

Final Project 2

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The Impact of Perceived Service Quality on Customer Loyalty in the Saudi Telecom Sector

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Dedication

This project is dedicated to my best friend for his constant support, encouragement, and motivation throughout my academic journey.

Abstract:

Purpose: This study examines whether perceived service quality influences customer loyalty in the Saudi telecom sector and identifies which service-quality dimension has the strongest effect on loyalty.

Methodology: The study adopts a quantitative, cross-sectional survey approach targeting telecom customers in Saudi Arabia. Data were collected using an online questionnaire distributed to telecom customers in Saudi Arabia (N = 200). Perceived service quality was measured through five SERVQUAL dimensions (reliability, responsiveness, assurance, empathy, and tangibles), while customer loyalty was measured through continuance intention, recommendation intention, and resistance to switching. Descriptive statistics, validity and reliability testing, correlation analysis, and regression analysis were used to analyze the data.

Findings: The analysis indicates that perceived service quality positively predicts customer loyalty. At the dimensional level, reliability, responsiveness, assurance, and empathy show significant positive effects on customer loyalty, while tangibles does not show a significant unique effect when controlling for other dimensions.

Research limitations/implications: Findings should be interpreted in light of the study design and sampling approach, and should not be generalized beyond the study sample without caution.

Keywords: service quality; SERVQUAL; customer loyalty; telecommunications; Saudi Arabia.

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1. Chapter 1: Introduction

1.1 Research Background

The Saudi telecom sector operates in a highly competitive environment where customers can compare providers easily and switch with limited friction. Over the past decade, the market has experienced rapid digital transformation, expanded network infrastructure, and increasing reliance on mobile data services. Customers now expect stable connectivity, consistent service availability, clear pricing, responsive support, and seamless digital experiences through mobile applications and online channels. In this context, telecom firms cannot rely on pricing promotions alone; sustainable performance increasingly depends on delivering service quality that customers perceive as superior and consistent over time.

Service-based industries differ from product-based industries because customers evaluate performance through experiences, interactions, and outcomes rather than through physical attributes. In telecommunications, service is consumed continuously and assessed repeatedly across multiple touchpoints: network coverage and speed, call quality, complaint handling, technical support, billing clarity, service activation and cancellation processes, and digital self-service systems. These touchpoints collectively shape the customer's perception of service quality. Because perceptions are formed through accumulated experiences, perceived service quality becomes a strategic asset that can influence customer attitudes and long-term behavioral intentions.

Customer loyalty is a major strategic objective in telecom markets because retaining customers is generally more cost-effective than acquiring new ones. Loyal customers are more likely to continue using the provider, purchase add-on services, show tolerance during temporary service issues, and recommend the provider to others. Conversely, dissatisfaction can lead to negative word-of-mouth, complaints, reduced usage, and switching behavior. In the Saudi market—where customers are exposed to strong advertising, competitive bundles, and frequent offers—loyalty is particularly valuable as a stabilizing force against churn.

Perceived service quality is commonly conceptualized as a multi-dimensional construct. A widely adopted framework is SERVQUAL, which evaluates service quality through five dimensions: reliability, responsiveness, assurance, empathy, and tangibles. Reliability reflects the provider's ability to deliver promised services dependably (e.g., stable connection, consistent service availability). Responsiveness reflects willingness and speed in helping customers (e.g., complaint resolution time, customer support responsiveness). Assurance relates to trust, competence, and the ability to instill confidence (e.g., staff competence, transparency, security). Empathy reflects individualized attention and understanding of customer needs (e.g., communication, problem ownership). Tangibles reflect physical and digital service evidence (e.g., service centers, app usability, clarity of documentation). In telecom services, these dimensions collectively form customers' perceptions of whether a provider is "good" or "poor," beyond isolated incidents.

Despite the relevance of service quality and loyalty in telecom, organizations often struggle to identify which aspects of service experience most strongly influence loyalty outcomes, especially when customer expectations change rapidly. Telecom firms may invest heavily in infrastructure or digital platforms without achieving proportional improvements in customer loyalty. This indicates a managerial need for empirical evidence that clarifies the direct relationship between perceived service quality and customer loyalty within the Saudi telecom context. Such evidence supports decision-making on where to allocate resources and which quality dimensions deserve priority to improve retention.

From an academic perspective, the relationship between perceived service quality and customer loyalty is well-established in-service marketing literature, but the strength and nature of this relationship can vary by industry, competitive intensity, and customer expectations in a specific country context. Saudi Arabia has a distinct market environment shaped by high digital adoption, increasing customer sophistication, and strong competition among telecom providers. This makes it important to test the

relationship locally rather than relying on general conclusions from other markets. Additionally, using an established multi-dimensional framework (SERVQUAL) provides a structured method for measuring perceived service quality while ensuring that the study can be extended and deepened in later stages of the graduation project.

Accordingly, this study focuses on examining the impact of perceived service quality on customer loyalty in the Saudi telecom sector. The project is designed to build progressively: Assignment 1 establishes the research foundation and logical structure; Assignment 2 develops the literature review and refined conceptual framing; and Project 2 completes the empirical testing through data collection and statistical analysis. This staged structure ensures continuity and consistency across all deliverables while maintaining a stable topic, variables, and research design until project completion.

1.2 Research Problem

Telecom providers in Saudi Arabia operate in a market where competitive offerings are similar and switching is feasible, which increases the risk of customer churn. Although companies invest in infrastructure development, customer service operations, and digital transformation, customer loyalty remains a critical challenge. Customers may discontinue services or switch providers when they perceive repeated network issues, weak support responsiveness, or poor overall service experience. This suggests a need to understand whether and how perceived service quality directly contributes to customer loyalty in the Saudi telecom sector.

