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**ANALYSIS OF THE MEDIATION SEQUEL OF  
CUSTOMER SATISFACTION BASED ON THE  
RELATIONSHIP BETWEEN SERVICE QUALITY AND  
CUSTOMER LOYALTY: A STUDY IN THE  
TELECOMMUNICATION INDUSTRY**

EHS Jayarathna

218289R

Master of Business Administration in Management of Technology

Department of Management of Technology

Faculty of Business

University of Moratuwa Sri Lanka

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The dissertation was submitted to the Department of Management of Technology of the University of Moratuwa in partial fulfilment of the requirement for the degree of Master of Business Administration in Management of Technology.

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Faculty of Business

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June 2024

## **DECLARATION**

I declare that this is my own work, and this thesis/dissertation does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any other University or institute of higher learning and to the best of my knowledge and believe it does not contain any material previously published or written by another person except where the acknowledgment is made in the text. I retain the right to use this content in whole or part in future works (such as articles or books)

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The above candidate has carried out research for the Ph.D./MPhil/Masters thesis/dissertation under my supervision. I confirm that the declaration made above by the student is true and correct.

Name of the supervisor: Dr.(Mrs.) VP Thesara Jayawardane

Signature of the supervisor:

Date: 22.08.2024

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## ABSTRACT

The main objective of this research is to identify the relationship between service quality and customer loyalty in the Telecommunication sector in Sri Lanka. Further, customer satisfaction was selected as a mediator between this relationship. It was identified that there is an increasing competition among the telecom providers in Sri Lanka and it is important to uplift the service quality. To identify the relationships, researcher carried out a comprehensive literature review. According to literature, it was identified that there is a positive relationship between service quality and customer loyalty. This study followed a quantitative methodology. Therefore, a conceptual framework and hypotheses were built up based on literature. Population covered in this study was the total telecommunication customers in Sri Lanka. 150 was selected as the sample size of this study. A 5-point Likert scale was used in the construction of a questionnaire survey, which was based on the indicators found in the literature research. Reliability, correlation, descriptive statistics, and regression analysis were all performed using SPSS for data analysis. This study's primary conclusion was that, in Sri Lanka's telecommunications industry, customer loyalty and service quality are positively correlated. Moreover, the relationship between service quality and customer loyalty was found to be considerably mediated by customer satisfaction. It was advised to improve client happiness and service quality.

**Keywords:** Customer loyalty, Customer satisfaction, Service quality

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## **LIST OF ABBREVIATIONS**

TRCSL	Telecommunications Regulatory Commission of Sri Lanka
IT-BPM	Information Technology and Business Process Management
R&D	Research and Development
GSM	Global System for Mobile Communications
BSC	Base Station Control
BTS	Base Transceiver Station
MSC	Mobile Switching Center
KMO	Kaiser-Meyer-Olkin
SDL	Service-Dominant Logic
SQ	Service Quality
CL	Customer Loyalty
CS	Customer Satisfaction

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Appendix A: Questionnaire

## **CHAPTER 01: INTRODUCTION**

### **1.1. Background of the Study**

Sri Lanka's telecommunications market is a key growth component within the services sector, delivering substantial net inflows and contributing significantly to the economy. The National Export Strategy aims to further boost this sector, targeting \$5 billion in revenue and the creation of 200,000 direct jobs by 2025, with a focus on developing 1000 IT-BPM startups. The country initiated the adoption of 5G technology in 2018, with mobile companies conducting trials, although commercialization has been delayed due to the government's pending allocation of necessary frequency spectrum (Trade.gov, 2022). According to the sources, Sri Lankan private and public sector telecom agencies are accommodating US software providers in providing their service. Not only that, but Sri Lanka Telecom has also invested a significant amount of money in national fiber optic network. This includes facilities such as fixed and mobile broadband, 5G, etc. that can be used by other telecom providers also. Despite delays in spectrum allocation, the market is gearing up for the transition from 4G to 5G mobile services, with major players like Dialog Axiata and Mobitel already conducting pre-commercial trials (Trade.gov, 2022).

In early 2023, Sri Lanka experienced a significant increase in digital adoption and internet usage. Therefore, it was revealed that this amount consists of 66.7% of the total population of Sri Lanka. Further, 7.2 million of the population is using social media and it is 32.9% of the population. This confirms that the country has seen significant growth in its online presence. However, the people not using online services were 7.28 million at the beginning of 2023 and this accounts for 33.3% of the population. The mobile sector has also been increased, with 36.18 million active cellular mobile connections. This is higher than the total population and indicating a high level of mobile connectivity. Internet connection speeds have also improved. The median mobile internet speeds has reached to 14.27 Mbps and fixed internet speeds at 20.09 Mbps (datareportal, 2023).

The potential growth rate of Sri Lankan telecom market for the next five years is 6.8% annually. Sri Lanka is home to several prominent telecommunications firms, including Dialog Axiata, Airtel, and Hutchison Telecommunications Lanka (Hutch). They

consistently allocate substantial funds to research and development, hence promoting innovation. Although there is still work to be done in completely implementing 5G services in Sri Lanka, major telecom carriers have finished 5G testing and demonstrations during the last two years. In the future, all users will progressively transition from using 3G and 4G networks to utilizing 5G networks. With the launch of its "Itgo" Wi-Fi solution, Sri Lanka Telecom (SLT) and Fon Wireless will be able to provide community-based Wi-Fi network connectivity services to its clientele. Laptops and smartphones are examples of mobile devices that can connect to the biggest Wi-Fi network. The demand for implementing Wi-Fi solutions will increase substantially as the popularity of smartphone connections continues to grow. Leading telecommunications companies are commencing the implementation of 5G wireless services in Sri Lanka. HUTCH and ZTE collaborated to demonstrate the highest 5G speed in Sri Lanka. The data emphasize the growing telecommunications industry in Sri Lanka, making it crucial to examine consumer loyalty, contentment, and service quality in the sector (Mordor Intelligence, 2023).

Customer satisfaction refers to the amount of happiness of the customer in consuming a product or a service or experiences provided by a company (Hasfar et al., 2020). Customer satisfaction ensures that the customers are well treated and their needs and expectations are met adequately. In Sri Lanka's telecommunications industry, they should maintain customer satisfaction and loyalty. These companies face higher level of competition and must prioritize customer experience to retain their market share and attract new customers.

According to Supriyanto et al., (2021) customer satisfaction is an important business dimension since it can determine the revenue growth of a company. Further, continuous purchases can occur from satisfied customers. This improves the competitive edge of organizations. As identified earlier, telecommunication companies generate greater revenues, and their plan is to grow it more. Satisfied customers can recommend a service to others. Increasing the loyal customers can result in a sustainable growth and reduce the costs associated with acquiring new customers.

Client satisfaction is a crucial determinant of a company's brand reputation (Özkan, Süer, Keser, & Kocakoç, 2020). Positive experiences lead to a favorable perception in the market, which enhances the company's competitiveness and attractiveness to

potential customers. In a regulatory environment that prioritizes consumer rights and satisfaction, companies that fail to meet customer expectations may face regulatory enquiry and penalties. Therefore, maintaining high levels of customer satisfaction is not only essential for business success but also for regulatory compliance and long-term stability.

Customer satisfaction has been evolved overtime and now it is a more complex topic. Previously it is just about whether customers were happy with a product or service. Companies used to make the customers happy expecting that they will come again. They ensured that the customers' basic needs are fulfilled. However, the customers in the current era are expecting more than usual and companies make their efforts to satisfy beyond the basic needs. They try to make the customers that they are valued in the business. The methods such as personalized experiences, being available on social media, and making sure customers can easily get help when they need it. Technology has resulted in significant changes in customer satisfaction and expectations. Customers are now more expected in easy, convenient, and tailored products and services (Veloso et al., 2020). Telecommunication industry is a highly competitive market in any country. Therefore, they have to maintain the customer satisfaction to retain their clients for a longer time period. Customer churn should be prevented and in certain countries telecom sector is continuously growing with increased demand. Adebisi et al. (2016) found that in the telecom industry, consumer happiness is mostly influenced by price/billing, customer care services, promotional activities, and service quality.

When further analyzing, it was noted that research has shown that one could argue that the primary determinant of client loyalty is customer satisfaction. Chigwende, (2021) proves that, in his study, improving service quality, offering competitive pricing, and providing excellent customer care services are highly important for telecommunication companies to enhance customer satisfaction and retain their customer base (Chigwende, 2021). Additionally, Alzoubi et al. (2020) emphasizes that there is a correlation between customer happiness and perceived service value. Perceived service value refers to the customer perception on the product benefits they can entertain compared to its cost. Not only that, customers also value service quality, expecting reliable and efficient telecom services. Price fairness is another important factor, as customers want to feel they are getting a good deal for the price they pay. If issues or problems are addressed promptly and effectively, customers will be satisfied in advance.

The customer loyalty is consistent preference and consumers' propensity to select a particular product or service from a business (Kiseleva et al., 2016). Positive customer experience can determine the level of loyalty of the customers. It helps to build long-term relationship between company and customer. While brand ambassadors who promote a company enthusiastically are part of customer loyalty, the core of this concept lies in the regular repeat customers who form the foundation of a business. Loyal customers have the power to become brand ambassadors, actively promoting a company's image. When customers are loyal to a brand, they trust their products or services and are likely to recommend them to others. Word-of-mouth marketing is highly influential, since people mostly depend on recommendations from friends, family, and online reviews when making purchasing decisions (Singh, 2020). Consistent delivery of excellent products or services can result in building strong relationships with customers, businesses can turn loyal customers into powerful supporters who help attract new customers and build brand reputation. Customer loyalty can significantly increase company revenue by driving higher spending from existing customers. The study done by Umashankar et al., (2017) proves that loyal customers are spending more on each purchase compared to new customers. These customers always trust the company and their products since they are satisfied about it. Not only that, increased loyal customers can improve the revenue of the company through increased continuous purchases.

The study done by Imbug et al., (2018) highlights the significant impact of customer experience on customer loyalty in the telecommunication industry. According to the researchers, there are three key dimensions of customer experience. These are core service, charging, and brand. Companies should try to provide positive core service, fair charging and quality brand to improve customer loyalty according to these researchers. Customer experience should be a major concern for telecom companies. Customers always want uninterrupted telecom service. They need that experience. Hence, it becomes evident that telecommunications companies must prioritize the creation and delivery of exceptional customer experiences to uphold customer retention rates and foster enduring relationships.

The research conducted by Awadhi et al. (2021) investigated the pivotal role of customer perceived expectations and experiences in shaping satisfaction within the telecommunications sector, with a particular focus on digital solutions. In their study,

it highlights that meeting or exceeding customer expectations through digitalization positively influences customer satisfaction. Hence it can be argued that telecom companies can enhance customer satisfaction by focusing on improving the digital solutions they offer. Further, ensuring they align with customer expectations.

Hafez & Akther (2017) conducted research that revealed the primary factors influencing loyalty in the telecom industry to be service quality, customer satisfaction, trust, and company image. Their analysis highlighted that the paramount component in fostering client loyalty is service quality. Hafez & Akther (2017) found that the main determinants of consumer loyalty in the telecommunications sector are service quality, customer satisfaction, reliability, and business image. Their analysis highlighted that the primary determinant for fostering client loyalty is the quality of service provided. The study's findings demonstrate that when a business provides high-quality service, customers become more devoted. Moreover, it is imperative to uphold customer satisfaction, trust, and corporate image as they play crucial roles in influencing customer loyalty. Not only that, this study highlights that, loyalty for a telecommunication provider can depend on the customer satisfaction, trust over the company and positive perception towards the service and brand image. However, this study found no meaningful correlation between switching costs and client loyalty. The research conducted by Tariq & Nik Mat (2018) puts forth a conceptual framework aimed at knowing the elements that affect consumer loyalty in this industry. Drawing upon Oliver's theory, the study focuses on trust, customer satisfaction, business image, and service excellence. The study investigates the service quality, customer satisfaction, dependability, and corporate reputation using Oliver's theory. These factors are crucial in determining loyalty among customers in the telecom sector. According to Agha et al. (2021), service quality is an important factor in influencing customer loyalty in the telecom industry. When the organization provide best quality service, customers remain loyal to the company according to the researchers. According to literature, trust can be considered as a major factor that contribute to customer loyalty. The corporate reputation significantly impacts customer loyalty, since clients are more inclined to stay loyal to businesses that possess favorable images and reputations. Additionally, switching costs emerge as a significant determinant influencing customer loyalty. Customers will switch from existing product to another when the perceived costs are increasing.

In the Sri Lankan telecom sector, customer loyalty was studied by Silva & Fernando, (2015). The study highlights that the dimensions of Excitement and Sincerity were found to be most important in creating brand loyalty. This suggests that customers in Sri Lanka are attracted to brands that offer exciting and sincere experiences. Additionally, dimensions such as Complexity, Competence, and Ruggedness were also found to significantly impact brand loyalty. This suggests that customers in Sri Lanka value brands perceived as sophisticated, capable, and durable (Silva & Fernando, 2015).

The term "service quality" describes the general caliber of services that a business offers to its clients (Jankalová, 2016). It typically encompasses dimensions qualities like dependability, certainty, responsiveness, empathy, and tangibles. The reliability aspect of service quality ensures that services are accurate and dependable for customers. Assurance dimension ensures that the employees are knowledgeable enough regarding their work and their ability to build the trust over the service on the customers. Empathy can be referred to as the nature of caring about the feelings and requests of the customers. Physical assets include buildings, machinery, and employee appearances. The study done by Demir, (2019) emphasizes the significance of service quality in the telecom sector, especially with regard to GSM companies. Service quality determinants are crucial factors that influence customer satisfaction and loyalty. Network reliability, call quality, customer service responsiveness, service coverage, and pricing are significantly impacting on the service quality in telecom firms. By benchmarking these factors, businesses can evaluate their advantages and disadvantages in relation to rivals, enabling them to focus on areas that need improvement. Improving service quality can raise client retention, satisfaction, and profitability in the long run.

The objective of this study is to examine the correlation between customer loyalty and service quality, with a specific focus on the telecommunications sector in Sri Lanka. As a prominent sector within the country, enhancing customer satisfaction is crucial in the face of intense competition. Given that all telecom operators emphasize strong service quality in their offerings, it becomes imperative to assess the sector's service quality to attain a competitive edge in the future. Furthermore, in this study, customer satisfaction is considered to be a mediating factor. Previous research suggests a substantial interrelation among customer loyalty, customer satisfaction, and service quality. However, when referring to the recent literature, it was identified that there is lack of

studies which analyzed these relationships in the Sri Lankan telecom industry. Therefore, the current study will fill this gap through the findings.

## 1.2. Research Problem

The background study of this research identified that the telecommunication sector in Sri Lanka is continuously developing with latest technologies. This increases the competition in the telecommunications sector. According to store.fitchsolutions.com, (2024) Sri Lankan telecommunication companies are experiencing severe tax burden due to changes in taxes. This impacts on their services directly and the prices have to be increased. Customers can be unhappy about the price increases which impacts on their satisfaction.

**Figure 1.1**

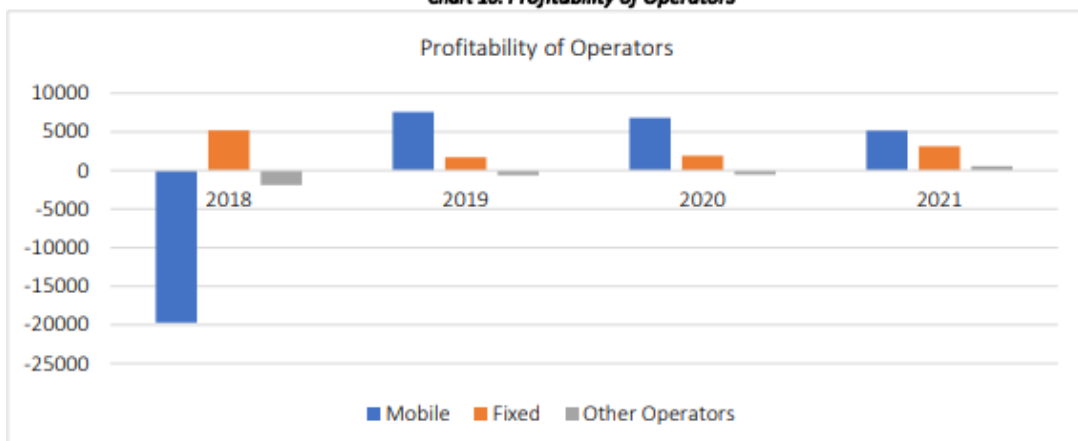
*Telecommunication Company Revenue*

**Table 11: Profitability of Operators**

Industry	2018 (Rs. Mn)	2019 (Rs. Mn)	2020 (Rs. Mn)	2021 (Rs. Mn)*
Mobile	(19,733)	7,564	6,805	5,146
Fixed	5,179	1,696	1,910	3,146
Other Operators	(1,909)	(612)	(546)	543
<b>Total</b>	<b>(16,463)</b>	<b>8,648</b>	<b>8,169</b>	<b>8,835</b>

\*Unaudited

**Chart 10: Profitability of Operators**



Note. (TRCSL, 2021)

The above figure demonstrates the revenue made by the telephone operators in Sri Lanka. According to the statistics, it is clear that the revenue from mobile services have reduced in 2021. Mobile users constitute the largest segment of telecommunications customers in Sri Lanka. Consequently, declining revenues can adversely affect the service quality provided by telecommunications companies.

