

THE EFFECT OF QUALITY OF SAFETY SERVICE ON SATISFACTION AND LOYALTY: SAFETY FIRST

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ABSTRACT

Regarding satisfaction and loyalty, the quality of safety services for ferry crossing users is analyzed. The role of satisfaction mediation was also analyzed in increasing loyalty. They are using Structural Equation Modeling. The study results indicate a strong and significant positive relationship between Safety Service Quality and Satisfaction and Loyalty. Additionally, there is a significant positive link between Satisfaction and Loyalty, and there is a mediating role of partial satisfaction in the relationship between Safety Service Quality and Loyalty. The theoretical implications of the results of this study prove that Safety Service Quality increases satisfaction and loyalty. The practical implications of this study provide input to government policymakers and regulations, especially in the shipping sector, that Safety Service Quality is paramount, and safety is the first (Safety First).

Keywords: Quality of Safety services, Satisfaction, Loyalty.

1. INTRODUCTION

In an increasingly competitive business world, service quality has become crucial in building a solid relationship between the company and the customer. Especially in industries related to safety aspects, such as transportation, healthcare, and the construction sector, the quality of safety services not only affects the customer experience but also plays an essential role in building trust. The quality of safety services includes various elements, such as service reliability, responsiveness in handling complaints, and preparedness for emergencies. Research by (Hussain et al., 2015) Exploring the connection between service quality, customer satisfaction, and brand loyalty in the airline industry reveals that service quality, perceived value, and brand image significantly enhance customer satisfaction. This, in turn, fosters brand loyalty. Meanwhile, the research conducted by (Gopal Vasanthi et al., 2023) shows that passengers are satisfied with the accurate, guaranteed, and reliable quality of service.

2. LITERATURE REVIEW

Customer satisfaction is an essential factor that affects loyalty to the company. Satisfaction arises when customer expectations regarding the quality of safety services are met or even exceeded. A recent study by (Kanyama et al., 2022) Indicates that customers who are pleased with the quality of services provided safety services have a higher tendency to continue using the same product or service and recommend the company to others. This is in line with the findings (Ali & Raza, 2017), which state that satisfaction related to safety services significantly affects customer loyalty.

Customer loyalty is one of the indicators of long-term success for a company. Loyal customers do not just return to use the same product or service but also become an indirect promotion agent through recommendations to the people around them.

3. CONCEPTUAL FRAMEWORK AND RESEARCH HYPOTHESIS

The Conceptual Framework of the Research Model can seen in Figure 1.

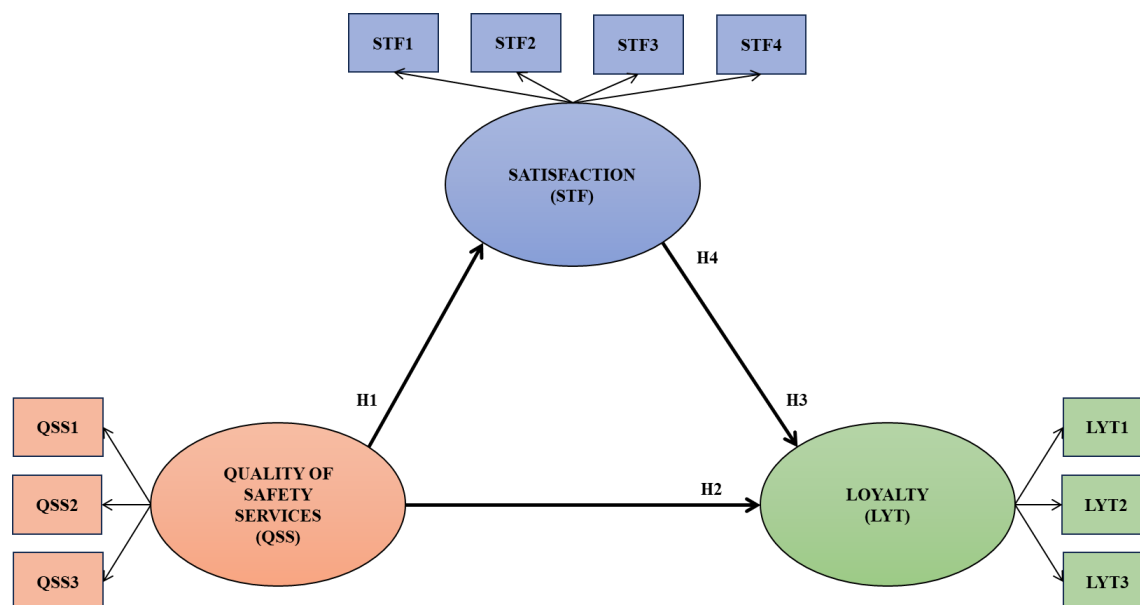


Figure 1. Conceptual Framework and Research Hypothesis

Description of Notation:

