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The effect of Final Disbursement Account delays on principal satisfaction

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ABSTRAK

Penelitian ini menganalisis hubungan skor keterlambatan Final Disbursement Account (FDA) dan kepuasan principal pada PT Garuda Unggul Nasional Cabang Tanjung Priok menggunakan mixed methods sequential explanatory. Data kuantitatif berasal dari 68 responden principal, dilanjutkan wawancara untuk menjelaskan konteks operasional. Regresi linear sederhana menghasilkan koefisien 0,577 ($p < 0,001$) dan R^2 sebesar 0,590. Arah pengkodean skor FDA perlu diperjelas sebelum hubungan positif ditafsirkan sebagai dampak keterlambatan atau pengelolaannya. Wawancara mengidentifikasi koordinasi operasional dan keuangan serta verifikasi dokumen sebagai bidang perbaikan. Temuan menunjukkan hubungan antarskor, bukan pengaruh kausal atau ukuran durasi keterlambatan aktual.

Kata Kunci: Final Disbursement Account (FDA), keterlambatan, kepuasan principal.

ABSTRACT

This explanatory sequential mixed-methods study examines the association between Final Disbursement Account (FDA) delay scores and principal satisfaction at PT Garuda Unggul Nasional, Tanjung Priok Branch. Quantitative data from 68 principal respondents were followed by interviews to contextualize operational processes. Simple linear regression yielded a coefficient of 0.577 ($p < 0.001$) and R^2 of 0.590. The direction of FDA score coding must be clarified before interpreting this positive relationship as the effect of delays or of their management. Interviews identified interdepartmental coordination and document verification as improvement priorities. The findings represent an association between scores, not a causal effect or a measure of actual delay duration.

Keywords: *Final Disbursement Account (FDA), delay, principal satisfaction.*

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INTRODUCTION

The Final Disbursement Account (FDA) is a final expense report that details all actual costs incurred while the vessel is in port. The timely submission of the FDA is crucial because it relates to the verification process, payment, and financial accountability to the principal. Delays in submitting the FDA can hinder administrative processes and reduce the quality of service as perceived by the principal. According to Ramón and Roig (2020), the timeliness of service is one of the factors influencing

customer satisfaction levels. Services provided on time enhance customers' positive perceptions, whereas service delays can lead to dissatisfaction.

However, research on the impact of delays in the Final Disbursement Account on principal satisfaction at ship agency companies remains limited. PT Garuda Unggul Nasional Tanjung Priok Branch still faces delays in submitting Final Disbursement Accounts to principals due to delays in supporting documents, the verification process, and suboptimal coordination between departments. These conditions have the potential to affect principal satisfaction. Therefore, this study aims to analyze the impact of delays in the Final Disbursement Account (FDA) on principal satisfaction and to identify the company's efforts to address these delays.

RESEARCH METHODOLOGY

This study employed a mixed-methods approach with a sequential explanatory design. The research was conducted at the Tanjung Priok branch of PT Garuda Unggul Nasional from July 29, 2024, to July 17, 2025. The study population consisted of 68 principals or principal representatives, selected using a saturation sampling technique. The FDA delay score is a questionnaire measure. The response anchors, item wording and reverse-scoring rules are not reproduced in the manuscript. A high mean score of 4.0 is therefore not interpretable as a longer delay, a shorter delay or greater tolerance without the coding key. Satisfaction with overall service is conceptually distinct from tolerance of late billing.

Primary data were collected through questionnaires, interviews, and observations, while secondary data were obtained from company documents. Quantitative data analysis was performed using descriptive analysis, classical assumption tests, simple linear regression, the coefficient of determination, and t-tests using SPSS version 29. Qualitative data analysis utilized the Miles and Huberman model, which includes data reduction, data presentation, and drawing conclusions. Data validity was tested through source triangulation and methodological triangulation.

RESULTS AND DISCUSSION

Delay in the Final Disbursement Account at PT Garuda Unggul Nasional Tanjung Priok Branch

Table 1. Summary of Research Variable Assessments

Variabel	Mean	Criteria
FDA Delay (X)	4,0	Good
Principal Satisfaction (Y)	4,4	Verry good

Table 1 reports mean questionnaire scores of 4.0 for the FDA delay variable and 4.4 for principal satisfaction. These are questionnaire ratings, not measured delay durations. Tolerance of late delivery cannot be inferred without item wording and scoring direction.

