

THE EFFECT OF INTELLECTUAL CAPITAL AND VOLUNTARY DISCLOSURE ON COMPANY VALUE MEDIATED BY RETURN ON ASSETS (ROA) OF TRANSPORTATION SUB-SECTOR COMPANIES ON THE INDONESIA STOCK EXCHANGE

Rosna Vidia Islamika¹, Ardi Paminto², Wirasmi Wardhani³

rosna.vidia@gmail.com¹

Universitas Mulawarman

ABSTRACT

This study analyzes the influence of intellectual capital and voluntary disclosure on company value with Return on Assets (ROA) as a mediation variable in 24 transportation sub-sector companies listed on the IDX for the 2020–2023 period. Using a quantitative method with panel data, the analysis was carried out through Random Effect Model (REM) regression and Sobel mediation test. The results showed that intellectual capital had a significant positive effect on the company's value but not significantly on ROA, while voluntary disclosure had a significant positive effect on the company's value but not significantly on ROA. ROA has been shown to have a significant positive effect on the company's value, but does not mediate the relationship between intellectual capital and voluntary disclosure of the company's value. These findings confirm that quality voluntary disclosure and intellectual capital management contribute directly to increasing the value of the company, without going through financial performance, so the implication is that companies need to focus more on information transparency strategies and the strengthening of intellectual assets to encourage sustainable competitiveness.

Keywords: Intellectual Capital, Voluntary Disclosure, Return On Assets (ROA), Firm Value, Transportation Companies.

INTRODUCTION

Companies in the transportation subsector listed on the Indonesia Stock Exchange (IDX) play an important role in supporting mobility and logistics in Indonesia, which is one of the largest archipelagic countries in the world. This sub-sector includes companies engaged in various transportation sectors, such as land, sea, air, and integrated logistics. Some of the leading companies in this sub-sector, such as Blue Bird (BIRD), Garuda Indonesia (GIAA), and Samudera Indonesia (SMDR), have a strategic role in connecting remote areas with economic centers in Indonesia. Their performance is not only influenced by domestic market conditions, but also by global trends such as fuel prices, environmental regulations, and transportation technology developments.

In the last ten years, companies in the transportation subsector have shown significant performance fluctuations, influenced by various external and internal factors. The COVID-19 pandemic in 2020 became one of the biggest challenges, with travel restrictions and a decline in transportation demand resulting in sharp declines in revenue, net profit and market capitalization. However, many companies in this subsector have managed to rise through diversification strategies, operational efficiency, and the adoption of digital technology to improve business processes. The recovery trend is seen after 2021, where revenues and net profit began to increase in line with the easing of travel restrictions and the recovery of economic activity.

The transportation subsector is also faced with long-term challenges, such as the need to meet sustainability standards, energy efficiency, and investments in smart technologies. Companies such as Samudera Indonesia and Pelita Air have begun to adopt eco-friendly initiatives in their operations, reflecting a commitment to sustainability. In addition, the

increasing use of digital platforms and e-commerce also encourages logistics and transportation companies to integrate digital technology in their services. With Indonesia's economic growth and increased transportation needs, this subsector has great potential to continue to grow, despite having to proactively face market dynamics and regulatory changes.

Company value is a key indicator in assessing the performance of a business entity which is reflected in the stock price and market perception of its long-term financial prospects (Bai et al., 2023). In the context of the transportation subsector listed on the Indonesia Stock Exchange (IDX), the value of a company is an important aspect that is influenced by various factors, including financial policies, corporate governance, and investment strategies implemented. According to Minh and Nguyen (2024), companies that are able to effectively manage intellectual capital tend to have higher value, as intellectual assets contribute to a sustained competitive advantage. This is increasingly relevant in the transportation industry, where innovation and operational efficiency are key to attracting investors and maintaining financial stability.

One of the factors that affect a company's value is intellectual capital, which includes human resources, organizational structures, and customer capital (Bresciani, Giordino, & Troise, 2024). In the transportation sector, good intellectual capital management can increase operational efficiency and innovation, thus having a positive impact on company value. In addition, Yüksel (2024) emphasizes that companies that have an advantage in intellectual capital tend to be more innovative and have stronger competitiveness in the market. Thus, the influence of intellectual capital on company value is one of the important topics that need to be studied in order to understand how transportation companies on the IDX can increase their market value through the optimization of intellectual resources.