Quality of Safety Services (OSS)

QSS1: The quality of Safety Service about the safety equipment demonstration on board and the position of safety equipment is excellent.

QSS2: The quality of Safety Service regarding the availability of ship safety equipment is excellent.

QSS3: Safety Service Quality about Crew Ability, Licensing Documents are excellent.

Satisfaction (STF)

STF1: The shipping service provided is after the hope.

STF2: Satisfied and will still use ship services.

STF3: The ship's facilities are in line with expectations.

STF4: Facilities for resting on the ship are fulfilled.

Loyalty (LYT)

LYT1: I will reuse the ship services.

LYT2: I would recommend using the boat to others.

LYT3: I will still use the boat despite other alternatives.

Hypothesis 1 (H1): Quality of Safety Services (OSS) influences Satisfaction (STF).
Hypothesis 2 (H2): Quality of Safety Services (OSS) influences Loyalty (LYT).
Hypothesis 3 (H3): Satisfaction (STF) influences loyalty (LYT).
Hypothesis 4 (H4): Satisfaction (STF) has a mediating role in the relationship between Quality of Safety Services (OSS) and Loyalty (LYT).

4. STRUCTURAL EQUATION MODELING (SEM)

Structural Equation Modeling (SEM) can seen in Figure 2.

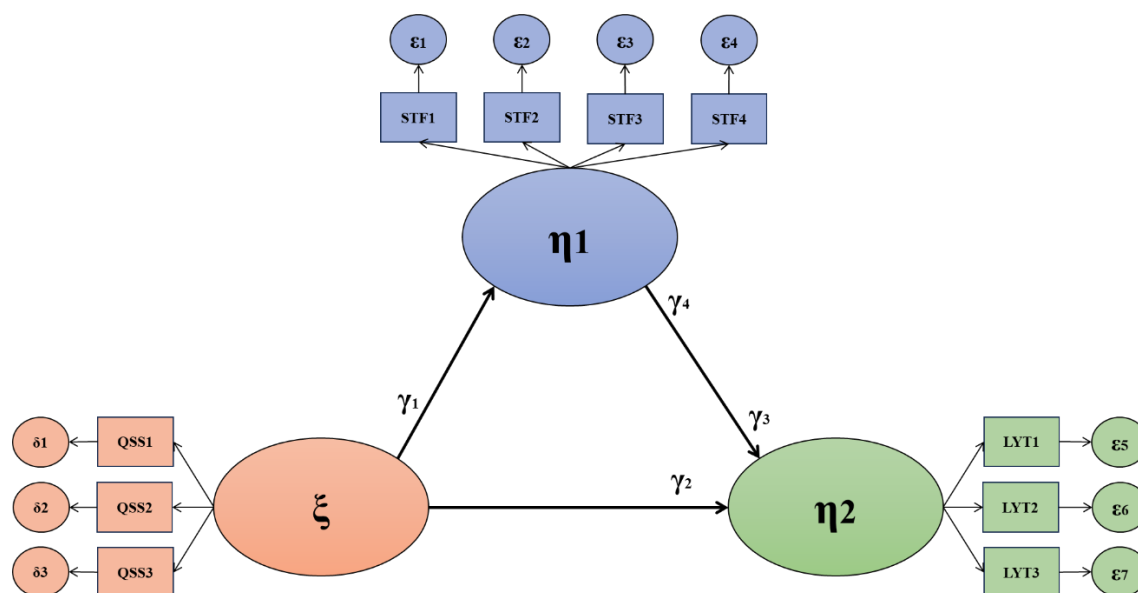


Figure 2. Structural Equation Modeling (SEM)

Notations used in Structural Equation Modeling (SEM):

ξ: Exogenous Latent Variables (Quality of Safety services).

