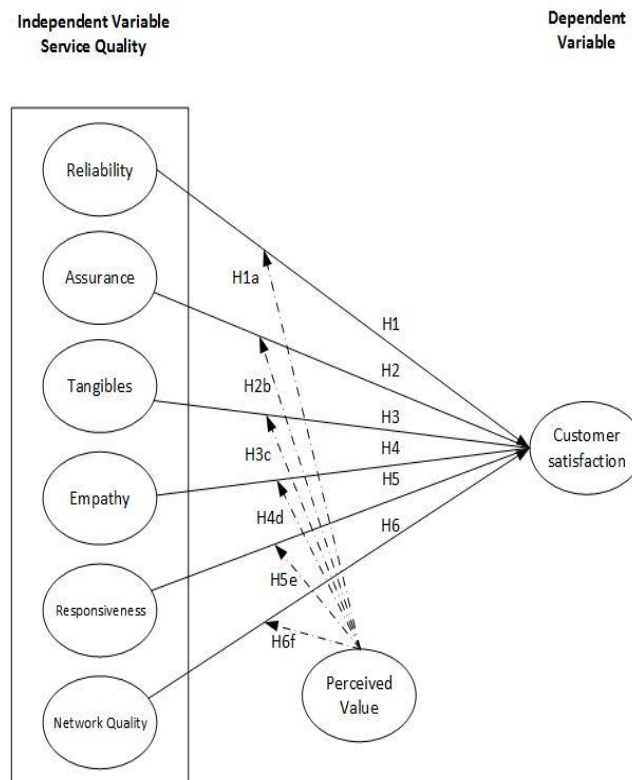
Source: Author Developed

3.1. Development of Hypotheses

Reliability is the ability to perform the promised service accurately and dependably (Rodrigues et al., 2011). Researcher shows that Reliability is one of strongest indicators of service quality (Narteh, 2017, Abdullah & Hilmi, 2014). Further, Narteh (2017) argue that there should be accuracy in billing, keeping accurate of records and performing the service at the designed time. Author Cui et al., (2003) noted that reliability is positively influence on customer satisfaction in banking, hotel and retailer sector respectively. Hence, below hypothesis can be formulated.

H1: There is a positive impact of reliability on customer satisfaction.

Assurance is knowledge and courtesy of employees and their ability to inspire trust and confidence, Assurance contains competence, courtesy, credibility and security (Parasuraman et al., 1988; Famiyeh,

Darko & Kwarteng, 2017; Padma, Rajendran and Sai, 2009). Kumar et al. (2009) shows that assurance is an indicator which influences service quality in bank sector and that it also influenced customer's judgment of employee competence which is crucial in building customer trust. Petridou et al. (2007) shows that assurance is highly significant in service quality while Siddiqi (2011) confirmed that assurance is highly positively influenced on customer satisfaction in banking sector. Hence, below hypothesis can be formulated.

H2: There is a positive impact of assurance on customer satisfaction.

Tangibles are physical facilities, equipment, and appearance of personnel (Parasuraman et al., 1988). Further Mukherjee et al., (2003) shows that tangibles are less effective to solve customer's issues and influence of tangibles are less on service quality perception in bank sector (Landhari et al., 2011). Yet petridou et al., (2007) shows that tangibles are significant to predict customer satisfaction in bank sector. Hence, below hypothesis can be formulated.

 H3: There is a positive impact of tangibility on customer satisfaction.

Empathy refers to caring, individualized attention the firm provides its customers (Parasuraman et al., 1988). According to AbuKhalifeh and Som (2012) that customers should be treated personalized basis and desired service need to be provided.Further according to Tsoukatos and Rand (2006) argued that firms should shows the empathy towards customer as firms giving individual attention towards customers. Siddiqi (2011) confirmed that empathy highly predicts customer satisfaction in bank sector. Based on the above justifications it developed the below hypothesis.

H4: There is a positive impact of empathy on customer satisfaction.

Responsiveness refers to willingness to help customers and provide prompt service (Parasuraman et al., 1988). Responsiveness is a main factor in customer satisfaction for banking sector (El Saghier, N., & Nathan, D., 2013; Lau, M. M. et al., 2013). Moreover, responsiveness is a significant predictor of overall customer satisfaction (Krishnamurthy, R., et al., 2010).

