



Customer Satisfaction and Service Quality in the Telecommunications Industry

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Peer Review Information	Abstract
<i>Submission: 08 Jan 2016</i> <i>Revision: 23 Feb 2016</i> <i>Acceptance: 10 March 2016</i> Keywords <i>Service Quality, Customer Satisfaction, Telecommunications, SERVQUAL, Customer Loyalty</i>	This study examines the relationship between service quality and customer satisfaction in the telecommunications industry. Drawing on the SERVQUAL tradition and telecom-specific service attributes, the study proposes a quantitative framework in which reliability, responsiveness, assurance and empathy, tangibility/access, network quality, and pricing/billing predict overall customer satisfaction. A structured questionnaire is proposed for 300 mobile telecommunications users, with responses measured on a five-point Likert scale. Descriptive statistics, reliability analysis, Pearson correlation, and multiple regression are used to assess the strength of the relationships. Illustrative results show that overall service quality is positively related to customer satisfaction, with network quality, reliability, responsiveness, and pricing/billing emerging as particularly influential. The model further indicates that satisfied customers are more likely to remain loyal and less likely to switch providers. The findings reinforce the importance of combining technical network performance with responsive customer care and transparent pricing. The study offers a compact framework that telecom managers can use to prioritize quality improvements and strengthen retention.

Introduction

The telecommunications industry is characterized by rapid technological development, intense rivalry, frequent service innovations, and comparatively low barriers to customer switching. In such a setting, customer satisfaction is not determined only by whether a call or data session is technically completed; it also reflects the customer's experience with network stability, complaint handling, billing accuracy, service accessibility, employee competence, and perceived fairness of prices. Consequently, service quality has become a central managerial concern because quality failures can quickly translate into complaints, negative word-of-mouth, reduced usage, and switching intentions.

Service quality is commonly understood as a customer's judgment about the excellence or superiority of a service. The SERVQUAL approach organizes service quality around reliability, responsiveness, assurance, empathy, and tangibles. Although the original framework was designed for services generally, telecom research has shown that technical performance, pricing structure, billing accuracy, and customer support need explicit attention. Santouridis and Trivellas (2010) found that customer service, pricing structure, and billing systems significantly influenced satisfaction in mobile telephony, while Olatokun and Ojo (2016) demonstrated the relevance of SERVQUAL dimensions for mobile telecommunication users. Chen and Cheng (2012) also linked service quality and perceived

value with satisfaction and loyalty in mobile services.

The objective of the present study is therefore to develop and test a concise empirical model of service quality and customer satisfaction in telecommunications. Specifically, the study asks: (i) which service-quality dimensions most strongly influence satisfaction; (ii) whether overall service quality is positively associated with satisfaction; and (iii) whether satisfaction is associated with loyalty and lower switching intention. The paper is designed as a methodology-oriented empirical study and uses an illustrative dataset to demonstrate the proposed analysis.

Literature Review

Parasuraman, Zeithaml, and Berry's service-quality framework established the expectation-performance approach to evaluating services, while later work emphasized that perceived performance itself can be a strong predictor of satisfaction. Cronin and Taylor (1992) proposed SERVPERF and argued for performance-based measurement. Brady and Cronin (2001) further conceptualized service quality as a multidimensional, hierarchical judgment. These models support the view that satisfaction is generated through repeated evaluations of both the service process and its outcome.

In telecommunications, the service outcome has a strong technical component. Kim, Park, and Jeong (2004) found that customer satisfaction and switching barriers influence loyalty in Korean mobile telecommunications. Aydin and Özer (2005) showed that perceived service quality, corporate image, trust, and switching costs are important antecedents of loyalty in mobile telecommunications. Santouridis and Trivellas (2010) reported that satisfaction mediates the effect of service quality on loyalty, emphasizing customer service, pricing, and billing. Chen and Cheng (2012) similarly positioned service quality as a driver of value, satisfaction, and loyalty in Taiwan.

Nigerian evidence also supports a close service quality-satisfaction relationship. Ojo (2010) reported a positive relationship between service quality and satisfaction among mobile users, while Olatokun and Ojo (2016) used SERVQUAL dimensions to examine consumer satisfaction with mobile telecommunication services. Taken together, these studies indicate that telecom customer satisfaction is shaped by a mixture of functional quality (how employees and systems respond), technical quality (network/service performance), and economic quality (pricing and billing fairness).

