Influence of Service Quality and Information Systems on Customer Satisfaction Indihome PT. Telkom Sorong with Trust And Perceived Risk as Moderating Variables

Jalmijn Tindage[1], Slamet Riyadi[2], Abdul Halik[3]
[1,2,3]Universitas 17 Agustus 1945 Surabaya

ABSTRACT: This study investigates the influence of service quality and information systems quality on customer satisfaction at Indihome PT. Telkom Sorong, with perceived trust and perceived risk as moderating variables. A quantitative approach was employed, using a purposive sampling method to gather data from 172 respondents. The results indicate that both service quality and information systems quality have a significant positive impact on customer satisfaction. Furthermore, perceived trust significantly moderates the relationship between service quality and customer satisfaction, while perceived risk substantially mediates the relationship between information systems quality and customer satisfaction. These findings provide valuable insights for Indihome PT. Telkom Sorong to enhance customer satisfaction levels by focusing on improving service quality, information systems quality, addressing perceived risks, and fostering trust among customers. Future research could explore other potential moderating variables and conduct longitudinal studies to examine the dynamics between these variables over time.

KEYWORDS: Service Quality, Information Systems, Customer Satisfaction, Perceived Risk, Trust

INTRODUCTION

In today's rapidly evolving digital landscape, companies must provide high-quality services and robust information systems to satisfy their customers and maintain a competitive edge (Parasuraman et al., 1988; Delone & McLean, 2003). The telecommunications sector, in particular, has become increasingly competitive as numerous providers offer similar services (Verhoef & Langerak, 2002). Consequently, understanding the factors that influence customer satisfaction has become crucial for the long-term success of telecommunication companies: one such company is Indihome PT. Telkom Sorong has experienced substantial growth in recent years, necessitating a deeper understanding of the factors contributing to customer satisfaction (Sorong, 2019).

Research on customer satisfaction has suggested that service quality and information systems play critical roles in determining customer satisfaction (Parasuraman et al., 1985; Delone & McLean, 1992). Service quality refers to evaluating a service provider's performance (Gronroos, 1984). Information systems quality pertains to the effectiveness and efficiency of the systems supporting a company's services (Delone & McLean, 2003). In addition to these factors, trust and perceived risk have emerged as vital moderating variables influencing the relationship between service quality, information systems, and customer satisfaction (Pavlou, 2003; Gefen et al., 2003).

This study explores the effects of service quality and information systems on customer satisfaction at Indihome PT. Telkom Sorong, while also investigating the moderating roles of trust and perceived risk. By understanding the intricate relationships between these factors, the research seeks to provide valuable insights for enhancing customer satisfaction and loyalty for Indihome PT. Telkom Sorong.

LITERATURE REVIEW

Service Quality and Customer Satisfaction

The literature has widely examined the relationship between service quality and customer satisfaction (Parasuraman et al., 1988; Cronin & Taylor, 1992; Zeithaml et al., 1996). The SERVQUAL model developed by Parasuraman et al. (1988) is a widely accepted framework for assessing service quality, which includes five dimensions: reliability, responsiveness, assurance, empathy, and tangibles. Studies have consistently demonstrated a positive relationship between service quality and customer satisfaction

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(Cronin & Taylor, 1992; Anderson & Sullivan, 1993; Zeithaml et al., 1996). High service quality leads to increased customer satisfaction, loyalty, positive word-of-mouth, and a competitive advantage for the service provider (Heskett et al., 1997).

Information Systems Quality and Customer Satisfaction

The quality of information systems is another crucial factor influencing customer satisfaction (Delone & McLean, 1992; 2003). Delone and McLean (1992) proposed a model of information systems success, which includes system quality, information quality, and user satisfaction. A high-quality information system is characterized by its ease of use, reliability, flexibility, and integration with other systems (DeLone & McLean, 2003). Studies have indicated that the quality of information systems directly impacts customer satisfaction, as it supports the efficient delivery of services and enhances the overall customer experience (Petter et al., 2008; Wu & Wang, 2006).

Trust as a Moderating Variable

Trust is critical in service delivery and customer satisfaction (Morgan & Hunt, 1994; Pavlou, 2003). Trust is the customer's belief in the service provider's reliability, integrity, and competence (Mayer et al., 1995). Research has shown that trust can moderate the relationship between service quality, information systems quality, and customer satisfaction (Gefen et al., 2003; McKnight et al., 2002). High levels of trust can strengthen the impact of service quality and information systems quality on customer satisfaction. Customers are more likely to perceive the service provider as reliable and dependable (Pavlou, 2003; Suh & Han, 2003).