Excessive taxation in recent years has significantly impacted the investment capacity of telecom firms, particularly in rural areas. In 2016 and 2017, the telecommunication industry faced an effective tax rate of 49.67%, which was later reduced to 37.7% in 2018 and further cut to 22.6% in 2020 (Economy Next, 2024). These fluctuations in tax rates have created an unstable financial environment for telecom companies, affecting their ability to maintain and improve service quality. Therefore, it is important for the telecom companies to review their customer satisfaction and service quality to attract and retain customers.

These data indicate that the telecom sector in Sri Lanka is battling financial obstacles while trying to preserve service quality and client satisfaction. Therefore, this study will answer the major research question of “What is the relationship between service quality and customer loyalty in Telecommunication sector in Sri Lanka?”

The purpose of this study is to clarify the significance of customer satisfaction as an intermediary in improving customer loyalty in the telecommunications industry. The results are anticipated to provide helpful suggestions for organizations to improve the quality of their services, which will eventually result in increased levels of client loyalty and satisfaction. This study is crucial for the telco firms to maintain its competitive edge and maintain enduring connections with its customers in Sri Lanka's dynamic telecommunications industry.

### **1.3. Research Questions**

1. What is the relationship between service quality and customer loyalty in Telecommunication sector in Sri Lanka
2. What is the relationship between service quality and customer satisfaction
3. What is the relationship between customer satisfaction and customer loyalty
4. What is the mediating impact in customer satisfaction on the relationship between service quality and customer loyalty

## **1.4. Research Objectives**

1. To examine the relationship between service quality and customer loyalty in Telecommunication sector in Sri Lanka
2. To identify the relationship between service quality and customer satisfaction
3. To identify the relationship between customer satisfaction and customer loyalty
4. To explain the mediating impact in customer satisfaction on the relationship between service quality and customer loyalty

## **1.5. Significance of the Research**

The findings of this research can help Telecommunication sector in Sri Lanka to improve its service quality and improve customer loyalty. Identifying the factors that influence customer satisfaction and loyalty is important for Telecommunication sector in Sri Lanka to improve their revenues and maintain competition. The current study can recognize the service quality issues and financial issues. Telecommunication sector can potentially increase customer loyalty, reduce churn rates, and enhance its overall reputation through resolving service quality issues currently exist. This study builds upon existing theoretical frameworks by examining the role of customer satisfaction as a mediator in the connection between service quality and customer loyalty. Further, this study can present broader overview of the relationships between these variables. The findings can enrich theories related to customer relationship management, service quality management, and customer loyalty, providing new insights and perspectives for future research in these areas.

## **1.6. Research Outline**

Introduction - Introduces the research topic, emphasizing the importance of customer satisfaction and devotion in the telecommunications industry. It also defines the research objectives and questions.

Literature Review – Provides a summary of satisfaction with customers and loyalty theories, reviews previous studies in the telecommunications industry, and establishes the theoretical framework for the research.

Methodology - explains the sampling strategy, data gathering technique, and research design, variables, measurements, and statistical methods employed in the investigation.

Data Analysis and Discussion - Presents and examines information gathered from the survey, tests hypotheses related to the mediation effect, and discusses the results and their implications for the telecommunications industry.

Conclusion - Summarizes the research findings, draws conclusions, provides recommendations for Telecommunication sector in Sri Lanka and suggests areas for future research.

## **CHAPTER 02: LITERATURE REVIEW**

### **2.1. Introduction**

The theoretical foundation for the research investigation is given in this chapter by reviewing previously published journal articles. Initially this chapter will provide short introduction to the Sri Lanka Telecommunication sector. Next, the focus will shift to examining the research variables, specifically service quality, customer loyalty, and customer satisfaction. Finally, it will focus on empirical evidence based on previously published research articles which relevant to this study area.

### **2.2. Service Quality**

As part of the assessment process, customer expectations are measured against the services delivered, determining the overall service quality. This quality of service reflects an attitude formed through evaluations conducted over an extended period. A service's quality is determined by how well it fulfills the expectations of the customer. Often, this element influences how people perceive of a product or service. Delivering superior service quality leaves a lasting impression on consumers, shaping their perception of the organization. In terms of strategic advantages, such as increasing customer retention and gaining a competitive edge, service quality is seen as a potential means to achieve these outcomes (Douglas & Connor, 2003).

Within the context of a service environment, it is presumed that customers' opinions of quality occur at several levels. At the beginning of their engagements with service providers, customers rate the quality of such interactions based on individual characteristics. There are several sub-indicators that make up service quality, including cost-effectiveness, user-friendliness, and technical support. Five primary factors are used to evaluate the quality of a service: tangibles, responsiveness, empathy, assurance, and reliability (Suryawirawan et al., 2022).

In light of the growing significance of services and the intensifying competition, it is imperative that both customers and management pay particular attention to the quality of the services they get. The term "technical quality" relates to elements like the response time, the efficacy of the site, and other similar aspects. Service quality

measurement entails aligning the level of service offered with client expectations. Consistently meeting consumer expectations is essential for delivering exceptional service (Dubey & Srivastava, 2016).

What sets one service apart from another is the customer's overall assessment of it. Quality of service from other types of service. In order to fully understand the essence of service quality, it is crucial to acknowledge the intangible, distinct, and linked attributes of the service (Naz et al., 2021).

### **2.2.1. SERVQUAL Model**

Because of the great entrance rates and the new upgrades in innovation that is associated with the portable broadcast communications industry, there has been a new increase in the premium in characterizing and assessing service quality (SERVQUAL) viewpoints in the versatile broadcast communications area worldwide. The service quality tool, also known as SERVQUAL, continues to be one of the most contentious models of service quality assessment over the past two decades. Despite advancements, there remains ambiguity regarding the original number of dimensions in SERVQUAL as proposed by its creators (Douglas & Connor, 2003).

It is possible to assert that the SERVQUAL Model was developed from the research conducted by Parasuraman, Zeithaml, and Berry (1988), which was based on the expectation – perception gap model. It was demonstrated by Parasuraman, Zeithaml, and Berry (1988) that the quality perceptions of customers are impacted by a succession of four unique gaps that arise inside organisations (Parasuraman, Zeithaml, & Berry, 1988). These deficiencies on the part of the service provider, which have the potential to impede the delivery of services such as those that customers consider to be of high quality, which include :

Gap1: The discrepancies between consumer expectations and the perceptions of management around those aspirations.

Gap2: The distinction between the management's perception of client requests and the attributes of service excellence.

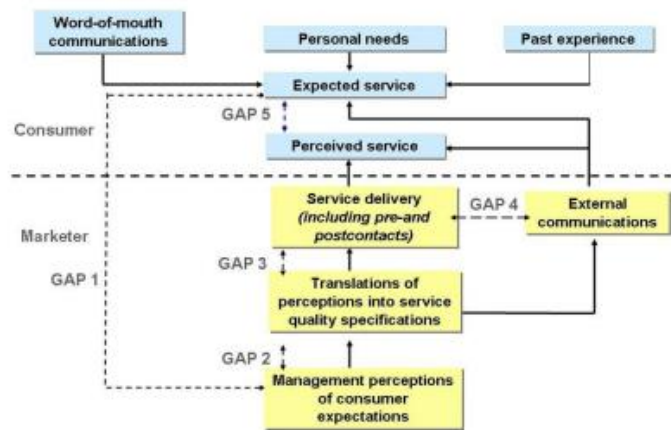
Gap3: The inconsistency between the criteria for service quality and the actual service delivered.

Gap4: There is a distinction between the delivery of services and the information that is given to customers about those services.

Gap5: Distinction between the level of service that is expected and the quality that is perceived. (Parasuraman, Zeithaml, & Berry, 1988).

**Figure 2.1**

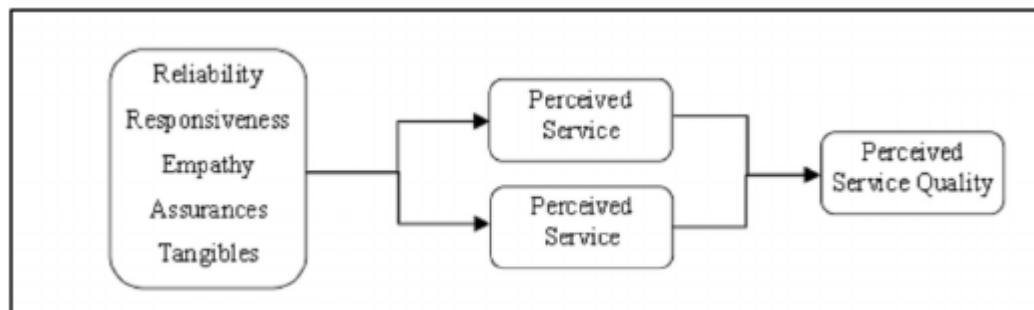
*Gap Model - SERVQUAL*



*Note.* Parasuraman, Zeithaml, & Berry, 1988.

**Figure 2.2**

*The SERVQUAL Model*



*Note.* Parasuraman, Zeithaml, & Berry, 1988.

Parasuraman, Zeithaml, and Berry (1988) define perceived service quality as the discrepancy between customer expectations and perceptions. The apparent help not set in stone by the distinction, greatness, and bearing of the four holes connected with the conveyance of management caliber from the advertiser's perspective (Parasuraman, Zeithaml, & Berry, 1988).

In here, this study has applied this theoretical model to get variables to measure service quality. Reliability, assurance, responsiveness and empathy use for the study to measure service quality.

### **2.2.2. SERVPERF Model**

In 1992, Cronin and Taylor introduced the SERVPERF model, which relies exclusively on consumers' ratings of service performance after it has been provided, in order to assess the quality of services, excluding pre-service expectations (Cronin & Taylor, 1992). Hashedi and Abkar (2017) employ the SERVPERF model to measure service quality from a functional perspective (Al-Hashedi & Abkar, 2017).

It utilizes the notion of perceived service quality to achieve satisfaction. It also links satisfaction with the tendency to buy more items. Rodrigues and Barkur (2011) assert that SERVPERF is a derivative of SERVQUAL, employing identical categories to evaluate service quality according to the RATER model. The dimensions include tangibles, reliability, responsiveness, assurance, and empathy (Rodrigues et al., 2011).

In contrast to SERVPERF, which solely measures performance perceptions, SERVQUAL directly assesses both expectations and performance perceptions through its measurement system. Because of the way that SERVPERF works under the presumption that respondents present their assessments via consequently contrasting their impression of performance and their assumptions for performance, it exclusively utilizes performance information (Adil et al., 2013). As per Carrillat, Jaramillo, and Mulki (2007), SERVPERF consequently works under the supposition that it isn't fundamental to gauge execution assumptions expressly (Carrillat et al., 2007). Rather than taking into account both pre-service expectations and post-service performance perceptions, Cronin and Taylor (1992) established the SERVPERF model, which

assesses service quality exclusively based on the consumer's view of post-service performance (Cronin & Taylor, 1992).

Because of the way that SERVPERF is a change to SERVQUAL, it utilizes similar aspects to assess the nature of administration (RATER model) The SERVQUAL approach has confronted analysis for being founded on the distinction among assumptions and execution (Cronin & Taylor, 1992). The research employed the dimensions of the SERVPERF model as effective components of service quality in order to evaluate their influence on customer satisfaction within the mobile communication industry in Sri Lanka.

As per SERVPERF Model, this study uses reliability, responsiveness, assurance and empathy to measure service quality.

### **2.2.3. Hierarchical Model**

In the year 2001, Brady and Cronin proposed another model that was a blend of four distinct models. One of the ways in which they enhanced SERVQUAL (Parasuraman et al., 1988) was by defining the characteristics that required to be trustworthy, responsive, empathetic, assured, and palpable. Brady and Cronin introduced the concept of service quality perception, which is evaluated by clients across three dimensions: the three dimensions of quality in this context are functional quality, physical environment quality, and technical quality (Parasuraman, Zeithaml, & Berry, 1988). Furthermore, they acknowledge the existence of multidimensional and multilayer judgements of service quality (Dabholkar, 1996). (Dabholkar, 1996).

The hierarchical model and the SERVQUAL elements that are defined into subdimensions have been used to conceptualise a new model. Brady and Cronin have accomplished their goal of improving the framework for service quality and resolving the impasse in this theory. It provides a clear manner of service quality measurement as well as a definition of service quality perception. In the SERVQUAL assessment, service outcomes were not taken into clear consideration; however, Brady and Cronin's approach appears to address this gap in the existing literature (Leisen Pollack, 2009).

**Figure 2.3**

*The Hierarchical Model*



*Note.* Brady & Cronin, 2001

In here, this study has used network quality as a measurement of service quality, and it is coming under outcome quality of service quality.

## **2.2.4. Dimensions of Service Quality**

### **2.2.4.1. Network Quality**

The specialized perspective, which alludes to "what" administration is provided, and the utilitarian angle, which alludes to "how" the assistance is offered, are the two components of administration quality that Gronroos (1988) laid out (Gronroos, 1988). Clients perceive the outcome of the process, referred to as the technical or result quality, based on the resources used. In addition, they assess the functioning of the process itself, which is known as functional or process quality. Assessing the technical quality of certain services can provide a challenge (Kang & James, 2004). In the event if a consumer pays a bill from his bank account, for instance, a bank is said to be technically sound. Due to the fact that the payment was processed instantly, assessing the technical quality of products could be a difficulty for the customer. Customers depend on supplementary indicators of quality attributes associated with the process (the "how"). Parasuraman et al. (1988) contended that quality assessments involve not only the service results, but also the evaluation of the procedures employed to provide the service.. The service quality measurement, also known as SERVQUAL, does not clearly represent both aspects; rather, it solely reflects one of the functional dimensions. One of the criticisms that might be levelled against SERVQUAL is that it places an

emphasis on a functional dimension (Parasuraman, Zeithaml, & Berry, 1988). This investigation takes into account the technical aspect by incorporating technical excellence as a parameter.

The GSM ( Global System for Mobile Communications ) network comprises of BTS ( Base Transceiver Stations ) that are connected to MSC ( Mobile Switching Centers ) through BSC ( Base Station Controllers ). The primary responsibility of the BSC is to manage radio resources and facilitate the transfer of calls between different BTS (or cells/areas). The source cited is Mishra (2004). The cell network capabilities in view of the recurrence thought, which offers extremely high limit in a restricted range distribution.

BTSs speak with gadgets like cell phones, tabs, dongles, and other the comparative gadgets.

Communication technologies, particularly mobile devices, are becoming an integral component of everyday life. A service that is provided by MTI is utilised by mobile phones and other devices such as computers and tablets. For this reason, there has been a persistent and significant increase in the demand for mobile services. As a result, businesses operating inside MTI are obligated to establish a network of high quality (Munyanti & Masrom, 2018). According to Shafei and Tabaa (2016), the quality of a network is characterised by its coverage area and the clarity of calls. Always maintaining a connection to a reliable mobile signal is something that should be prioritised. In recent times, businesses have expanded outside the confines of the workplace. Because of this when examining the GSM ( Global System for Mobile Communications ) network, which includes BTS ( Base Transceiver Stations ) connected to MSC ( Mobile Switching Centers ) through BSC ( Base Station Controllers ), it is essential to ensure robust mobile coverage throughout, whether the client is stationary or mobile. This is particularly important when considering the network coverage of service providers in the Sri Lankan MTI, it is found that all of them offer the same type of services (VOICE, SMS, and DATA) (Shafei & Tabaa, 2016).

#### **2.2.4.2. Assurance**

In this context, "assurance" refers to the skills and capacities of the personnel, as well as the question of whether or not these skills and capabilities earn the faith and

confidence of the stakeholders. In the event that consumers feel at ease with the personnel of the firm, this is an indication that customers will return to the company in order to conduct further commercial interactions. The following characteristics are also included in assurance: competence, courtesy, good communication, and a general attitude that is geared towards providing efficient and effective service to customers of the company. The manner in which employees conduct themselves instills trust in the organization, which in turn makes consumers feel safe. This is the case provided that employees are courteous and always possess the expertise necessary to respond to queries from customers. In addition, the assurance component of SERVQUAL encompasses the organization's level of expertise, the level of politeness it extends to its clients, and the level of operational security it provides. Competence refers to the knowledge and skills that an organization possesses to effectively deliver its services. It is the combination of their expertise and the manner in which they connect with the clientele that instills confidence in the organization (Setiono & Hidayat, 2022).

#### **2.2.4.3. Reliability**

The phrase "Service Quality Dimension" pertains to the company's implementation and delivery of the service, ensuring that it meets the promised standards of quality and accuracy within the specified boundaries agreed upon by the company and the customer. This indicates that the organization is able to give a service to its customer at a time without making any mistakes and that it is able to fulfil what it promised within the time frame that was agreed upon. It is generally agreed that reliability is the most crucial aspect of service quality (Setiono & Hidayat, 2022).

#### **2.2.4.4. Responsiveness**

Service Quality Dimension pertains to the company's readiness to assist clients by offering them efficient, high-quality, and prompt service. This dimension is crucial as customers feel more appreciated when they receive top-quality service. It implies that the personnel of a service organisation are prepared to assist consumers, meet their needs, inform them about service availability, and deliver prompt service. Efficient and competent recovery from a service failure may greatly enhance views of quality (Nitecki & Hernon, 2000).

