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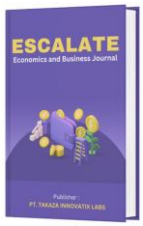

The Influence of Intellectual Capital on Corporate Financial Performance (An Empirical Study of Technology Sector Companies Listed on the IDX for the 2022-2025 Period)

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Abstract*: This study examines the effect of Intellectual Capital, measured by the Value Added Intellectual Coefficient (VAIC), on financial performance, proxied by Return on Assets (ROA), in technology sector companies listed on the Indonesia Stock Exchange during the 2022–2025 period. Using a quantitative approach, this study analyzes secondary data obtained from audited annual reports of 23 companies, yielding 92 observations selected through purposive sampling. Data were analyzed using descriptive statistics, classical assumption tests, and multiple linear regression with Firm Size and Debt to Asset Ratio (DAR) as control variables. The results indicate that Intellectual Capital has no significant effect on ROA in the sample firms. However, the inclusion of control variables improves the explanatory power of the model, although the main relationship remains insignificant. These findings suggest that short-term financial performance in technology companies is influenced more by structural and financial factors than by intellectual capital efficiency alone. The study concludes that Intellectual Capital is not a direct determinant of financial performance in technology sector companies in Indonesia. Future research is recommended to use broader measurements of intellectual capital, extend the observation period, and include other industrial sectors.*

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Introduction

Financial performance is a company's ability to manage resources to achieve financial goals, such as generating profits, maintaining stability, and increasing investor value (Ningrum, 2022). Improving financial performance is a crucial factor determining a company's value in

the eyes of investors because it is closely related to investment decisions and stock price movements (Annisa & Susilawati, 2020). In practice, financial performance is generally measured using profitability ratios, one of which is Return on Assets (ROA), which indicates a company's effectiveness in utilizing assets to generate profits (Hendra et al., 2025). Good financial performance is an important foundation for managerial decision-making, increasing market confidence, and enhancing corporate sustainability. Furthermore, high financial performance is often supported by valuable resources, including Intellectual Capital (IC), which enables companies to gain long-term competitive advantages and improve financial performance (Hamid, 2024; Sari & Gantino, 2023).

Amidst the rapid development of digital transformation in Indonesia, the technology sector has shown significant growth through the expansion of e-commerce, social commerce, online transportation services, and digital payments, which recorded a 227% growth in QRIS transactions (IDXChannel, 2025). This development was further strengthened by the implementation of the Indonesia Stock Exchange Industrial Classification (IDX-IC) in 2021, which placed technology as one of the main sectors on the Indonesia Stock Exchange. However, this condition is not fully reflected in the financial performance of technology companies. Data for the 2021–2023 period shows that the average ROA of technology sector companies is -7.5%, far below the industry standard of 5% (Khaeranissa et al., 2025). Furthermore, the IDX Sector Technology Index Fact Sheet for October 2025 shows that the technology sector is characterized by aggressive growth, high volatility, and diverse levels of company performance, making it an interesting sector to study from the perspective of value creation and financial performance (IDX Index Fact Sheet, 2025).

This situation indicates a gap between the rapid growth of the technology sector and companies' ability to generate profitability. The increasingly strong acceleration of digitalization, particularly following the Covid-19 pandemic, has encouraged companies to expand and invest heavily in technology and asset development to support the digital economy (Abbas et al., 2024). However, this aggressive expansion also has consequences in the form of increased operational costs and asset investment, which in the short term can depress company profitability. This situation demonstrates that the growth of the technology industry is not always accompanied by optimal improvements in financial performance.

Pressure on the financial performance of technology companies is inseparable from the sector's high dependence on intangible assets, such as software development, research, innovation, and business ecosystem development. From a Resource-Based Theory perspective, intangible assets are valuable, rare, and difficult-to-imitate strategic resources, thus forming the basis of a company's competitive advantage (Herdianto et al., 2024). One of the main forms of these intangible assets is Intellectual Capital, which consists of Human Capital, Structural Capital, and Relational Capital (Sawarjuwono & Kadir, 2003). Intellectual Capital is believed to play a crucial role in creating company value because it reflects a company's ability to manage knowledge, human resources, organizational systems, and relationships with stakeholders (Bontis et al., 2000; Sawarjuwono & Kadir, 2003).

