



Implementation of Customer Experience and Service Quality Systems to Improve Customer Satisfaction at PT. SUCOFINDO (PERSERO) Strategic Business Unit (SBU) Coal

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Abstract. This study aimed to analyze the effects of customer experience and service quality on customer satisfaction at PT Sucofindo (Persero) Strategic Business Unit (SBU) Coal. Customer satisfaction is important in the coal inspection and testing industry because corporate customers expect reliable, accurate, responsive, and professional services. This study employed a quantitative approach using a survey method. The population consisted of 400 customers, with 200 respondents selected using the Slovin formula with a 5% margin of error and accidental sampling. Data were analyzed using multiple linear regression with SPSS, supported by validity, reliability, classical assumption, t-test, F-test, and coefficient of determination analyses. The results showed that customer experience had a positive and significant effect on customer satisfaction, with a regression coefficient of 0.256, $t = 7.491$, and $p = 0.000$. Service quality also had a positive and significant effect, with a regression coefficient of 0.146, $t = 4.311$, and $p = 0.000$. The Adjusted R^2 value of 0.474 indicated that customer experience and service quality explained 47.4% of the variation in customer satisfaction. These findings highlight the importance of improving customer-oriented services, reliability, responsiveness, professionalism, and accuracy to maintain sustainable customer satisfaction.

Keywords: Coal Inspection; Customer Experience; Customer Satisfaction; Service Quality; Service Reliability.

1. INTRODUCTION

In the coal inspection and testing service industry, customer satisfaction is a crucial aspect because service quality is assessed not only by test results but also by the overall customer experience during service delivery. Customers in this sector are generally corporate or business entities with high expectations regarding result accuracy, timeliness of task completion, workforce professionalism, and consistency of service quality. Therefore, inspection and testing firms are required to provide superior and sustainable services to meet customer expectations optimally.

PT Sucofindo (Persero) is a national company engaged in inspection, testing, certification, training, and consultancy, offering a broad range of services across various industrial sectors, including the coal mining sector. Through its Strategic Business Unit (SBU) Coal, the company provides inspection and testing services that serve as the basis for customers' business decisions. In an increasingly competitive business environment, the company must ensure that the quality of services delivered achieves high levels of customer satisfaction to maintain long-term business relationships.

One determinant considered to contribute to the formation of customer satisfaction is customer experience. The concept of customer experience refers to the personal responses that arise from various forms of customer interaction with a company, whether direct or indirect. Such interactions can generate cognitive, emotional, or behavioral responses that customers subsequently evaluate based on the congruence between initial expectations and the actual experience received. In contemporary marketing, customer experience has become a strategic element because it can create added value, strengthen the company's competitive position, and foster long-term customer relationships. Effectively managed customer experience has the potential to increase satisfaction, reinforce loyalty, reduce complaint rates, and retain customers over the long term. (Jia et al., 2023; Arkadan et al., 2024).

In addition to customer experience, service quality is also a factor frequently associated with levels of customer satisfaction. Service quality describes a company's ability to provide services that meet or exceed customer expectations. Service quality can be reflected through service reliability, responsiveness to customer needs, the ability to provide assurance and build trust, attentiveness to customer needs, and adequate physical facilities support. When customers receive services that meet their expectations, positive perceptions of the company tend to increase. Conversely, service quality that fails to meet expectations can reduce satisfaction, erode customer trust, and weaken established business relationships. (Fathulloh & Purnama, 2024; Arli et al., 2024; Dewa, 2023).

Several previous studies have demonstrated relationships among customer experience, service quality, and customer satisfaction. The findings of Muhammad Abi Fadillah and Parlagutan Silitonga (2024), Ananta Budhi Danurdara and Anwari Masatiff (2025), and Zidan Rizki Robbani et al. (2025) indicate that customer experience has a positive and significant effect on customer satisfaction. Conversely, studies by Mulyati and Rahmat Jaya (2025) and Sri Amanda et al. (2023) also show that service quality exerts a positive and significant influence on customer satisfaction. Recent evidence also shows that customer experience can be closely associated with satisfaction through customers' evaluations of service encounters and touchpoints (Jia et al., 2023; McCullough et al., 2024).

Nevertheless, most prior studies have been conducted in the hotel, banking, digital services, and other consumer-oriented business sectors. Research on customer experience and service quality in the coal inspection and testing services industry remains relatively limited, particularly in the context of corporate clients whose interaction patterns, needs, and expectations differ from those in other sectors. This gap in the literature indicates a research gap that presents an opportunity to conduct studies within the technical services industry. Based

on these conditions, research on Penerapan Sistem Customer Experience dan Service Quality terhadap Peningkatan Customer Satisfaction Di PT SUCOFINDO (PERSERO) Pada SBU Batubara becomes important to undertake in order to enrich empirical knowledge and provide practical contributions to the company.