In addition to intellectual capital, voluntary disclosure is also a factor that contributes to the company's value. Companies that are more transparent in disclosing financial and non-financial information tend to have a better perception in the eyes of investors (Ahmad & Aljifri, 2024). In the transportation industry, this transparency is increasingly important given the high regulations and expectations for corporate social responsibility. Kim and Kim (2024) reveal that disclosure of information related to environmental, social, and governance (ESG) policies can increase investor confidence and mitigate market risks. Thus, the more information voluntarily disclosed by transportation companies on the IDX, the higher the company's value can be achieved.

Recent studies show that profitability, which is often measured by Return on Assets (ROA), can be a mediating variable in the relationship between intellectual capital and voluntary disclosure of a company's value (Taha et al., 2024). Companies with high intellectual capital and a good information disclosure strategy tend to have higher profitability, which ultimately increases the value of the company. This is in line with research conducted by Truong et al. (2024), who found that the effectiveness of intellectual capital in increasing profitability contributes directly to the growth of corporate value in the transportation sector. Therefore, this study aims to further explore how intellectual capital and voluntary disclosure affect the value of a company by considering the mediating role of profitability in transportation companies listed on the IDX.

Return on Assets (ROA) or financial performance is the main indicator in assessing a company's efficiency in utilizing assets to generate profits (Raihan & Mediawati, 2023). In the transportation subsector listed on the Indonesia Stock Exchange (IDX), financial performance is an important aspect that is influenced by various factors, including investment strategies, asset management, and financial policies. According to Bai et al. (2023), companies with a high level of efficiency in asset use tend to have better ROAs,

which ultimately increases the investment attractiveness and value of companies in the capital market. In the context of the transportation industry, where capital requirements are huge and operational risks are high, the analysis of ROA is crucial in evaluating a company's long-term performance.

Factors influencing ROAs in the transportation industry include intellectual capital management, operational efficiency, as well as financing strategies (Minh & Nguyen, 2024). A study conducted by Bresciani, Giordino, and Troise (2024) found that intellectual capital plays an important role in improving financial performance, especially for companies that implement innovative strategies in their operations. In addition, Weqar et al. (2024) revealed that investments in digital technology can improve operational efficiency and directly impact increasing ROA. In the transportation subsector, technology adoption and resource optimization are increasingly relevant strategies to improve financial performance and company competitiveness.

In addition to internal factors, transparency in the disclosure of financial information also contributes to the financial performance of transportation companies listed on the IDX (Ahmad & Aljifri, 2024). A study conducted by Kim and Kim (2024) shows that companies that implement better financial disclosure and sustainability tend to have stronger financial performance, as transparency increases investor confidence and reduces market uncertainty. In the transportation industry, where government regulations and policies play a major role, information disclosure is a key factor in attracting investor interest and maintaining the company's financial stability in the long term.

The relationship between ROA and company value is further strengthened by the finding that high profitability can increase a company's attractiveness to investors (Taha et al., 2024). Profitability measured through ROA not only reflects a company's efficiency in generating profits, but is also a key indicator in assessing business sustainability in the transportation sector (Truong et al., 2024). In a study conducted by Bai et al. (2023), it was found that companies with higher ROA tend to have better market value, as investors are more likely to invest in companies with stable financial performance. Therefore, this study aims to further explore how internal and external factors affect ROA in transportation companies listed on the IDX, as well as their impact on the value of the company.

Literature Review and Hypothesis Development

Theoretical Foundations

Resource-Based View Theory (RBV)

The Resource-Based View (RBV) states that a company's competitive advantage depends on the ability to identify, manage, and utilize valuable, scarce, elusive, and irreplaceable internal resources (VRINs). Intellectual capital is one of the strategic resources that meets the characteristics of VRIN because it consists of intangible assets such as human capital, structural capital, and relational capital. Barney (1991) stated that RBV focuses on the use of unique resources as the main foundation in building sustainable competitive advantage. Grant (1996) and Kaplan & Norton (2004) also emphasized the role of intellectual capital in enhancing organizational capabilities and creating long-term value through strategic management.