Although intellectual capital is theoretically considered capable of improving financial performance, previous research has shown inconsistent findings. Research by Herdianto et al. (2024), Nawaz and Haniffa (2017), and Tirtasari and Syafruddin (2025) found that intellectual capital has a positive effect on financial performance. Conversely, Stefania (2023) found no significant effect, while Astari and Darsono (2020) and Allan et al. (2020) found a negative effect on financial performance. These differences in research findings indicate a research gap, indicating that the relationship between intellectual capital and financial performance requires further examination, particularly in the technology sector, which relies heavily on knowledge-based assets.

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Based on these phenomena and research gaps, this study aims to analyze the influence of Intellectual Capital on the financial performance of technology sector companies listed on the Indonesia Stock Exchange. The urgency of this research lies in the importance of understanding the effectiveness of intangible asset management in increasing the profitability of companies in the knowledge and innovation-based sector. The novelty of this research lies in the focus of testing Intellectual Capital using the Value Added Intellectual Coefficient (VAIC) method on financial performance proxied by Return on Assets (ROA) in technology sector companies listed on the Indonesia Stock Exchange, which are characterized by high dependence on intangible assets and face unique growth and profitability dynamics.

Research methods

This study uses a quantitative approach based on the philosophy of positivism. The quantitative method was chosen because it is empirical, objective, measurable, rational, and systematic. It uses numerical data that is analyzed statistically to test the formulated hypotheses (Sugiyono, 2013). The data used in this study are secondary data obtained not directly by the researcher, but rather from sources that have previously collected and published data (Sulung & Muspawi, 2024). The research data comes from annual reports and audited financial statements of technology sector companies listed on the Indonesia Stock Exchange during the period 2022–2025. This study aims to analyze the effect of Intellectual Capital, measured using the Value Added Intellectual Coefficient (VAIC), on company financial performance, proxied by Return on Assets (ROA), by including Firm Size and Debt to Asset Ratio (DAR) as control variables.

This study uses the documentation method as a data collection technique by collecting and reviewing annual reports and financial reports of technology sector companies obtained through the official website of the Indonesia Stock Exchange. Intellectual Capital measurement is carried out using the Value Added Intellectual Coefficient (VAIC) method which is developed through three main components, namely Human Capital Efficiency (HCE), Structural Capital Efficiency (SCE), and Capital Employed Efficiency (CEE), which are then added together to obtain the VAIC value. Meanwhile, financial performance is measured using Return on Assets (ROA), while the control variables consist of Firm Size which is calculated using the natural logarithm of total assets and Debt to Asset Ratio (DAR) which is calculated based on the comparison of total liabilities to total assets.

Operational definition is the definition of each variable used in this study.

1. *Value Added Intellectual Coefficient*(VAIC)

VAIC is a method of measuring IC that uses data from a company's annual report. This method is used to assess a company's ability to create added value through the utilization of its resources. Value added (VA) is the primary indicator of a company's performance, derived from the difference between output (OUT) and input (IN). Output reflects the company's total revenue, while input includes all costs excluding labor costs.(Gani, 2022)In Pulic's model, labor is viewed as a value creator. VAIC consists of three components: Capital Employed Efficiency (CEE), Human Capital Efficiency (HCE), and Structural Capital Efficiency (SCE).

$$VA = S - B = NI + T + DP + I + W$$

Where:
S: is net sales income (Output)
B: is the cost of materials and services purchased or Cost of Goods Sold (COGS) (Input)
NI: net profit after tax
Q: tax

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DP: depreciation
I: interest expense
W: employee training, bonuses, and salaries

Human Capital Efficiency (HCE) functions for Knowing the quantity of VA generated through funds invested in employees. HCE can be expressed in the following formula:

$$\text{HCE} = \frac{VA}{HC}$$

Where:
VA: difference between SB
Human Capital: is the total employee expenses (salary, benefits, etc.)