#### **2.2.4.5. Empathy**

Empathy is a term that describes the manner in which a corporation shows concern for its consumers and provides them with individualised attention in order to make those customers feel as though they are extra valued and extraordinary. Aspects like as access, communication, and comprehension of the customer's requirements are included. The provision of care and consideration for each individual consumer is the focus of this concern (Bove, 2019). When it comes to this aspect, the organisation is able to comprehend the issues that consumers face and produce outcomes that are favourable to them, in addition to providing them with particular and personalised attention. Empathetic organisations have not lost touch with what it feels like to be a client of their own organisation during the course of their existence. Therefore, organisations that demonstrate empathy are able to comprehend the requirements of their clientele and ensure that their offerings are easily available to them. Emotional intelligence was described by Parasuraman et al. (1985) as the caring and individual attention that a company delivers to its clients. Providing individualised attention to clients, having staff that are aware of the requirements of their consumers, and operating business hours that are convenient for customers are all necessities (Bahadur et al., 2018).

### **2.3. Customer Loyalty**

The term "customer loyalty" refers to the conduct of consumers that is most closely related to their tendency to make repeat purchases. The term "customer loyalty" has traditionally been used to refer to the consequences that result from all of the interactions that a consumer has with a service or product provider. Loyalty is defined as a strong commitment to consistently choose or continue using a preferred product or service in the future, even when faced with situational factors and marketing efforts that may encourage a change in behavior (Douglas & Connor, 2003).

It is crucial for businesses to have loyal customers in order to be able to supply high-quality items that satisfy their requirements. The attitude that a consumer has towards a service, brand, or business, as well as the goal of a customer to maintain his or her connection with the business or brand, are both examples of customer and brand loyalty. Customers are more likely to stay loyal to a brand when they are dedicated to making purchases, speak positively about the product, and recommend it to others. In order for a business to keep its clients, customer loyalty is of the utmost importance, and it is also

worth mentioning that customer loyalty may help lessen rivalry between rivals. Customer loyalty can be impacted by relationship marketing, the caliber of service rendered, and the degree of customer fulfillment (Meyer-Waarden, 2007).

Loyalty refers to the dedication of a customer to remain committed to a service provider, even when there are several alternative options available to the consumer. Customer attitudes are a reflection of their plans to either repurchase or acquire more items or services from the same firm. It also indicates their propensity to recommend the company to others. This demonstrates customer commitment by showing a reluctance to switch to competitors. Customers that are loyal to a business not only return back to make further purchases, but they also have a tendency to talk positively about the service they receive to their family and friends. It is expected that the company's profitability would rise as a result of the presence of loyal clients who make consistent purchases (Popjanev, 2016).

There are four factors that are used to quantify customer loyalty. These dimensions are as follows: saying nice things, recommending friends, continuing to purchase, and providing advice. When a consumer shares positive opinions about a product or service through a review, narrative, or description of their personal experience with it. There is a correlation between the suggestion of a friend to purchase a product that is comparable to the one that was used and the invitation of other individuals to share the services of the provider as a consequence of the perceived favorable experience. In the context of a recurring cycle, continuous buying refers to the situation in which a consumer makes additional purchases of the subsequent product or service. This occurs when the buyer has the mindset of continually repurchasing the service. You should encourage other people to make use of the service or purchase the goods (Lacey & Sneath, 2006).

The primary determinant of customer loyalty is typically seen as the level of alignment between an individual's subjective disposition and their repeated loyalty. The interaction is considered to be mediated by social norms and elements that are specific to the setting. Individuals have identified cognitive, emotional, and conative antecedents of relative attitude as factors that contribute to loyalty. Additionally, motivational, perceptual, and behavioural repercussions have been recognised as contributory factors. When it comes to businesses that are focused on the customer, survival is contingent on the degree to which the client's needs are satisfied. According to the findings of previous research studies, the primary advantage of client retention is the intention to make more purchases. On the other hand, other individuals had

recognized various benefits, such as the intention to repurchase, price tolerance, desire to refer, and so on. Vendors must effectively handle client satisfaction and the consequences of customer loyalty to attain retention. The concept of loyalty is sometimes related with a pyramid effect, suggesting that there exists a hierarchical structure of varying degrees of devotion between customers and sellers. In the presence of particular attitudes and behaviors, a change in the amount of loyalty will become apparent (Uncles et al., 2003).

Among the factors that influence client loyalty, there are three considerations to consider: (1) Loyalty factors that have an effect on the product or service offered by an organization; a) quality is the highest level of value that a consumer receives and is motivated to come back and make additional purchases; b) price from the product and service, which becomes a factor that influences customer loyalty due to the price including the natural process of purchase; and c) customer loyalty program. (2) The factors that impact loyalty with regard to development are as follows: a) Quality that is based on the relationship with the prior experience, and b) Trust. 3) A factor that factors into the conduct of the client and impacts their loyalty. Personal qualities, such as gender, age, income, risk being taken, attitude, and expectation, are additional factors that influence consumer loyalty, despite the fact that some study acknowledges that other individuals are not loyal. There are seven factors that determine loyalty, which include: a) the sense of security within the industry, b) the diversity of the industry, c) the factors that contribute to the overall evaluation of the product include its quality, the service offered by personnel, and the concept of collaboration (Išoraitė, 2016).

According to Japariato et al. (2007), the following are some of the variables that drive customer loyalty: 1) Providing a supportive and caring environment for consumers will result in the satisfaction of the industry, which in turn will result in the loyalty of customers. (2) Trust is something that develops over a period of time, beginning with customers beginning to trust the business and continuing until both the customer and the industry come to trust each other. (3) The primary determinant of customer loyalty is typically seen as the degree of alignment between an individual's mindset and their repeated loyalty. The industry bears the responsibility of safeguarding its clients through the provision of high-quality products and services, as well as addressing their intricate needs, thereby ensuring that customers perceive the firm's utmost care (Japariato, Laksmono, & Khomariyah, 2007). Cumulative satisfaction refers to the overall value of all products and services accumulated over time. As a result of the fact

that customer attitude and behaviour are dependent on products and services, customer loyalty is an essential component in the process of pleasing consumers, as stated by Abdullah, Putit and Teo (2014). It is generally accepted that a consumer holds a loyal relationship with a business when they exhibit good conduct (Abdullah et al., 2014).

## **2.4. Customer Satisfaction**

Satisfaction often refers to the emotions of contentment or dissatisfaction that an individual experiences while evaluating the perceived effectiveness or results of a product or service in relation to their initial expectations. This comparative process evaluates whether the actual performance meets, exceeds, or falls short of what was anticipated, thereby determining the level of satisfaction.. The consumer is unsatisfied with the product or service if the performance or experience does not meet their expectations. The consumer is happy if the product or service meets their expectations. The consumer is extremely satisfied or thrilled if it goes above and beyond their expectations (Pei et al., 2020).

Customer satisfaction is a corporate ideology that highlights the importance of creating value for customers and showcasing the ability and accountability to meet their needs, as well as proactively managing and predicting their expectations. A sensation that purchasers have as a result of a company's performance that falls in line with their expectations is known as customer satisfaction. A consumer's state of mind after making a purchase is referred to as satisfaction. This state of mind reflects the extent to which the consumer either appreciates or disapproves of the service following their experience. If the service performance fails to meet the consumer's expectations, it often results in dissatisfaction. The response of the customer to the entire set of needs or services that were given in accordance with the customer's expectations. Because of this, the level of satisfaction that is achieved will have a beneficial effect on the capacity of the firm to realise the desires of its consumers, which will result in a favourable perception of the performance of the company. Once they have reached a point of contentment, they will choose and purchase it again at regular intervals (Thamrin & Aresa, 2021).

When a customer believes that the products or services they have acquired have attained the level of satisfaction that they had anticipated based on their current position, they

are pleased. Comparing consumer experiences with the same items or services can help gauge customer satisfaction levels. Customers recognize that their satisfaction contributes to loyalty, leading them to readily make purchases. Therefore, a customer's satisfaction level stands as the most crucial factor in determining their loyalty. The level of satisfaction experienced by customers is largely a cognitive and emotive component (Narteh & Kuada, 2014).

#### **2.4.1. Expectancy Theory Of Disconfirmation**

In the event that the exhibition of a help or item is more terrible than anticipated results, then, at that point, it will prompt disappointment (negative disconfirmation). Oliver (1980) presented the anticipation hypothesis of disconfirmation. The creator shows that the degree of fulfillment is a result between the apparent execution and the normal presentation by purchasers. Positive disconfirmation happens when organizations give preferable items and administrations over people expected. To additionally mirror the more worldwide point of view, most of specialists utilize the idea of generally consumer loyalty with the organization (Gupta & Zeithaml, 2006). This idea is viewed as fulfillment since it depends on "by and large assessment in light of the absolute buy and utilization experience. According to Kant and Jaiswal (2017), one of the most important performance criteria for a firm operating in a highly competitive industry is providing satisfaction to the company's customers (Kant & Jaiswal, 2017).

Expectancy Disconfirmation Theory aiming at explaining post-purchase or post-adoption pleasure as a function of expectations, perceived performance, and disconfirmation of beliefs is Disconfirmation Theory. After direct experience with a good, service, or technology artefact, post-purchase or post-adoption contentment is the degree to which a person is happy or fulfilled with that artefact. According to expectation confirmation theory, disconfirmation of beliefs and perceived performance directly affect satisfaction; hence, expectations and perceived performance indirectly affect it by means of a mediational relationship passing through the disconfirmation construct (Kant & Jaiswal, 2017).

## **2.5. The Relationship Between Service Quality and Customer Loyalty**

Agyapong (2011) was led utilizing different relapse examination to explore the connection between administration quality characteristics (effects, dependability, responsiveness, skill, pleasantness, having a good sense of reassurance, correspondence, and client understanding) and consumer loyalty. As per the discoveries, every one of the help quality qualities was a dependable sign of consumer loyalty. Furthermore, the findings indicated that if no measures were done to improve the levels of these variables, the level of customer loyalty would decrease (Agyapong, 2011). Loke et al. (2011) has found that, these factors had a significant relation to customer satisfaction. The findings revealed that although all five characteristics accounted for more than 80 percent of the consumer happiness, the dimensions of empathy, dependability, and responsiveness demonstrated the most substantial and powerful impact on customer satisfaction and loyalty. Iddrisu et al. (2015) discovered a strong correlation between tangibles, responsiveness, and dependability and customer loyalty in the telecoms sector in Ghana. Dubey & Srivastava (2016) has found that the quality of service has a beneficial effect on both relationship building and loyalty. Two of the four service quality antecedents, tangible and assurance, positively impact customer relationship management. Tangibility, on the other hand, has a big impact on customer loyalty. The study's findings suggest that service providers should enhance their technical skills and give their clients with state-of-the-art technology (Dubey & Srivastava, 2016). The aim of this study was to investigate the relationship between variations in service quality and customer loyalty in the Indian telecoms sector. The study regarded service quality gaps as the independent variable and customer loyalty as the dependent variable. This study considered five criteria identified by Parsuraman, Zeithaml, and Berry (1988) as antecedents of service quality gaps, using the SERVQUAL model. The factors include dependability, assurance, tangibility, empathy, and responsiveness. This study employed an exploratory and causal research approach using questionnaires. Parsuraman, Zeithaml, and Berry's work in 1988 was used to create a 27-item tool. The instrument consisted of 22 questions related to the five antecedents of independent variables, together with 5 items for customer loyalty, adapted from the research of Kaur and Soch (2012). Information was collected from 163 consumers of BSNL and Airtel mobile services in Jammu & Kashmir using

structured questionnaires. In assessing the instrument's reliability, The Cronbach's coefficient alpha was utilized. A multivariate regression analysis was conducted to ascertain the causal link between the independent and dependent variables. The study's findings indicated that inadequacies in service quality had a notable and beneficial effect on customer relationships. Hence, the study proposes that service providers enhance their technical proficiency and supply clients with state-of-the-art technologies (Baba, 2018).

## **2.6. The Relationship Between Service Quality and Customer Satisfaction**

Multiple studies demonstrate that both the quality of service and the pleasure of customers have a substantial influence on the loyalty of clients.

There are variety of studies have used SERVQUAL model to identify the relationship between service quality among different variables like customer satisfaction, loyalty of customers. Loke et al. (2011) and Agyapong (2011) have conducted studies on the relationship between service quality in telecommunication industry. Loke et al. (2011) conducted a study in Malaysia's telecommunications industry to examine the impact of dependability, 'responsiveness', assurance, 'empathy', and tangible features on 'customer satisfaction', using the service quality scale (SERVQUAL) model. Agyapong (2011) conducted a study to investigate the impact of quality of service on satisfaction among consumers among Vodafone telecom customers in Ghana. Agyapong (2011) also used a modified service quality scale, commonly referred to as the SERVQUAL model, to analyze service quality. Loke et al. (2011) has found that, these factors had a significant relation to customer satisfaction. The findings revealed that although all five characteristics accounted for more than 80 percent of the consumer happiness, the dimensions of empathy, dependability, and responsiveness demonstrated the most substantial and powerful impact on customer satisfaction and loyalty. A research done by Agyei and Kilika (2013) in the mobile telecommunications industry of Kenya discovered a favorable correlation between customer retention and all dimensions of service quality, as defined by the SERVQUAL model (Agyei & Kilika, 2013).

There are some studies have conducted regarding service quality and customer satisfaction and customer loyalty and customer satisfaction by using variety of dimensions of service quality. Iddrisu et al. (2015) finding is comparable with the findings of Kheng et al. (2010), who found that consumer loyalty was directly related to tangibles. When it came to client loyalty, empathy came out on top with the largest positive correlation, whereas assurance had the lowest correlation.

The field of telecommunications is one of the industries that is expanding at the fastest rate in the entire world. Due to the COVID-19 pandemic, consumers have increasingly relied on telecommunications to sustain their employment and educational pursuits. During the COVID-19 epidemic, there was a rise in the number of people using the internet and telecom services, the firms that supply telecom services face numerous hazards and barriers as they endeavor to suit their customers' expectations by offering a wide array of telecoms services. During the COVID-19 epidemic, it is of the utmost importance to have a comprehensive understanding of the elements that influence consumer loyalty towards telecom firms within this context. The aim of this study is to investigate the correlation between customer happiness, perceptions of promotional packages, and service quality, and their influence on consumer loyalty towards telecommunications companies in Hungary. Additionally, the study investigated how customer satisfaction and perceptions of promotional packages work as mediators in the connection between service quality and customer loyalty. Amidst the COVID-19 pandemic, a key aim of the study is to contrast the perspectives of Hungarian customers and expatriates residing in Hungary with those of consumers from different nations in relation to the conduct of telecom companies. Data were collected using a well-structured questionnaire and a linear snowball sampling method. The study analyzed 589 completed answers, comprising 208 from Hungarian clients and 381 from people in other countries. A regression analysis was conducted on the acquired data using AMOS 22 software for analysis. Based on our research findings, both service quality and consumers' perceptions of promotional packages positively influence customer loyalty, both internationally and among Hungarian customers. Customer satisfaction significantly impacts customer loyalty specifically among consumers located in foreign countries. Customer satisfaction significantly affects customer loyalty only among consumers located in foreign countries. Furthermore, the findings suggest that promotional packages and customer happiness have a role in mediating the connection between service quality and consumer contentment (Naz et al., 2021).

## **2.7. The Relationship Between Customer Satisfaction and Customer Loyalty**

Investigating the link between customer loyalty and happiness in the framework of Bangladesh's mobile phone market was the aim of this paper. Maintaining the quality of their products, the mobile phone companies change their main marketing plans to retain their current customers. They do this by maximizing the loyalty of their clients. The results of the research indicate that in Bangladesh's mobile telecommunications industry, consumer happiness and customer loyalty show a positive relationship (Hossain & Suchy, 2013). In the telecoms sector, three elements ensure consumer loyalty: increasing client contentment, perceived value, and service quality (Lai et al., 2009). Research has shown that Sri Lanka Telecom PLC in Sri Lanka conducted studies to look at the link between customer loyalty and satisfaction. The results of the research revealed that certain factors of customer satisfaction clearly influence consumer loyalty (Karunanithy & Rasanayagam, 2013).

## **2.8. The Mediating Impact In Customer Satisfaction On The Relationship Between Service Quality And Customer Loyalty**

Talib et al. (2011) found that three aspects determine the quality of service : dependability, empathy, and service. Talib et al. (2011) also discovered a positive correlation between service quality and customer loyalty . A study undertaken in the retail banking sector in Bangladesh revealed a strong correlation between all service quality measures and customer loyalty, with customer satisfaction acting as a mediator. In the framework of Ghana's telecom sector, research has been conducted to investigate the role consumer satisfaction performs as a mediator between service quality and customer loyalty. Moreover, it was clear that the degree of client satisfaction was quite much influenced by the quality of the service. Though not statistically significant, the direction between the mediator— Customer Satisfaction—and Customer Loyalty was positive. Once more, it became evident that the contentment of the client partially balances the relationship between service quality and customer loyalty. Consumer pleasure should be considered even if it was clear that the quality of service given by telecommunication companies cannot be the only determinant of customer loyalty (Nyan, Rockson, & Addo, 2020). The study done by Kumar, (2017) analysed the

mediator role of customer satisfaction between the relationship of customer loyalty and service quality in telecom service industry. The study reveals that customer satisfaction partially mediates between service quality and customer loyalty. The same findings were revealed by (Vun et al., 2013).

## **CHAPTER 03: RESEARCH METHODOLOGY**

### **3.1. Introduction**

This chapter provides an overview of the methodology used in the study, including the primary methodology, research design, techniques for collecting data, and methods for analyzing data. The study commences by introducing the conceptual framework. The operationalization of variables is illustrated in a table. Hypotheses were built up based on the literature. The discussion revolved around the study design, which was based on the concept of the research onion. This text examines several aspects of research, including research philosophy, research approach, research plan, and chronology. The demographic and sample of this study were elucidated using the data collection methodology. The study offers an elucidation of the dependability and accuracy of the research, along with a discourse about the research ethics that were considered.