1.2.1 Theoretical Gaps

While service quality and loyalty are widely studied in service industries, there is a need to examine the relationship specifically within the Saudi telecom sector using a structured, multi-dimensional service quality framework. Additionally, it is important to evaluate how perceived service quality—conceptualized through recognized dimensions—predicts loyalty intentions in a market characterized by high competition and evolving customer expectations.

1.2.2 Practical Gaps

Telecom firms may not have clear evidence regarding the extent to which improving perceived service quality can strengthen customer loyalty. Without empirical findings, managerial decisions may focus on costly improvements that do not materially influence loyalty outcomes. Therefore, there is a practical need for data-driven evidence that supports retention strategies by identifying the relationship between perceived service quality and customer loyalty in the Saudi telecom sector.

Main Research Question:

Does perceived service quality significantly influence customer loyalty in the Saudi telecom sector?

1.3 Research Significance

1.3.1 At the Theoretical Level

This study contributes to the academic understanding of customer loyalty in service industries by empirically examining the impact of perceived service quality within the Saudi telecom sector. It supports the use of a multi-dimensional service quality framework and provides context-specific evidence that can enrich service marketing research in Saudi Arabia and similar markets.

1.3.2 At the Practical Level

The findings will help telecom managers understand whether improving perceived service quality can strengthen customer loyalty and reduce churn risk. The study supports managerial decision-making by providing evidence-based insight into service quality as a strategic lever for retention, enabling more effective allocation of resources toward customer experience improvement.

1.4 Research Questions

RQ1: Do the SERVQUAL dimensions (reliability, responsiveness, assurance, empathy, and tangibles) significantly influence customer loyalty in the Saudi telecom sector?

RQ2: Which SERVQUAL dimension has the strongest effect on customer loyalty among telecom customers in Saudi Arabia?

RQ3: To what extent does overall perceived service quality predict customer loyalty in the Saudi telecom sector?

RQ4: Are telecom customers' perceptions of service quality (across SERVQUAL dimensions) generally high or low in the Saudi telecom sector?

1.5 Research Objectives

O1: To measure customers' perceptions of service quality in the Saudi telecom sector using the SERVQUAL dimensions.

O2: To examine the impact of overall perceived service quality on customer loyalty in the Saudi telecom sector.

O3: To test the effects of each SERVQUAL dimension (reliability, responsiveness, assurance, empathy, and tangibles) on customer loyalty.

O4: To identify the strongest SERVQUAL predictor(s) of customer loyalty and provide practical recommendations to improve retention.

1.6 Research Hypotheses

H1: Perceived service quality has a significant positive impact on customer loyalty in the Saudi telecom sector.

Optional sub-hypotheses for Project 2 testing using SERVQUAL dimensions:

H1a: Reliability has a significant positive impact on customer loyalty in the Saudi telecom sector.

H1b: Responsiveness has a significant positive impact on customer loyalty in the Saudi telecom sector.

H1c: Assurance has a significant positive impact on customer loyalty in the Saudi telecom sector.

H1d: Empathy has a significant positive impact on customer loyalty in the Saudi telecom sector.

H1e: Tangibles have a significant positive impact on customer loyalty in the Saudi telecom sector.

1.7 Research Model

Independent Variable (IV): Perceived Service Quality (measured using SERVQUAL dimensions: Reliability, Responsiveness, Assurance, Empathy, Tangibles)

Dependent Variable (DV): Customer Loyalty

Overall relationship:

Perceived Service Quality → Customer Loyalty

Dimension-level relationships (Project 2 empirical testing):

Reliability → Customer Loyalty

Responsiveness → Customer Loyalty

Assurance → Customer Loyalty

Empathy → Customer Loyalty

Tangibles → Customer Loyalty

1.8 Research Methodology

This study adopts a quantitative research approach using a survey-based design. Primary data will be collected through a structured questionnaire distributed to telecom customers in Saudi Arabia. The questionnaire will use a five-point Likert scale to measure perceived service quality (through SERVQUAL dimensions) and customer loyalty.

A non-probability convenience sampling method will be used to collect responses from telecom customers, with a practical target sample size of approximately 150–300 respondents to support regression analysis with multiple predictors. Data analysis in Project 2 will include descriptive statistics (means and standard deviations), reliability testing (Cronbach's alpha), correlation analysis, and multiple regression to test the SERVQUAL dimension hypotheses and identify the strongest predictor(s) of customer loyalty.

To ensure measurement quality, the questionnaire will be reviewed for clarity and relevance before full distribution. Participation will be voluntary and anonymous, and no personally identifiable information will be collected. The study data will be used for academic purposes only, and results will be reported in aggregate form to protect respondents' privacy.

1.9 Scope of Study

This study focuses on telecom customers in Saudi Arabia across the Saudi telecom sector, without limiting the research to a single provider. The empirical context includes customers of major providers operating in the Saudi market (e.g., STC, Mobily, and Zain). The study examines customers' perceptions of service quality and their loyalty intentions. Data collection will be conducted during the academic period allocated for the graduation project. The scope is limited to customer perceptions gathered via questionnaire and does not include internal company performance data or employee perspectives.

1.10 The Suggested Project Structure

The project will follow a structured progression to ensure continuity until the end of Project 2:

Chapter 1: Introduction — Background, research problem, significance, questions, objectives, hypotheses, model, methodology, and scope.

Chapter 2: Literature Review — Review of service quality, SERVQUAL dimensions, customer loyalty, and empirical findings on their relationship.

Chapter 3: Research Methodology (Detailed) — Research design, instrument development, sampling plan, measurement items, and analysis procedures.

Chapter 4: Data Analysis and Results — Data screening, reliability and validity checks, descriptive statistics, and hypothesis testing via regression.

Chapter 5: Conclusion and Recommendations — Summary of findings, managerial implications for Saudi telecom companies, limitations, and future research directions

2. Chapter 2: Literature Review

2.1 Introduction

This chapter reviews the academic literature related to perceived service quality and customer loyalty in service industries, with a particular focus on the telecommunications sector. The purpose of the literature review is to clarify the conceptual meaning of the study variables, identify how they are measured in prior research, and establish the theoretical foundation for examining the relationship between perceived service quality and customer loyalty.