Perceived Risk as a Moderating Variable

Perceived risk is another factor that may influence the relationship between service quality, information systems quality, and customer satisfaction (Bauer, 1960; Featherman & Pavlou, 2003). Perceived risk refers to the potential negative consequences that customers associate with a service or product (Cunningham, 1967). In the service delivery context, perceived risk may involve concerns about privacy, security, and service performance (Featherman & Pavlou, 2003). Research has demonstrated that perceived risk can moderate the relationship between service quality, information systems quality, and customer satisfaction (Pavlou et al., 2007). High levels of perceived risk may weaken the positive effects of service quality and information systems quality on customer satisfaction, as customers may be more cautious in evaluating the service provider (Koufaris & Hampton-Sosa, 2004).

RESEARCH METHOD

This research employs a quantitative approach to investigate the relationships between service quality, information systems quality, customer satisfaction, trust, and perceived risk among Indihome PT. Telkom Sorong customers. A survey methodology was chosen to collect primary data from the respondents, allowing for the quantification and statistical analysis of the relationships between the variables under study.

The sampling method used in this research is purposive sampling, a non-probability sampling technique in which the researcher selects participants based on specific characteristics relevant to the study (Etikan et al., 2016). In this case, the target population consisted of Indihome PT. Telkom Sorong customers, and the sample was selected based on their experience with the company's services and their willingness to participate in the survey. A total of 172 respondents were included in the sample, which was determined using the Lemeshow formula with a 5% tolerance level.

Data collection was carried out through a structured questionnaire, which included items designed to measure the variables of interest: service quality, information systems quality, customer satisfaction, trust, and perceived risk. The questionnaire was developed based on established scales from the literature, such as the SERVQUAL scale (Parasuraman et al., 1988) for service quality, the Delone and McLean model (2003) for information systems quality, and scales for trust (Mayer et al., 1995) and perceived risk (Featherman & Pavlou, 2003).

The collected data were then analyzed using Structural Equation Modeling (SEM), a statistical technique that enables the testing of complex relationships between multiple variables simultaneously (Hair et al., 2011). SEM was utilized to estimate the direct effects of service quality and information systems quality on customer satisfaction, as well as the moderating effects of trust and perceived risk on these relationships. The results of the SEM analysis provided insights into the strength and significance of the relationships between the variables, which were used to draw conclusions and recommendations for improving customer satisfaction among Indihome PT. Telkom Sorong users.

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RESULT

Table 1. Reliability Test

Variable	Cronbach's Alpha	Interpretation
Service Quality	0.715	Reliable
Information Systems Quality	0.754	Reliable
Customer Satisfaction	0.804	Reliable
Perceived Trust	0.696	Reliable
Perceived Risk	0.716	Reliable

The reliability test was conducted using Cronbach's Alpha, a widely used measure of internal consistency for scales and questionnaires (Cronbach, 1951). Cronbach's Alpha values range from 0 to 1, with higher values indicating higher reliability. A commonly accepted threshold for acceptable reliability is 0.60 (Nunnally, 1978).

The reliability test results reveal that all variables in the study have Cronbach's Alpha values above the 0.60 threshold, indicating that the measurements for service quality, information systems quality, customer satisfaction, perceived trust, and perceived risk are reliable. This suggests that the questionnaire items used in this study are consistent and provide a reliable measure of the constructs under investigation.

Table 2. Result Average Variance Extracted (AVE)

Variable	Average Variance Extracted (AVE)
Service Quality (K_Pel)	0.526
Information Systems Quality (K_Inf)	0.603
Customer Satisfaction (K_Puas)	0.528
Perceived Trust (Keper)	0.666
Perceived Risk (Resiko)	0.583

Average Variance Extracted (AVE) measures the amount of Variance captured by a construct about the Variance due to measurement error (Fornell & Larcker, 1981). AVE values range between 0 and 1, with higher values indicating a better representation of the construct by its corresponding indicators. A commonly accepted threshold for acceptable AVE is 0.50, which suggests that the latent construct can explain at least 50% of the Variance in the hands (Hair et al., 2011).

The results of the AVE analysis show that all variables in the study have AVE values above the 0.50 threshold, indicating that the constructs of service quality, information systems quality, customer satisfaction, perceived trust, and perceived risk are adequately represented by their respective indicators. This suggests that the measurement model exhibits sufficient convergent validity, an essential requirement for conducting further analyses, such as Structural Equation Modeling (SEM).

