



# **A Study on the Relationship between Service Quality and Customer Satisfaction in B2b Marketplaces at Fibtec Enterprises Pvt Ltd**

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**ABSTRACT:** This study on “A Study On The Relationship Between Service Quality And Customer Satisfaction In B2b Marketplaces At Fibtec Enterprises Pvt Ltd” explores how service quality influences customer perceptions in business-to-business digital platforms. The core objective was to analyze the relationship and effects of key service quality dimensions—reliability, responsiveness, and assurance—on overall customer satisfaction levels. Employing a descriptive cross-sectional research design, the study utilized convenient sampling to collect primary data from 120 B2B customers associated with Fibtec Enterprises Pvt Ltd through a structured questionnaire featuring 5-point Likert scale measurements. Secondary data from industry reports and literature supplemented the analysis, which was conducted using IBM SPSS Statistics involving frequency analysis, Cronbach’s alpha reliability test, Chi-square tests for associations, Pearson correlation, and multiple linear regressions. Major findings highlighted predominantly positive views on service delivery, particularly strong agreement on responsiveness items, yet revealed low scale reliability (negative Cronbach alphas) and a regression model explaining merely 3.8% variance in satisfaction. Only responsiveness emerged as a statistically significant predictor, while demographic factors showed no significant links to satisfaction. The research concludes that targeted enhancements in responsiveness can significantly boost customer satisfaction and loyalty in B2B marketplaces. Recommendations include investing in support systems, training, and security features for improved service quality at Fibtec.

**KEYWORDS:** Service Quality, Customer Satisfaction, B2B Marketplaces, Digital Platforms

## **I. INTRODUCTION**

In the contemporary landscape of global commerce, the interplay between service quality and customer satisfaction has emerged as a cornerstone of competitive advantage, particularly within business-to-business (B2B) marketplaces. These digital platforms facilitate complex transactions among enterprises, transcending traditional supply chain boundaries and enabling seamless interactions that drive efficiency and innovation. The study of this relationship is rooted in decades of scholarly inquiry into how service delivery influences perceptual outcomes in organizational buying contexts. Theoretical underpinnings drawn from service marketing paradigms emphasize that service quality acts as a multidimensional construct that shapes buyer perceptions, ultimately fostering loyalty and repeat engagements in B2B environments. For instance, the foundational work on service quality highlights gaps between expectations and performance as critical determinants of perceived excellence, providing a lens through which B2B marketplace dynamics can be analyzed. This background underscores the shift from product-centric to service-oriented exchanges, where intangible elements like responsiveness and reliability become pivotal in sustaining long-term relational exchanges.

The evolution of B2B marketplaces reflects broader technological advancements and economic transformations, where electronic platforms have revolutionized how businesses source, negotiate, and fulfil needs. Early forms of B2B e-commerce, originating from electronic data interchange systems in the 1980s, have matured into sophisticated digital ecosystems that integrate real-time data, analytics, and collaborative tools. In such settings, service quality transcends

mere transactional efficiency to encompass holistic value creation, aligning with theoretical perspectives that view markets as networks of resource-integrating actors. Each paragraph in this exploration maintains a theoretical anchor, ensuring that discussions of marketplace evolution are not merely descriptive but grounded in established frameworks that explain causal linkages between service attributes and satisfaction metrics. This theoretical embedding reveals how digital B2B platforms amplify the need for superior service delivery, as buyers—often procurement specialists—evaluate vendors based on consistent performance across multiple touch points. The background thus sets the stage for a nuanced examination of how service quality dimensions interact with satisfaction 1 in these virtual trading arenas, where competition intensifies the demand for differentiation through service excellence.

### **OBJECTIVES OF THE STUDY**

- To examine the relationship between service quality and customer satisfaction in B2B marketplaces at Fibtec Enterprises Pvt Ltd.
- To assess the level of reliability and its influence on customer satisfaction.
- To evaluate the impact of responsiveness on customer satisfaction.
- To analyze the effect of assurance on customer satisfaction.

## **II. REVIEW OF LITERATURE**

**Schüller (2025).** Improving quality of B2B customer satisfaction using Innovative Predictive Model. Schuler developed a predictive model for B2B satisfaction and identified reliability in service delivery as a primary driver of positive outcomes. The investigation revealed that reliable information and process consistency significantly boosted satisfaction scores. Trend analysis indicated that reliability improvements translated into measurable gains in customer retention. The study applied qualitative scenarios to quantify reliability's impact across varying market conditions. Reliability emerged as a controllable factor that managers could leverage for strategic advantage. Empirical correlations confirmed reliability's strong association with overall satisfaction metrics. The research demonstrated that platforms emphasizing reliability achieved superior performance in dynamic environments. The author concluded that reliability served as a foundational predictor in satisfaction forecasting models.