In competitive service markets, customer loyalty is a key outcome because it reflects customers' intentions to continue using a provider, resist switching, and recommend the provider to others. Prior research suggests that perceived service quality is a major driver of loyalty because it shapes customers' evaluations of service experiences over time. Given the intangible and continuous nature of telecom services, customers often form their service quality perceptions based on repeated interactions and service outcomes, which then influence loyalty behaviors.

Accordingly, this chapter is structured into four sections: (1) perceived service quality as the independent variable, (2) customer loyalty as the dependent variable, (3) the theoretical and empirical relationship between the two variables, and (4) a conclusion summarizing the reviewed literature and linking it to the current study.

2.2 The Independent Variable: Perceived Service Quality

Perceived service quality refers to the customer's overall judgment about the excellence or superiority of a service. It is typically evaluated by comparing customer expectations with actual service experiences across multiple service dimensions. Because services are intangible and produced and consumed simultaneously, customers rely on their perceptions to evaluate quality, rather than purely objective measures.

A widely used and validated framework for measuring perceived service quality is SERVQUAL, which conceptualizes service quality through five dimensions: reliability,

responsiveness, assurance, empathy, and tangibles. Reliability refers to the ability to perform the promised service dependably and accurately, such as delivering consistent network performance and meeting service commitments. Responsiveness reflects the willingness to help customers and provide prompt service, such as speed of complaint handling and customer support response. Assurance relates to employees' knowledge, courtesy, and ability to convey trust and confidence, which is particularly relevant in telecom services involving billing, contracts, and customer data. Empathy refers to caring and individualized attention, such as understanding customer needs and providing personalized assistance. Tangibles include physical facilities, equipment, and the appearance of personnel, as well as modern digital equivalents such as the usability and clarity of mobile applications and self-service portals.

In telecom markets, SERVQUAL is relevant because customers judge quality through both technical service outcomes (e.g., reliability and performance consistency) and relational/service-process outcomes (e.g., responsiveness and assurance). Therefore, measuring perceived service quality using SERVQUAL provides a structured and academically grounded approach for capturing customer perceptions in the Saudi telecom sector.

Perceived service quality is not a single, one-dimensional judgment; rather, it is a comprehensive evaluation formed through repeated encounters with the service provider. In the telecommunications context, customers interact with the provider through a combination of technical service outcomes (such as network availability and performance consistency) and relational/process outcomes (such as responsiveness of support and clarity of service procedures). This continuous exposure makes service quality perceptions cumulative and highly sensitive to repeated failures or repeated confirmations of reliability.

The SERVQUAL framework remains one of the most frequently used approaches for conceptualizing and measuring perceived service quality. The model assumes that

customers evaluate service performance across five dimensions, and that these dimensions collectively shape overall judgments of quality. In telecom services, each dimension has a practical meaning that can be translated into measurable indicators suitable for survey-based research.

First, **reliability** is often the most critical dimension in telecommunications because it reflects whether the provider delivers the promised service dependably and accurately. In practical terms, reliability relates to stable coverage, consistent internet speed relative to the purchased plan, minimal call drops, and the ability to resolve service interruptions effectively. Customers may tolerate occasional issues, but repeated instability can quickly weaken quality perceptions and increase switching intentions.

Second, **responsiveness** reflects how promptly and effectively the provider helps customers when problems occur. In telecom services, responsiveness can be reflected in the speed of answering customer inquiries, the time required to resolve complaints, the clarity of guidance provided by customer service agents, and the perceived effort made to solve issues. Responsiveness also extends to digital responsiveness through self-service channels such as chat support, ticket systems, and service status updates.

Third, **assurance** refers to the sense of trust and confidence the provider conveys. Telecommunications services involve contracts, payment systems, customer personal data, and service commitments. Therefore, assurance may be reflected in the professionalism and competence of employees, transparency in billing procedures, perceived security of customer information, and the provider's ability to explain services and policies clearly. When assurance is weak—such as unclear charges or inconsistent communication—customers may perceive higher risk and reduced trust, which can undermine loyalty.

Fourth, **empathy** reflects the degree to which customers feel the provider understands and cares about their needs. In telecom services, empathy can be demonstrated through individualized attention, flexible solutions for service problems, respectful

communication, and an overall feeling that the provider treats customers fairly. Although telecom services are often standardized, customers still evaluate whether the company listens, takes ownership of issues, and provides support that feels personal rather than automated.

Fifth, **tangibles** include the physical and visible elements associated with service delivery. Traditionally, tangibles refer to the appearance of service centers, the professional image of staff, and the quality of physical facilities. In modern telecom markets, tangibles also include “digital tangibles,” such as the usability of mobile applications, clarity of online interfaces, ease of account management, and the quality of digital communication materials. For many customers, the telecom app is now a primary service interface; therefore, digital tangibles have become central to perceived service quality.

From a measurement perspective, SERVQUAL dimensions can be operationalized through survey items using a Likert scale, where respondents indicate the extent of agreement with statements reflecting each dimension. This approach is widely used in empirical research because it allows quantifying perceptions and statistically testing their relationship with customer outcomes such as loyalty. In the current study, perceived service quality will be treated as a multi-dimensional construct measured through SERVQUAL, which provides a robust foundation for building Assignment 2 and completing the empirical analysis in Project 2

2.3 The Dependent Variable: Customer Loyalty

Customer loyalty is generally defined as a customer’s favorable attitude and behavioral intention to continue using a service provider over time. In service contexts, loyalty is commonly reflected through repurchase intention, resistance to switching, positive word-of-mouth, and willingness to recommend the provider. Loyalty is critical for firms because it reduces churn risk and supports long-term profitability, especially in markets where acquiring new customers requires significant marketing and promotional costs.