Structural Capital Efficiency (SCE) is used to describe the contribution of structural capital (SC) to creating value added (VA). SCE measures the efficiency of SC in generating added value, indicating the amount of SC required to produce each rupiah of VA. The SCE formula can be stated as follows:

$$\text{SCE} = \frac{SC}{VA}$$

Where:
Structural Capital (SC): the difference between VA and HC
Value Added (VA): the difference between output and input

Capital Employee Efficiency (CEE) is a value used to measure a company's relationship with its business. A high capital employee (CE) score indicates that management is utilizing CE effectively. The formula for calculating CEE is:

$$\text{CEE} = \frac{VA}{CE}$$

Where:
Capital Employed (CE): available funds (total equity and net income)
Value Added (VA): the difference between output and input

VAIC is the sum of 3 components that have been calculated to show the efficiency value of a company's intellectual capital.

$$\text{VAIC} = \text{HCE}+\text{SCE}+\text{CEE}$$

Where:
HSE: Human Capital Efficiency
SCE: Structural Capital Efficiency
CEE: Capital Employee Efficiency

2. Financial performance

Financial performance is the results achieved by management in effectively managing the company over a specified period. Research measures financial performance using the Return on Assets (ROA) ratio.

"Return on Assets (ROA) is a ratio to see the percentage of a company in processing assets into net profit"(Astari & Darsono, 2020). The formula for ROA is:

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$$\text{ROA} = \frac{(Earning\ After\ Tax)}{(Total\ Assets)}$$

Where:
Earning After Tax: net profit after tax
Total Assets: total wealth owned by an entity

3. Firm Size

Company size can be categorized in several ways, such as total revenue, total assets, and total equity. Company size can be determined based on total assets or by calculating the logarithm of total assets.

$$\text{Firm Size} = \text{Ln(Total Assets)}$$

Where:
Ln : Natural Logarithm

4. Debt to Asset (DAR) Ratio

The Debt-to-Asset Ratio measures how much of a company's assets are funded through debt. This ratio is one of the tools used to measure a company's solvency, namely its ability to meet and repay all its long-term obligations.

$$\text{DAR} = \frac{(Total\ Liabilities)}{(Total\ Assets)}$$

Data analysis was performed using the Statistical Package for the Social Sciences (SPSS) software. The analysis phase began with descriptive statistics to describe the characteristics of the data through minimum, maximum, average, and standard deviation values (Ghozali, 2016). Next, classical assumption tests were conducted, including the normality test using the Kolmogorov-Smirnov test, the heteroscedasticity test using the Glejser test, and the autocorrelation test using the Durbin-Watson test (Ghozali, 2016). Hypothesis testing was conducted using linear regression analysis to examine the effect of Intellectual Capital on the company's financial performance. In addition, an F test was conducted to assess the feasibility of the simultaneous regression model, a t test to test the partial influence of variables, and a coefficient of determination (R^2) to measure the ability of the independent variables to explain variations in the dependent variable (Ghozali, 2016; Marbun, 2019).

The population in this study was all technology sector companies listed on the Indonesia Stock Exchange during the 2022–2025 period. The sample was determined using a purposive sampling technique, which is a sample selection technique based on specific considerations in accordance with the research objectives (Sugiyono, 2013). The sample criteria used included technology sector companies listed on the Indonesia Stock Exchange during the research period and published complete audited financial reports and annual reports containing all the data required for the study.

Based on these criteria, 34 companies, or 136 observations, were selected. After screening for companies that did not publish complete financial reports or lacked the required data, 11 companies, or 44 observations, were removed from the sample. Thus, the final sample size used in this study was 23 companies with a total of 92 observations for the 2022–2025 period.