Table 1. Selected literature on telecommunications service quality and satisfaction

Study	Context	Main variables	Key implication
Kim et al. (2004)	Korea mobile telecom	Satisfaction, switching barriers, loyalty	Satisfaction is a major loyalty driver.
Aydin & Özer (2005)	Turkey mobile telecom	Quality, image, trust, switching cost	Multiple quality-related factors shape loyalty.
Santouridis & Trivellas (2010)	Greece mobile telephony	Service quality, satisfaction, loyalty	Customer service, price and billing matter strongly.
Chen & Cheng (2012)	Taiwan mobile service	Quality, value, satisfaction, loyalty	Service quality works through value and satisfaction.
Olatokun & Ojo (2016)	Nigeria mobile telecom	SERVQUAL dimensions, satisfaction	Functional service-quality dimensions affect satisfaction.

Methodology

The study adopts a quantitative, cross-sectional survey design. The target population consists of adult users of mobile telecommunications services who have used their current provider for at least six months. A sample of 300 respondents is proposed using convenience sampling with basic quotas for age and provider to avoid excessive concentration in one group. The questionnaire contains demographic questions and multi-item constructs measured

on a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree.

Service quality is operationalized through six composite dimensions: reliability (consistent and accurate service), responsiveness (speed of support and complaint resolution), assurance and empathy (competence, trust and individualized attention), tangibles/access (service channels and ease of access), network quality (coverage, call clarity, data stability), and pricing/billing (fairness, transparency and bill

accuracy). Customer satisfaction is measured using overall satisfaction, expectation fulfillment and decision correctness. Loyalty is measured through intention to continue, recommendation intention and low switching intention.

The proposed hypotheses are: H1 - overall service quality has a positive effect on customer

satisfaction; H2 - network quality has a positive effect on customer satisfaction; H3 - reliability and responsiveness positively affect customer satisfaction; H4 - pricing/billing quality positively affects customer satisfaction; and H5 - customer satisfaction has a positive effect on loyalty and a negative effect on switching intention.

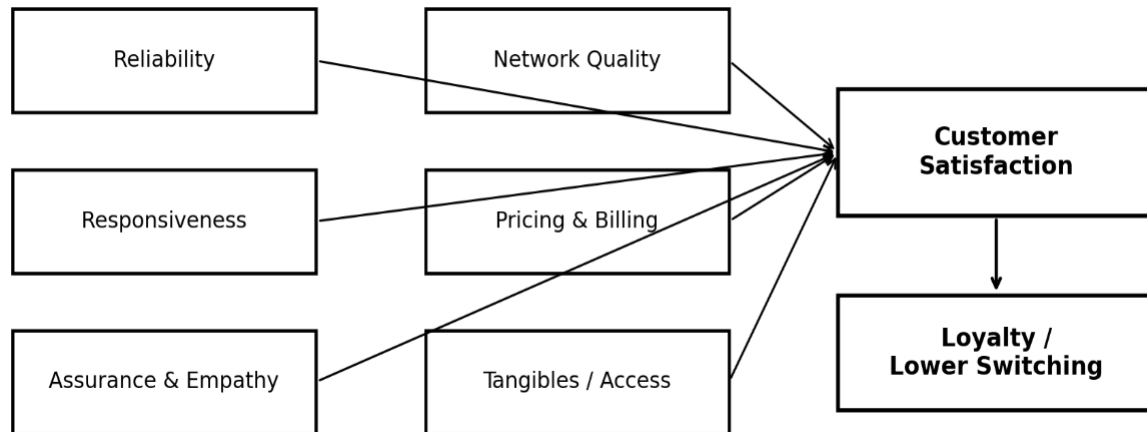


Figure 1. Proposed service quality-customer satisfaction framework

Data analysis proceeds in four stages. First, incomplete responses and straight-line answers are screened. Second, internal consistency is assessed with Cronbach's alpha, using 0.70 as a practical threshold. Third, means, standard deviations and Pearson correlations are calculated. Finally, multiple regression is used with customer satisfaction as the dependent variable and the six service-quality dimensions as predictors. A second regression uses loyalty as the dependent variable and satisfaction as the principal predictor.