Loyalty is not limited to repeat usage alone; it also includes an attitudinal component. A customer may repeatedly use a service due to convenience or lack of alternatives, but true loyalty is reflected when the customer chooses to stay despite competitive offers and is willing to advocate for the provider. In telecom services, where switching can occur quickly due to promotional campaigns, loyalty indicates a stronger and more stable customer–provider relationship.

In empirical research, loyalty is typically measured through survey items capturing intention to continue, intention to recommend, preference for the provider, and reduced intention to switch. This study adopts these established approaches to measure customer loyalty among telecom customers in Saudi Arabia.

2.4 The Relationship Between the Independent and the Dependent Variables

The relationship between perceived service quality and customer loyalty is strongly supported in service marketing literature. The behavioral consequences of service quality suggest that customers who perceive high service quality are more likely to develop positive attitudes toward the service provider, trust the provider, and remain committed over time. As service quality perceptions improve, customers' switching intentions typically decrease, while their likelihood of recommending the provider increases.

Empirical research across service industries generally indicates a positive association between service quality and loyalty outcomes. Service quality provides customers with confidence that the provider can consistently meet their needs, which reinforces their intention to stay. In telecom services, reliability and responsiveness are particularly influential because service failures can have immediate negative effects on daily communication, work, and digital activities. When customers perceive that a telecom provider delivers reliable service and resolves issues promptly, loyalty intentions are strengthened.

Several studies also argue that loyalty may be influenced indirectly through satisfaction; however, the current study focuses on examining the direct relationship between perceived service quality and customer loyalty in the Saudi telecom sector. This approach remains theoretically acceptable because service quality can influence loyalty both directly and through other psychological mechanisms such as satisfaction, trust, and commitment. The direct-effect model is particularly useful for managerial decision-making because it provides a clear understanding of whether service quality improvements are likely to translate into stronger customer loyalty.

Given the competitive structure of the Saudi telecom market and the importance of service experience in shaping customer perceptions, examining this relationship within the Saudi context is essential. The literature supports the expectation that higher perceived service quality will be associated with stronger customer loyalty intentions among telecom customers.

2.5 Conclusion

This literature review examined the two main constructs of the current study—perceived service quality and customer loyalty—and clarified how prior research explains the relationship between them in service industries, with relevance to telecommunications.

The review confirmed that perceived service quality is widely treated as a multi-dimensional concept rather than a single general perception. Frameworks such as SERVQUAL remain influential because they provide a structured way to capture customers' evaluations across reliability, responsiveness, assurance, empathy, and tangibles. These dimensions are particularly suitable for telecom services, where customers continuously experience the service through network outcomes, support processes, billing interactions, and digital platforms.

The review also highlighted that customer loyalty represents more than repeated usage. In the telecom sector, loyalty reflects both behavioral intention (e.g., continued subscription and reduced switching) and attitudinal commitment (e.g., willingness to recommend the provider and preference despite competing offers). The literature suggests that loyalty is a strategic outcome for telecom firms because competitive markets increase customer sensitivity to perceived service failures and increase exposure to switching incentives. Therefore, loyalty remains a valuable indicator of relationship strength and long-term customer retention potential.

Across the reviewed studies, the relationship between perceived service quality and loyalty is consistently described as positive. Customers who perceive higher service quality are more likely to remain committed, resist switching behavior, and engage in positive word-of-mouth. This relationship is commonly explained through service marketing logic: perceived service quality improves customers' confidence in the provider's ability to deliver promised value, reduces perceived risk, strengthens trust, and enhances customers' willingness to continue the relationship. Although some research models introduce customer satisfaction, trust, or switching barriers as mediating or moderating factors, the direct relationship remains theoretically valid and practically

useful for managerial decision-making. A direct-effect model provides a clear and measurable foundation for examining whether service quality improvements are likely to translate into loyalty outcomes.

Based on this review, the current study is justified in proposing that perceived service quality influences customer loyalty in the Saudi telecom sector. The Saudi context presents a highly relevant setting because telecom customers are increasingly digital, quality-sensitive, and exposed to intense competition. The literature also supports the use of SERVQUAL dimensions as a measurement approach that can be operationalized through survey items and tested statistically. This is critical because it ensures continuity across the graduation project stages, enabling the study to move from conceptual development to empirical testing in Project 2 without changing the core research model.

In summary, the reviewed literature establishes a strong theoretical foundation for the proposed hypothesis and supports the selection of the study variables and measurement framework. The next stage of the project will build on this foundation by developing a deeper empirical literature base, refining measurement items for the Saudi telecom context, and preparing the research instrument and analysis plan for data collection and hypothesis testing.

Chapter 3: Research Methodology

3.1 Introduction:

This chapter presents the research methodology used to address the research questions and test the proposed hypotheses. It explains the operational definitions of the research variables, the research design using the research onion, the population and sampling approach, data collection methods, types of data, and the statistical analysis procedures planned for hypothesis testing. The methodology is aligned with a quantitative, survey-based study of telecom customers in Saudi Arabia and supports continuity with the earlier chapters of the project.

3.2 Operational Definitions for Research Variables:

Operational definitions specify how each variable will be measured in the study. This supports measurement consistency and enables statistical testing of the research model.

3.2.1 Perceived Service Quality (Independent Variable):

Conceptual definition: Perceived service quality is customers' overall evaluation of the excellence of telecom services based on their experiences.

Operational definition: Perceived service quality will be measured using a structured questionnaire adapted from the SERVQUAL framework. It will be operationalized through five dimensions (reliability, responsiveness, assurance, empathy, and tangibles). Each dimension is measured using 4 items on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Dimension scores will be calculated as the mean of their items, and an overall service quality score will be calculated as the mean of all 20 items.