The research began with the collection of secondary data in the form of annual reports and financial statements of technology sector companies that met the sample criteria. The collected data was then used to calculate the Intellectual Capital value using the Value Added

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Intellectual Coefficient (VAIC) method, which consists of Human Capital Efficiency (HCE), Structural Capital Efficiency (SCE), and Capital Employed Efficiency (CEE). Next, the Return on Assets (ROA) value was calculated as a proxy for financial performance, with Firm Size and Debt to Asset Ratio (DAR) as control variables.

The next stage is data processing and analysis using SPSS. The analysis begins with descriptive statistics and continues with classical assumption testing to ensure the regression model meets the analysis requirements. After the model is declared to meet the required assumptions, a linear regression analysis is performed to examine the effect of intellectual capital on the company's financial performance. The analysis results are then evaluated using the F-test, t-test, and coefficient of determination to address the research objective of the influence of intellectual capital on the financial performance of technology companies listed on the Indonesia Stock Exchange.

Results and Discussion

Descriptive Statistical Analysis

Table 4.1Descriptive Statistics

Descriptive Statistics

	N	Minimum	Maximum	Mean	Standard Deviation
Intellectual Capital	63	1.23612	6.93257	2,735	1.9238
Financial Performance	63	0.00144	0.09821	0.052	0.03342
Firm Size	63	3121609	1.91E+12	6E+11	7.244E+11
Debt to Asset Ratio	63	0.10537	0.77135	0.395	0.2138
Valid N (listwise)	63				

(SPSS Output, 2026)

Prior to the descriptive statistical analysis, this study included 92 observations, as described in Chapter III. During the initial data processing stage, a series of statistical tests, including classical assumption tests, were conducted to assess the validity of the regression model. The initial test results indicated that some data did not meet the assumptions, particularly in the normality and heteroscedasticity tests. This condition indicated the presence of extreme values (outliers) in the dataset that could affect the analysis results. Outliers are data points with extreme values or significantly different from the majority of the data, thus disproportionately affecting the analysis results, particularly the mean, standard deviation, and regression model estimates.(Alimmudin, 2024)Under certain conditions, removing outliers is permitted if their presence could distort the data distribution and make the analysis results less representative (Field, 2017; Ghozali, 2021). Therefore, this study removed outliers, reducing the total number of observations to 63, which were then used in subsequent analyses.

The Intellectual Capital variable, proxied by VAIC, has a minimum value of 1.23612, a maximum of 6.93257, a mean of 2.735, and a standard deviation of 1.9238. A smaller standard deviation value than the mean indicates that the variation in intellectual capital between companies is relatively low, so the data tends to be homogeneous.

The Financial Performance variable, proxied by ROA, has a minimum value of 0.00144, a maximum of 0.09821, a mean of 0.052, and a standard deviation of 0.03342. A positive mean value indicates that the sample companies, on average, are able to generate profits from their assets. Furthermore, a standard deviation value smaller than the mean indicates relatively low profitability variation.

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The Firm Size variable has a minimum value of 3,121,609, a maximum of 1.91×10^{12}, a mean of 6×10^{11}, and a standard deviation of 7.244×10^{11}. A standard deviation value greater than the mean indicates a significant difference in firm size among the sample companies.

The Debt to Asset Ratio (DAR) variable has a minimum value of 0.10537, a maximum of 0.77135, a mean of 0.395, and a standard deviation of 0.2138. The mean value indicates that the average company finances approximately 39.5% of its assets with debt. The standard deviation value, which is smaller than the mean, indicates that variations in leverage levels between companies are relatively moderate.

Classical Assumption Test

1. Normality Test

Table 2. Kolmogorov-Smirnov Normality Test

One-Sample Kolmogorov-Smirnov Test

			Unstandardized Residual
N			63
Normal Parametersa,b	Mean		0
	Standard Deviation		0.0287812
Most Extreme Differences	Absolute		0.091
	Positive		0.091
	Negative		-0.091
Test Statistics			0.091
Asymp. Sig. (2-tailed)c			.0.640d
Monte Carlo Sig. (2-tailed)e	Sig.		0.218
	99% Confidence Interval	Lower Bound	0.21
		Upper Bound	0.227

(SPSS Output, 2026)

Based on the results of the normality test using the One-Sample Kolmogorov-Smirnov Test, the Asymp. Sig. (2-tailed) value was obtained at 0.640. This value is greater than the 0.05 significance level, so it can be concluded that the residual data is normally distributed. These results indicate that the regression model has met the assumption of normality, so it can be used for further hypothesis testing.