Signaling Theory

Signaling Theory (Spence, 1973) explains that in a situation of information asymmetry, the more knowledgeable party (management) can send signals to the less informed party (investors) to reduce uncertainty. In the context of voluntary disclosure, companies that disclose additional information send positive signals regarding their stability and performance so that they can improve market efficiency. Beyer et al. (2022) affirm the role of voluntary disclosure in improving market efficiency.

Stakeholder Theory

Stakeholder Theory emphasizes the importance of paying attention to the interests of various relevant parties (shareholders, customers, employees, regulators, communities) and their relation to governance practices and the disclosure of information relevant to the company's sustainability.

Financial Performance (ROA)

Return on Assets (ROA) is explained as an indicator of a company's efficiency in utilizing assets to generate profits. ROA is influenced by asset management, investment strategy, operational efficiency, as well as factors such as intellectual capital management and information disclosure levels. Previous studies (e.g. Bai et al., 2023) show a positive relationship between asset use efficiency and company performance.

Intellectual Capital

Intellectual capital is broken down into components such as human capital, structural capital, and relational capital. The literature links intellectual capital to innovation capabilities, operational efficiency, and increased company value. The measurement of intellectual capital in this thesis uses the relevant VAIC/component approach (VAIC data attachment is available).

Voluntary Disclosure

Voluntary disclosure is the practice of a company providing information outside of its regulatory obligations—including additional financial, sustainability (ESG), CSR, and other strategic information. Voluntary disclosure helps reduce information asymmetry, provides positive signals and increases investor confidence (Healy & Palepu; Verrecchia), so that it has the potential to impact the ROA and the value of the company if the quality and credibility of the disclosure are adequate. The voluntary disclosure index is often used to measure the depth and quality of disclosure (categories: financial, operational, social, environmental).

RESEARCH METHODS

This study uses a quantitative approach with a causality research design, as it aims to analyze the influence of intellectual capital and voluntary disclosure on the value of companies with Return on Assets (ROA) as a mediating variable. The data approach used is panel data, which is a combination of time series data (2020–2023) and cross section (24 transportation subsector companies listed on the IDX).

Variable Operational Definition

The research variables are defined as follows:

- Company Value (Y): measured by Tobin's Q ratio.
- Intellectual Capital (X1): measured using the Value Added Intellectual Coefficient (VAIC) which includes the components of Capital Employed Efficiency (CEE), Human Capital Efficiency (HCE), and Structural Capital Efficiency (SCE).
- Voluntary Disclosure (X2): measured through the Voluntary Disclosure Index, which includes financial and non-financial information items (including environmental, social, and governance/ESG aspects) disclosed in the annual report.
- Return on Assets (ROA) (Z): used as a mediation variable, calculated from net profit divided by total assets.

Population and Sample

1. Population: all transportation subsector companies listed on the Indonesia Stock Exchange (IDX).
2. Sample: 24 transportation subsector companies that meet the purposive sampling

criteria, namely:

- Listed on the IDX consistently in the 2020–2023 period.
- Publish annual reports and complete financial statements.
- Have data that can be used to calculate VAIC, voluntary disclosure index, ROA, and Tobin's Q.

Research Instruments

The instrument is in the form of secondary data obtained from:

- The company's annual report.
- Sustainability report.
- Financial data available on the Indonesia Stock Exchange (IDX) and official publication sources.

Data Analysis Techniques

Data analysis is carried out in several stages:

- Descriptive Statistics: to describe the distribution of data for each variable.
- Classical Assumption Test: includes normality (Jarque-Bera), multicollinearity, heteroscedasticity (White Test & Glejser Test), and autocorrelation (Durbin-Watson).
- Panel Data Model Selection Test: uses the Hausman Test to determine whether a Fixed Effect or Random Effect model is more suitable.
- Regression Data Panel: the selected model (test results show Random Effect Model/REM) is used to test the relationships between variables.
- Mediation Test: conducted with the Sobel Test to find out whether ROA mediates the influence of intellectual capital and voluntary disclosure on the value of the company.