η1: Endogenous Latent Variables (Satisfaction).

η2: Endogenous Latent Variables (Loyalty).

δ: Measurement error on the Exogenous latent variable.

ε: Measurement error on the manifest variable for latent variable Endogene.

γ: Coefficient of influence of exogenous variables.

β: Coefficient of influence of endogenous variables on endogenous variables.

Outer Model Equation:

Quality of Safety Services (OSS) or (ξ):

$$OSS_1 = \lambda_{OSS1}\xi + \delta_1$$

$$OSS_2 = \lambda_{OSS2}\xi + \delta_2$$

$$OSS_3 = \lambda_{OSS3}\xi + \delta_3$$

Satisfaction (STF) or (η_1):

$$STF_1 = \lambda_{STF1}\eta_1 + \varepsilon_1$$

$$STF_2 = \lambda_{STF2}\eta_1 + \varepsilon_2$$

$$STF_3 = \lambda_{STF3}\eta_1 + \varepsilon_3$$

$$STF_4 = \lambda_{STF4}\eta_1 + \varepsilon_4$$

Loyalty (LYT) or (η_2):

$$LYT_1 = \lambda_{LYT1}\eta_2 + \varepsilon_5$$

$$LYT_2 = \lambda_{LYT2}\eta_2 + \varepsilon_6$$

$$LYT_3 = \lambda_{LYT3}\eta_2 + \varepsilon_7$$

Inner Model Equation:

$$\text{Loyalty (LYT) or } (\eta_2) = \gamma_2\xi + \gamma_3\eta_1 + \varepsilon_8$$

5. METHODS

It is using Structural Equation Modeling. Interpretation of the comprehensive analysis results is in harmony with the nature of multivariate analysis, which already considers the relationship between variables. Structural equation models (SEM), the least-squares, and factor-based methods were used. The respondents from the study were one hundred passengers of the Kariangau Port – Penajam Port Crossing, East Kalimantan Province.

There is a ten model fit and quality index (Kock, 2010), as follows (refer to Table 1):

Table 1. Model fit and quality index

No	Model Fit & Quality Index	Criteria Fit
1	Average Path Coefficient (APC)	$p < 0.001$
2	Average R-squared (ARS)	$p < 0.001$
3	Average Adjusted R-squared (AARS)	$p < 0.001$
4	Average block Variance Inflation Factor (AVIF)	Acceptable if ≤ 5
		Ideally ≤ 3.3
5	Average Full Collinearity VIF (AFVIF)	Acceptable if ≤ 5
		Ideally ≤ 3.3
6	Tenenhaus GoF (GoF)	Small ≥ 0.1
		Medium ≥ 0.25
		Large ≥ 0.36
7	Simpson's paradox ratio (SPR)	Acceptable if ≥ 0.7
		Ideally = 1
8	R-squared contribution ratio (RSCR)	Acceptable if ≥ 0.9
		Ideally = 1
9	Statistical suppression ratio (SSR)	Acceptable if ≥ 0.7
10	Nonlinear- bivariate causality- direction ratio	Acceptable if ≥ 0.7

(NLBCDR)

6. RESULTS AND DISCUSSION**Table 2. Composite reliability coefficients, Cronbach's alpha coefficients, and Average variances extracted (AVE)**

Latent Variables	Composite reliability coefficients	Cronbach's alpha coefficients	Average variances extracted (AVE)
Quality of Safety Sevices (OSS)	0.896	0.825	0.742
Satisfaction (STF)	0.932	0.903	0.775
Loyalty (LYT)	0.923	0.874	0.800