3.2.2 Customer Loyalty (Dependent Variable):

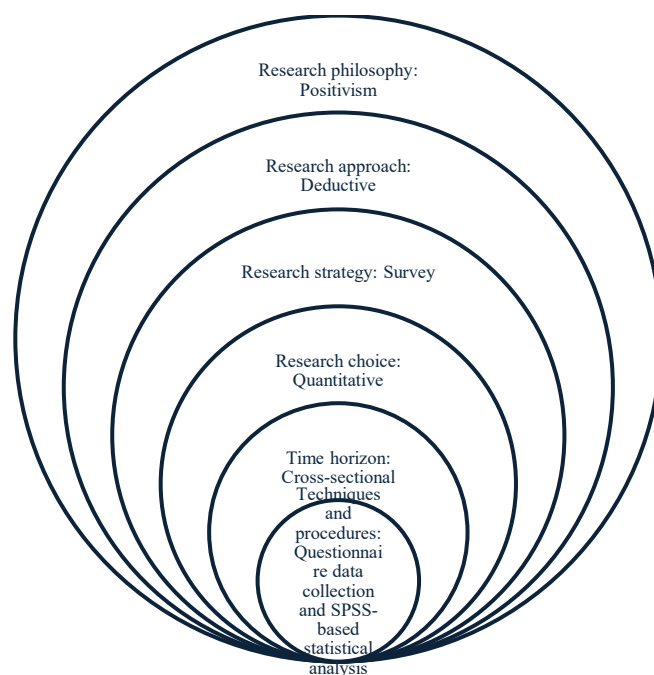
Conceptual definition: Customer loyalty reflects customers' intention to continue using their provider, recommend it to others, and resist switching.

Operational definition: Customer loyalty will be measured using 5 items (continuance intention, recommendation intention, preference, resistance to switching, and positive word-of-mouth) rated on the same 5-point Likert scale. The overall loyalty score will be calculated as the mean of the 5 items.

3.3 Research Design (Research Onion):

This study is designed using the research onion framework, which clarifies methodological choices from philosophy to techniques.

Figure 3. Research Onion (selected choices).



Selected research onion layers:

- Research philosophy: Positivism
- Research approach: Deductive
- Research strategy: Survey
- Research choice: Quantitative
- Time horizon: Cross-sectional
- Techniques and procedures: Questionnaire data collection and SPSS-based statistical analysis

3.3.1 Research Philosophy:

This study adopts a positivist philosophy, which is appropriate for examining measurable relationships using objective methods and statistical analysis.

3.3.2 Research Approach:

This study follows a deductive approach, where hypotheses are developed based on theory (SERVQUAL and loyalty literature) and then tested using empirical data.

3.3.3 Research Strategy:

The research strategy is a survey strategy, using a structured questionnaire to collect quantitative data from telecom customers.

3.3.4 Research Choice:

The research choice is quantitative, as the study relies on numerical data and statistical testing of hypotheses.

3.3.5 Time Horizon:

The time horizon is cross-sectional, because data will be collected at a single point in time from respondents.

3.3.6 Data Collection and Analysis Techniques:

Data will be collected using an online questionnaire (e.g., Google Form) and analyzed using statistical software (e.g., SPSS) through reliability tests, descriptive statistics, correlation, and regression analysis.

3.4 Research Population & Sampling Methods and Technique:

3.4.1 Research Population:

The target population consists of telecom customers in Saudi Arabia who currently use mobile and/or internet services. The study is conducted at the sector level and may include customers of major providers (e.g., STC, Mobily, and Zain).

3.4.2 Research Sample:

Due to time and access constraints, the study will use a practical sample of telecom customers. To support multiple regression with five predictors, the study will target approximately 150–300 valid responses (or more if feasible). As an optional guideline for large populations, sample size may be referenced using common sample size tables (e.g., Krejcie & Morgan, 1970).

Inclusion criteria:

- Age 18 years or older
- Telecom customer in Saudi Arabia
- Has used the current provider for at least 6 months (recommended)

3.4.3 Sampling Method & Technique:

A non-probability convenience sampling technique will be used. The questionnaire will be distributed online to reach Saudi telecom customers efficiently.

3.5 Data Collection Method:

This section describes the research instrument used to collect data in order to answer research questions and test hypotheses. The study relies on a survey questionnaire to collect quantitative data.

3.5.1 Instrument of the Independent Variable (Perceived Service Quality)

Table 3. Instrument of the Independent Variable (Perceived Service Quality). Source: The Researcher (2026).

<i>Variable</i>	Dimensions	Number of Items	Scale
<i>Perceived Service Quality</i>	Reliability	4	5-point Likert
<i>Perceived Service Quality</i>	Responsiveness	4	5-point Likert

<i>Perceived Service Quality</i>	Assurance	4	5-point Likert
<i>Perceived Service Quality</i>	Empathy	4	5-point Likert
<i>Perceived Service Quality</i>	Tangibles	4	5-point Likert
<i>Total</i>	20		

3.5.2 Instrument of the Dependent Variable (Customer Loyalty):

Table 4. Instrument of the Dependent Variable (Customer Loyalty). Source: The Researcher (2026).

Variable	Dimensions	Number of Items	Scale
Customer Loyalty	<i>Loyalty (overall)</i>	5	<i>5-point Likert</i>

3.5.3 Questionnaire Structure:

The questionnaire is structured into three sections:

Section A: Demographic information

Section B: Perceived service quality (SERVQUAL) – 20 items

Section C: Customer loyalty – 5 items

3.6 Types of Data:

This study uses primary quantitative data collected from respondents through Likert-scale

questionnaire items. Secondary sources (journals, books, and reports) support the theoretical background and literature review, but hypothesis testing relies on primary data.