2. THEORETICAL REVIEW

Customer satisfaction is a primary indicator for assessing a company's success in meeting customer needs and expectations. In the service sector, customer satisfaction emerges through an evaluative process of the quality of service received and the experiences gained while interacting with the company. Satisfaction levels increase when customers perceive that the services received meet or exceed their prior expectations (Wardhana, 2024).

Customer experience is understood as the overall customer responses formed from a sequence of interactions with a company during the use of products or services. This experience is not only related to the service outcome but also encompasses various aspects such as sensory, emotional, cognitive, behavioral, and social experiences felt by customers when interacting with the service provider. Positive experiences can build favorable perceptions of the company and thereby enhance overall customer satisfaction (Pei et al., 2020; Kumar et al., 2022). (Jia et al., 2023; Arkadan et al., 2024; McCullough et al., 2024).

In addition to customer experience, service quality is also a variable commonly associated with the formation of customer satisfaction. Service quality describes a company's ability to provide services that meet customer expectations through optimal service performance. Assessments of service quality are typically reflected in service reliability, responsiveness, service assurance, customer care, and adequate physical facility support. When customers receive high-quality services, the likelihood of achieving customer satisfaction increases because their needs and expectations are effectively fulfilled (Singh et al., 2023). (Fathulloh & Purnama, 2024; Arli et al., 2024; Yang et al., 2024; Dewa, 2023).

Various empirical findings indicate that customer experience and service quality are important determinants in shaping customer satisfaction. Studies by Fadillah and Silitonga (2024), Danudara and Masatif (2025), and Robbani et al. (2025) found that customer experience positively affects customer satisfaction. Meanwhile, research by Muliwati and Jaya (2025), Prasetyo et al. (2025), and Amanda et al. (2023) also demonstrate that service quality has a positive and significant effect on customer satisfaction. Therefore, both variables are considered relevant for explaining variation in customer satisfaction levels within the service

industry. Recent empirical studies likewise reinforce the relevance of these relationships across service contexts (Jia et al., 2023; Fathulloh & Purnama, 2024; Arli et al., 2024).

3. RESEARCH METHODS

This study employs a quantitative survey approach to examine the relationships between customer experience and service quality and customer satisfaction at PT Sucofindo (Persero) Strategic Business Unit (SBU) Batubara. The choice of a quantitative approach is based on the research orientation that focuses on testing relationships among variables statistically using empirical data collected directly from respondents.

The population in this study comprised all customers of PT Sucofindo (Persero) SBU Batubara, totaling 400 customers. The sample size was determined using Slovin's formula with a tolerance for error of 5%, resulting in 200 respondents as the unit of analysis. The sampling procedure employed a non-probability sampling technique with an accidental sampling approach, in which respondents were selected based on the availability and willingness of customers encountered directly to participate.

Prior to data collection, the research instrument was assessed for appropriateness through validity and reliability tests to ensure that each indicator could measure the intended variable accurately and consistently. Furthermore, classical assumptions were tested through a series of examinations including the normality test, multicollinearity test, and heteroskedasticity test as prerequisites to be fulfilled before applying multiple linear regression analysis.

All data processing was performed using SPSS software. The analytical techniques applied included multiple linear regression to map relationships among variables, partial tests (t-test) to identify the effect of each independent variable separately, and simultaneous tests (F-test) to evaluate the collective effect of the two independent variables on customer satisfaction. In addition, the coefficient of determination (R^2) was utilized to measure the proportion of variation in customer satisfaction that could be explained by customer experience and service quality.

4. RESULTS AND DISCUSSION

Validity and Reliability Test Results

Based on the validity test results, validity testing was conducted to determine the instrument's ability to measure the studied variables. The test results indicated that all statement items for the variables Customer Experience, Service Quality, and Customer

Satisfaction had r hitung values greater than the r tabel value of 0,1241. Therefore, all statement items were declared valid and suitable for use in the study.

Subsequently, a reliability test was conducted to assess the consistency level of the research instrument. The test results showed that all variables had Cronbach's Alpha values greater than 0,60, thus the research instrument was declared reliable and can be used as a consistent data collection tool.

Coefficient of Determination

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.693 ^a	.481	.474	5.33025

a. Predictors: (Constant), Service Quality, Customer Trust, Customer Experience

Figure 1. Multiple Regression Test Results

Based on the analysis of the coefficient of determination, an Adjusted R Square value of 0,474 was obtained, indicating that after adjustment for the number of independent variables and sample size, 47,4% of the variation in Y can be explained by the model, while the remaining 52,6% is influenced by variables outside the study model.