Table 3. Analysis Results Model fit and quality index

No	Model fit and quality Index	Criteria Fit	Analysis results	Remarks
1	Average Path Coefficient (APC)	$p < 0.001$	0.495 $p < 0.001$	Good Significant
2	Average R-squared (ARS)	$p < 0.001$	0.502 $p < 0.001$	Good Significant
3	Average Adjusted R-squared (AARS)	$p < 0.001$	0.494 $p < 0.001$	Good Significant
4	Average block Variance Inflation Factor (AVIF)	Acceptable if ≤ 5		
		Ideally ≤ 3.3	1.529	Ideally
5	Average Full Collinearity VIF (AFVIF)	Acceptable if ≤ 5		
		Ideally ≤ 3.3	2.296	Ideally
6	Tenenhaus GoF (GoF)	Small ≥ 0.1		
		Medium ≥ 0.25		
		Large ≥ 0.36	0.622	Large
7	Simpson's paradox ratio (SPR)	Acceptable if ≥ 0.7		
		Ideally = 1	1	Ideally
8	R-squared contribution ratio (RSCR)	Acceptable if ≥ 0.9		
		Ideally = 1	1	Ideally
9	Statistical suppression ratio (SSR)	Acceptable if ≥ 0.7	1	Accepted
10	Nonlinear- bivariate causality- direction	Acceptable if ≥ 0.7	1	Accepted

ratio (NLBCDR)			
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Table 4. R-squared coefficients, Adjusted R-squared coefficients, Q-squared coefficients

Latent Variables	R-squared coefficients	Adjusted R-squared coefficients	Q-squared coefficients
Satisfaction (STF)	0.357	0.350	0.351
Loyalty (LYT)	0.646	0.637	0.647

Results of Hypothesis Research 1 (H1)

There was a positive ($\beta=0.60$) and significant ($p < 0.001$) effect of Quality of Safety Services (OSS) on Satisfaction (STF).

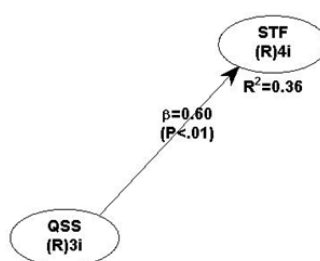


Figure 3. Results of the Analysis of the Effect of Quality of Safety Services (OSS) on Satisfaction (STF)

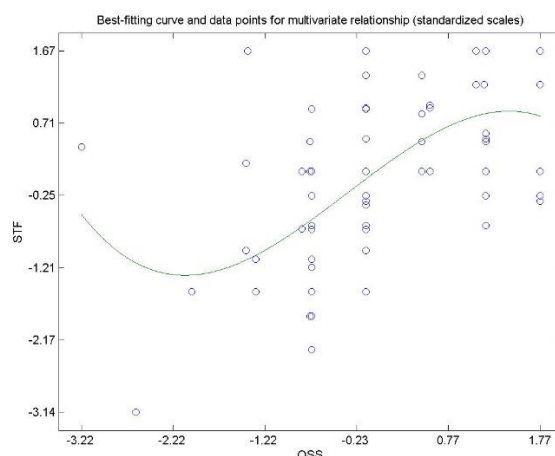


Figure 4. The best-fitting curve for a multivariate relationship between Quality of Safety Services (OSS) and Satisfaction (STF).

Results of Hypothesis Research 2 (H2)

There was a positive ($\beta=0.64$) and significant ($p < 0.001$) influence of Quality of Safety Services (OSS) on Loyalty (LYT).

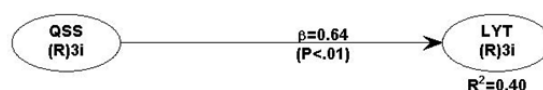


Figure 5. The results of the analysis of the Effect of Quality of Safety Services (OSS) on Loyalty (LYT).

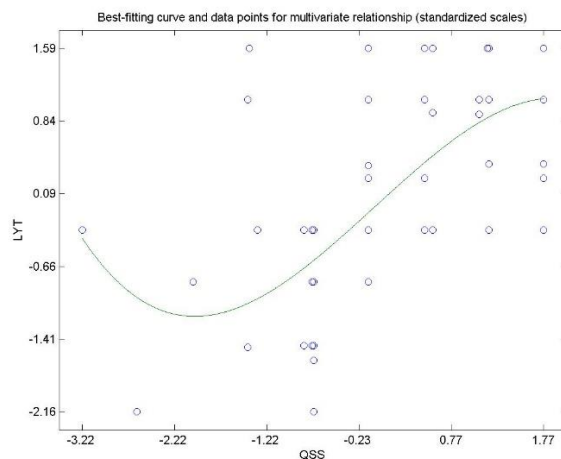


Figure 6. The best-fitting curve for a multivariate relationship between Quality of Safety Services (OSS) and Loyalty (LYT).