3.7 Statistical Analysis Procedures:

Data analysis will be conducted using statistical software such as SPSS and will include:

1. Data coding and entry (export from Google Forms to Excel/CSV and import to SPSS).
2. Data screening (missing values, incomplete responses, and outliers).
3. Variable computation (means for each SERVQUAL dimension, overall service quality, and loyalty).
4. Reliability testing (Cronbach's alpha for each dimension and loyalty).
5. Descriptive statistics (frequencies for demographics; means and standard deviations for constructs).
6. Correlation analysis (Pearson correlation).
7. Multiple regression analysis (five SERVQUAL dimensions → customer loyalty) to test H1a–H1e and identify the strongest predictor.
8. Optional simple regression (overall service quality → customer loyalty) to test H1 overall.

3.8 Conclusion:

This chapter described the methodology of the study, including operational definitions of the variables, the research design based on the research onion, population and sampling approach, data collection method, types of data, and the planned statistical analysis procedures. These choices ensure consistency with the study objectives and provide a clear plan for empirical testing in the Saudi telecom sector.

Chapter 4: Statistical Analysis & Findings Discussion

4.1 Introduction:

The results reported in this chapter are based on data collected using an online questionnaire distributed to telecom customers in Saudi Arabia (N = 200). The chapter includes sample profile statistics, validity and reliability testing, descriptive statistics for the study variables, hypotheses testing, and discussion of findings in relation to prior literature.

4.2 Sample Profile (Descriptive Statistics for Research Sample):

Descriptive statistics were calculated to describe the research sample in terms of demographic characteristics. Table 4.1 summarizes the sample profile.

Table 4.1 Sample Profile (N = 200)

Gender:

<i>Category</i>	Frequency	Percent
<i>Male</i>	134	67.0%
<i>Female</i>	66	33.0%

Age:

<i>Category</i>	Frequency	Percent
<i>18–24</i>	53	26.5%
<i>25–34</i>	79	39.5%

35–44	43	21.5%
45–54	17	8.5%
55+	8	4.0%

Region:

<i>Category</i>	Frequency	Percent
<i>Central</i>	58	29.0%
<i>Western</i>	44	22.0%
<i>Eastern</i>	44	22.0%
<i>Southern</i>	35	17.5%
<i>Northern</i>	19	9.5%

Current Provider:

<i>Category</i>	Frequency	Percent
<i>STC</i>	109	54.5%
<i>Mobily</i>	51	25.5%
<i>Zain</i>	35	17.5%
<i>Other</i>	5	2.5%

Tenure with Current Provider:

<i>Category</i>	Frequency	Percent
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<i><1 year</i>	43	21.5%
<i>1–3 years</i>	82	41.0%
<i>4–6 years</i>	46	23.0%
<i>7+ years</i>	29	14.5%

Main Service Used Most:

<i>Category</i>	<i>Frequency</i>	<i>Percent</i>
<i>Mobile data</i>	78	39.0%
<i>Home internet</i>	42	21.0%
<i>Calls/SMS</i>	15	7.5%
<i>All equally</i>	65	32.5%

4.3 Validity & Reliability Tests for the Questionnaires:

4.3.1 Validity:

To support the suitability of the questionnaire for statistical analysis, validity checks were conducted. First, content validity is supported because the measurement items were adapted from established scales in the literature (SERVQUAL and loyalty/behavioral intention measures). Second, the dataset shows strong sampling adequacy for construct-related analysis.

Table 4.2 Validity Indicators

<i>Test</i>	<i>Result</i>
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KMO (overall)

0.879

Bartlett's Test of Sphericity

$\chi^2 = 2952.220$, df = 300, p < 0.001

The KMO value indicates good sampling adequacy, and Bartlett's test is significant, supporting the appropriateness of the correlation structure for construct-level analysis.

4.3.2 Reliability (Cronbach's Alpha):

Reliability was assessed using Cronbach's alpha. Values ≥ 0.70 indicate acceptable internal consistency.

Table 4.3 Reliability Results (Cronbach's Alpha)

<i>Scale</i>	Cronbach's Alpha
<i>Reliability</i>	0.888
<i>Responsiveness</i>	0.848
<i>Assurance</i>	0.866
<i>Empathy</i>	0.896
<i>Tangibles</i>	0.884
<i>Customer Loyalty</i>	0.897

Overall, the results show strong reliability for all scales, indicating that the questionnaire items are internally consistent.

4.4 Descriptive Statistics for Research Variables (Answering Research Questions):

Descriptive statistics were computed for the study variables (means and standard deviations). Table 4.4 summarizes the results.

Table 4.4 Descriptive Statistics of Constructs (N = 200)

<i>Construct</i>	Mean	Std. Deviation	Interpretation
<i>Reliability</i>	3.256	1.257	Moderate
<i>Responsiveness</i>	3.414	1.148	Moderate
<i>Assurance</i>	3.260	1.216	Moderate
<i>Empathy</i>	3.299	1.291	Moderate
<i>Tangibles</i>	3.312	1.230	Moderate
<i>Overall Service Quality</i>	3.308	0.813	Moderate
<i>Customer Loyalty</i>	3.449	1.210	Moderate

Interpretation uses a common classification for a 5-point scale: 1.00–2.33 (Low), 2.34–3.66 (Moderate), 3.67–5.00 (High).

Answering RQ4: Customers' perceptions of service quality are generally moderate across all SERVQUAL dimensions, with responsiveness showing the highest mean (3.414).

Answering RQ3 (descriptively): Overall perceived service quality and customer loyalty both show moderate average levels

4.5 Testing Hypotheses:

4.5.1 Correlation Analysis (Initial Relationship Check):

Pearson correlation was calculated between service quality constructs and customer loyalty.

Table 4.5 Correlation with Customer Loyalty

<i>Predictor</i>	r	p-value
<i>Reliability</i>	0.422	<0.001
<i>Responsiveness</i>	0.409	<0.001
<i>Assurance</i>	0.424	<0.001
<i>Empathy</i>	0.340	<0.001
<i>Tangibles</i>	0.218	0.002
<i>Overall Service Quality</i>	0.546	<0.001

The correlations are positive and significant, indicating that higher perceived service quality is associated with higher customer loyalty

4.5.2 Simple Regression (Overall Service Quality → Loyalty):

A simple regression was conducted to test the overall effect of perceived service quality on customer loyalty.