The Effect of Delays in Final Disbursement Account Payments on Principal Satisfaction

This section presents the results of an analysis of data regarding FDA delays and principal satisfaction. The analysis was conducted using SPSS version 29 with a sample of 68 respondents. The tests performed are described as follows:

Research Instruments

Validity Test

Validity testing assesses the suitability of each questionnaire item. The Pearson product-moment method was used for this purpose. The significance level was set at 0.05, giving a critical r value of 0.238. Item correlations were assessed against this criterion.

Table 2. Validity Test Results

Variable	Item	r count	r table	Information
Final Disbursement Account	X1	0,846	0,238	Valid
	X2	0,893	0,238	Valid
	X3	0,919	0,238	Valid
	X4	0,877	0,238	Valid
	X5	0,910	0,238	Valid

Delay (X)	X6	0,918	0,238	Valid
	X7	0,930	0,238	Valid
Principal Satisfaction (Y)	Y1	0,685	0,238	Valid
	Y2	0,716	0,238	Valid
	Y3	0,876	0,238	Valid
	Y4	0,703	0,238	Valid
	Y5	0,719	0,238	Valid
	Y6	0,876	0,238	Valid
	Y7	0,876	0,238	Valid
	Y8	0,703	0,238	Valid
	Y9	0,719	0,238	Valid

Reliabilty Test

The reliability test assesses the consistency of the research instrument. Cronbach's Alpha was used as the measure of internal consistency. The minimum criterion was set at 0.70. The obtained alpha value was evaluated against that threshold.

Table 3. Reliability Test Results

Variable	Cronbach's Alpha	Information
FDA Delay (X)	0,952	Reliable
Principal Satisfaction (Y)	0,901	Reliable

Classical Assumption Test

Normality Test

The Kolmogorov–Smirnov method was used for the normality test. The test examines whether the distribution being assessed departs from the specified normal distribution. Statistical significance was used to interpret the result. A non-significant result is not proof of exact normality.

Table 4. Normality Test Results

One-Sample Kolmogorov-Smirnov Test			Unstandardized Residual
N			68
Normal Parameters	Mean		.0000000
	Std. Deviation		2.48674754
Most Extreme Differences	Absolute		.104
	Positive		.054
	Negative		-.104
Test Statistic			.104
Asymp. Sig.(2-tailed)			.063
Monte Carlo.(2-tailed)	Sig.		.065
	99% Confidence Interval	Lower Bound	.058
		Upper Bound	.071

Table 4 presents the result of the normality test. The reported significance value is 0.063. This value exceeds the significance level of 0.05. Therefore, the test does not provide sufficient evidence to reject the normality assumption at that level.

Heteroscedasticity Test

The Glejser method was used to assess heteroscedasticity in the regression model. The assessment concerns whether residual variation changes with the predictor. The significance threshold was set at 0.05. A p value above the threshold indicates that the test has not detected statistically significant heteroscedasticity.

Table 5. Heteroscedasticity Test Result

Model		Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	2.105	.961		2.191	.032
	Keterlambatan FDA	-003	.034	-010	-084	.934

The reported significance value for the Glejser test is 0.934. This value is greater than 0.05. The test therefore does not detect statistically significant heteroscedasticity. This result does not establish that the residual variance is exactly constant.

Linearity Test

The linearity test assesses the relationship between FDA delay (X) and principal satisfaction (Y). The test is used to examine the adequacy of a linear relationship. The specified decision criterion is a significance value greater than 0.05 for deviation from linearity. Under this criterion, a non-significant deviation does not provide sufficient evidence against linearity.

Table 6. Linearity Test Result

			Sum of Squar	df	Mean Square	F	Sig.
Y*X	Between Groups	(combined)	743.606	18	41.311	7.564	<.001
		Linearity	596.898	1	596.898	109.291	<.001
		Deviation from Linearity	146.707	17	8.630	1.580	.107
	Whithi Groups		267.615	49	5.462		
	Total		1011.221	67			

Table 6 shows a significance value of 0.107, indicating that a linear relationship exists between variables X and Y.

Simple Linear Regression Analysis

Table 7. Simple Linear Regression Analysis Result

Modle		Unstandardized B	Coefficients Std Error	Standardized Coeficients Beta	t	Sig.
1	(constant)	24.031	1.682		14.288	<,001
	X	.577	.059	.768	9.751	<,001

The fitted equation is Y = 24.031 + 0.577X, where X and Y are the reported questionnaire scores. The slope is 0.577 (SE = 0.059, standardized beta = 0.768); the approximate 95% confidence interval calculated from the printed coefficient and standard error is [0.459, 0.695] using 66 residual degrees of freedom. A positive score association is supported, but its operational interpretation depends on item coding. The intercept is a model parameter at X = 0 and need not represent an observed satisfaction level.