### **3.2. Context of the Study**

The telecommunications industry in Sri Lanka is governed by two main regulations The Telecommunications Regulatory Commission of Sri Lanka (TRCSL) and the Sri Lanka Telecommunication Act, No. 25 of 1991 (modified by Act No. 27 of 1996), which was enacted under this legislation. The Act defines "telecommunication" as the action of transmitting, emitting, or receiving any signs, signals, letters, pictures, sound, or intellect of any kind by the use of optical means, wires, radio waves, or any other electromagnetic system. Recently, the competitiveness in Sri Lanka's telecommunications market has increased, particularly in the areas of data transmission, wireline fixed access, cellular mobile, and wireless services. The telecoms industry is crucial to the functioning of a nation. It makes a substantial economic contribution and is essential to society by enabling communication between individuals and organizations (Prabath & Sandanayake, 2022).

Among the most significant industries in Sri Lanka, the telecommunications sector is one of the most important sectors since it makes both direct and indirect contributions to the economy of the country and makes use of a significant number of resources. On the other hand, it is one of the most significant industries that contributes to the

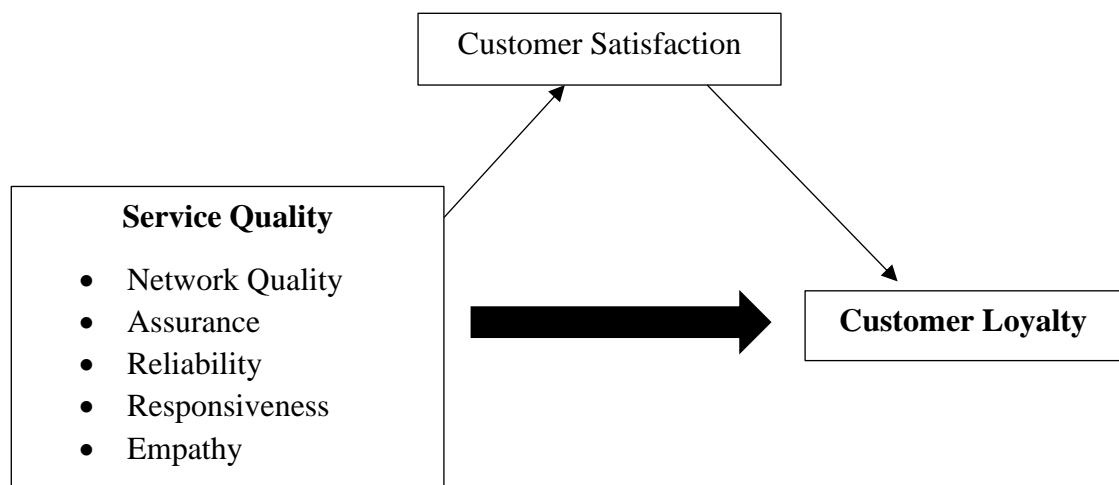
expansion of the nation's economy in both direct and indirect ways (Prabath & Sandanayake, 2022).

### 3.3. Conceptual Framework

The conceptual framework of this study presents a visual representation of the desired results. The independent variable in this study is service quality, whereas 'customer loyalty' is the dependent variable. Additionally, customer satisfaction is considered the mediator variable.

**Figure 3.1**

*Conceptual Framework*



*Note.* Developed by Author, 2024

### 3.4. Hypotheses Development

Ahmed et al. (2010) discovered a positive relationship in Pakistan's telecom industry between customer loyalty and numerous service quality indicators. In Loke et al. (2011)'s analysis of the Malaysian telecom market, they discovered that responsiveness, dependability, and empathy had the most effects on customer satisfaction and loyalty. Agyapong (2011) discovered that a number of characteristics of high-quality services were reliable measures of client satisfaction. In the Kenyan mobile telecommunications sector, research by Iddrisu et al. (2015) and Agyei and Kilika (2013) revealed a positive association between all facets of service quality and consumer loyalty. These empirical observations led to the development of the following theory.

H1<sub>a</sub>: There is a significant relationship between Service Quality and Customer Loyalty

H1<sub>0</sub>: There is no correlation between Service Quality and Customer Loyalty

Loke et al. (2011) and Agyapong (2011) have conducted studies on the relationship between service quality in telecommunication industry. Loke et al. (2011) conducted a study in Malaysia's telecommunications industry and found that there is a significant relationship between service quality and customer satisfaction. Further, the studies done by Agyapong (2011) and Agyei and Kilika (2013) in the mobile telecommunications industry, there is a significant association between service quality and customer satisfaction;

H2<sub>a</sub>: There is a significant relationship between Service Quality and Customer Satisfaction

H2<sub>0</sub>: There is no correlation between Service Quality and Customer Satisfaction

Customer loyalty, consumer satisfaction, and the mobile telecommunications sector in Bangladesh all exhibit positive relationships (Hossain & Suchy, 2013). Customer satisfaction and customer loyalty has positive relationships according to Lai et al., (2009). Sri Lanka Telecom PLC carried a research to examine the relationship between customer satisfaction and loyalty in Sri Lanka. The study's findings demonstrated that a number of customer satisfaction criteria have a discernible impact on customer loyalty

(Karunanithy & Rasanayagam, 2013). Based on these evidence following hypothesis is determined;

H3<sub>a</sub>: There is a significant relationship between Customer Satisfaction and Customer Loyalty

H3<sub>0</sub>: There is no correlation between Customer Satisfaction and Customer Loyalty

In study, Kumar. A, (2017) examined the function of customer happiness as a mediator in the relationship between customer loyalty and service quality in the telecom sector. According to the study, there is a partial mediating role of customer satisfaction between loyalty and service quality. Similar conclusions were made by (Vun et al., 2013). Therefore, service quality still has some direct influence on customer loyalty, but customer satisfaction accounts for part of this effect. Based on this evidence following hypothesis is determined;

H4<sub>a</sub>: Customer satisfaction mediates the relationship between Service Quality and Customer Loyalty

H4<sub>0</sub>: Customer satisfaction does not mediate the relationship between Service Quality and Customer Loyalty

In study, Kumar. A, (2017) examined the function of customer happiness as a mediator in the relationship between customer loyalty and service quality in the telecom sector. According to the study, there is a partial mediating role of customer satisfaction between loyalty and service quality. Similar conclusions were made by (Vun et al., 2013). Based on this evidence following hypothesis is determined;’ H4<sub>a</sub>: ‘Customer satisfaction’ mediates the relationship between ‘Service Quality’ and Customer Loyalty.

### 3.5. Operationalization

**Table 3.1**

*Operationalization*

Variable	Definition	Dimensions	Indicators	Source	Measurement
Service Quality	A measure of	Network Quality: This refers to the overall performance	<ul style="list-style-type: none"> <li>Network coverage area</li> </ul>	(Shafei & Tabaa, 2016).	5 point likert scale

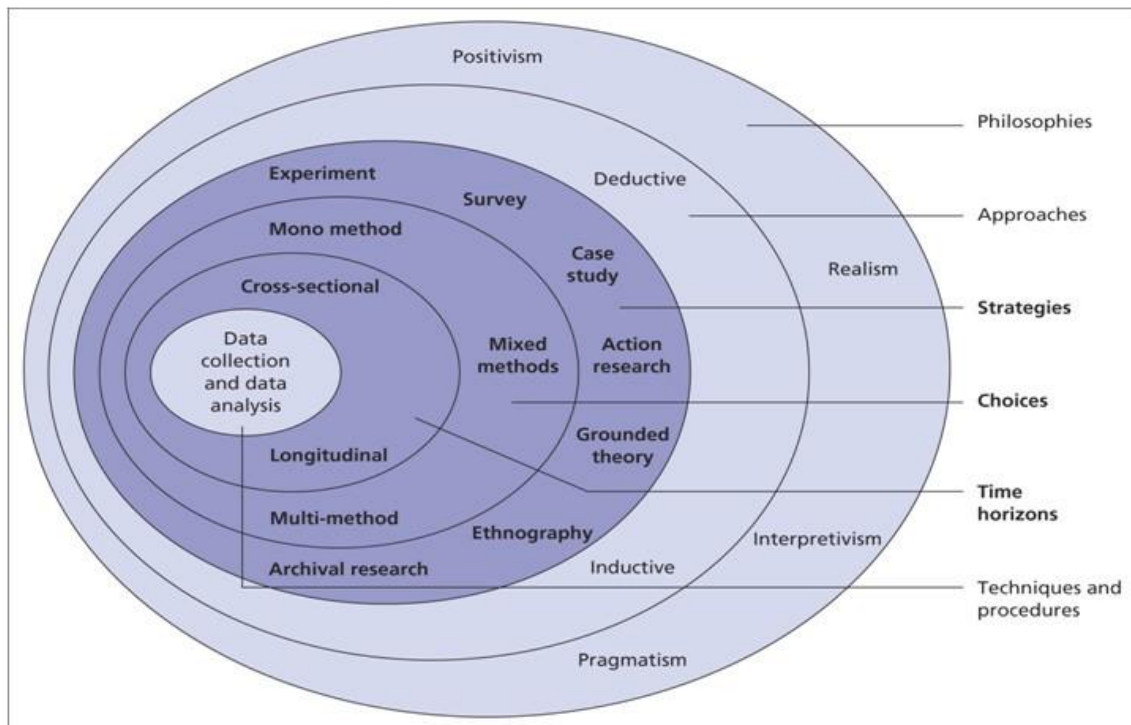
	service quality is the degree to which the level of service provided is in accordance with the expectations of the client. (Dubey & Srivastava, 2016).	and reliability of a telecommunication service provider's network (Shafei & Tabaa, 2016). (Rahhal, 2015)	<ul style="list-style-type: none"> <li>• Call clarity and call quality</li> <li>• Call drop</li> <li>• Network congestion.</li> </ul>	(Rahhal, 2015)
		Assurance: Assurance in telecommunication services refers to the confidence customers have in their provider's trustworthiness, accuracy and timeliness of information received, the reliability of the billing system, and the convenience of accessing services and outlets. (Roy & Ganguli, 2008)	<ul style="list-style-type: none"> <li>• Trustworthiness</li> <li>• Accurate and timely information</li> <li>• Billing system</li> <li>• Convenience of procedures and outlets</li> </ul>	(Parasuraman et al., 1991)  (Roy & Ganguli, 2008)
		Reliability: Reliability in telecommunication services reflects the	<ul style="list-style-type: none"> <li>• Consistency</li> <li>• Dependability</li> <li>• Fulfilling promises</li> </ul>	

		<p>provider's ability to consistently deliver dependable service</p> <p>(Roy &amp; Ganguli, 2008)</p>	<ul style="list-style-type: none"> <li>• Service Accuracy</li> </ul>		
		<p>Responsiveness:          Responsiveness in telecommunication services refers to the provider's ability to efficiently resolve customer complaints, deliver services promptly, maintain convenient operating hours, and ensure that staff are approachable and readily available to assist customers with their needs.          (Roy &amp; Ganguli, 2008)</p>	<ul style="list-style-type: none"> <li>• Customer complaints resolving</li> <li>• Speed of service</li> <li>• Operating Hours</li> <li>• Approachability</li> </ul>		

		<p>Empathy: Empathy in telecommunication services involves providing service aimed at making customers feel valued and understood by the service provider.</p> <p>(Roy &amp; Ganguli, 2008)</p>	<ul style="list-style-type: none"> <li>• Personalised attention</li> <li>• Pleasant, friendly, and caring service</li> <li>• Understanding Customer Needs</li> <li>• Sympathetic Response</li> </ul>		
Customer satisfaction	Sentiments of joy or disappointment that a person has as a result of comparing the perceived performance (or results) of a product or service with the expectations that they had for it.		<ul style="list-style-type: none"> <li>• Perceived performance vs. expectations</li> <li>• Usage experience</li> <li>• Comparison of experiences</li> </ul>	(Pei et al., 2020).	
Customer Loyalty	The conduct of consumers that is most closely related to their tendency to make repeat purchases. (Douglas & Connor, 2003)		<ul style="list-style-type: none"> <li>• Recommendations</li> <li>• Repeat purchase intention</li> <li>• Trust</li> <li>• Perceived Value</li> <li>• Fair and competitive price</li> </ul>	(Išoraitė, 2016).	

### 3.6. Research Design

**Figure 3.2**  
*Research Onion Model*



*Note.* (Saunders et al., 2016)

In Positivism philosophy, the researcher is based on the objectives of the study and generates outcomes to achieve those objectives. Therefore, the personal idea of the researcher is not included in this type of research. The current study is based on a set of objectives, and the researcher is analyzing data to achieve these objectives. Therefore, the positivism philosophy is employed in this study. `

The deductive approach is based on a specific theory built by previous researchers. The researcher is building the hypotheses based on these theories and then collects and analyses data to prove the hypotheses. In deductive approach, researcher is not building new knowledge since they are based on existing knowledge in contrary to the inductive approach (Taherdoost H. , 2022). Making observations and then taking into account hypotheses that would fit the relevant observations in line with them is known as the abductive research philosophy. The researcher in this study utilizes theories pertaining to service quality, customer satisfaction, and customer loyalty. Hypotheses were

derived from empirical literature, and the data were developed to evaluate these hypotheses. Therefore, deductive approach is used in this study.

The current study uses this strategy to collect data from the users of telecommunication services. The questionnaire was constructed with a 5-point Likert scale, with 1 denoting Strongly Disagree, 2 indicating Disagree, 3 representing Neutral, 4 signifying Agree, and 5 denoting Strongly Agree. The questionnaire consists of two primary sections. First section contains questions related to demographic factors of the respondents such as gender, age group, income level, etc. The second part of the questionnaire includes questions related to the variables under study. The researcher is using quantitative method to analyze and present the data in this study. The primary data obtained from the questionnaire survey is evaluated using statistical software and effectively shows the results. Further, Given that this particular research study is conducted over a shorter period of time, it is possible to apply the cross sectional technique to it (Kesmodel, 2018).

### 3.7. Population and Sample

The study population refers to the subset of the target population that can be readily accessed and investigated. The subset chosen from the overall group being studied is referred to as the study sample. This study encompasses the clientele of telecommunications services in Sri Lanka.

**Table 3.2**

*Sampling Framework*

Telecom Provider	Customer base
Dialog	17 million
SLT Mobitel	9 million
Airtel	3 million
Total	23 million

*Note.* (Dialog Axiata, 2024); (Airtel, 2024); (SLT Mobitel, 2023)

The above table demonstrates the sampling framework of this study. Main telecom providers in Sri Lanka, Dialog, SLT Mobitel and Airtel, were considered for sampling framework. According to the statistics, telecommunication sector serves the 23 million users in Sri Lanka. Morgan's Table is used to determine the sample size for a given population size to achieve a desired confidence level and margin of error. According to Morgan's Table, for a population of over 1,000,000, a sample size of 384 is recommended at a 95% confidence level with a 5% margin of error. Collecting responses from 384 participants is challenging due to the limitation of time for this study. Therefore, the sample size was reduced to 150 customers from the Colombo district. However, telecom users in the Colombo district are not published by the relevant main telecom providers.

### **3.8. Data Collection**

This study utilizes both primary and secondary data. Primary data is data that is directly obtained by the researcher, as stated by Taherdoost (2021). Primary data is not collected or published previously by others. Surveys, interviews, observations, experiments, or direct measurements are the main methods of primary data collection. In this study, primary data was collected through a questionnaire survey method distributed using Google Forms. The participants were provided with information on the objective of the study, and their responses were included in the data analysis. Secondary data refers to data collected by others or published by another party. This study gathered secondary data from journal articles, telecommunication industry reports, and other reliable secondary data sources such as websites.

### **3.9. Data Analysis**

The current study follows a quantitative data analysis method, where data was analyzed using SPSS. The main tests used for data analysis include descriptive statistics, frequency analysis, correlation analysis, reliability test, validity test, ANOVA test, and mediation analysis.

Frequency Analysis – Frequency analysis was used to examine the distribution of data for demographic factors among the customers or respondents in this study. It

summarizes the data under variables. It is used to identify any patterns or trends in the data.

Descriptive statistics – Descriptive statistics demonstrates the trends, central tendency and variation of variables. This test was utilized to examine the average and standard deviation of each item within the three primary variables in this study. It can be used to explain how variant is the data and the central tendency of the items.

Reliability Test – Reliability is tested based on the Cronbach's Alpha value. This test was done for all three variables of this study.

Correlation analysis – Pearson correlation test was used to analyze the relationships between the variables. The Pearson correlation value is utilized to quantify the strength of the relationship between variables. A positive correlation value reflects a positive relationship whereas negative correlation value demonstrates a negative relationship.

ANOVA Test – This is used to analyze the mean values between two or more variables. Therefore, this is useful for understanding statistical significant difference between the variables.

Mediation Analysis – The researcher used this study to determine if customer happiness plays a major role as a mediator in the link between service quality and customer loyalty.

### **3.10. Research Ethics**

Research ethics is an important consideration of any researcher. This ensures that the research is done adhering to the ethical principles and in an ethically responsible manner. Research ethics covers the principles of anonymity, informed consent, privacy, and integrity (Knight, 2019). The current study involves participation of a set of respondents, users of telecommunication services, and it is important to protect their privacy. The researcher did not request their identity and has not revealed it in this research. Researcher always promoted voluntary participation in this research. The participants were notified that their involvement is optional, and they possess the privilege to retract their answers at any given moment. The primary data collected are protected using necessary data protection methods. The data is stored securely and the access is only limited to the researcher. The data will be discarded after the research.