Results of Hypothesis Research 3 (H3)

There was a positive ($\beta=0.77$) and significant ($p < 0.001$) influence of Satisfaction (STF) on Loyalty (LYT).

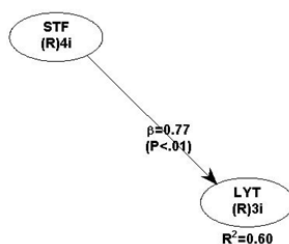


Figure 7. The results of the analysis of the influence of Satisfaction (STF) on Loyalty (LYT).

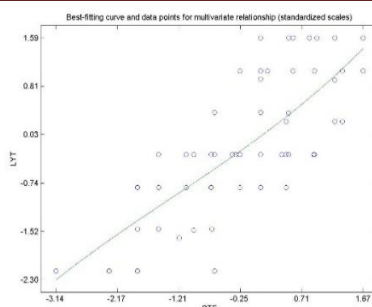


Figure 8. The best-fitting curve for a multivariate relationship between Satisfaction (STF) and Loyalty (LYT).

Results of Hypothesis Research 4 (H4)

Satisfaction (STF) has a mediating role in the relationship between Quality of Safety Services (OSS) and Loyalty (LYT).

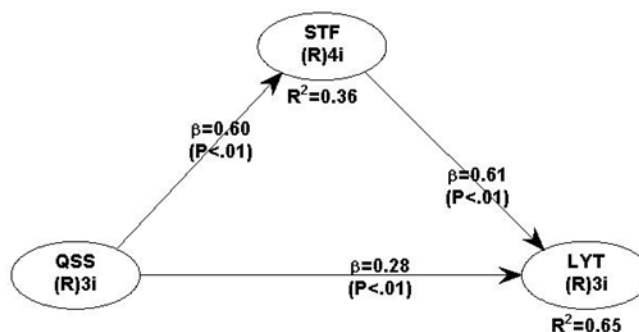


Figure 9. The mediation role of Satisfaction (STF) on the relationship between Quality of Safety Services (OSS) and Loyalty (LYT).

7. CONCLUSION

The Research Model can produce a Coefficient of Determination of Loyalty (LYT) of 0.65, which means Variable Quality of Safety Services (OSS) and variable Satisfaction (STF) can explain their Loyalty (LYT) by 65%. The rest (35%) are variables outside the research and error factor. The study's theoretical implications suggest that Safety Service Quality (OSS) is crucial in driving Customer Satisfaction and Loyalty. Furthermore, Customer Satisfaction is a mediating factor in the relationship between Safety Service Quality and Customer Loyalty. The practical implications of this study are: the Quality of Safety Services (OSS) factor is a factor that must be paid great attention to by transportation service providers, that the safety of transportation service users is the main thing (Safety First)

REFERENCES

- Ali, M., & Raza, S. A. (2017). Service quality perception and customer satisfaction in Islamic banks of Pakistan: the modified SERVQUAL model. *Total Quality Management and Business Excellence*, 28(5–6). <https://doi.org/10.1080/14783363.2015.1100517>
- Gopal Vasanthi, M., Soundrarajan, V., Nawaz, N., Gajendran, V., & Parayitam, S. (2023). Passenger satisfaction with cleanliness and other service quality dimensions and gender as a moderator: Evidence from Indian Railways. *Cogent Business and Management*, 10(1). <https://doi.org/10.1080/23311975.2023.2183568>
- Hussain, R., Al Nasser, A., & Hussain, Y. K. (2015). Service quality and customer satisfaction of a UAE-based airline: An empirical investigation. *Journal of Air Transport Management*, 42. <https://doi.org/10.1016/j.jairtraman.2014.10.001>
- Kanyama, J., Nurittamont, W., & Siripipatthanakul, S. (2022). Hotel Service Quality and Its Effect on Customer Loyalty : The Case of Ubon Ratchathani, Thailand during COVID-19 Pandemic. *Journal of Management in Business, Healthcare, and Education (JMBHE)*, 1(2), 1–20.
- Kock, N. (2010). Regressing WarpPLS in e-collaboration studies: An overview of five main analysis steps. *International Journal of E-Collaboration*, 6(4), 1–11. <https://doi.org/10.4018/jec.2010100101>