In banking perspective, customer satisfaction in banks is directly affected by the responsiveness (El Saghier, N., & Nathan, D., 2013; Lau, M. M. et al., 2013), and has a significant predictor of overall satisfaction in Indian banking services (Krishnamurthy, R., et al., 2010). On the other hand, Banerjee, N. and Sah, S. (2012) found that weak responsiveness in Public sector banks was a major source for customers' dissatisfaction, as such banks fail to provide prompt service and, employees are busy and unwilling to help the customers. Hence, the above statements can be argued that the Responsiveness dimension of service quality will strongly influence the customer satisfaction in banking sector and therefore, the research proposed the following hypotheses.

H5: There is a positive impact of Responsiveness on customer satisfaction

Network Quality The researchers consider the network quality dimension from technical aspect because the models SERVQUAL and SERVPERF considered only functional aspect (Parasuraman et al., 1985; Baker & Lamb, 1994; Mangold & Babakus, 1991; Richard & Allaway, 1993). In reference to literature, network quality is considerably affected to customer satisfaction. Therefore, hypothesis H6 is formulated as below.

H6: There is a positive impact of network quality on customer satisfaction

The interaction path (Service quality X Perceived value) should be significant to support moderator hypothesis. As well, there may be significant main effects for the independent variable (Perceived service quality) and moderator (Perceived value), but these are not directly relevant conceptually to testing the moderator hypothesis (Baron and Kenney, 1986). In reference to literature, there is strong relationship between perceived service quality and customer satisfactions, but do not show direct link to customer satisfaction, shows an effect on relationship between perceived service quality and customer satisfaction and therefore, below hypotheses are formulated.

- H1a: Perceived value moderates the relationship between reliability and customer satisfaction.
- H2b: Perceived value moderates the relationship between assurance and customer satisfaction.
- H3c: Perceived value moderates the relationship between tangibility and customer satisfaction.
- H4d: Perceived value moderates the relationship between empathy and customer satisfaction
- H5e: Perceived value moderates the relationship between responsiveness and customer satisfaction
- H6f: Perceived value moderates the relationship between network quality and customer satisfaction

4. RESEARCH STRATEGY AND METHODOLOGY

Quantitative study defined as a systematic investigation of a particular objective with quantifying and analyzing data to get the results (Apuke, 2017). Creswell (1994) defines quantitative research as an enquiry into social or human problem based on testing a hypothesis or a theory composed of variables, measured with numbers, and analyzed with statistical procedures in order to determine whether the hypothesis or the theory holds true.

4.1. Target Population and Sampling Frame

The population refers to the entire group of people, events, or things of interest that the researcher wishes to investigate; Target population is the group of people where researcher is interested in analyzing to get relevant information for research purpose (Sekaran&Bougie, 2009). The population of this study is the mobile telecommunication customers in MTI of Sri Lanka.

The sampling frame is a representation of all elements in the population from which the sample drawn (Sekaran&Bougie, 2009). In this research, the sampling frame is the customers of mobile telecommunication industry who visit any customer care center within last 3 months. Total population is the customers who are in between 18 to 55 years old. The Sample Size for 95.46% Confidence Interval for Proportion is 384(Cochran, 1977). Therefore, total of 500 questionnaires were distributed.

5. DATA ANALYSIS AND DISCUSSION

In order to collect data, 500 questionnaires distributed among mobile users of work force. And collected **407.** Among these 19 questionnaires were rejected due to six respondents didn't visit to a customer care center of the service provider and thirteen were rejected due to missing values. The accepted number of questionnaires was 388 which are enough to do the analyses (Krejcie and Morgan, 1970).

5.1. Reliability Test

Table 5.1: Reliability Statistics

Variable	Cronbach's Alpha	No of Items
Reliability	0.768	5
Assurance	0.703	4
Tangibles	0.700	4
Empathy	0.766	5
Responsiveness	0.763	4
Network Quality	0.635	2
Customer satisfaction	0.717	3
Perceived value	0.724	4

Source: Survey Data 2017

According to Sekaran (2010), the reliability of a measure is an indication of the stability and consistency with which the instrument measures the concept and helps to assess the goodness of a measure. All the alpha values are above the rule of thumb of 0.6 for a reliable scale, which suggests the internal validity of each instrument is satisfactory.