The objectives of this research is communicated clearly to the respondents prior to the data collection. It was explained that the collection of data is only for the research purposes. The integrity of the research is ensured, and the results of the data analysis are reported transparently and accurately, with no conflicts of interest.

## CHAPTER 04: DATA ANALYSIS AND DISCUSSION

### 4.1. Introduction

The fourth phase of this research inquiry is specifically focused on the examination and interpretation of data. In this chapter, the primary data acquired from the online data survey undergo a series of statistical analyses. The software used for the statistical analysis is IBM SPSS Data Analytical Software. The analytical techniques deployed for this research investigation include univariate, bivariate and multivariate analytics. The present research study employs a range of univariate data analysis techniques, including demographic factor analysis, descriptive statistics, reliability testing, and validity testing. Furthermore, correlation analysis is employed as a bivariate analytic technique to evaluate the link that exists between study variables. Finally, multiple regression analysis and mediator analysis are deployed as the multivariate analytical techniques.

### 4.2. Demographic Factor Analysis

**Table 4.1**

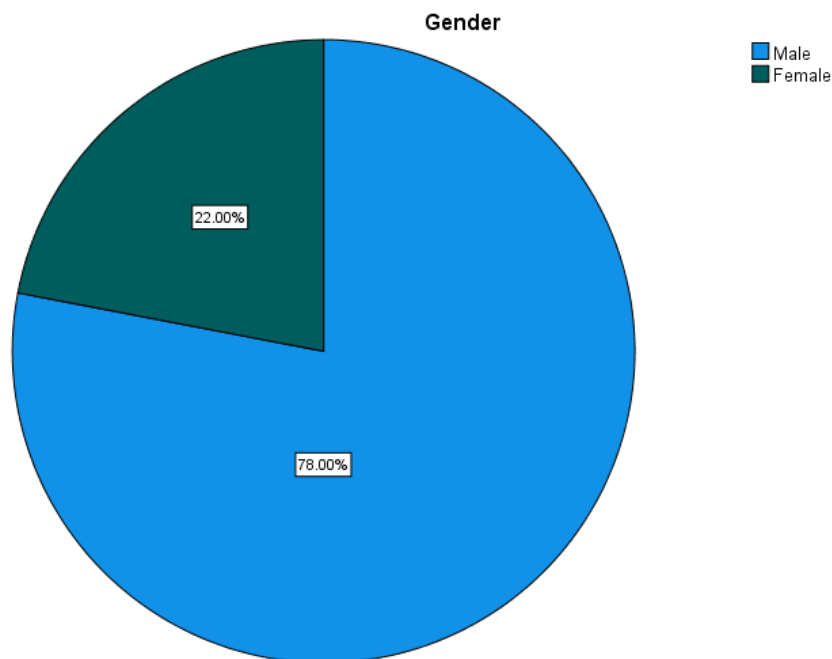
*Gender*

		Gender			Cumulative Percent
		Frequency	Percent	Valid Percent	
Valid	Male	117	78.0	78.0	78.0
	Female	33	22.0	22.0	100.0
	Total	150	100.0	100.0	

*Note.* Developed by Author, 2024

**Figure 4.1**

*Gender*



*Note.* Developed by Author, 2024

Among a collective of 150 individuals, the data provided showed 78% male and 22% female responses. This distribution shows a majority representation of males and a minority representation of females. This data can reveal about the nuances of how men and women interact with different services, and the ways in which women and men influence customer satisfaction.

**Table 4.2**

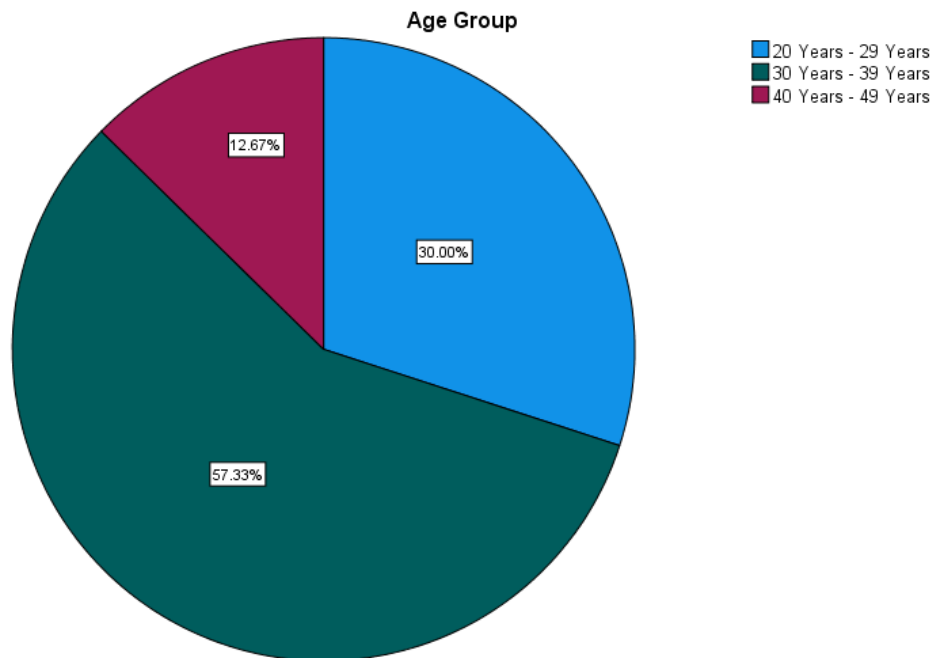
*Age Group*

		Age Group			Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	20 Years - 29 Years	45	30.0	30.0	30.0
	30 Years - 39 Years	86	57.3	57.3	87.3
	40 Years - 49 Years	19	12.7	12.7	100.0
Total		150	100.0	100.0	

*Note.* Developed by Author, 2024

**Figure 4.2**

*Age Group*



*Note.* Developed by Author, 2024

Sample is segmented into three age groups, providing insight into the participant composition. Among them, 30% of respondents fall within the 20 to 29 age bracket, while the majority, comprising 57.3% of participants, belong to the 30 to 39 age group. After that, 12.7% are between 40 and 49 years of age. From this distribution, it appears that Outlines from their twenties to late thirties are overrepresented. In this way, it is possible to get a good understanding of how age affects the quality of services and their satisfaction.

**Table 4.3**

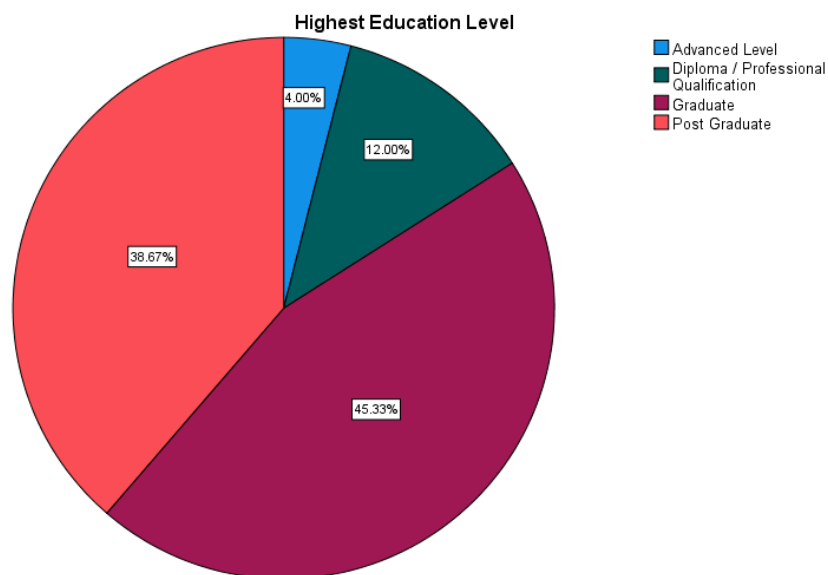
*Highest Education Level*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Advanced Level	6	4.0	4.0	4.0
	Diploma / Professional Qualification	18	12.0	12.0	16.0
	Graduate	68	45.3	45.3	61.3
	Post Graduate	58	38.7	38.7	100.0
	Total	150	100.0	100.0	

*Note.* Developed by Author, 2024

**Figure 4.3**

*Highest Education Level*



*Note.* Developed by Author, 2024

This distribution indicates level of education of the respondents. Firstly, 4% responded that they had completed advanced level. And 12% hold a diploma or professional qualification. A significant majority, 45.3%, are graduates. Finally, 38.7% had further education at post-graduate level. Considering this data, it appears that a mixture of people with different levels of educational qualifications participated in this sample.

**Table 4.4**

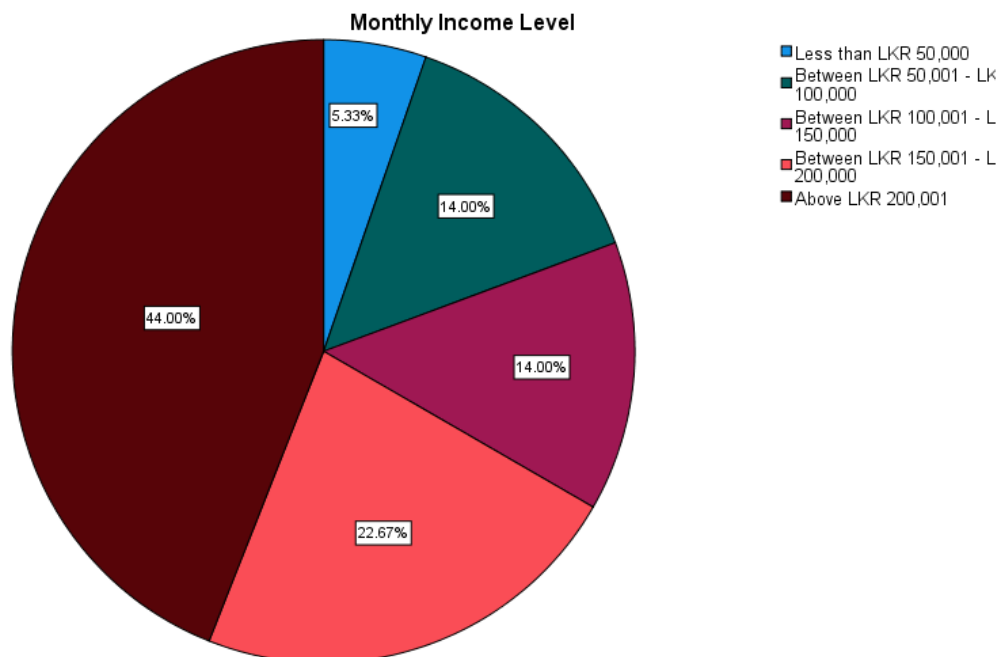
*Monthly Income Level*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than LKR 50,000	8	5.3	5.3	5.3
	Between LKR 50,001 - LKR 100,000	21	14.0	14.0	19.3
	Between LKR 100,001 - LKR 150,000	21	14.0	14.0	33.3
	Between LKR 150,001 - LKR 200,000	34	22.7	22.7	56.0
	Above LKR 200,001	66	44.0	44.0	100.0
	Total		150	100.0	100.0

*Note.* Developed by Author, 2024

**Figure 4.4**

*Monthly Income Level*



*Note.* Developed by Author, 2024

This distribution shows range of participants' monthly income levels. The people who earn less than 50000 rupees per month are 5.3%. An amount of 14% is in the range of

Rs 50,001 to 100,000. Also, 14% of personnel responded in the range of Rs 100,001 to 150,000. 21.6% people belong to the range of Rs.150,001 to Rs.200,000. 44% of the people who responded to a significant level belong to those who earn more than 200,001 rupees per month. This data can be used to analyze how financial resources affect service conditions and customer satisfaction.

### **4.3. Descriptive Statistics**

Descriptive statistics can be recognized as a type of most basic, univariate analysis which is targeted at summarizing and describing the key attributes of a data set or data distribution (Dong, 2023). According to Yellapu (2018), descriptive statistics enable to provide meaningful insights on data distribution, central tendencies and variability attributed within a data set. In the current research investigation, mean and standard deviation values are calculated as descriptive statistics of the dataset. The mean value serves as a measure of central tendency, indicating the average value of the dataset. Meanwhile, standard deviation represents a measure of dispersion, illustrating the spread of the dataset around the mean value (Alabi & Bukola, 2023). The descriptive statistics of the current data set can be further illustrated as follows.

**Table 4.5***Descriptive Statistics - Service Quality Statistics***Statistics**

		SQ1	SQ2	SQ3	SQ4	SQ5	SQ6	SQ7	SQ8	SQ9	SQ10	SQ11	SQ12	SQ13	SQ14	SQ15	SQ16	SQ17	SQ18	SQ19	SQ20
N	Valid	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
	Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mean		3.49	3.69	3.67	3.65	3.49	3.69	3.69	3.37	3.65	3.74	3.43	3.67	3.65	3.48	3.70	3.69	3.38	3.65	3.75	3.45
Std. Deviation		.25	.02	.24	.20	.25	.02	.91	.79	.20	.22	.00	.44	.00	.25	.21	.89	.87	.82	.77	.93

*Note.* Developed by Author, 2024

The table above illustrates the descriptive statistics of the independent variable, service quality. Twenty constructs or research statements have been utilized to represent the service quality in the research investigation. Upon examining the data presented in the table, majority these constructs possess mean values greater than 3.5. Since the measurement scale used for the data survey is 5 point likert scale, this indicate that most of the answers provided for these constructs are positive. In other words, most of the respondents have agreed with these statements.

On the other hand it is visible that the items of SQ1, SQ5, SQ8 depict 3.49, 3.20 and 3.37 respectively. These values indicate that most of the respondents have recorded a "neutral" response for each of these variables. Furthermore, all the 08 constructs possess low level of standard deviation values indicating data spread is close to mean values.

**Table 4.6***Descriptive Statistics - Customer Satisfaction Statistics*

	The performance of the telecommunication services meets or exceeds my expectations	My overall experience with the telecommunication services is positive.	I am satisfied with the value I receive for the price I pay for the telecommunication services.	I find the telecommunication services to be better than those offered by competitors	I am happy with the consistency of service provided by the telecommunication company	The telecommunication services consistently meet my needs and requirements	I would recommend the telecommunication services to others based on my experience.	I find the telecommunication services to be reliable and dependable
N Valid	150	150	150	150	150	150	150	150
Missing	0	0	0	0	0	0	0	0
Mean	3.15	3.51	3.34	3.63	3.59	3.40	3.71	3.62
Std. Deviation	1.019	.932	1.029	.798	.899	.912	.886	.808

*Note.* Developed by Author, 2024

The table above illustrates the descriptive statistics of the mediator variable in the research investigation, customer satisfaction. 8 constructs have been used to assess customer satisfaction. According to the results derived from descriptive statistics, it can be noted that the mean values of 5 constructs, namely, “My overall experience with the telecommunication services is positive”, “I find the telecommunication services to be better than those offered by competitors”, “I am happy with the consistency of service provided by the telecommunication company”, “I would recommend the telecommunication services to others based on my experience” and “I find the telecommunication services to be reliable and dependable” are 3.51, 3.63, 3.59, 3.71 and 3.62 respectively. All these mean values are above 3.5. From the descriptive statistics presented, it can be inferred that the majority of respondents have agreed with

these 5 constructs. However, the remaining 3 constructs, namely, "Performance of the telecommunication services meets or exceeds my expectations," "I am satisfied with the value I receive for the price I pay for the telecommunication services," and "The telecommunication services consistently meet my needs and requirements," possess mean values between 3 and 3.5, indicating that the majority of the sample has recorded a "neutral" response to these variables. Furthermore, it is visible that standard deviation values of all the 8 constructs are relatively low illustrating lower dispersion of responses around the mean value.

**Table 4.7**

*Descriptive Statistics - Customer Loyalty Statistics*

	I intend to continue using the services of this telecommunication company in the future	I am likely to recommend this telecommunication company to friends and family	I trust this telecommunication company more than others in the market	I perceive the services offered by this telecommunication company to be of higher value compared to others.	Even if there are cheaper options available, I prefer to stick with this telecommunication company.	I feel a sense of loyalty towards this telecommunication company	I am willing to pay a premium for the services provided by this telecommunication company	I believe this telecommunication company offers fair and competitive prices for their services
N Valid	150	150	150	150	150	150	150	150
Missing	0	0	0	0	0	0	0	0
Mean	3.81	3.69	3.68	3.68	3.65	3.59	3.35	3.48
Std. Deviation	.800	.969	.985	.922	.935	1.004	1.124	.988

*Note.* Developed by Author, 2024

The table provided displays the descriptive statistics for the independent variable, customer loyalty. Based on the information presented in the table, it is evident that "I am willing to pay a higher price for the services offered by this telecommunication

business” and “I believe this telecommunication company offers fair and competitive prices for their services” constructs have recorded 3.35 and 3.48 as the mean values respectively. Only these two constructs possess mean values in between 3 and 3.5 indicating neutral response shown by the sample. The statistics additionally show that the mean values of all the other constructions fall between 3.5 and 4, indicating that the majority of the respondents had agreed with the remaining six constructs correspondingly. Moreover, it is evident that the standard deviation values for all 8 constructs have been documented to be quite low, indicating a low level of data dispersion from the mean value.

#### **4.4. Reliability Test**

Reliability testing within a research study refers to the level of internal consistency and stability demonstrated by a particular research instrument (Surucu & Maslakci, 2020). According to Baharinya, et al., (2021), reliability test within a research context attempts to assess and evaluate the degree to which a particular research instrument possess the ability to show higher level of consistency and repeatability over the time. This research /investigation is based on primary data collected from a self-structured questionnaire. Hence reliability test is crucial for this research study as well as similar research studies as higher internal consistency illustrate that the measurement tool used for the research investigation is consistence and reliable which in turn adds credibility to the research findings.