Multiple Regression Test Results

Partial Test Results (t-test)

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	2.591	1.282		.044
	Customer Experience	.256	.034	.457	.000
	Customer Trust	.157	.071	.114	.029
	Service Quality	.146	.034	.246	.000

a. Dependent Variable: Customer Satisfaction

Figure 2. Partial Test Results

Based on the results of the partial tests (t-test) in the Coefficients table, it was found that all independent variables, namely Customer Experience (X1) and Service Quality (X2), have a significant partial effect on the dependent variable Customer Satisfaction (Y). This is indicated by the significance values of each variable being less than 0,05.

- The Customer Experience variable (X1) has a regression coefficient (B) of 0.256, a t calculated value of 7.491, and a significance of 0,000. This means H1 is accepted.
- The Service Quality variable (X2) has a regression coefficient of 0.146, a t calculated value of 4.311, and a significance of 0,000. This means H2 is accepted.

Discussion

Effect of Customer Experience on Customer Satisfaction

The study results indicate that Customer Experience has a positive and significant effect on Customer Satisfaction. This finding shows that the experiences perceived by customers during interactions with PT Sucofindo (Persero) SBU Batubara are an important factor in shaping customer satisfaction. Customer Experience reflects the experiences customers obtain through various touchpoints during the service process. These experiences include sensory (sense), emotional (feel), cognitive (think), behavioral (act), and social (relate) dimensions perceived by customers when using the company's services. Positive experiences will form favorable perceptions of the company and increase the level of customer satisfaction. At PT Sucofindo (Persero) SBU Batubara, customer experience can be formed through the quality of communication with staff, ease of obtaining information, responsiveness to customer needs, professionalism in the conduct of inspections and testing, and ease of obtaining service results. When customers receive experiences that meet or exceed expectations, they will give positive evaluations of the company, thereby increasing customer satisfaction.

This result is consistent with the studies of Fadillah and Silitonga (2024), Danurdara and Masatiff (2025), and Robbani et al. (2025), which concluded that Customer Experience has a positive and significant effect on Customer Satisfaction. These findings indicate that customer experience is one of the main factors influencing customer satisfaction across various service sectors. This interpretation is also supported by Jia et al. (2023), who identified customer-experience dimensions from online reviews and examined their relationship with customer satisfaction, and by McCullough et al. (2024), who found that specific service-interaction moments can influence overall satisfaction.

Effect of Service Quality on Customer Satisfaction

The results indicate that Service Quality has a positive and significant effect on Customer Satisfaction. This finding suggests that the service quality delivered by PT Sucofindo (Persero) SBU Batubara plays an important role in enhancing customer satisfaction. Service Quality reflects the company's ability to provide services that meet customer expectations. In this study, service quality was measured through the dimensions of tangibles, reliability, responsiveness, assurance, and empathy. These five dimensions describe service aspects that customers directly experience while using the company's services. In the context of coal inspection and testing services, customers assess not only the test results they receive but also the timeliness of service delivery, accuracy of information, staff competence, responsiveness to customer requests, and

available supporting facilities. Therefore, good service quality will increase customers' confidence in the company's ability to meet their needs.

The findings of this study are consistent with Muliwati and Jaya (2025), Prasetyo et al. (2025), and Amanda et al. (2023), which show that Service Quality has a positive and significant effect on Customer Satisfaction. These results reinforce that service quality is a very important factor in creating customer satisfaction. Similar evidence is reported by Fathulloh and Purnama (2024), Arli et al. (2024), Yang et al. (2024), and Dewa (2023), although the specific service dimensions and contexts differ across studies.

5. CONCLUSIONS AND RECOMMENDATIONS

Based on the results concerning the influence of Customer Experience and Service Quality on Customer Satisfaction at PT Sucofindo (Persero) SBU Batubara, it can be concluded that Customer Experience has a positive and significant effect on Customer Satisfaction. The results show that the better the experience perceived by customers during interactions with PT Sucofindo (Persero) SBU Batubara, the higher the level of customer satisfaction that is formed. Customer experience, which encompasses the aspects of sense, feel, think, act, and relate, can generate positive perceptions of the company's services. Service Quality also has a positive and significant effect on Customer Satisfaction at PT Sucofindo (Persero) SBU Batubara. This indicates that high-quality service—through aspects such as service speed, accuracy of results, responsiveness, and professionalism—can increase customer satisfaction.

PT Sucofindo SBU Batubara needs to improve customer experience by enhancing faster service delivery, and should continue to strengthen service quality by reinforcing reliability, responsiveness, assurance, and punctuality of service so that customers obtain a more optimal service experience.

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