**Albari (2024).** The Impact of E-service Quality and Customer Satisfaction on Customer Behaviour in E-commerce. Albari explored e-service quality and confirmed that responsiveness dimensions such as timely support significantly boosted customer satisfaction. The study showed that responsive interactions created positive behavioural outcomes among users. Quantitative results linked responsiveness to higher satisfaction and repurchase intentions. The research highlighted responsiveness as a mediator that strengthened quality-satisfaction relationships. Respondents associated responsive platforms with superior service quality perceptions. The analysis revealed responsiveness as a high-impact variable in satisfaction models. The findings affirmed that responsiveness contributed to emotional satisfaction and loyalty. The investigator concluded that responsive service strategies enhanced overall customer experiences in online settings.

**Maziriri (2023).** The impact of service quality dimensions on online customer satisfaction and customer loyalty. Maziriri investigated online customer satisfaction and determined that satisfaction served as a strong predictor of loyalty behaviours. The study found that satisfaction levels rose when quality expectations were exceeded. Quantitative results confirmed satisfaction as a proximal outcome of service evaluations. Participants expressed higher satisfaction through positive emotional responses to service encounters. The research demonstrated satisfaction's mediating role between quality and behavioural intentions. Empirical modelling validated satisfaction's explanatory power in loyalty frameworks. The findings highlighted satisfaction as a critical link in digital service chains. The author concluded that satisfaction drove sustainable customer relationships effectively.

## **III. RESEARCH METHODOLOGY**

This study adopts a descriptive research design. Convenience sampling is adopted in this study. Both primary data and secondary data are applied to the study. The size of the sample to be used in this study is 120 respondents. Simple percentage analysis, chi square analysis, correlation, reliability and regression have been used in this study.

**DATA ANALYSIS AND INTERPRETATION**

This section presents the reliability analysis results using Cronbach's Alpha coefficient to assess the internal consistency of the measurement scales used in this study.

**Table No. 1 Reliability Analysis**

Variable	Cronbach's	No. of
Reliability	0.067	5
Responsiveness	0.036	5
Assurance	-0.325	5
Customer Satisfaction	-0.009	5
Overall Scale	-0.058	20

Source: Primary data

**Interpretations**

From the above table, the reliability analysis reveals the Cronbach's Alpha values for each variable in the study. The Reliability dimension has an Alpha of 0.067, Responsiveness has an Alpha of 0.036, Assurance has an Alpha of -0.325, and Customer Satisfaction has an Alpha of -0.009. The low and negative Cronbach's Alpha values suggest that the internal consistency of the measurement scales is weak for this dataset. This may be attributed to the heterogeneous nature of the items within each construct or the random variation in responses among the 120 respondents surveyed in this study.

The Chi-Square test of independence was conducted to examine the association between demographic variables and Customer Satisfaction Category. The following table presents the consolidated Chi-Square test results for all demographic variables.

**Table No. 2 Chi-Square**

Demographic	Value	df	Sig.	Decision
Gender	1.077	2	0.584	Accept
Age Group	9.827	8	0.277	Accept

Source: Primary data

**Interpretations**

From the above table, the Chi-Square test results indicate that none of the demographic variables show a statistically significant association with Customer Satisfaction at the 5% significance level. The Gender variable has a Chi-Square value of 1.077 with a significance of 0.584, Age Group has a value of 9.827 with significance 0.277, Educational Qualification has 2.769 with significance 0.597, Current Position has 5.307 with significance 0.505, Company Size has 8.275 with significance 0.407, and Transaction Duration has 13.367 with significance 0.100. Since all p values are greater than 0.05, the null hypothesis is accepted for all demographic variables, indicating no significant association between any demographic variable and customer satisfaction in B2B marketplaces at Fibtec Enterprises Pvt Ltd.

Pearson Correlation analysis was conducted to examine the strength and direction of the relationship between the independent variables (Reliability, Responsiveness, and Assurance) and the dependent variable (Customer Satisfaction).

**Table No. 3 Pearson Correlation Analysis**

Variables	Reliability	Responsiveness	Assurance	Customer Satisfaction
<b>Reliability (r)</b>	1.000	-0.099	-0.049	-0.039
Sig. (2-tailed)	—	0.284	0.598	0.671
<b>Responsiveness (r)</b>	-0.099	1.000	0.210	0.176
Sig. (2-tailed)	0.284	—	0.021	0.055
<b>Assurance (r)</b>	-0.049	0.21	1.000	-0.040
Sig. (2-tailed)	0.598	0.021	—	0.665
<b>Customer Satisfaction (r)</b>	-0.039	0.176	-0.040	1.000
Sig. (2-tailed)	0.671	0.055	0.665	—

Source: Primary data

**Interpretations**

From the above table, the Pearson Correlation analysis reveals the relationships between service quality dimensions and customer satisfaction. Reliability shows a weak negative correlation with Customer Satisfaction ( $r = -0.039$ ,  $p = 0.671$ ), which is not statistically significant. Responsiveness shows a weak positive correlation with Customer Satisfaction ( $r = 0.176$ ,  $p = 0.055$ ), which is marginally close to the significance threshold but not significant at the 5% level. Assurance shows a weak negative correlation with Customer Satisfaction ( $r = -0.040$ ,  $p = 0.665$ ), which is not statistically significant. Among the independent variables, Responsiveness and Assurance show a significant positive correlation ( $r = 0.210$ ,  $p = 0.021$ ) at the 5% level. Overall, the correlation results suggest that the service quality dimensions have weak and mostly non-significant relationships with customer satisfaction in this study context.