In the current research investigation, Cronbach’s Alpha test is used to assess the reliability and internal consistency of the data set. Surucu and Maslakci (2020) established that a value of 0.7 is commonly recognized as the criterion for assessing if an instrument has a significant degree of internal consistency. With this context, the reliability test results of each research variables in the current study have been depicted as follows.

**Table 4.8**

*Reliability Test - Service Quality*

<b>Reliability Statistics</b>	
Cronbach's Alpha	N of Items
.917	20

*Note.* Developed by Author, 2024

Based on the table provided, the variable that is not influenced by other factors, service quality, has a Cronbach's Alpha coefficient of 0.917. This value is higher than the universally accepted threshold of 0.7, hence it can be concluded that the 20 constructs of research instrument used to record service quality possess high level of internal consistency, thus the data set qualifies for further statistical analysis.

**Table 4.9**

*Reliability Test - Customer Satisfaction*

<b>Reliability Statistics</b>	
Cronbach's Alpha	N of Items
.921	8

*Note.* Developed by Author, 2024

Based on the information provided, the mediator variable, customer happiness, has a Cronbach's Alpha value of 0.921. This value is higher than the universally accepted threshold of 0.7, hence it can be concluded that the 08 constructs of research instrument used to record customer satisfaction possess high level of internal consistency, thus the data set qualifies for further statistical analysis.

**Table 4.10**

*Reliability Test - Customer Loyalty*

<b>Reliability Statistics</b>	
Cronbach's Alpha	N of Items
.919	8

*Note.* Developed by Author, 2024

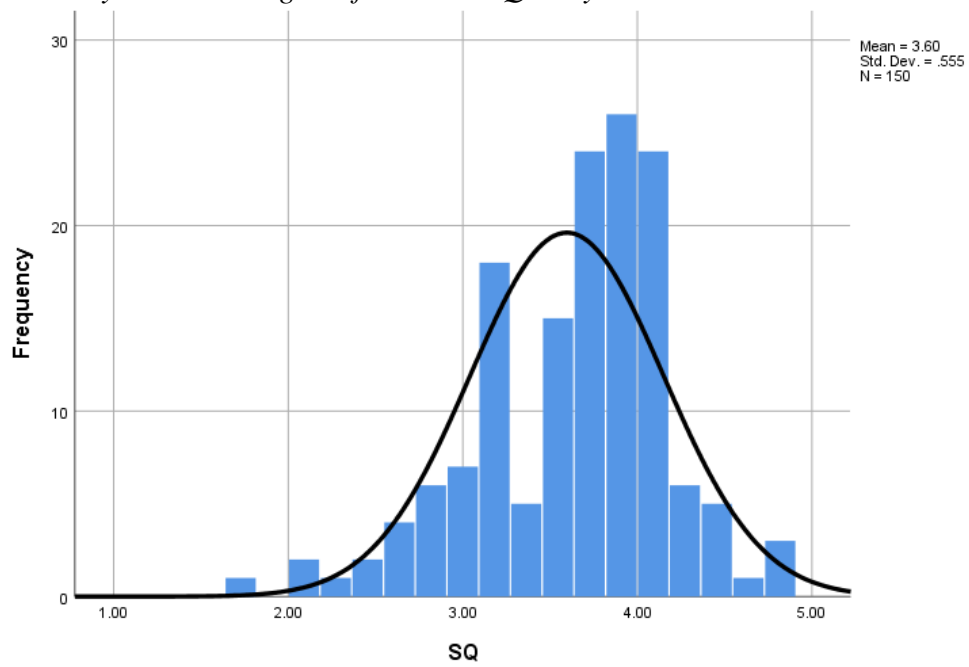
Based on the table provided, the variable that is being measured, customer loyalty, has a Cronbach's Alpha value of 0.919. This result exceeds the internationally recognized threshold of 0.7, hence it can be concluded that the 08 constructs of research instrument used to record customer loyalty possess high level of internal consistency, thus the data set qualifies for further statistical analysis.

#### **4.5. Normality Test**

A normality test can be identified as an analytical tool which is used to identify whether a particular data set possess a normal data distribution which is followed up with symmetrical curve (Alabi & Bukola, 2023). Dong (2023) states that a data distribution with a symmetrical bell-shaped curve is indicative of a normal distribution. A normality test is run on the independent variable, service quality, in the current study investigation. The results are visually depicted using a histogram.

**Figure 4.5**

*Normality Test – Histogram for Service Quality*

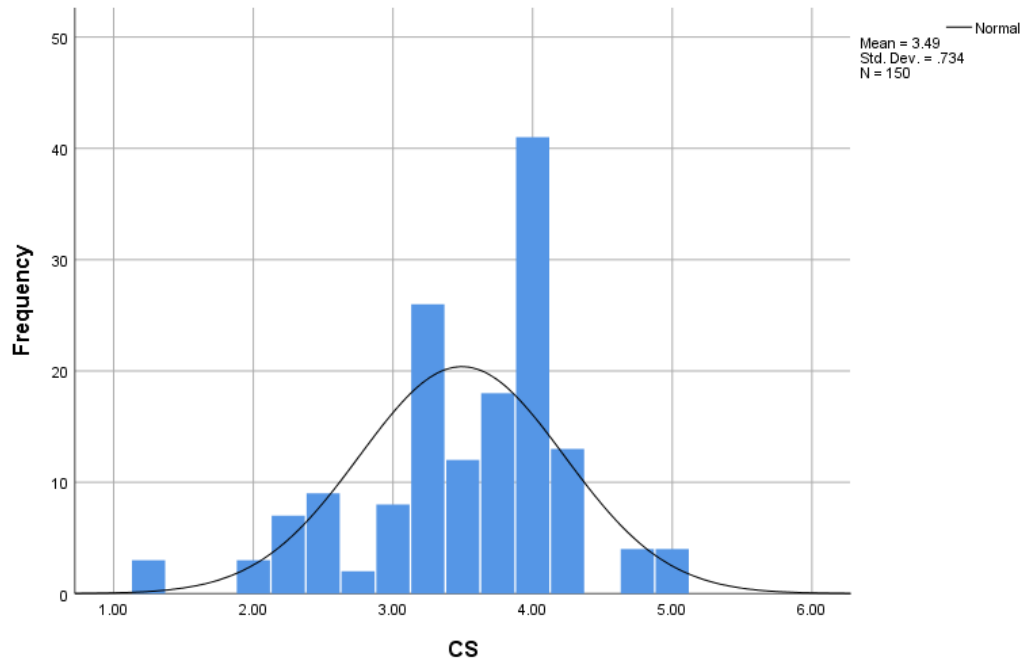


*Note.* Developed by Author, 2024

When considering the above figure, it is visible that the data distribution of the independent variable, service quality is a left skewed curve. Based on this data, it can be inferred that the dataset connected to service quality is not normally distributed.

**Figure 4.6**

*Normality Test – Histogram for Customer Satisfaction*

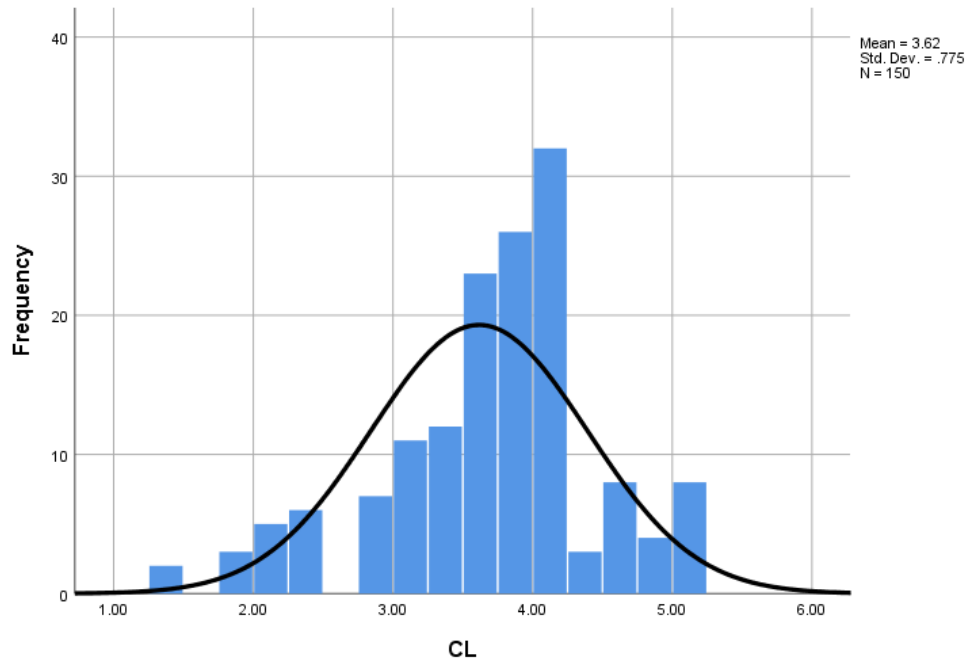


*Note.* Developed by Author, 2024

When considering the above figure, it is visible that the data distribution of the mediator variable, Customer Satisfaction is having a symmetrical curve where tails are equal in both sides. Based on this data, it can be inferred that the dataset connected to Customer Satisfaction is normally distributed.

**Figure 4.7**

*Normality Test – Histogram for Customer Loyalty*



*Note.* Developed by Author, 2024

When considering the above figure, it is visible that the data distribution of the dependent variable, Customer Loyalty is having a symmetrical curve where tails are equal in both sides. Based on this data, it can be inferred that the dataset connected to Customer Loyalty is normally distributed.

**Table 4.11***Harman's single Biased Test*

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	16.094	44.705	44.705	16.094	44.705	44.705
2	3.389	9.413	54.118	3.389	9.413	54.118
3	2.801	7.780	61.899	2.801	7.780	61.899
4	2.360	6.555	68.453	2.360	6.555	68.453
5	1.823	5.065	73.518	1.823	5.065	73.518
6	1.368	3.799	77.317	1.368	3.799	77.317
7	1.157	3.213	80.531	1.157	3.213	80.531
8	1.029	2.858	83.389	1.029	2.858	83.389
9	.976	2.712	86.101			
10	.730	2.027	88.127			
11	.702	1.950	90.077			
12	.636	1.766	91.843			
13	.448	1.245	93.088			
14	.398	1.107	94.194			
15	.376	1.046	95.240			
16	.339	.943	96.183			
17	.279	.774	96.957			
18	.230	.640	97.596			
19	.199	.552	98.148			
20	.172	.478	98.626			
21	.131	.364	98.990			
22	.118	.328	99.318			

23	.096	.267	99.585			
24	.088	.245	99.829			
25	.037	.102	99.931			
26	.017	.047	99.978			
27	.006	.016	99.993			
28	.002	.007	100.000			
29	3.922E-15	1.089E-14	100.000			
30	1.410E-15	3.918E-15	100.000			
31	8.349E-16	2.319E-15	100.000			
32	1.082E-16	3.004E-16	100.000			
33	4.860E-17	1.350E-16	100.000			
34	2.313E-18	6.424E-18	100.000			
35	-1.138E-15	-3.161E-15	100.000			
36	-2.554E-15	-7.094E-15	100.000			

Extraction Method: Principal Component Analysis.

*Note.* Developed by Author, 2024

The Total variances are less than 50%. Therefore, it can be argued that common method bias is not present in the data.

## 4.7. Factor Analysis

**Table 4.12**

*Factor Analysis -Service Quality*

### Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings <sup>a</sup>
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	9.241	46.203	46.203	9.241	46.203	46.203	6.769
2	2.709	13.544	59.747	2.709	13.544	59.747	6.656
3	2.574	12.872	72.619	2.574	12.872	72.619	2.142
4	1.468	7.342	79.961	1.468	7.342	79.961	2.204
5	1.254	6.269	86.230	1.254	6.269	86.230	5.720
6	1.093	5.463	91.694	1.093	5.463	91.694	3.841
7	.915	4.577	96.271				
8	.672	3.360	99.631				
9	.044	.218	99.849				
10	.020	.100	99.949				
11	.007	.034	99.983				
12	.003	.017	100.000				
13	3.789E-15	1.895E-14	100.000				
14	1.295E-15	6.474E-15	100.000				
15	5.335E-16	2.668E-15	100.000				
16	3.349E-16	1.675E-15	100.000				

17	1.930E-17	9.651E-17	100.000				
18	-1.934E-17	-9.669E-17	100.000				
19	-5.774E-16	-2.887E-15	100.000				
20	-2.097E-15	-1.048E-14	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

*Note.* Developed by Author, 2024

According to the above total variance table, it is clear that the 91.694% of the Service quality variable is determined by the first 6 items.

**Table 4.13**

*Factor loadings – Service Quality*

<b>Component Matrix<sup>a</sup></b>						
	Component					
	1	2	3	4	5	6
SQ1	<b>0.699</b>	0.580	-0.129	-0.253	0.129	0.165
SQ2	<b>0.870</b>	0.129	-0.047	-0.049	-0.064	-0.352
SQ3	<b>0.735</b>	0.272	0.025	0.127	0.182	-0.029
SQ4	<b>0.769</b>	-0.570	0.085	-0.082	0.241	0.093
SQ5	<b>0.699</b>	0.580	-0.129	-0.253	0.129	0.165
SQ6	<b>0.870</b>	0.129	-0.047	-0.049	-0.064	-0.352
SQ7	<b>0.729</b>	-0.089	0.105	0.433	-0.270	-0.225
SQ8	<b>0.709</b>	-0.009	0.004	0.178	-0.435	0.488
SQ9	<b>0.769</b>	-0.570	0.085	-0.082	0.241	0.093
SQ10	-0.098	0.305	<b>0.764</b>	0.393	0.317	0.086
SQ11	0.090	-0.027	<b>0.814</b>	-0.464	-0.288	-0.073
SQ12	<b>0.720</b>	0.272	0.025	0.136	0.184	-0.051
SQ13	<b>0.763</b>	-0.568	0.076	-0.098	0.252	0.095
SQ14	<b>0.701</b>	0.571	-0.133	-0.262	0.125	0.159
SQ15	<b>0.869</b>	0.139	-0.042	-0.038	-0.058	-0.346
SQ16	<b>0.727</b>	-0.080	0.109	0.443	-0.266	-0.219
SQ17	<b>0.706</b>	0.001	0.008	0.188	-0.429	0.493
SQ18	<b>0.761</b>	-0.574	0.077	-0.093	0.243	0.099
SQ19	-0.137	0.316	<b>0.757</b>	0.379	0.321	0.099

SQ20	0.060	-0.022	<b>0.804</b>	-0.485	-0.291	-0.065
------	-------	--------	--------------	--------	--------	--------

*Note.* Developed by Author, 2024

According to the factor loadings, it is clear that the majority of the SQ dimensions are contributed to component 1. The rest is representing the component 3 which is another dimension of service quality.

**Table 4.14**

*Factor Analysis - Customer Satisfaction*

**Total Variance Explained**

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.209	65.114	65.114	5.209	65.114	65.114
2	.811	10.138	75.252			
3	.522	6.529	81.781			
4	.445	5.561	87.342			
5	.342	4.270	91.611			
6	.293	3.668	95.279			
7	.222	2.774	98.053			
8	.156	1.947	100.000			

Extraction Method: Principal Component Analysis.

*Note.* Developed by Author, 2024

According to the above total variance table, the first component alone accounts for 65.114% of the variance in customer satisfaction. This strong influence may indicate that customer satisfaction is heavily driven by a single underlying factor.

**Table 4.15***Factor Loadings – Customer Satisfaction*

<b>Component Matrix<sup>a</sup></b>	
	Component
	1
CS1	0.792
CS2	0.882
CS3	0.800
CS4	0.590
CS5	0.835
CS6	0.871
CS7	0.837
CS8	0.812

*Note.* Developed by Author, 2024

According to the above factor loadings, all the items under customer satisfaction are strongly correlated with Component 1.

**Table 4.16***Factor Analysis - Customer Loyalty*

<b>Total Variance Explained</b>						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.194	64.925	64.925	5.194	64.925	64.925
2	.933	11.657	76.582			
3	.538	6.722	83.305			
4	.397	4.965	88.269			
5	.287	3.583	91.852			
6	.265	3.314	95.166			
7	.232	2.900	98.065			
8	.155	1.935	100.000			

Extraction Method: Principal Component Analysis.

*Note.* Developed by Author, 2024

According to the above total variance table, the first component alone accounts for 64.925% of the variance in customer satisfaction. This strong influence may indicate that customer loyalty is heavily driven by a single underlying factor.

**Table 4.17**

*Factor Loadings - Customer Loyalty*

<b>Component Matrix<sup>a</sup></b>	
	Component
	1
CL1	0.747
CL2	0.877
CL3	0.890
CL4	0.808
CL5	0.816
CL6	0.826
CL7	0.647
CL8	0.810

*Note.* Developed by Author, 2024

According to the above factor loadings, all the items under customer loyalty are strongly correlated with Component 1.

#### **4.6. Correlation Analysis**

Correlation analysis is a statistical method used to measure the strength and direction of relationships between two or more variables (Okoyere, 2024). This technique is commonly used as a bivariate analytical tool to examine correlations between research variables in research projects. The current study inquiry utilizes Pearson's correlation analysis to establish the link between service quality, customer satisfaction, and customer loyalty.