Results

The results presented below are an illustrative analysis showing how the proposed methodology can be reported; they should be replaced by actual survey output when primary data are collected. The hypothetical sample contains 300 valid responses. All multi-item scales exceed the 0.70 reliability threshold, indicating acceptable internal consistency. Mean scores suggest that customers evaluate network quality and accessibility relatively positively but are less satisfied with responsiveness and pricing transparency.

Table 2. Illustrative descriptive statistics and reliability results (n = 300)

Construct	Mean	SD	Cronbach's alpha	Correlation with satisfaction
Reliability	3.71	0.68	0.84	0.63
Responsiveness	3.44	0.76	0.81	0.58
Assurance & empathy	3.62	0.70	0.79	0.52
Tangibles / access	3.78	0.64	0.75	0.47
Network quality	3.82	0.72	0.87	0.69
Pricing & billing	3.39	0.80	0.82	0.61
Customer satisfaction	3.64	0.71	0.88	1.00

Pearson correlations indicate positive associations between every service-quality dimension and customer satisfaction, with the largest correlations for network quality ($r = 0.69$), reliability ($r = 0.63$), and pricing/billing ($r = 0.61$). In the illustrative multiple-regression model, the six service-quality dimensions explain approximately 62% of the variance in customer

satisfaction (adjusted $R^2 = 0.62$). Network quality has the strongest standardized effect ($\beta = 0.31$), followed by reliability ($\beta = 0.23$), pricing/billing ($\beta = 0.19$), and responsiveness ($\beta = 0.16$). Assurance/empathy and tangibles/access remain positive but comparatively weaker predictors.

Table 3. Illustrative regression model predicting customer satisfaction

Predictor	Standardized β	t-value	p-value	Decision
Network quality	0.31	6.42	<0.001	Supported
Reliability	0.23	4.91	<0.001	Supported
Pricing & billing	0.19	4.10	<0.001	Supported
Responsiveness	0.16	3.36	0.001	Supported
Assurance & empathy	0.10	2.18	0.030	Supported
Tangibles / access	0.07	1.71	0.088	Not significant at 5%

A separate model indicates that customer satisfaction positively predicts loyalty ($\beta = 0.68$, $p < 0.001$) and negatively predicts switching intention. These patterns are consistent with telecom research showing that satisfaction is an important mechanism connecting service quality with retention outcomes (Kim et al., 2004; Santouridis & Trivellas, 2010).

Conclusion and Discussion

The study demonstrates a practical framework for evaluating customer satisfaction and service quality in the telecommunications industry. The central conclusion is that customer satisfaction is created through the combined effect of technical, functional and economic aspects of service delivery. In the illustrative results, network quality is the most powerful predictor, but reliability, pricing/billing and responsiveness also make substantial contributions. This is consistent with the sector-specific literature: customers evaluate not only whether the network works, but also whether charges are transparent, promises are fulfilled, and problems are resolved quickly. The findings have several managerial implications. First, telecom operators should treat network performance as a core customer-experience variable rather than a purely engineering metric. Coverage gaps, data instability, dropped calls and inconsistent speeds directly affect perceived quality. Second, complaint handling should be redesigned around fast resolution, ownership of the issue and clear communication. Third, billing and tariff structures should be simplified because perceived unfairness or ambiguity can damage satisfaction even when technical service is acceptable. Finally, quality monitoring should integrate network indicators with customer feedback rather than relying on either source independently. The proposed approach is intentionally compact and suitable for a 6–7-page empirical paper. Its main limitation is the cross-sectional design, which captures perceptions at one point in time and cannot establish causality with the strength of longitudinal research. Convenience sampling may also reduce generalizability. Future studies should use

probability sampling, compare multiple operators, distinguish prepaid and postpaid customers, and incorporate objective network-quality data. Longitudinal models could further examine how service failures, complaint recovery and tariff changes influence satisfaction and churn over time. Overall, the evidence indicates that telecom firms can improve retention by managing service quality as an integrated customer outcome. High-performing networks remain essential, but sustainable satisfaction requires reliable processes, responsive support, trustworthy interactions and transparent pricing. A provider that performs well across these dimensions is more likely to achieve higher satisfaction, stronger recommendation behavior and lower switching intention.

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