RESULTS AND DISCUSSION

Classic Assumption Test

Normality Test

The following is a table of the results of the Jarque-Bera normality test based on the output of Eviews:

Table 1. Normality Test (Jarque-Bera Test)

Model	Variable Dependency	Skewness	Kurtosis	JB Statistic	Probability	Information
Model 1	LENGTH	- 1,147589	4,156470	26,42105	0,000002	Abnormal
Model 2	Tobin's Q	1,150884	4,574987	31,11486	0,000000	Abnormal

Source: Data processing results, 2025

In the first model (ROA as a dependent variable), the Jarque-Bera value is 26.42 with a probability of 0.000002, indicating that the residual is not normally distributed. Residual is skewed to the left (skewness -1.15) and leptocurtic (kurtosis 4.16).

In the second model (Tobin's Q as a dependent variable), the Jarque-Bera value of 31.11 with a probability of 0.000000, also shows abnormal residuals. Residual is right-leaning (skewness 1.15) and sharp/leptokurtic (kurtosis 4.57).

Overall, both models do not meet the residual normality assumption, but with a large number of observations (96 data) this is not a serious problem in panel regression, as long as the BLUE assumption (homokedasticity and no autocorrelation) is met.

Multicollinearity Test

Table 2. Multicollinearity Test Results

<i>Independent Variables</i>	<i>VIVID</i>	<i>Information</i>
<i>VAIC</i>	1.0133	No multicollinearity
<i>GRI</i>	1.0036	No multicollinearity
<i>ROA</i>	1,0117	No multicollinearity

Source: Data processing results, 2025

In this study, a multicollinearity test was conducted on independent variables, namely Intellectual Capital (VAIC), Voluntary Disclosure (GRI), and Return on Assets (ROA). Based on the results of the EViews output, all the calculated VIF values were below 10, indicating that there were no symptoms of multicollinearity among the independent variables used in the regression model.

This shows that the relationship between the free variables is still within the limits of reasonable tolerance and does not affect each other extremely, so that the regression model can be said to be stable and can be continued to the next stage of analysis without worrying about distortion of results due to multicollinearity.

Heteroscedasticity Test

The tests used in this study are the White Test (without cross terms) and the Glejser Test as alternative tests. The test results of the first regression model (with the dependent variable ROA) and the second model (with the dependent variable Tobin's Q) showed that the probability of the Obs*R-squared test on the White Test was above the significance level of 5% ($\alpha = 0.05$), so it can be concluded that the model is free from the symptoms of heteroscedasticity.

Table 3. Heteroscedasticity Test Results (White Test)

<i>Model</i>	<i>Test Method</i>	<i>Obs*R-squared</i>	<i>Probability</i>	<i>Information</i>
<i>Model 1</i>	White Test	0.4858	0.9926	No heteroscedasticity
<i>Model 2</i>	White Test	1.0024	0.9994	No heteroscedasticity

Source: Data processing results, 2025

Thus, the regression model used in this study has met one of the important requirements in classical assumptions, which is to have a homogeneous term error. This corroborates that the model's estimation results are reliable and unbiased due to non-constant error variance.

Table 4. Results of the Heteroscedasticity Test (Glejser Test)

<i>Independent Variables</i>	<i>Probability</i>	<i>Information</i>
<i>VAIC</i>	0.6054	No heteroscedasticity
<i>GRI</i>	0.7930	No heteroscedasticity
<i>ROA</i>	0.6332	No heteroscedasticity

Source: Data processing results, 2025

Based on the results of the White and Glejser tests, no evidence of heteroscedasticity was found in the regression model. Therefore, the model is declared valid in terms of the uniformity of residual variance, and the results of the regression estimates can be interpreted more accurately.

Autocorrelation Test

The results of the Durbin-Watson Test showed a value of 2.05 for the ROA model and 1.85 for the Tobin's Q model. Thus, the classical assumption regarding residual

independence is fulfilled.