Model fit: $R^2 = 0.299$, $p < 0.001$.

Slope: $B = 0.814$, $p < 0.001$.

This indicates that overall perceived service quality significantly predicts customer loyalty.

4.5.3 Multiple Regression (SERVQUAL Dimensions → Loyalty):

Multiple regression was used to test the effect of each SERVQUAL dimension on customer loyalty (H1a–H1e).

Model fit: $R^2 = 0.323$, Adjusted $R^2 = 0.306$, $F(5, 194) = 18.520$, $p < 0.001$.

Table 4.6 Multiple Regression Results (DV: Customer Loyalty)

<i>Predictor</i>	B	Std. Beta	p-value	Decision
<i>Reliability</i>	0.211	0.219	0.001	Supported (H1a)
<i>Responsiveness</i>	0.205	0.194	0.005	Supported (H1b)
<i>Assurance</i>	0.212	0.213	0.003	Supported (H1c)
<i>Empathy</i>	0.164	0.175	0.006	Supported (H1d)
<i>Tangibles</i>	0.008	0.008	0.904	Not supported (H1e)

Strongest predictor (RQ2): Reliability has the highest standardized beta ($\beta = 0.219$), closely followed by assurance ($\beta = 0.213$).

4.6 Findings Discussion and Connection with Literature:

The results provide evidence that perceived service quality is a meaningful driver of customer loyalty in the Saudi telecom context. The positive and significant relationship between overall service quality and loyalty aligns with service marketing literature that links service quality to behavioral intentions (e.g., continued usage and recommendation).

The findings are also consistent with telecom-related studies that emphasize the role of service quality in loyalty outcomes.

At the dimension level, reliability, responsiveness, assurance, and empathy significantly predicted customer loyalty. This suggests that customers value stable and dependable telecom services (reliability), timely support and problem resolution (responsiveness), confidence and trust in service transactions (assurance), and customer-oriented treatment (empathy). These results support the idea that loyalty in telecom is influenced more by performance and interaction-based experiences than by appearance-related factors.

Tangibles did not show a significant unique effect in the multiple regression model, despite being positively correlated with loyalty. This outcome can occur when tangibles share variance with other dimensions. In practice, it may indicate that improvements in digital interfaces or physical facilities alone may not increase loyalty unless core service performance and customer support are also strong.

Overall, the model explains a meaningful portion of loyalty variance ($R^2 = 0.323$). While this indicates that service quality is an important factor, it also suggests that other variables (e.g., price fairness, satisfaction, trust, switching barriers, or perceived value) may additionally contribute to loyalty and could be examined in future studies.

4.7 Conclusion:

This chapter presented the statistical analysis and findings discussion for the study. The descriptive results showed moderate levels of perceived service quality and customer loyalty. Validity and reliability results indicated that the questionnaire is suitable for analysis and internally consistent. Hypotheses testing confirmed that overall perceived service quality significantly predicts customer loyalty. At the dimension level, reliability, responsiveness, assurance, and empathy were significant predictors of loyalty, while tangibles was not significant when controlling for other dimensions. The findings support the study's research model and provide a strong basis for Chapter 5.

Chapter 5: Research Limitations, Recommendations & Conclusion

5.1 Introduction

This chapter presents the study limitations, practical recommendations, and the final conclusion. It summarizes the key findings reported in Chapter 4 and translates them into actionable implications for telecom providers in Saudi Arabia. It also highlights limitations that affect the interpretation of the findings and proposes directions for future research.

5.2 Summary of Key Findings

- Perceived service quality has a positive and statistically significant relationship with customer loyalty in the Saudi telecom sector.
- At the dimensional level, reliability, responsiveness, assurance, and empathy significantly predict customer loyalty.
- Tangibles show a positive relationship with loyalty at the correlation level, but do not demonstrate a significant unique effect in the multiple regression model when other dimensions are considered simultaneously.
- Overall, the findings suggest that loyalty is more strongly driven by core service performance and customer-support experience than by appearance-related factors when other dimensions are controlled.

5.3 Research Limitations

1. Sampling and data-collection constraints: Data were collected using an online questionnaire and a convenience sampling approach, which may limit generalizability; therefore, findings should be interpreted with caution.
2. Cross-sectional design: The design limits strong causal inference and does not capture changes over time.
3. Self-reported measures may involve response bias.

5.4 Practical Recommendations

5.4.1 Improve Reliability (Highest Priority)

- Strengthen network stability and reduce service interruptions through proactive monitoring and faster recovery procedures.
- Improve transparency of service issues through timely notifications and clear communication.
- Ensure promised service levels are met consistently across regions.

5.4.2 Enhance Responsiveness

- Reduce response time for customer complaints and inquiries across all channels (call center, chat, and app).
- Improve complaints handling workflows (ticketing, escalation, and follow-up confirmation).
- Expand self-service support features to resolve common issues quickly.

5.4.3 Increase Assurance

- Improve billing transparency (clear charges, simplified invoices, and policy explanations).
- Provide staff training to ensure accurate and confident responses to customers inquiries.
- Strengthening communication about privacy and security practices to build customer trust.

5.4.4 Strengthen Empathy

- Encourage respectful communication and problem ownership during customer interactions.
- Offer fair solutions and compensation when service failures occur.
- Use customer feedback to identify recurring pain points and respond with customer-focused improvements.

5.4.5 Maintain Tangibles as Supportive

- Continue improving service centers and digital interfaces as supportive elements, alongside core performance dimensions.
- Ensure apps and websites are user-friendly, especially for payments, complaints, and account management.