The results are also supported by the Normal PP Plot, which shows the data distribution following the regression line. Therefore, both statistically and visually, the normality assumption in the regression model has been met, allowing the regression analysis to proceed to the next classical assumption test.

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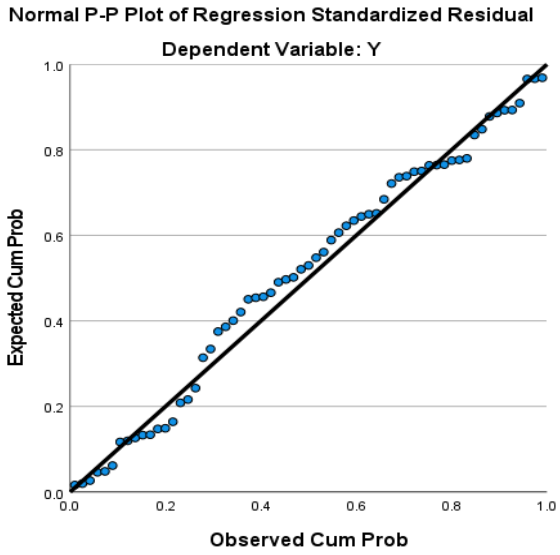

Figure 1. Normal PP Plot Analysis

2. Heteroscedasticity Test

Table 3. Glacier Test

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	0.0274	0.0066		4,173	0.000		
	X	1.10E-03	0.0012	0	0.929	0.357	0.737	1,356
	C1	0.00E+00	0	0	-1.02	0.312	0.800	1,250
	C2	-0.0124	0.0098	-0.015	-1.26	0.214	0.869	1,151

(SPSS Output, 2026)

In addition, the significance value of the Intellectual Capital (X) variable is 0.357, Firm Size (C1) is 0.312, and Debt to Asset Ratio (C2) is 0.214, all of which are above the 5% significance level. These results indicate that there is no significant relationship between the absolute value of the residual and the independent variables or control variables used in the model. Thus, the residual variance tends to be constant at all levels of observation. This condition indicates that the regression model does not experience the problem of inequality of variance (heteroscedasticity). Therefore, the resulting regression parameter estimates can be considered BLUE (Best Linear Unbiased Estimator), so that the results of the regression test can be interpreted and used for hypothesis testing more reliably.

3. Autocorrelation Test

Table 4. Durbin-Watson Test

Model Summary

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate	Durbin-Watson
1	0.508	0.258	0.22	0.02950	1,635

(SPSS Output, 2026)

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Based on the results of the Durbin-Watson autocorrelation test, the Durbin-Watson value was 1.635. This value is in the range of 1.5 to 2.5, thus concluding that the regression model does not experience autocorrelation problems. Therefore, the residuals in the research model are independent and the classical assumption of autocorrelation has been met, thus making the regression model suitable for hypothesis testing.

TestRegressionLinear

Simple linear regression is used to test whether intellectual capital contributes to a company's financial performance. This method is used to determine the direction and magnitude of intellectual capital's influence on financial performance, as proxied by Return on Assets (ROA). The results of the simple regression are then compared with those incorporating control variables to determine whether Firm Size and Debt to Asset Ratio (DAR) influence the relationship between intellectual capital and a company's financial performance.

A simple regression model was used to obtain an initial overview of the relationship between intellectual capital and financial performance. The results of this test then served as the basis for comparison with a model using control variables. This comparison aimed to observe changes in results after Firm Size and DAR were included in the model. This allowed for a more comprehensive analysis of the influence of intellectual capital.