Hypothesis Test

Coefficient of Determination Test (R^2)

Table 8. Coefficient of Determination Test Result

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.768[a]	.590	.584	2.50552

The fitted linear model has a reported R^2 of 0.590. This value indicates that the model accounts for 59% of the sample variance in satisfaction scores. The remaining variance is not explained by the model. The result does not establish that FDA delays cause 59% of satisfaction or that the remaining variance is wholly attributable to identified external factors. The results of the t-test indicate that FDA delay (X) is statistically associated with principal satisfaction (Y), with a t-value of 9.751 and a significance value of < 0.001. Efforts of PT Garuda Unggul Nasional Tanjung Priok Branch in Addressing Final Disbursement Account (FDA) Delays PT Garuda Unggul Nasional Tanjung Priok Branch has implemented various measures to minimize FDA delays.

These efforts include improving coordination between the operational and finance departments, providing reminders to the operational team, and accelerating internal processes under certain conditions. In addition, the company maintains communication with external parties, such as Pelindo and port authorities, to expedite the completion of supporting documents. These measures indicate that the company has implemented adequate operational control, enabling FDA delays to be managed effectively while maintaining the quality of service provided to principals (Interviews with Operational Staff, Finance Staff, and the Branch Manager of PT Garuda Unggul Nasional Tanjung Priok Branch, 2026). The interviews contextualize the statistical association by identifying document availability and internal coordination as operational concerns.

They do not resolve the questionnaire coding or establish causality. A proposed monitoring process is to timestamp document receipt, verification, correction and final FDA delivery; assign owners for each stage; and agree on turnaround targets with principals based on observed processing times and contractual requirements. Ship and port service studies address timely disbursement, logistics service quality, and customer satisfaction [1], [2], [3]. These studies provide a comparison framework; their settings and methods do not establish the validity or magnitude of the findings of the present study.

b. t-test

Table 9. t-test Result

Model		Unstandardized B	Coefficients Std Error	Standardized Coeeficients Beta	t	Sig.
1	(constant)	24.031	1.682		14.288	<.001
	X	.577	.059	.768	9.751	<.001

Ship and port service studies address timely disbursement, logistics service quality, and customer satisfaction [4], [5], [6], [7], [8], [9], [10], [11], [12]. The research settings and study designs differ. These publications provide context for interpreting the topic. They do not independently validate the results of the present study. Research on port operations addresses pilotage scheduling, berth allocation, waiting time, and vessel arrival coordination [13], [14], [15]. The research settings and study designs differ. These publications provide context for interpreting the topic. They do not independently validate the results of the present study.

CONCLUSION

The reported FDA score averaged 4.0 and the regression showed a positive association with principal satisfaction ($B = 0.577$, $p < 0.001$; $R^2 = 0.590$). Interpretation of the direction requires the original questionnaire and scoring key. Interview findings suggest improving coordination and document verification. Prospective monitoring of actual turnaround time and satisfaction is needed before concluding that an intervention reduces delays or improves satisfaction.

DECLARATIONS AND ADDITIONAL INFORMATION

ORIGINALITY AND EXCLUSIVE SUBMISSION

The authors are requested to confirm that the manuscript is original, has not been published and is not under consideration elsewhere.

AUTHOR CONTRIBUTIONS

Proposed CRediT statement (for author approval): Raras Pradipta Sulanjari: conceptualization, methodology, formal analysis, writing – original draft. Awel Suryadi; Fitri Kensiwi: investigation, validation and writing – review & editing.

CONFLICT OF INTEREST

No competing interests have been reported.

FUNDING

No external funding or specific grant was reported for this study.

ETHICAL APPROVAL

This study uses questionnaire responses and regression results on principal satisfaction.

INFORMED CONSENT

The manuscript describes participant involvement; the consent procedure is documented and confirmed by the authors.

DATA AVAILABILITY

The study draws on questionnaire responses and regression results on principal satisfaction. Access to underlying material should be requested from the corresponding author and is subject to confidentiality and applicable permissions.

USE OF ARTIFICIAL INTELLIGENCE

ChatGPT (OpenAI) assisted with language editing, consistency checks, structure and formatting. The authors remain responsible for the data, interpretation and scientific content.

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EDITORIAL INDEPENDENCE

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