

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

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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):

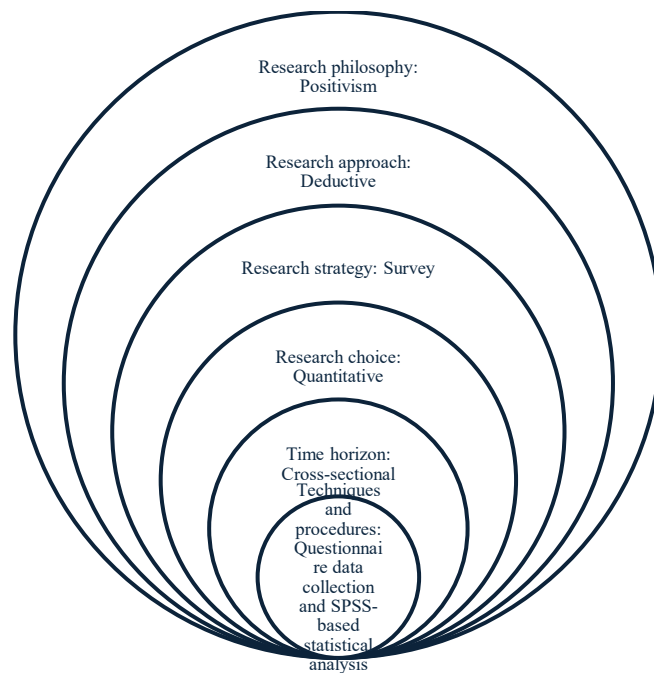
Conceptual definition: Customer loyalty reflects customers' intention to continue using their provider, recommend it to others, and resist switching.

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).



Source: The Researcher (2026).

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).

Variable	Dimensions	Number of Items	Scale
Perceived Service Quality	Reliability	4	5-point Likert
Perceived Service Quality	Responsiveness	4	5-point Likert
Perceived Service Quality	Assurance	4	5-point Likert
Perceived Service Quality	Empathy	4	5-point Likert
Perceived Service Quality	Tangibles	4	5-point Likert
Total		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	Loyalty (overall)	5	5-point Likert

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.