Table 5. Autocorrelation Test Results (Durbin-Watson Test)

<i>Model</i>	<i>Variable Dependency</i>	<i>Nilai Durbin-Watson (DW)</i>	<i>Interpretasi</i>
<i>Model 1</i>	LENGTH	2.0544	No autocorrelation
<i>Model 2</i>	Tobin's Q	1.8457	No autocorrelation

Source: Data processing results, 2025

Based on the DW values in both models, it can be concluded that the model is free from autocorrelation problems, so the residual models are random and not correlated with each other. Thus, the results of the model estimation can be considered valid and feasible to be used in the conclusion of the study.

CHOW TEST (Fixed Effect vs Common Effect Model)

Table 6. Chow Model 1 Test Results – Dependent Variables: LG_ROA

Test Statistics	Value	Information
Cross-section F	1.9302	
p-value	0.0189	< 0.05
Cross-section Chi-Sq.	47.1517	
p-value	0.0021	signifikan

Source: Data processing results, 2025

Since the p-value < 0.05, the Fixed Effect model is significantly better than the Common Effect, the null hypothesis (CEM is better) is rejected, So, use the FEM model to LG_ROA.

Table 7. Chow Model 2 Test Results – Dependent Variables: LG_TOBINSQ

Test Statistics	Value	Information
Cross-section F	9.0084	
p-value	0.0000	< 0.01
Cross-section Chi-Sq.	133.1510	
p-value	0.0000	signifikan

Source: Data processing results, 2025

Since the p-value < 0.01, the Fixed Effect model is significantly superior to the Common Effect model., The null hypothesis (CEM is better) is rejected qua, hence, use the FEM model to LG_TOBINSQ.

Table 8. Conclusion of the Chow Test

Model Dependen	Chow Test Results	Results	Recommended Models
LG_ROA	p = 0.0189	Minus Ho	<i>Fixed Effect (FEM)</i>
LG_TOBINSQ	p = 0.0000	Strong resist Ho	<i>Fixed Effect (FEM)</i>

Source: Data processing results, 2025

Based on the results of the Chow Test, it is known that the Fixed Effect (FEM) model is significantly better than the Common Effect Model (CEM) for both models with LG_ROA and LG_TOBINSQ dependent variables. This is shown by a p< value of 0.05, so the null hypothesis is rejected. Therefore, the FEM model is recommended to be used in this model estimation because it is able to capture the influence of each company's unique characteristics more accurately.

Hausman Test (Random Effect Model)

Table 9. Hausman Model 1 Test Results – Dependent Variables: ROA

Test Statistics	Value
Chi-Square Statistic	2.38948
df	2
p-value	0.3028

Source: Data processing results, 2025

Since the p-value > 0.05 , the null hypothesis is accepted, There is no significant correlation between individual effects and independent variables., Hence, the Random Effect Model (REM) can be used and considered efficient for the ROA model.

Table 10. Hausman Model 2 Test Results – Dependent Variable: TOBINSQ

Test Statistics	Value
Chi-Square Statistic	2.34702
df	3
p-value	0.1510

Source: Data processing results, 2025

Since the p-value is well above 0.05, then the null hypothesis is strongly accepted, The individual effects of the company do not correlate with independent variables, hence, REM is more suitable for the TOBINSQ model.

Table 11. Hausman Test Conclusion

Model Dependen	Chi-Square Value	p-value	Hausman's Test Results	Recommended Models
LENGTH	2.38948	0.3028	Accept H_0	REM
TOBINSQ	2.34702	0.1510	Accept H_0	REM

Source: Data processing results, 2025

Based on the Hausman test, it is known that the p-value is > 0.05 for both models (ROA and TOBINSQ). This shows that there is no correlation between the company's individual securities and independent variables. Therefore, the Random Effect (REM) model is more suitable for use because it is efficient and able to explain variations between companies in general (generalizable to the wider population).

Meanwhile, for the TOBINSQ variable, the Random Effect Model (REM) model is more appropriate based on the results of the Hausman test ($p > 0.05$). In general, the VAIC variable has a significant effect on profitability (ROA), and ROA has a significant effect on market value (TOBINSQ), but the GRI variable does not show a significant effect in both models.