5.2. Validity Testing

According to Joppe (2000), validity in a quantitative research determines whether the research truly measures what it intended to measure or how truthful the results actually are. For testing the validity of the current study, the KMO (Kaise-Meyer-Olkin) & Bartlett's test was used.

Table 5.2: *KMO and Bartlett's Test*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.889
Bartlett's Test of Sphericity	Approx. Chi-Square	1315.480
	Df	15
	Sig.	.000

Source: Survey Data 2017

According to the rule of thumb, the sample is said to be adequate if the KMO value is greater than 0.7 and the sig value is lesser than 0.05.

5.3. Univariate Analysis - Descriptive Statistics on Service Quality

The main variable service quality was categorized into six variables according to the literature. Under each dimensions, there are several items included in the questionnaire. Following section summarized customer responses into the frequencies percentage as well as measurements mean and standard deviation.

The mean and standard deviation of the sample, basically, mean is the average value of the sample. Standard deviation is the measurement of dispersion of scores from the mean value. The frequency distribution analysis was made for each the items of dimensions in order to compare means and other frequency statistics.

Table 5.3: Descriptive Statistics

Construct	Mean	Std. Deviation
Reliability	4.8258	.97819
Assurance	4.9111	.94665
Tangibles	4.9491	.92280
Empathy	4.8428	.92718
Responsiveness	4.3911	.67454
Network Quality	4.8054	1.20781

Source: Survey Data 2017

Table 5.3 contains means and dispersion of variables from the mean. Highest and lowest Standard deviations exist for network quality and responsiveness variables respectively. The respondent attitudes towards network quality in Sri Lanka are highly different but attitudes about responsiveness are highly closed.

Table 5.4: Testing of Hypotheses

Hypotheses	Status	Justification
H1: There is a positive impact of reliability on customer satisfaction	Accepted	F sig<0.05 and t. sig<0.05
H2: There is a positive impact of Assurance on customer satisfaction	Rejected	Not linear
H3: There is a positive impact of Tangibility on customer satisfaction	Accepted	F sig<0.05 and t. sig<0.05
H4: There is a positive impact of Empathy on customer satisfaction	Accepted	F sig<0.05 and t. sig<0.05
H5: There is a positive impact of Responsiveness on customer satisfaction	Rejected	Not linear
H6: There is a positive impact of network quality on customer satisfaction	Rejected	Not linear

Source: Survey Data 2017

5.4. Moderating Effect

As per the regression analysis, perceived value doesn't moderate any dimension of service quality. Ismail et al., (2009) indicate that perceived values don't moderate the relationships between responsiveness and assurance with customer satisfaction in education filed. Thus the results provide partial support for the hypothesis of the study. Caruana, Money and Berthon (2000) confirmed that direct link between service quality and satisfaction is moderated partially by perceived value in audit firms.

Reliability

Table 5.6: Moderation effect - Summary

Summary						
R	**R-sq**	**MSE**	**F**	**df1**	**df2**	**p**
.6859	.4705	.6093	113.7308	3.0000	384.0000	.0000

	coefficient	se	T	p	LLCI	ULCI
Reliability	.5116	.1585	3.2276	.0014	.2000	.8233
Perceived value	.8143	.1848	4.4053	.0000	.4508	1.1777
Perceived value x Reliability	-.0525	.0372	-1.4096	.1595	-.1257	.0207

<div align="center">Moderator</div>

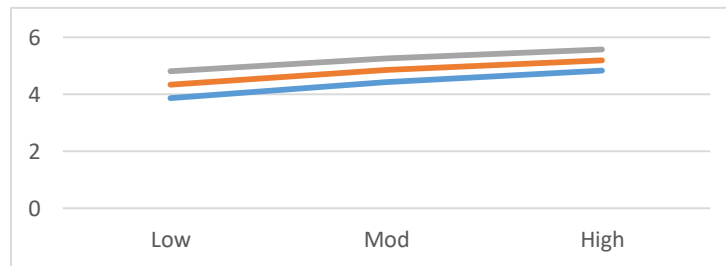| IV	Low	Mod	High
Low	3.8833	4.4981	5.1129
Mod	4.2768	4.8286	5.3805
High	4.5391	5.049	5.5588

Figure 5.1: Moderation effect

According to the graph of perceived value doesn't moderate the relationship between reliability and customer satisfaction. Therefore, hypothesis H1a: Perceived value moderates that influence made by reliability on customer satisfaction is rejected.