1. **F/Simultaneous Test**

Table 5. Simultaneous F-Test Without Control

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.0005	1	0.0005	0.458	0.5
	Residual	0.0687	61	0.0011		
	Total	0.0692	62			

(SPSS Output, 2026)

Based on the F-test results, the calculated F-value was 0.458 with a significance level of 0.500. Because the significance level is greater than 0.05, the simultaneous regression model is insignificant. Therefore, the Intellectual Capital (VAIC) variable does not significantly influence financial performance (ROA) in the technology sector companies sampled in the study. These results indicate that changes in intellectual capital values are not yet able to adequately explain variations in company financial performance in the simple regression model used.

Meanwhile, for the control group, the calculated F-value was 6.843 with a significance value of 0.000. Because the significance value is less than 0.05, the simultaneous regression model is declared significant. Thus, the variables Intellectual Capital (VAIC), Firm Size, and Debt to Asset Ratio (DAR) jointly influence the financial performance (ROA) of the technology sector companies in the study sample. These results indicate that the regression model incorporating control variables has a better ability to explain variations in financial performance

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than the simple regression model. Therefore, the multiple regression model used is suitable for further hypothesis testing.

Table6. F Test with Control Variables

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.0179	3	0.006	6,843	0.001
	Residual	0.0514	59	0.0009		
	Total	0.0692	62			

(SPSS Output, 2026)

2. **t-test (Partial)**

The t-test was used to determine the effect of Value Added Intellectual Capital (VAIC) on Return on Assets (ROA). This test aims to verify the main hypothesis of this study, namely whether VAIC has a significant influence on individual company financial performance. The test was conducted by examining the significance value of the VAIC regression coefficient at the 5% significance level ($\alpha = 0.05$). The decision-making criteria are based on comparing the significance value with a significance level of 0.05. If the significance value is less than 0.05, then VAIC is declared to have a significant effect on ROA, thus accepting the research hypothesis. Conversely, if the significance value is greater than 0.05, then VAIC does not have a significant effect on ROA, and the research hypothesis is rejected.

Table 7. T-Test Without Control Variables

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	0.048057	0.0074	.	6,504	0		
	VAIC	0.001499	0.0022	0.086	0.677	0.501	1	1

(SPSS Output, 2026)

As a comparison with the simple regression model, the results of the t-test on multiple regression that includes control variables show that the regression coefficient of VAIC (X) is 0.00025 with a calculated t-value of 0.110 and a significance value of 0.913. Because the significance value is greater than 0.05, H_1 is rejected and H_0 is accepted, so it can be concluded that Intellectual Capital (VAIC) still has no significant effect on financial performance (ROA) after being controlled by Firm Size (C1) and Debt to Asset Ratio (C2).

Compared to the model without control variables, the VAIC significance value increased from 0.501 to 0.913, while the regression coefficient decreased from 0.001499 to 0.00025. These results indicate that the addition of control variables does not change the study's conclusion, namely that VAIC has no significant effect on ROA. Thus, the relationship between intellectual capital and financial performance in technology sector companies is not substantially influenced by company size or leverage level.

Table 8. T-Test with Control Variables

Coefficientsa

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Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	0.041508	0.0126	.	3,304	0.002		
	X	0.00025	0.0023	0.014	0.11	0.913	0.737	1,356
	C1	0.00E+00	0	-0.449	-3,578	0.001	0.800	1.25
	C2	0.055651	0.0188	0.356	2.96	0.004	0.869	1,151

(SPSS Output, 2026)

3. **Coefficient of Determination Test(R2)**

Table 9. Coefficient of Determination Without Control Variables

Model Summary

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate	Durbin-Watson
1	0.086	0.007	-0.009	0.03356	1,091

(SPSS Output, 2026)

Based on the Model Summary results, there are quite clear differences between the model without control variables and the model with control variables.

In the model without control variables, the R value was 0.086, R Square was 0.007, and Adjusted R Square was -0.009. These results indicate that Intellectual Capital (VAIC) is only able to explain 0.7% of the variation in financial performance (ROA), while the remaining 99.3% is influenced by other factors outside the research model. The negative Adjusted R Square value also indicates that the model's ability to explain variations in ROA is very low.