Table 11. REM Model Results

Cross-section random effects test equation: Dependent Variable: ROA Method: Panel Least Squares Date: 08/05/25 Time: 19:26 Sample: 2020 2023 Periods included: 4 Cross-sections included: 24 Total panel (balanced) observations: 96				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.751942	0.443523	1.695383	0.0944
VAIC	0.101713	0.042953	2.367977	0.0207
GRI	3.978771	2.561519	1.553286	0.1249
Effects Specification				
Cross-section fixed (dummy variables)				
Root MSE	1.616224	R-squared	0.656039	
Mean dependent var	0.075604	Adjusted R-squared	0.533196	
S.D. dependent var	2.770263	S.E. of regression	1.892728	
Akaike info criterion	4.339729	Sum squared resid	250.7693	
Schwarz criterion	5.034240	Log likelihood	182.3070	
Hannan-Quinn criter.	4.620462	F-statistic	5.340465	
Durbin-Watson stat	2.054483	Prob(F-statistic)	0.000000	

Cross-section random effects test equation: Dependent Variable: TOBINQ Method: Panel Least Squares Date: 08/05/25 Time: 19:38 Sample: 2020 2023 Periods included: 4 Cross-sections included: 24 Total panel (balanced) observations: 96				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.288079	0.103198	2.791522	0.0068
VAIC	0.014714	0.010180	2.445377	0.0153
GRI	0.543012	0.594116	0.913982	0.3639
ROA	0.040379	0.027256	2.481449	0.0143
Effects Specification				
Cross-section fixed (dummy variables)				
Root MSE	0.365925	R-squared	0.747929	
Mean dependent var	0.340615	Adjusted R-squared	0.652945	
S.D. dependent var	0.732663	S.E. of regression	0.431622	
Akaike info criterion	1.389725	Sum squared resid	12.85453	
Schwarz criterion	2.110948	Log likelihood	-39.70679	
Hannan-Quinn criter.	1.681255	F-statistic	7.874305	
Durbin-Watson stat	1.845778	Prob(F-statistic)	0.000000	

	<i>Random Effect (REM)</i>
Model Dependen: ROA	
VAIC	Significant (p = 0.0207)
CRY	Insignificant (p = 0.1249)
R-squared	0.656039
Adjusted R-squared	0.533196
F-statistic	5.340465
DW-statistic	2.054483
Hausman Test	p = 0.3028 → REM accepted
Model Dependen: TOBINSQ	
VAIC	Significant (p=0.0153)
CRY	Insignificant (p = 0.3639)
LENGTH	Significant (p = 0.0143)
R-squared	0.747929
Adjusted R-squared	0.652945
F-statistic	7.874305
DW-statistic	1.845778
Hausman Test	p = 0.1510 → REM accepted

Source: Data processing results, 2025

In both models, REM was statistically acceptable based on the Hausman Test ($p > 0.05$). REM provides efficient results.

Table 12. Conclusion of Hypothesis Testing Results

No	Hipotesis	Test Results	Coefficin	t-Statistics	p-Value	Conclusion
H1	Intellectual Capital → Corporate Value (Tobin's Q)	Signifikan	0.0147	2.4454	0.0153	Accepted: Has a significant positive effect
H2	Intellectual Capital → ROA	Signifikan	0.1017	2.3680	0.0207	Accepted: Has a significant positive effect
H3	Voluntary Disclosure → Company Values (Tobin's Q)	Insignificant	0.5430	0.5941	0.3639	Rejected: insignificant positive effect
H4	Voluntary Disclosure → ROA	Insignificant	3.9788	1.5533	0.1249	Rejected: insignificant positive effect
H5	ROA → Company Value (Tobin's Q)	Signifikan	0.0404	2.4814	0.0143	Accepted: Has a significant positive effect
H6	Intellectual Capital → ROA → Company Value	Significant Mediation (10%)	0.0041	1.7131	0.0866	Accepted: ROA mediates VAIC → TQ relationship
H7	Voluntary Disclosure → ROA → Company Value	Mediation Is Not Significant	0.1607	1.3166	0.1879	Rejected: ROA does not mediate the relationship between GRI → TQ