Assurance

Relationships between Assurance (independent variable) and customer satisfaction (dependent variable) are linear. Therefore, hypothesis H2b: Perceived value moderates that influence made by assurance on customer satisfaction is rejected.

Tangibles

Table 5.7: Moderation effect - Summary

Summary						
R	**R-sq**	**MSE**	**F**	**df1**	**df2**	**p**
.6859	.4705	.6093	113.7308	3.0000	384.0000	.0000

	coeff.	se	t	p	LLCI	ULCI
Reliability	.5116	.1585	3.2276	.0014	.2000	.8233
Perceived value	.8143	.1848	4.4053	.0000	.4508	1.1777
Perceived value x Reliability	-.0525	.0372	-1.4096	.1595	-.1257	.0207

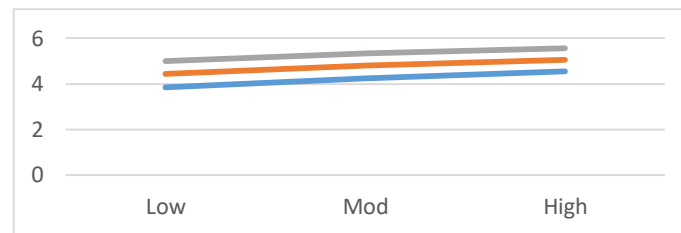| IV	Moderator		
	Low	Mod	High
Low	3.854	4.4314	5.0088
Mod	4.2488	4.7908	5.3329
High	4.5448	5.0604	5.576

Figure 5.2: Moderation effect

According to the graph perceived value doesn't moderate the relationship between tangibles and customer satisfaction. Therefore, hypothesis H3c: Perceived value moderates that influence made by tangibility on customer satisfaction is rejected.

Empathy

Table 5.8: Moderation effect - Summary

Summary						
R	R-sq	MSE	F	df1	df2	p
.7327	.5368	.5330	148.3365	3.0000	384.0000	.0000

	coeff	se	T	p	LLCI	ULCI
Empathy	.5862	.1505	3.8959	.0001	.2904	.8821
Perceived value	.5860	.1830	3.2031	.0015	.2263	.9458
Perceived value x Empathy	-.0263	.0359	-.7324	.4644	-.0969	.0443

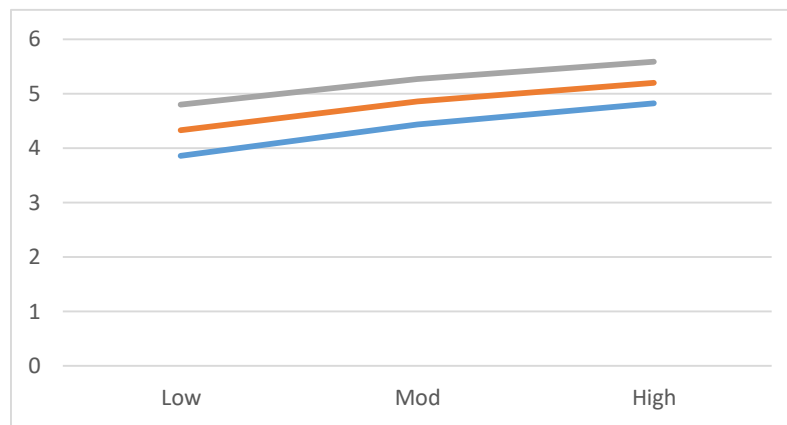| IV	Moderator		
	Low	Mod	High
Low	3.7995	4.2856	4.7717
Mod	4.3925	4.8471	5.3016
High	4.7879	5.2214	5.6549

Figure 5.3: Moderation effect

According to the graph perceived value doesn't moderate the relationship between Empathy and customer satisfaction. Therefore, hypothesis H4d: Perceived value moderates that influence made by empathy on customer satisfaction is rejected.