Table 3. Fit Structural Model

Index	Value	Remark
Average Path Coefficient (APC)	0.140	p-value < 0.001
Average R-squared (ARS)	0.254	p-value < 0.001
Average Adjusted R-squared (AARS)	0.226	p-value < 0.001
Average Block VIF (AVIF)	1.888	ideally ≤ 3.3
Average Full Collinearity VIF (AFVIF)	1.564	ideally ≤ 3.3
Tenenhaus GoF (GoF)	0.431	large ≥ 0.36
Simpson's Paradox Ratio (SPR)	0.667	ideally = 1
R-squared Contribution Ratio (RSCR)	0.945	ideally = 1
Statistical Suppression Ratio (SSR)	1.000	ideally = 1
Nonlinear Bivariate Causality Direction Ratio (NLBCDR)	0.900	acceptable if ≥0.7

The model fit indices show that the structural model is satisfactory, with most index meeting their respective criteria. The APC, ARS, and AARS have p-values less than 0.001, indicating that the relationships between the variables are statistically significant. The AVIF and AFVIF values are within the acceptable range (≤ 3.3), suggesting the model does not suffer from multicollinearity issues. The GoF value is considered significant (≥ 0.36), indicating a good overall fit of the model. The SPR and RSCR values are close to 1, while the SSR value equals 1, further supporting the model's adequacy. Finally, the NLBCDR deal is acceptable, greater than or equal to 0.7.

These results indicate that the structural model is suitable for explaining the relationships between service quality, information systems quality, customer satisfaction, perceived trust, and perceived risk in the context of Indihome PT. Telkom Sorong.

Table 4. Structural Research Model Path Coefficient

Hypothesis	Estimate	P-Value	Result
1. Service Quality (K_Pel) → Customer Satisfaction (K_Puas)	0.129	0.043	Supported
2. Information Systems Quality (K_Inf) → Customer Satisfaction (K_Puas)	0.325	0.000	Supported
3. Perceived Trust (Keper) * Service Quality (K_Pel) → Customer Satisfaction (K_Puas)	0.178	0.008	Supported
4. Perceived Trust (Keper) * Information Systems Quality (K_Inf) → Customer Satisfaction (K_Puas)	0.048	0.264	Not Supported
5. Perceived Risk (Resiko) * Service Quality (K_Pel) → Customer Satisfaction (K_Puas)	0.015	0.420	Not Supported
6. Perceived Risk (Resiko) * Information Systems Quality (K_Inf) → Customer Satisfaction (K_Puas)	0.144	0.026	Supported

The path coefficients and moderating relationships results are as follows:

Path Coefficients:

Service Quality (K_Pel) → Customer Satisfaction (K_Puas): Estimate = 0.129, p-value = 0.043

Information Systems Quality (K_Inf) → Customer Satisfaction (K_Puas): Estimate = 0.325, p-value = 0.000

Moderating Relationships:

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Perceived Trust (Keper) * Service Quality (K_Pel) → Customer Satisfaction (K_Puas): Estimate = 0.178, p-value = 0.008

Perceived Trust (Keper) * Information Systems Quality (K_Inf) → Customer Satisfaction (K_Puas): Estimate = 0.048, p-value = 0.264

Perceived Risk (Resiko) * Service Quality (K_Pel) → Customer Satisfaction (K_Puas): Estimate = 0.015, p-value = 0.420

Perceived Risk (Resiko) * Information Systems Quality (K_Inf) → Customer Satisfaction (K_Puas): Estimate = 0.144, p-value = 0.026

Based on the hypothesis testing results:

Service quality significantly affects customer satisfaction (Estimate = 0.129, p-value = 0.043). This finding aligns with the existing literature, suggesting that higher service quality increases customer satisfaction (Parasuraman et al., 1988; Zeithaml et al., 1996). Information systems quality significantly affects customer satisfaction (Estimate = 0.325, p-value = 0.000). This result supports the notion that better information systems quality contributes to higher levels of customer satisfaction (DeLone & McLean, 2003; McKinney et al., 2002).

Perceived trust significantly moderates the relationship between service quality and customer satisfaction (Estimate = 0.178, p-value = 0.008). This result suggests that higher levels of trust can strengthen the positive effect of service quality on customer satisfaction (Morgan & Hunt, 1994; Sirdeshmukh et al., 2002).