**Table 4.18***Correlation Test*

		<b>Correlations</b>		
		SQ (Service Quality)	CS (Customer Satisfaction)	CL (Customer Loyalty)
SQ	Pearson Correlation	1	.709**	.660**
	Sig. (2-tailed)		.000	.000
	N	150	150	150
CS	Pearson Correlation	.709**	1	.787**
	Sig. (2-tailed)	.000		.000
	N	150	150	150
CL	Pearson Correlation	.660**	.787**	1
	Sig. (2-tailed)	.000	.000	
	N	150	150	150

\*\* . Correlation is significant at the 0.01 level (2-tailed).

*Note.* Developed by Author, 2024

The data suggests a strong positive relationship between service quality and customer satisfaction, with a correlation coefficient of 0.709. However, it is clear that there is a positive correlation of 0.660 between service quality (independent variable) and client loyalty (dependent variable), which is significant at 0.000.

Finally, the data presented in the table above indicate that customer satisfaction (mediator variable) has a positive correlation value of 0.787 with customer loyalty (dependent variable), which is significant at 0.00.

#### **4.7. Multiple Regression Analysis**

Multiple regression analysis is a multivariate analytical approach used to evaluate the significant impact of two or more factors on an exploratory variable. The present research study used multiple regression analysis to evaluate the impact of service

quality (independent variable) and customer satisfaction on customer loyalty. The analytical findings obtained from the analysis may be further illustrated as follows.

**Table 4.19**

*Variable Entered*

Model	Variables Entered	Variables Removed	Method
1	Customer Loyalty, Customer Satisfaction <sup>b</sup>		Enter

Dependent Variable: Customer\_Loyalty  
All requested variables entered.

*Note.* Developed by Author, 2024

The table provided offers a succinct summary of the primary variables used in the regression model. The table demonstrates that this regression model considers service quality and customer satisfaction as the independent variables, while customer loyalty is considered the dependent variable .

**Table 4.20**

*Model Summary*

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.800 <sup>a</sup>	.640	.636	.46770

a. Predictors: (Constant), CS (Customer Satisfaction), SQ (Service Quality)  
b. Dependent Variable: CL (Customer Loyalty)

*Note.* Developed by Author, 2024

The table above displays the summary of the regression model . This table facilitates comprehension of the overall fitness of the regression model . The R Square value among the given values is the proportion of variation that can be accounted for by the

independent variables. The model summary table reveals a R Square value of 0.640, suggesting that 64% of the variability in customer loyalty can be accounted for by service quality and customer happiness.

**Table 4.21**

*ANOVA*

		<b>ANOVA<sup>a</sup></b>				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	57.271	2	28.636	130.907	.000
	Residual	32.156	147	.219		
	Total	89.427	149			

a. Dependent Variable: CL

b. Predictors: (Constant), CS, SQ

*Note.* Developed by Author, 2024

The ANOVA table provides a comprehensive assessment of the overall significance of the regression model. Upon analyzing the findings obtained from the ANOVA table, it is observed that the F value is 130.907, surpassing the value of 1. Moreover, the observed value is 0.000, which is below the threshold of 0.05. Therefore, it may be inferred that this regression model as a whole is statistically significant.

**Table 4.22***Coefficients*

<b>Coefficients<sup>a</sup></b>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.185	.259		.713	.477
	SQ	.297	.101	.206	2.942	.004
	CS	.677	.074	.641	9.138	.000

a. Dependent Variable: CL (Customer Loyalty)

*Note.* Developed by Author, 2024

The ultimate result of performing multiple regression analysis is the Coefficient table . The coefficients in multiple regression analysis represent the predicted change in the dependent variable's variance when each independent variable changes by one unit, while holding all other variables unchanged. Based on the values obtained from the Coefficient table, the Beta value for service quality is 0.206. Moreover, the Beta coefficient for customer satisfaction is 0.641. This demonstrates a positive significant impact of customer satisfaction on customer loyalty. Additionally, both service quality and customer satisfaction exhibit statistically significant values of 0.000, which are below the threshold of 0.05. Therefore, it can be inferred that these factors have a statistically significant impact.

## 4.8. Mediator Analysis

Mediator analysis was done based on Hayes model in SPSS. The result is demonstrated below.

**Table 4.23**

*Model Summary When Customer Satisfaction is Outcome Variable*

Run MATRIX procedure:

```
***** PROCESS Procedure for SPSS Version 4.2
*****

                Written by Andrew F. Hayes, Ph.D.          www.afhayes.com
                Documentation available in Hayes (2022).
                www.guilford.com/p/hayes3

*****
*****
Model   : 4
   Y    : CL
   X    : SQ
   M    : CS

Sample
Size: 150

*****
*****
OUTCOME VARIABLE:
CS

Model Summary

```

df2	R	R-sq	MSE	F	df1
.000	.709	.502	.270	149.426	148.000

```

Model

```

	coeff	se	t	p	LLCI
ULCI					
constant	.016	.288	.056	.956	-.552
.584					
SQ	.966	.079	12.224	.000	.810
1.122					

The above outcome demonstrates the model summary of the developed model in this analysis. The outcome variable in this model is customer satisfaction. The relationship between service quality and customer satisfaction is demonstrated by the coefficient

value of 0.966. The p-value is 0.000, indicating strong statistical significance. This Beta value for customer satisfaction demonstrates a significant positive impact on customer loyalty. With significance levels of 0.000 for both variables, it is confirmed that these relationships are statistically significant. Moreover, the R square coefficient of determination, which is 0.502, signifies that 50.2% of the variance in customer satisfaction can be accounted for by the level of service excellence. This highlights the strong influence that service quality has on customer satisfaction, reinforcing the importance of maintaining high service quality standards to enhance customer satisfaction and loyalty.

OUTCOME VARIABLE:  
CL

Model Summary

	R	R-sq	MSE	F	df1	df2
p						
	.800	.640	.219	130.907	2.000	147.000
p						
	.000					

Model

	coeff	se	t	p	LLCI
ULCI					
constant	.185	.259	.713	.477	-.327
.697					
SQ	.297	.101	2.942	.004	.097
.496					
CS	.677	.074	9.138	.000	.530
.823					

The aforementioned result illustrates the influence of service quality and customer satisfaction on customer loyalty. Based on the results, it can be concluded that service quality (Coefficient = 0.297,  $p < 0.05$ ) and customer satisfaction (Coefficient = 0.677,  $p < 0.05$ ) have a statistically significant and positive influence on customer loyalty. The coefficient of determination (R square) is 0.640, signifying that 64% of the variability in customer loyalty can be accounted for by the service quality and customer happiness variables. The high R square value indicates a significant ability of the model to explain the relationship between service quality, customer happiness, and customer loyalty. Hence, telecommunications businesses should prioritize improving the quality

of their services and guaranteeing client happiness in order to establish and sustain consumer loyalty.

```

***** TOTAL EFFECT MODEL
*****
OUTCOME VARIABLE:
  CL

OUTCOME VARIABLE:
  CL

Model Summary
      R      R-sq      MSE      F      df1      df2
p      .660      .436      .341     114.485     1.000     148.000
.000

Model
      coeff      se      t      p      LLCI
ULCI
constant      .196      .323      .605      .546      -.443
.834
SQ      .950      .089     10.700      .000      .775
1.126

***** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y
*****

Total effect of X on Y
      Effect      se      t      p      LLCI      ULCI
      .950      .089     10.700      .000      .775      1.126

Direct effect of X on Y
      Effect      se      t      p      LLCI      ULCI
      .297      .101     2.942      .004      .097      .496

Indirect effect(s) of X on Y:
      Effect      BootSE      BootLLCI      BootULCI
CS      .654      .087      .488      .832

***** ANALYSIS NOTES AND ERRORS
*****

Level of confidence for all confidence intervals in output:
  95.0000

Number of bootstrap samples for percentile bootstrap confidence
intervals:
  5000

----- END MATRIX -----

```

The above data demonstrates the mediation effect in the model. Total effect of the model is significant at 0.000 and direct effect is also significant at 0.0004. Therefore customer satisfaction partially mediates the relationship between service quality and customer loyalty.

#### **4.9. Discussion**

Researchers assert that service quality is assessed by comparing the customer's degree of anticipation and satisfaction with the product or service they get. Exceptional service quality has the potential to create a favorable and enduring impact on clients. This favorable image not only promotes customer contentment but also strengthens client allegiance, establishing a robust, enduring bond between the consumer and the service provider. Service quality is seen as a viable approach for attaining strategic advantages. It can increase customer levels and gain a competitive edge over other businesses. In the service environment, customers evaluate quality based on individual characteristics and sub-indicators such as cost-effectiveness, user-friendliness, and technical support (Douglas & Connor, 2003). Researchers have regularly identified evidence showing a favorable association between service quality and client loyalty. In their study, Ahmed et al. (2010) found a favorable correlation between customer loyalty and many variables of service quality, such as efficacy, assurance, responsiveness, reliability, and empathy, in the telecoms business of Pakistan. In their study on Malaysia's telecoms market, Loke et al. (2011) found that empathy, dependability, and responsiveness had the greatest influence on customer happiness and loyalty. Agyapong (2011) found that several service quality attributes, including tangibles, reliability, responsiveness, competence, courtesy, security, communication, and customer understanding, were dependable indicators of customer satisfaction. These factors, in turn, had an impact on customer loyalty in the telecommunications industry. In a study conducted by Iddrisu et al. (2015), it was discovered that there is a direct correlation between service quality indicators, such as tangibles, responsiveness, and dependability, and customer loyalty in the telecoms industry in Ghana. Agyei and Kilika (2013) found a favorable correlation between all aspects of service quality, as defined by the SERVQUAL model, and customer loyalty in the mobile

telecommunications industry in Kenya. In India, a study conducted by Dubey and Srivastava (2016) emphasized the beneficial effect of service quality on customer relationship management and loyalty. The study found that tangibility, in particular, had a significant influence. Hence, the research in the literature continuously demonstrates a notable and favorable correlation between the quality of service and the loyalty of customers.

The correlation study demonstrates a statistically significant positive association between service quality and customer Loyalty ( $r = .660$ ,  $p = 0.000$ ), providing evidence for the adoption of hypothesis H1a. Therefore it rejects the alternative hypothesis ( $H1_0$ ). This discovery aligns with previous studies documented in the existing body of knowledge. The respondents have given favorable ratings to the service quality, which includes factors such as network quality, assurance, dependability, responsiveness, and empathy. This is evident from the mean values of the items in the descriptive statistics. In the same vein, the many aspects of client loyalty also garnered favorable feedback. Therefore, the correlation between the quality of service and the level of client happiness is confirmed. This is consistent with the results of Agyei and Kilika (2013), who similarly observed a positive association between customer loyalty and service quality in the telecoms industry.

H1a: There is a significant relationship between Service Quality and Customer Loyalty  
– Accepted

Agyapong (2011) and Loke et al. (2011) have both studied the connection between service quality in the telecom sector. In a study on the telecoms sector in Malaysia, Loke et al. (2011) discovered a strong correlation between customer happiness and service quality. Additionally, research in the mobile telecommunications sector by Agyapong (2011) and Agyei and Kilika (2013) shows a strong correlation between customer happiness and service quality. The current study findings proves that there is a positive significant association between service quality and customer satisfaction ( $r = .709$ ,  $p = 0.000$ ), which aligns with the literature. Therefore, the null hypothesis is rejected ( $H2_0$ ).

H2<sub>a</sub>: There is a significant relationship between Service Quality and Customer Satisfaction – Accepted.

There are positive correlations between consumer happiness, customer loyalty, and the mobile telecommunications industry in Bangladesh (Hossain & Suchy, 2013). According to Lai et al. (2009), there is a positive correlation between customer loyalty and satisfaction. Sri Lanka Telecom PLC conducted a study to look at the connection between loyalty and customer satisfaction in Sri Lanka. The study's conclusions showed that a variety of customer satisfaction standards significantly affect the loyalty of customers (Karunanithy & Rasanayagam, 2013). Aligning with these literature, the current study has also found that the customer satisfaction and customer loyalty is positively related ( $r = .787$ ,  $p = 0.000$ ). Therefore, the null hypothesis is rejected (H3<sub>0</sub>).

H3<sub>a</sub>: There is a significant relationship between Customer Satisfaction and Customer Loyalty

The research conducted by Iddrisu et al. (2015), Agyei and Kilika (2013), and Naz et al. (2021) together confirms that customer satisfaction plays a role as a mediator in the connection between service quality and customer loyalty. Iddrisu et al. (2015) found that customer satisfaction partially mediates the relationship between service quality aspects (tangibles, responsiveness, and dependability) and customer loyalty in Ghana's telecoms industry. Agyei and Kilika (2013) obtained comparable findings in the mobile telecommunications industry in Kenya, employing the SERVQUAL methodology. In addition, Naz et al. (2021) presented proof that customer satisfaction acts as a mediator in the connection between service quality and customer loyalty in the Hungarian telecoms industry during the COVID-19 epidemic. The current study utilized the Hayes process model to conduct a mediator analysis, which indicates that customer satisfaction partially mediates the relationship. Service quality directly affects client loyalty, but the amount of customer happiness also plays a role in this connection. The descriptive data from the present study reveal a favorable feeling towards customer loyalty, as respondents have expressed their intents to persist in utilizing the services and advocating for the telecom firm to others. Additionally, the respondents perceive the telecom service as reliable and trustworthy, contributing to overall customer

satisfaction. Although the mediation effect observed in the current study aligns with the findings of Agyei and Kilika (2013), it's important to note that differences in the measurement of service quality indicators may lead to variations in findings across studies. While Iddrisu et al. (2015) used specific dimensions such as tangibles, responsiveness, and reliability, the current study may have utilized different indicators. Therefore, while the overall conclusion regarding mediation by customer satisfaction is consistent with previous research, differences in specific findings can be attributed to variations in methodology and measurement. As such, the acceptance of hypothesis H2a in the current study (Effect = .297,  $p = 0.004$ ) is supported by the alignment with Agyei and Kilika (2013), despite potential differences with other studies like Iddrisu et al. (2015).

H4a: Customer satisfaction mediates the relationship between Service Quality and Customer Loyalty – Accepted.

#### **4.10. Summary**

Based on the comprehensive data analysis results, several key findings emerge:

**Demographic Profile:** The majority of participants in the study are male, and a significant portion have graduate or postgraduate qualifications. **Service Quality:** Descriptive statistics indicate that respondents perceive service quality dimensions (network quality, assurance, reliability, responsiveness, empathy) positively, as evidenced by higher mean values. **Customer Loyalty and Satisfaction:** Similarly, customer loyalty and satisfaction variables also exhibit positive responses among respondents, reflected in favorable mean values. **Reliability of Measurements:** when all variables have Cronbach's Alpha values over 0.7, it indicates that the measurement of constructs is trustworthy, assuring internal consistency within the research. **Validity Test:** The validity test confirms the accuracy of measurements, ensuring that variables are accurately assessed. **Relationships among Variables:** Correlation analysis reveals positive and significant relationships among all variables, indicating interdependencies between service quality, customer satisfaction, and loyalty.

The regression analysis reveals that service quality and customer happiness have a substantial influence on client loyalty, underscoring their significance in shaping consumer behavior. The mediation effect of customer satisfaction on the link between service quality and customer loyalty is supported by the results of the mediator analysis, which is consistent with previous research. Overall, the study's findings offer useful insights into the elements that influence customer loyalty in the telecommunications industry, proving the significance of service quality and customer satisfaction in motivating client loyalty. The acceptance of both hypotheses underscores the alignment of the study's results with established literature, contributing to a deeper understanding of customer behavior in telecom service contexts.

## **CHAPTER 05: CONCLUSION AND RECOMMENDATION**

### **5.1. Introduction**

Ultimately, the study has yielded significant findings about the correlation between service quality, customer happiness and customer loyalty within the telecommunications industry in Sri Lanka. The analysis chapter has highlighted the essential findings derived from correlation analysis, multiple regression analysis, and mediator analysis. These findings are used to make significant conclusions and provide practical suggestions for organizations. These conclusions and recommendations are crucial for firms to strategically manage service quality and customer satisfaction in order to improve client loyalty. Furthermore, the study acknowledges its limits and suggests future research directions to go deeper into this field of study. The primary aim of this chapter is to provide practical applications that may be derived from the findings of the study. These implications seek to give valuable insights for enterprises in the telecom industry in Sri Lanka, enabling them to successfully improve customer loyalty.

### **5.2. Conclusion**

#### Research Objectives

Examine the Connection between Service Quality and Customer Satisfaction : The purpose of this objective is to analyze the relationship between service quality and customer satisfaction in the Sri Lankan telecommunication business.

This study aims to analyze the influence of service quality and customer satisfaction on customer loyalty. The purpose is to determine the cause-and-effect relationship between service quality, customer satisfaction, and customer loyalty. This offers valuable perspectives on the factors that influence the establishment and maintenance of enduring customer relationships.

The purpose of this study is to investigate the mediating role of customer satisfaction in the link between service quality and customer loyalty. By doing so, we want to get a more comprehensive knowledge of the underlying mechanisms involved.

### Comprehensive Conclusion

This research offers valuable and in-depth understanding of how service quality, customer happiness, and customer loyalty interact in the telecommunications business of Sri Lanka. But utilizing advanced statistical techniques and analysis methods this research successfully managed to offer valuable insights and actionable recommendations

The correlation analysis undertaken in this study demonstrates a statistically significant positive association between service quality, customer satisfaction, and customer loyalty. This discovery emphasizes the significance of giving priority to both the quality of service and the contentment of customers in order to improve customer loyalty. Furthermore, the multiple regression analysis emphasizes the substantial influence of service quality and customer satisfaction on customer loyalty, indicating that these two factors play a vital role in molding consumer behavior.