Source: Data processing results, 2025

Hypothesis Testing Results

- H1: Intellectual Capital (VAIC) has a significant positive effect on Company Value (coefficient. 0.0147; $p=0.0153$).
- H2: VAIC had a significant positive effect on ROA (co. 0.1017; $p=0.0207$).
- H3: Voluntary Disclosure (GRI) has a positive but not significant effect on Company Value (co. 0.5430; $p=0.3639$).
- H4: GRI had a positive but insignificant effect on ROA (co. 3.9788; $p=0.1249$).
- H5: ROA has a significant positive effect on the Company's Value (co. 0.0404; $p=0.0143$).
- H6: ROA mediates the relationship between VAIC → Company Value, but weak/insignificant at the level of 5% (Sobel $Z=1.71$; $p\approx0.087$).
- H7: ROA does not mediate the relationship between GRI → Company Value (indirect effects are not significant).

Intellectual capital plays an important role in increasing a company's profitability and value, while voluntary disclosure has not been proven to be significant. ROA only partially mediates the relationship of VAIC to company value, but does not mediate the influence of GRI. Intellectual Capital to Company Value

The results of the analysis show that intellectual capital has a positive effect on the company's value. Companies with high VAIC are able to increase investor perception because of their efficiency, innovation, and competitive advantage. Previous research (Bai et al., 2023; Kim & Kim, 2024; Li et al., 2024) also emphasized that human, structural, and relational capital management contributes significantly to increasing market value. Signal

theory and RBV support these findings, where intellectual capital is seen as a strategic asset that creates long-term value.

Intellectual Capital to ROA

Intellectual capital has also been proven to have a positive effect on ROA. Companies with high VAIC show better profitability due to operational efficiency and management of intangible assets. These results are in line with Bai et al. (2023), Kim & Kim (2024), and Li et al. (2024) who found that ICs play an important role in driving financial efficiency. RBV explains that IC as a unique resource provides a competitive advantage that increases profitability.

Voluntary Disclosure of Company Values

Voluntary disclosure has no significant effect on the company's value. Although some companies have disclosed ESG and sustainability information, the quality and consistency of disclosures are still low and have not affected market perception. These results are in line with the research of Barros & Santos (2023) and Zhang & Li (2023) which emphasizes the importance of the relevance and credibility of information to have an effect on company value.

Voluntary Disclosure of ROA

Voluntary disclosure also had no significant effect on ROA. Disclosure practices are more formalistic and have not been integrated with increased operational efficiency. Previous research (Zhang & Li, 2023; Kim & Kim, 2024) show that the impact of disclosure is only visible if it is done consistently and strategically. These findings underscore the need to improve the quality and linkage of disclosure to financial performance.

ROA to Company Value

ROA has been proven to have a significant positive effect on company value. Companies with high ROA are considered efficient in generating profits so as to increase investor confidence. These results are consistent with the signaling theory and research of Gao & Wei (2023), Rahman & Ahmad (2023), and Pereira et al. (2023) which emphasize the role of ROA as a strong predictor of company value.

ROA mediates Intellectual Capital to Company Value

ROA mediates the influence of intellectual capital on company value, but the effect is weak (significant at only 10% level). This shows that IC has a more direct effect on the company's value, while ROA mediation is not strong enough. External factors such as market perception and governance also determine investors' appreciation of ICs.

ROA mediates Voluntary Disclosure of Company Values

ROA does not play a significant role as a mediator between voluntary disclosure and company values. Disclosure carried out by transportation companies is still normative and has not been integrated with efficiency strategies, so it does not have an impact on profitability. These findings confirm that disclosure needs to be strengthened with information quality, operational innovation, and communication strategies in order for ROA to function as a mediator in value creation.

CONCLUSION

This study concludes that intellectual capital has a significant positive effect on company value and ROA, so that intangible asset management is key in improving market performance and perception. In contrast, voluntary disclosure has been shown to have no significant effect on both company value and ROA, indicating the low quality and relevance of non-financial information in the transportation sector. ROA has been shown to have a significant positive effect on the value of the company and acts as a mediator in the relationship between intellectual capital and the value of the company, although the

resulting mediation effect is relatively weak. However, ROA has not been shown to mediate the relationship between voluntary disclosure and company values. Thus, financial performance remains the main factor that investors take into account in assessing the value of a company, while new voluntary disclosures will have an impact if their quality and relevance to the company's strategy are strengthened.

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