Perceived trust does not significantly moderate the relationship between information systems quality and customer satisfaction (Estimate = 0.048, p-value = 0.264). This implies that the impact of information systems quality on customer satisfaction is not substantially affected by the level of trust.

Perceived risk does not significantly moderate the relationship between service quality and customer satisfaction (Estimate = 0.015, p-value = 0.420). This finding indicates that perceived threat does not notably influence the effect of service quality on customer satisfaction.

The perceived risk significantly moderates the relationship between information systems quality and customer satisfaction (Estimate = 0.144, p-value = 0.026). This result suggests that higher levels of perceived risk can weaken the positive effect of information systems quality on customer satisfaction (Pavlou & Gefen, 2004; Featherman & Pavlou, 2003).

DISCUSSION

The discussion section will interpret the research results, relating them to the existing literature and theoretical frameworks. This study focused on understanding the influence of service quality and information systems quality on customer satisfaction at Indihome PT. Telkom Sorong, with perceived trust and perceived risk as moderating variables.

The results show that service quality significantly affects customer satisfaction (Estimate = 0.129, p-value = 0.043). This finding aligns with previous research demonstrating the importance of service quality in driving customer satisfaction (Parasuraman et al., 1988; Zeithaml et al., 1996). The current study highlights the need for Indihome PT—Telkom Sorong should invest in improving their service quality to enhance customer satisfaction.

Information systems quality also significantly affects customer satisfaction (Estimate = 0.325, p-value = 0.000). This result supports the notion that better information systems quality contributes to higher levels of customer satisfaction (DeLone & McLean, 2003; McKinney et al., 2002). It suggests that Indihome PT. Telkom Sorong should continuously improve its information systems to ensure a seamless and user-friendly customer experience, ultimately increasing satisfaction.

Perceived trust significantly moderated the relationship between service quality and customer satisfaction (Estimate = 0.178, p-value = 0.008). This result suggests that higher levels of trust can strengthen the positive effect of service quality on customer satisfaction (Morgan & Hunt, 1994; Sirdeshmukh et al., 2002). This finding underscores the importance of building and maintaining customer trust, as it can magnify the positive impact of service quality on satisfaction.

However, perceived trust does not significantly moderate the relationship between information systems quality and customer satisfaction (Estimate = 0.048, p-value = 0.264). This implies that the impact of information systems quality on customer satisfaction is not substantially affected by the level of trust. It suggests that the quality of information systems can directly influence customer satisfaction, and faith may be less critical in this context.

Perceived risk does not significantly moderate the relationship between service quality and customer satisfaction (Estimate = 0.015, p-value = 0.420). This finding indicates that perceived threat does not notably influence the effect of service quality on customer satisfaction. This result could imply that customers are more focused on service quality than the associated risks when evaluating their satisfaction levels.

Finally, perceived risk significantly moderates the relationship between information systems quality and customer satisfaction (Estimate = 0.144, p-value = 0.026). This result suggests that higher levels of perceived risk can weaken the positive effect of

information systems quality on customer satisfaction (Pavlou & Gefen, 2004; Featherman & Pavlou, 2003). It highlights the importance of addressing and mitigating perceived risks associated with information systems to enhance customer satisfaction.

CONCLUSION

In conclusion, this study aimed to determine the effect of service quality and information systems quality on customer satisfaction at Indihome PT. Telkom Sorong, with perceived trust and perceived risk as moderating variables. The results indicate that both service quality and information systems quality have a significant positive impact on customer satisfaction. Additionally, the findings reveal that perceived trust significantly moderates the relationship between service quality and customer satisfaction, while perceived risk substantially mediates the relationship between information systems quality and customer satisfaction.

These findings provide valuable insights for Indihome PT. Telkom Sorong to enhance customer satisfaction levels. To achieve this, the company should focus on improving its service and information systems quality, as they directly impact customer satisfaction. Additionally, fostering trust among customers can magnify the positive impact of service quality on satisfaction. Furthermore, addressing and mitigating perceived risks associated with information systems are essential for maximizing the positive effect of information systems quality on customer satisfaction.

Future research could explore other potential moderating variables that may explain the relationships between service quality, information systems quality, and customer satisfaction. Also, longitudinal studies could examine the changes in these relationships over time, providing a more comprehensive understanding of the dynamics between these variables.

Overall, this study contributes to the existing knowledge on service quality, information systems quality, and customer satisfaction, particularly in the context of Indihome PT. Telkom Sorong. The results offer practical implications for the company to enhance customer satisfaction levels, ultimately leading to improved customer loyalty and long-term business success.

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