Furthermore, the mediator has offered useful perspectives on how the connection between service quality and customer loyalty is influenced by customer happiness. The investigation has demonstrated statistical evidence of a considerable mediation between the two variables through customer satisfaction, as indicated by a significant indirect effect and mediation pathways.

Overall, this research makes important additions to our understanding of how service quality management and customer relationships operate in the telecommunications business of Sri Lanka. This study has not only advanced theoretical understanding but also offered practical implications for firms seeking to improve client loyalty by fulfilling the research objectives. The findings highlight the need of integrating organizational strategy with customer-centric methods in order to deliver superior service quality and increase levels of customer satisfaction.

Moving forward, it is imperative for businesses to leverage these insights to design tailored strategies aimed at improving service delivery processes, enhancing customer

experiences, and ultimately fostering stronger customer loyalty. Organizations may achieve sustainable growth and gain a competitive edge in the current business environment by focusing on investing in initiatives that increase service quality and adopting focused programs to boost customer satisfaction.

This research is fundamental for future efforts in service quality management and improving customer relationships. It facilitates ongoing innovation and the pursuit of excellence in customer-focused activities.

### **5.3. Recommendation**

#### **5.3.1. Enhancing Service Quality**

According to the results of this study, it is crucial for firms in [industry or business sector] to emphasize improvements in service quality in order to increase customer satisfaction and loyalty. In order to do this, firms can take into account the following suggestions:

Establish and implement effective systems for continuously monitoring and assessing the quality of services at every point of interaction. Conducting regular audits, implementing mystery shopping activities, and analyzing client feedback can yield significant information regarding areas that need improvement. These initiatives enable organizations to identify gaps in service delivery, understand customer pain points, and address emerging issues proactively.

Allocate resources towards the education and growth of frontline personnel to guarantee they possess the necessary expertise and understanding to deliver outstanding service experiences. Training programs focused on communication skills, problem-solving, and product knowledge can empower employees to exceed customer expectations.

Incorporate technological solutions like CRM systems, AI-driven chatbots, and self-service portals to optimize service delivery processes and improve overall efficiency. Automation of routine tasks can free up staff time to focus on delivering personalized and high-quality service.

Establishment of Service Standards: Define clear service standards and benchmarks to guide employee behavior and performance. These standards should align with customer expectations and organizational objectives, serving as a yardstick for evaluating service quality.

### **5.3.2. Strengthening Customer Satisfaction Initiatives**

To foster greater customer satisfaction and loyalty, organizations can implement the following recommendations:

**Personalized Engagement Strategies:** Leverage customer data and analytics to personalize interactions and tailor offerings to individual preferences. Implement loyalty programs, personalized promotions, and targeted communication channels to enhance customer engagement and satisfaction.

**Proactive Issue Resolution:** Adopt a proactive approach to identify and address customer issues promptly. Implement effective complaint handling procedures, empower frontline staff to resolve issues on the spot, and follow up with customers to ensure resolution and satisfaction.

**Consistent Communication:** Sustain transparent communication channels with customers across different platforms like email, social media, and mobile apps. Keep customers informed about new products, promotions, and service enhancements to demonstrate commitment to their satisfaction.

**Surveys and Feedback Mechanisms:** Consistently seek input from customers through surveys, focus groups, and online reviews. Utilize this feedback to pinpoint areas needing improvement and enact measures to resolve customer issues.

### **5.3.2. Harnessing Customer Satisfaction as a Mediator**

Leveraging the understanding of customer satisfaction's mediating role between service quality and customer loyalty, organizations can strategically:

Investing in Customer Experience Management: Develop comprehensive customer experience management strategies aimed at optimizing every touchpoint along the customer journey. By consistently delivering superior experiences, organizations can enhance customer satisfaction and drive long-term loyalty.

Aligning Internal Processes with Customer Needs: Ensure that internal processes and systems are aligned with customer needs and preferences. Streamline processes, remove barriers to service delivery, and empower employees to prioritize customer satisfaction in their daily interactions.

Measuring and Monitoring Customer Satisfaction Metrics: Deploying robust metrics and Key Performance Indicators (KPIs) to precisely gauge customer satisfaction levels is crucial. Tracking metrics like Net Promoter Score (NPS), Customer Satisfaction Score (CSAT), and Customer Effort Score (CES) enables organizations to assess the efficacy of their customer satisfaction endeavors.

Collaborative Approach to Implementation:

To effectively implement these recommendations, it is essential for organizations to adopt a collaborative approach involving cross-functional teams, leadership buy-in, and employee engagement. Organizations can cultivate sustainable competitive advantages and spur growth in a highly competitive marketplace by nurturing a culture of continuous improvement and customer-centricity.

To summarize, the suggestions mentioned earlier offer a clear plan for businesses in the [industry or business sector] to improve the quality of their services, increase customer happiness, and cultivate lasting client loyalty. By aligning their plans with customer-centric concepts and utilizing insights from this study, firms may position themselves for success and attain sustainable growth in today's ever-changing business environment.

## **5.4. Research Implications**

### **5.4.1. Practical Implications**

Implementing Actionable Strategies:

The practical implications drawn from the research findings offer actionable strategies for organizations within the telecommunication industry in Sri Lanka to enhance their operational performance and achieve strategic objectives. These implications are grounded in empirical evidence and aim to guide decision-making processes within organizations.

Service Quality Enhancement:

Operational Excellence: Organizations can prioritize operational excellence by implementing efficient processes, leveraging technology solutions, and investing in employee training. Organizations may increase overall customer satisfaction by optimizing processes and reducing service gaps.

The Service Recovery Protocols: Establishing effective the service recovery protocols is essential for addressing customer complaints and resolving issues promptly. By empowering frontline staff to handle complaints proactively and offering appropriate compensation or remedies, organizations can turn negative experiences into opportunities to delight customers and build loyalty.

Customer Satisfaction Enhancement:

Personalization and Customization: Embracing personalization and customization strategies can help organizations cater to individual customer needs and preferences. By leveraging customer data and analytics, organizations can deliver personalized experiences across all touchpoints, leading to increased satisfaction and loyalty .

Omnichannel Engagement: Adopting an omnichannel approach to customer engagement enables organizations to connect with customers seamlessly across multiple channels. By integrating online and offline channels and providing consistent

messaging and experiences, organizations can enhance customer satisfaction and drive loyalty.

#### Employee Empowerment and Engagement:

**Training and Development:** Investing in staff training and development programs is essential for equipping frontline people with the requisite skills and knowledge to deliver exceptional service. Through ongoing training and opportunities for skill development, organizations empower employees to exceed customer expectations and drive satisfaction.

**Recognition and Rewards:** Recognizing and rewarding employee performance is essential for fostering a culture of service excellence and employee engagement. Recognizing and celebrating employee achievements can significantly boost morale, motivation, and job satisfaction within organizations. Consequently, this results in enhanced service provision and increased client contentment.

#### Continuous Improvement and Innovation:

**Feedback Loops:** Establishing robust feedback loops enables organizations to gather valuable insights from customers and employees. Through the regular solicitation of feedback and timely action upon it, firms may identify areas in need of improvement and effectively adopt new solutions to enhance the quality of service and increase customer satisfaction .

**Adaptability and Flexibility:** Embracing adaptability and flexibility is crucial for organizations to respond effectively to changing market dynamics and evolving customer preferences. By maintaining agility and adaptability, firms may stay ahead of the curve and constantly provide value to consumers. This flexibility allows businesses to quickly respond to evolving market trends and customer needs, maintaining a competitive edge in dynamic environments.

In conclusion, The aforementioned practical implications offer concrete recommendations for firms in the [industry or business sector] to improve service quality, increase customer happiness, and achieve long-term success. By executing

these methods and fostering a culture of ongoing improvement and innovation, firms may differentiate themselves in the marketplace and generate long-lasting competitive advantages. This proactive approach enables businesses to continually enhance their offerings, meet evolving customer demands, and stay ahead of competitors.

#### **5.4.2. Theoretical Implications**

Advancing Service Quality Theory:

The study aims to enhance the current understanding of service quality assessment by examining the relationship between perceived service quality (SERVQUAL) and performance-based metrics (SERVPERF). Through establishing the convergent validity of various constructs, the research enhances our understanding of service quality theory and provides insight into the variable importance of different aspects in predicting customer satisfaction and loyalty.

Service-Dominant Logic Perspective: The findings align with the principles of service-dominant logic (SDL) by highlighting the centrality of value co-creation in service delivery. The research highlights the significance of consumer engagement and interaction in designing service experiences, so supporting the principles of Service-Dominant Logic (SDL) and underlining the relevance of collaboration between service providers and customers in the production of value.

Customer Satisfaction and Loyalty Models:

Mediation Effects: The study expands upon current models of customer satisfaction and loyalty by exploring the intermediary function of customer satisfaction in the association between service quality and loyalty. By uncovering the underlying mechanisms through which service quality influences loyalty outcomes, the study enhances our understanding of the sequential nature of customer perceptions and behaviors in the service context.

Non-linear Relationships: The research delves into non-linear connections among service quality, customer satisfaction, and loyalty, challenging conventional linear

frameworks. By recognizing the intricate and evolving nature of customer relationships, the study underscores the necessity for more sophisticated models capable of capturing the nonlinear impacts of service quality dimensions on customer outcomes.

#### Role of Emotional and Psychological Factors:

**Emotional Engagement:** The research underscores the importance of emotional engagement in influencing customer perceptions and behaviors. The study highlights the need of including emotional aspects into frameworks for service quality and satisfaction. It underlines how affective reactions significantly influence the development of customer loyalty and advocacy.

**Psychological Contracts:** The results shed light on the impact of psychological contracts on client loyalty, underscoring the need of comprehending and overseeing these implicit agreements in cultivating enduring customer relationships. By exploring reciprocal obligations between service providers and customers, the research expands our understanding of the social exchange processes underlying customer relationships and loyalty intentions.

#### Contextual Considerations:

**Industry-Specific Insights:** The study provides industry-specific insights on the relationship between service quality, happiness, and loyalty in the [industry or business sector]. This gives essential recommendations for firms operating in this area. By examining the unique challenges and opportunities faced by organizations in this context, the study offers practical implications for managers and policymakers seeking to improve service delivery and customer outcomes.

**Cross-Cultural Perspectives:** The research recognizes the influence of cultural subtleties on consumer perceptions and actions. By delving into cross-cultural differences in service quality expectations and satisfaction levels, the study highlights the necessity for cultural sensitivity and adaptation in global service strategies.

In summary, the theoretical implications of the research expand our comprehension of service quality theory, customer satisfaction and loyalty models, as well as the

influence of emotional and psychological factors on customer relationships. By advancing theoretical frameworks and examining contextual factors, the study enriches the broader literature on service management and consumer behavior.

## **5.5. Limitations of the Research**

Despite the valuable insights gained from this study, several limitations should be acknowledged.

**Sample Size and Generalizability:** The research utilized a relatively small sample size from a specific demographic or geographic region, potentially constraining the generalizability of the findings to wider populations or contexts. To improve the external validity of the findings, future research endeavors should strive to incorporate larger and more diverse groups.

**Cross-Sectional Design:** The utilization of cross-sectional data constrains the capacity to establish causal relationships among variables. Longitudinal or experimental designs would furnish a more robust comprehension of the temporal dynamics and causal pathways underlying the relationships scrutinized in this study.

**Measurement Issues:** The study included self-reported assessments of service quality, customer happiness, and loyalty, which might be influenced by common method bias and social desirability effects. In order to address these problems, future study might utilize a variety of data gathering approaches and objective performance measurements.

**Contextual Factors:** The research may not comprehensively encompass the impact of contextual elements, such as industry-specific dynamics, cultural variations, and market conditions, on consumer perceptions and behaviors. Future studies should consider these contextual nuances to provide a more comprehensive understanding of the phenomena under investigation.

Indeed, recognizing these limitations is crucial for informing future research directions. By addressing these gaps in methodology and scope, researchers can enhance the robustness and applicability of their findings, thereby advancing our knowledge of service management and consumer behavior.

## 5.6. Future Research

Based on the knowledge acquired from this study, several opportunities for future research become apparent.

**Longitudinal Studies:** Undoubtedly, doing longitudinal study would yield valuable insights into the temporal dynamics of service quality, customer satisfaction, and loyalty. Through the continuous monitoring of these data, researchers may reveal long-term patterns, detect trends, and clarify the causal mechanisms that drive changes in consumer behavior. By adopting a longitudinal approach, we may gain a more thorough comprehension of the influence of service quality efforts on customer perceptions and their subsequent impact on loyalty.

**Moderating Variables:** Exploring the role of moderating variables, such as customer demographics, cultural factors, and technological advancements, might provide insight into the specific factors that determine the connections between service quality, contentment, and loyalty.

**Qualitative Approaches:** Absolutely, qualitative methodologies like in-depth interviews or focus groups can provide rich, nuanced insights into customer perspectives and experiences. These methods allow researchers to delve deeply into the underlying motivations, emotions, and perceptions driving customer behavior. Through the examination of these qualitative aspects, researchers may get a comprehensive comprehension of the elements that influence consumer happiness and loyalty. This complements the quantitative results gained from surveys or statistical studies. Incorporating qualitative methodologies into research endeavors may boost the general comprehension of service quality dynamics and augment the validity and profundity of study outcomes.

**Comparative Studies:** Performing comparison analyses across several sectors or geographic areas would allow researchers to pinpoint industry-specific or context-specific variables that impact consumer perceptions and behaviors.

Future research focusing on these areas can enhance our comprehension of service management and aid in crafting improved strategies to bolster customer satisfaction and loyalty.

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## Appendix A

### Questionnaire

#### **Analysis Of The Mediation Sequel Of Customer Satisfaction Based On The Relationship Between Service Quality And Customer Loyalty: A Study In The Telecommunication Industry**

Prepared by: EHS Jayarathna

This survey is conducted as a part of the research for the MBA in Management of Technology, in the Faculty of Business, University of Moratuwa.

Information provided will be treated confidentially and so you do not need to write any of your identity on the questionnaire. The information will be used only for academic purposes.

The questionnaire consists of 02 sections. (Part 1, Part 2)

#### **PART 1– General Information**

##### 1. Gender

- |                        |                      |
|------------------------|----------------------|
| I. Male                | <input type="text"/> |
| II. Female             | <input type="text"/> |
| III. Prefer not to say | <input type="text"/> |

##### 2. Age Group

- |                          |                      |
|--------------------------|----------------------|
| I. 20 Years – 29 Years   | <input type="text"/> |
| II. 30 Years – 39 Years  | <input type="text"/> |
| III. 40 Years – 49 Years | <input type="text"/> |
| IV. 50 Years – 59 Years  | <input type="text"/> |

2. Highest Education Qualification

- |   |  |
|---|--|
| I. Ordinary Level                         |  |
| II. Advanced Level                        |  |
| III. Diploma / Professional Qualification |  |
| IV. Graduate                              |  |
| V. Post Graduate                          |  |

3. Monthly Income Level

- |  |  |
|--|--|
| I. Less than LKR 50,000                |  |
| II. Between LKR 50,001 - LKR 100,000   |  |
| III. Between LKR 100,001 - LKR 150,000 |  |
| IV. Between LKR 150,001 - LKR 200,000  |  |
| V. Above LKR 200,001                   |  |

**PART 2 – Information of customer satisfaction for quality of services provide by telecommunication industry**

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
<b>Service Quality</b>					
I am satisfied with the network coverage area provided by my telecom service provider.					
The clarity and quality of calls I make using my telecom service are consistently high.					
I do not often experience dropping calls					
The network of my telecom service provider is rarely congested, even during peak hours.					
I trust my telecom service provider to handle my information and services securely					
My Telecom provider gives me accurate information					
The billing system of my telecom service provider is accurate and easy to understand					
It is convenient to obtain services from my telecom partner from their outlets and through other digital methods					
My telecom service provider consistently delivers reliable service.					
I can depend on the cellular company's service					

My telecom service provider fulfills the promises made to its customers.					
My telecom service provider provides accurate and timely information when needed.					
My telecom service provider resolves customer complaints promptly and effectively.					
The speed of service provided by my telecom service provider meets my expectations					
The operating hours are convenient for the customers					
Employees are easily approachable					
I feel that my telecom service provider offers personalized attention to my needs.					
The customer service representatives of my telecom provider are pleasant, friendly, and caring.					
The company makes efforts to understand the specific needs of customers					
When there are problems, the service provider is sympathetic and reassuring					
<b>Customer Loyalty</b>					
I intend to continue using the services of this telecommunication company in the future					
I am likely to recommend this telecommunication company to friends and family					

I trust this telecommunication company more than others in the market					
I perceive the services offered by this telecommunication company to be of higher value compared to others					
Even if there are cheaper options available, I prefer to stick with this telecommunication company					
I feel a sense of loyalty towards this telecommunication company					
I am willing to pay a premium for the services provided by this telecommunication company					
I believe this telecommunication company offers fair and competitive prices for their services					
<b>Customer Satisfaction</b>					
The performance of the telecommunication services meets or exceeds my expectations					
My overall experience with the telecommunication services is positive					
I am satisfied with the value I receive for the price I pay for the telecommunication services.					
I find the telecommunication services to be better than those offered by competitors.					
I am happy with the consistency of service provided by the telecommunication company					

The telecommunication services consistently meet my needs and requirements					
I would recommend the telecommunication services to others based on my experience					
I find the telecommunication services to be reliable and dependable					