Responsiveness

Relationships between Assurance (independent variable) and customer satisfaction (dependent variable) are linear. Therefore, hypothesis H5e: Perceived value moderates that influence made by responsiveness on customer satisfaction is rejected.

Network Quality

Relationships between Assurance (independent variable) and customer satisfaction (dependent variable) are linear. Therefore, hypothesis H6f: Perceived value moderates that influence made by network quality on customer satisfaction is rejected.

6.   CONCLUSION AND RECOMMENDATIONS

6.1. Conclusion

The research focused on impact of service quality on customer satisfaction telecommunication industry in Sri Lanka. According to telecommunication industry information, all service providers are in trouble to be in the industry. As a result of this, some has exit from the business. This situation influence to raise the question to find what the major dimensions of service quality that are involved to customer satisfaction in mobile telecommunication industry of Sri Lanka and determine impact of service quality on customer satisfaction as well as how perceived value moderates the relationship service quality and customer satisfaction. The present study focused on the impact of service quality on customer satisfaction as a whole as well as the impact of its constructs individually. According to the regression

analysis, it was revealed that service quality had a statistically significant, positive relationship with customer satisfaction.

The study used SERVPERF model to measure service quality. According to the model, Reliability, Tangibles, Assurance, Responsiveness, Empathy are the Service quality dimensions and Network quality was added as a technical dimension. As well as, this research checked the moderating effect of the perceived value to the relationship between service quality and customer satisfaction. According to the analyses of the results, derived framework could be denoted as below.

Figure 6.1: Derived Model
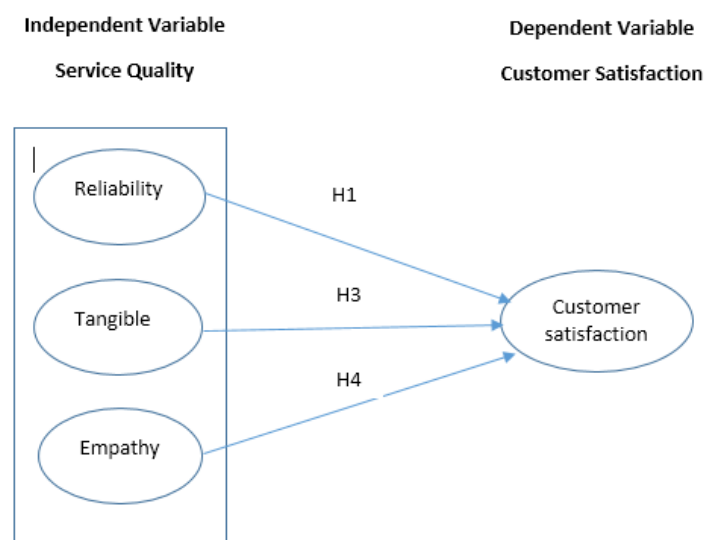
Source: Author Developed

In Sri Lanka, the major dimensions of service quality which impact to customer satisfaction are Empathy, Tangible and Reliability because the hypotheses regarding these dimensions are accepted. R squared is the proportion of the variance in the dependent variable that is predictable from the independent variable. Empathy has the highest value for R squared which is 40.2%. This means, Empathy acquired 40.2% proposition from the total satisfaction. In telecommunication industry of Sri Lanka. Other service quality dimensions that Tangible and Reliability hold second and third largest respectively.

This study aimed to check sees whether any influence by perceived value towards relationship between service quality and customer satisfaction. As rejecting hypotheses regarding moderating effect. It can be concluded as perceived value doesn't moderate the relationship between service quality and customer satisfaction in mobile telecommunication industry in Sri Lanka.

6.2. Recommendations

According to findings few recommendations are available for service providers in mobile telecommunication industry in Sri Lanka. Firms in telecommunication industry should look into Tangible, Empathy and Reliability of service quality dimensions.

i.   Empathy refers to provide caring individualized attention the firm provides its customers. Therefore, it is essential to provide individual attention to show to the customer that the company does best to satisfy his needs.

ii. Tangible consist of the physical facilities, equipment and appearance of personnel. Clients often trust the tangible evidence that surrounds the service when making their assessment.

iii. Reliability refers to the performance of a promised service in an accurate and timely manner and to the delivery of intact and correct products (or services) at times convenient to customers.

7.   REFERENCES

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