5.5 Suggestions for Future Research

- Collect real customer data in Saudi Arabia with larger sample sizes and probability sampling.
- Include mediating or moderating variables such as satisfaction, trust, perceived value, price fairness, or switching barriers.
- Apply longitudinal designs to observe how perceptions influence loyalty over time.
- Compare loyalty drivers across telecom providers in Saudi Arabia.
- Combine survey data with objective performance indicators (e.g., network availability) for stronger evidence.

5.6 Conclusion

This project examined the impact of perceived service quality on customer loyalty in the Saudi telecom sector. The results highlight reliability, responsiveness, assurance, and empathy as key drivers of customer loyalty, while tangibles did not show a significant unique effect in the multiple regression model. Overall, the project demonstrates a complete research process from theory to analysis and reporting.

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Appendix

Appendix A: Questionnaires for your research variables

Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

Section A: Demographic Information

A1. Gender: ☐ Male ☐ Female ☐ Prefer not to say

A2. Age: ☐ 18–24 ☐ 25–34 ☐ 35–44 ☐ 45–54 ☐ 55+

A3. City/Region: ☐ Central ☐ Western ☐ Eastern ☐ Northern ☐ Southern

A4. Current telecom provider: ☐ STC ☐ Mobily ☐ Zain ☐ Other: _____

A5. How long have you been with your current provider? ☐ <1 year ☐ 1–3 years ☐ 4–6 years ☐ 7+ years

A6. Main service you use most: ☐ Mobile data ☐ Calls/SMS ☐ Home internet ☐ All equally

Section B: Perceived Service Quality (SERVQUAL)

Reliability:

R1. My telecom provider delivers the service as promised.

R2. Network coverage and service availability are reliable in my daily use.

R3. The internet/mobile service performs consistently without frequent interruptions.

R4. When a problem occurs, the provider resolves it in a dependable manner.

Responsiveness:

RS1. Customer service responds promptly when I request help.

RS2. The provider provides quick solutions to service issues and complaints.

RS3. The provider is willing to assist me when I face a service problem.

RS4. Digital support channels (app/chat/website) respond efficiently to my requests.

Assurance:

AS1. Customer service staff seem knowledgeable and competent.

AS2. I feel safe and confident in my transactions with the provider (billing, payments, etc.).

AS3. The provider communicates policies and charges clearly and transparently.

AS4. The provider inspires trust in handling customer information and data privacy.

Empathy:

E1. The provider gives customers personal attention when needed.

E2. The provider understands customer needs and provides appropriate support.

E3. Customer service treats me respectfully and professionally.

E4. The provider shows willingness to solve problems in a customer-friendly manner.

Tangibles:

T1. The provider's service centers and facilities appear professional and well organized.

T2. The provider's mobile application/website is easy to use and visually clear.

T3. Information provided (messages, invoices, notifications) is clear and well presented.

T4. The provider's digital services (self-service, account management) are modern and convenient.

Section C: Customer Loyalty

L1. I intend to continue using my current telecom provider in the future.

L2. I would recommend my telecom provider to others.

L3. I consider my telecom provider my first choice among competitors.

L4. I am unlikely to switch to another provider even if competitors offer promotions.

L5. I speak positively about my telecom provider to friends and family.

Appendix B: Table of research instruments

Table B.1 Table of research instruments. Source: The researcher (2026).

Variable	Dimensions	Number of Items	Source
Perceived Service Quality (IV)	<i>Reliability</i>	4	<i>Parasuraman et al. (1988)</i>
Perceived Service Quality (IV)	<i>Responsiveness</i>	4	<i>Parasuraman et al. (1988)</i>
Perceived Service Quality (IV)	<i>Assurance</i>	4	<i>Parasuraman et al. (1988)</i>
Perceived Service Quality (IV)	<i>Empathy</i>	4	<i>Parasuraman et al. (1988)</i>
Perceived Service Quality (IV)	<i>Tangibles</i>	4	<i>Parasuraman et al. (1988)</i>
Customer Loyalty (DV)	<i>Loyalty (overall)</i>	5	<i>Zeithaml et al. (1996); Aydin & Özer (2005)</i>

Appendix C:

This appendix provides key statistical outputs derived from the dataset used in Chapter 4 (N = 200). It is included to enable reference the results file if required.

Table C.1 Validity indicators (KMO and Bartlett's test).

<i>Test</i>	<i>Result</i>
<i>KMO (overall)</i>	0.879
<i>Bartlett's Test of Sphericity</i>	$\chi^2 = 2952.220$, df = 300, p < 0.001

Table C.2 Reliability (Cronbach's alpha).

<i>Scale</i>	<i>Alpha</i>
<i>Reliability</i>	0.888
<i>Responsiveness</i>	0.848
<i>Assurance</i>	0.866
<i>Empathy</i>	0.896
<i>Tangibles</i>	0.884
<i>Customer Loyalty</i>	0.897

Table C.3 Correlation with Customer Loyalty.

<i>Predictor</i>	<i>r</i>	<i>p-value</i>
<i>Reliability</i>	0.422	<0.001
<i>Responsiveness</i>	0.409	<0.001

<i>Assurance</i>	0.424	<0.001
<i>Empathy</i>	0.340	<0.001
<i>Tangibles</i>	0.218	0.002
<i>Overall Service Quality</i>	0.546	<0.001

Table C.4 Multiple regression results (DV: Customer Loyalty).

<i>Predictor</i>	B	Std. Beta	p-value	Decision
<i>Reliability</i>	0.211	0.219	0.001	Supported (H1a)
<i>Responsiveness</i>	0.205	0.194	0.005	Supported (H1b)
<i>Assurance</i>	0.212	0.213	0.003	Supported (H1c)
<i>Empathy</i>	0.164	0.175	0.006	Supported (H1d)
<i>Tangibles</i>	0.008	0.008	0.904	Not supported (H1e)