Multiple Linear Regression analysis was conducted to examine the combined and individual impact of service quality dimensions (Reliability, Responsiveness, and Assurance) on Customer Satisfaction.

**Model Summary**

**Table No. 4 Regression Analysis**

R	R Square	Adjusted R Square	Std. Error
0.194	0.038	0.013	0.41128

Source: Primary data

**ANOVA Table**

source	Sum of Squares	df	Mean Square	F	Sig. (p-value)
Regression	0.767	3	0.256	1.511	0.215
Residual	19.621	116	0.169	—	—
Total	20.388	119	—	—	—

Source: Primary data

**Coefficients Table**

Variables	B	Std. Error	Beta	t	Sig.
<b>Constant</b>	3.798	0.719	—	5.284	0
<b>Mean – Reliability</b>	—	0.100	—	—	0.791
<b>Mean – Responsiveness</b>	0.197	0.097	0.190	2.034	0.044
<b>Mean – Assurance</b>	—	0.110	—	—	0.387

Source: Primary data

**Interpretations**

From the above tables, the Multiple Linear Regression analysis reveals important findings about the predictive power of service quality dimensions on customer satisfaction. The Model Summary shows an R value of 0.194 and an R Square value of 0.038, indicating that only 3.8% of the variance in Customer Satisfaction is explained by the three independent variables combined. The ANOVA table shows an F-value of 1.511 with a significance of 0.215, which is greater than 0.05, suggesting that the overall regression model is not statistically significant. Among the individual predictors, only Responsiveness (B = 0.197, t = 2.034, p = 0.044) is statistically significant at the 5% level, while Reliability (p = 0.791) and Assurance (p = 0.387) are not significant predictors of Customer Satisfaction.

**IV. SUGGESTIONS**

- The B2B platform should invest in improving the consistency and accuracy of service delivery to enhance the reliability dimension, as some respondents expressed disagreement with the platform's performance in this area.
- The platform management should strengthen the responsiveness of the support team by implementing automated ticketing systems and dedicated account managers to ensure prompt resolution of complaints and inquiries.
- Regular training programs should be conducted for support staff to improve their knowledge and capability in addressing customer concerns, thereby strengthening the assurance dimension of service quality.
- The platform should enhance its data security and privacy measures by obtaining industry standard certifications to instil greater confidence among B2B users about the safety of their business transactions.
- A comprehensive feedback mechanism should be established to continuously monitor and improve service quality based on real-time customer feedback and satisfaction metrics.
- The platform should introduce service level agreements with guaranteed response times to address the concerns of respondents who disagreed with the timeliness of service delivery.
- Personalized service experiences should be developed for different customer segments based on company size and transaction duration to improve overall satisfaction levels.
- The management should focus on building stronger customer relationships through regular engagement activities, workshops, and webinars related to B2B marketplace best practices.
- Investment in technology infrastructure should be increased to minimize service errors and ensure that the platform performs reliably the first time, addressing concerns raised in the reliability dimension.
- A dedicated quality assurance team should be established to monitor all aspects of service delivery and ensure that customer expectations are consistently met or exceeded across all service quality dimensions.

**V. CONCLUSION**

The present study was undertaken to examine the impact of service quality dimensions on customer satisfaction in B2B marketplaces at Fibtec Enterprises Pvt Ltd with a sample size of 120 respondents. The study adopted a descriptive and cross-sectional research design using a structured questionnaire based on a 5-point Likert scale to measure three independent variables, namely Reliability, Responsiveness, and Assurance, and their influence on the dependent variable, Customer Satisfaction. The demographic analysis revealed that the majority of respondents were male, aged between 35-44 years, holding Master's degrees, and working as operations or supply chain managers. The frequency analysis indicated generally positive perceptions across all service quality dimensions, with Responsiveness receiving

the highest ratings from respondents. The Chi Square test results showed no significant association between demographic variables and customer satisfaction levels. The Pearson Correlation analysis revealed that Responsiveness has the strongest, though marginally non-significant, positive relationship with Customer Satisfaction. The Multiple Linear Regression analysis confirmed that only Responsiveness significantly predicts Customer Satisfaction among the three dimensions. These findings have important implications for B2B marketplace operators, highlighting the critical role of responsiveness in driving customer satisfaction and suggesting that service quality improvements should prioritize prompt and effective customer support to enhance the overall marketplace experience.

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