Table 10. Determinant Coefficients with Control Variables

Model Summary

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate	Durbin-Watson
1	0.508	0.258	0.22	0.02950	1,635

(SPSS Output, 2026)

Meanwhile, in the model with Firm Size and Debt to Asset Ratio (DAR) as control variables, the R value increased to 0.508, R Square to 0.258, and Adjusted R Square to 0.220. These results indicate that the model is able to explain 25.8% of the variation in ROA, or an increase of 25.1% compared to the model without control variables.

Thus, the addition of control variables has been shown to improve the model's ability to explain corporate financial performance. However, despite the significant improvement in model quality, the test results still show that VAIC has no significant effect on ROA, so the main conclusion of the study remains unchanged after the inclusion of control variables in the model.

Discussion

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Based on the partial test results, it appears that IC as a VAIC has a significance level of 0.105 (>0.05). Therefore, H1 is rejected and H0 is accepted, confirming that IC has no significant effect on a company's financial performance. This study's results indicate that increasing intellectual capital efficiency does not significantly impact company performance.

This condition is in line with research by Allan et al. (2020) and Stefania (2023), which obtained insignificant results because the operational activities of technology companies in Indonesia still largely rely on physical assets and cash flow to improve financial performance.(Allan et al., 2020)Meanwhile, Stefania (2023) stated that Intellectual Capital (IC) is not the primary factor in improving financial performance, but rather a supporting element. Resource-Based Theory also does not contradict these findings. Intellectual capital is a strategic resource that can create competitive advantage if managed effectively. In the technology sector, intellectual capital exists for long-term support, such as digital ecosystem efficiency, innovation, and the expansion of services or goods. Therefore, the benefits are not visible in the company's short-term profitability. High investment and operational costs, especially in human resource development, the latest technology, and research and development, put pressure on technology companies' profits. Meanwhile, previous research findings, such asHerdianto et al (2024)Those who research intellectual capital in Islamic banking emphasize that its influence stems from the significant influence of human resource quality, such as customer relationships and information systems. VAIC in banking is directly useful for credit distribution and fund management, as banking is a business directly reflected in profitability.

Research Limitations

This study has several limitations that need to be considered in interpreting the results and future research.

First, the use of VAIC as an intellectual capital variable. This method is limited by only looking at financial statement data to capture intellectual capital efficiency. Therefore, unrecorded intellectual capital, such as technological capabilities, is invaluable and immeasurable, requiring further study to fully understand its full scope.

Second, data collection for the 2022-2025 period apparently cannot reflect the development of the digital economy after the Covid-19 pandemic, so thatThe results cannot be generalized to different economic conditions or longer periods.

The three sectors covered are limited to the technology sector listed on the IDX from 2022 to 2025, and therefore cannot be generalized to other industrial sectors with different business structures.

Conclusion

This study shows that Intellectual Capital, measured using the Value Added Intellectual Coefficient (VAIC), does not significantly influence the financial performance of technology sector companies, as proxied by Return on Assets (ROA). This result indicates that increasing intellectual capital efficiency has not been able to directly contribute to increasing company profitability in the short term. However, when control variables such as Firm Size and Debt to Asset Ratio (DAR) are included in the model, the model's explanatory power for financial performance increases, although the effect of VAIC remains insignificant. This finding suggests

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that company financial performance is more influenced by structural and financial factors than intellectual capital efficiency alone.

This study has limitations, including the use of VAIC, which is based solely on accounting data, thus incapable of capturing all dimensions of intellectual capital. The study's limited period, from 2022 to 2025, does not reflect the long-term dynamics of the technology industry. Furthermore, the study's focus on the technology sector on the Indonesia Stock Exchange, therefore, the results cannot be generalized to other sectors. Therefore, further research is recommended to use a more comprehensive approach to measuring intellectual capital, extend the observation period, and expand the research object to other industrial sectors. Practically, the results of this study can serve as a consideration for company management, suggesting that investment in intellectual capital needs to be accompanied by cost efficiency and asset optimization strategies for a more tangible impact on financial performance.

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