International Journal of Multidisciplinary Approach Research and Science
E-ISSN 2987-226X P-ISSN 2988-0076
Volume 3 Issue 02, May 2025, Pp. 569-589
DOI: https://doi.org/10.59653/ijmars.v3i02.1648

The Influence of Intellectual Capital and Leverage on Company Value with Profitability as a Mediating Variable

(Empirical Study on Technology Sector Companies Listed on the Indonesia Stock Exchange for the Period 2021-2023)

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Received: 10-03-2025 *Reviewed: 15-04-2025* *Accepted: 25-05-2025*

Abstract

This research is intended to investigate how intellectual capital and leverage impact firm value, with profitability acting as a mediating factor (focused on technology companies listed on the Indonesia Stock Exchange from 2021 to 2023). The variables examined in this study include intellectual capital and leverage as independent factors, firm value as the dependent factor, and profitability as the mediating factor. This research is categorized as quantitative. The study's population is made up of companies within the technology sector listed on the Indonesia Stock Exchange during the years 2021 to 2023. A purposive sampling method was utilized to select a sample of 20 companies. The analysis of the data was conducted using multiple linear regression through the IBM SPSS version 27 software. The data sourced for this research are secondary data retrieved from the official website of the Indonesia Stock Exchange. The results of this study reveal that intellectual capital, leverage, and profitability collectively influence financial distress. Furthermore, when considered individually, it is found that intellectual capital does not influence the company's value, leverage positively affects the company's value, profitability negatively impacts the company's value, intellectual capital positively influences profitability, leverage does not affect profitability, intellectual capital negatively influences the company's value when mediated by profitability, and leverage does not impact the company's value when mediated by profitability.

Keywords: Intellectual capital, leverage, profitability, company value

Introduction

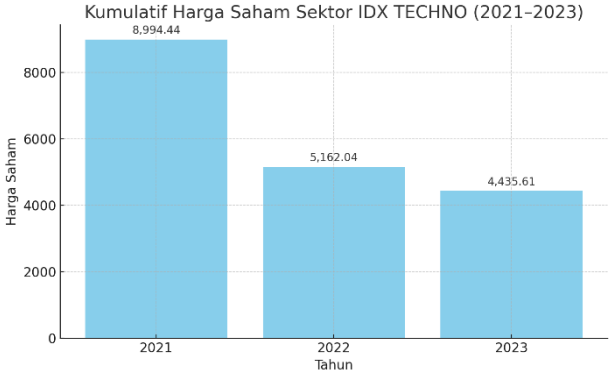
The purpose of the company is to increase the value and prosperity of its shareholders. Increasing stock prices can achieve economic prosperity. Therefore, investment, spending, and dividend decisions must always be oriented towards achieving the company's goals. Because

all areas are interconnected, such as production, marketing, human resources, and finance, effective management must be used to achieve these goals (Astawinetu & Handini, 2020).

Technology sector companies are one of the most important sectors for the world economy, including Indonesia, amidst globalization and rapid technological progress. Due to continuous innovation and the increasing need for digital solutions, technology companies continue to grow significantly. Thus, investors are increasingly interested in investing in companies that are growing in this field.

The technology sector index in 2021 recorded a year-on-year (yoy) increase in value of 707.56%. In 2022, it was noted that the technology sector index experienced a yoy decrease in value of 42.61% from the end of 2021 to the end of 2022 and was followed in 2023 by a yoy decrease of 14.07%, this decrease can be considered quite large compared to the decrease experienced by other sector indices. YOY comparison is a popular and effective way to evaluate a company's financial performance.

Figure 1.1 Technology Sector Stock Prices



Source: Data processed by researchers

The graph shows that the stock price in the IDXTECHNO sector experienced a sharp decline from 8,994.44 in 2021 to 5,162.04 in 2022. However, in 2022, stocks in this sector were affected by rising inflation which forced the central bank to raise the benchmark interest rate. The pattern of declining stock prices continued into 2023, where the stock price of the technology sector was recorded at only 4,435.61. This reflects significant pressure on the technology sector during that period, which led to a decline in investor confidence in the sector.

Technology sector companies are experiencing the “Tech Winter” phenomenon throughout 2022 and 2023. The term tech winter is used to describe a period of significant decline in the technology industry, especially in start-up companies. The current tech winter phenomenon is caused by the increase in interest rates set by the US central bank. This makes investors hesitate to invest and prefer to hold their money (Dwi, 2023).

This study is in line with previous in-depth studies on the influence of intellectual capital on firm value with profitability as a mediating variable. The novelty of this study lies in the focus of different research subjects, namely technology sector companies listed on the Indonesia Stock Exchange. While previous researchers focused on research subjects in the banking sub-sector listed on the Indonesia Stock Exchange. In addition, this study adds another

variable, namely leverage. While previous studies only focused on intellectual capital (Rasendriya et al., 2024).

Literature Review

Signal Theory

Signaling theory was conveyed by (Spence, 1973), the owner of information can give the recipient (investor) a signal or signal about the condition of the company. This theory can be used to show investors how to see the future of the company. Signaling theory says that management has information about the value of the company that shareholders do not know. For investors who invest in the company, this information is very useful. Signaling theory describes what the signaler or signaler does to influence the behavior of the signal recipient (Ghozali, 2020). Signaling theory states that a company that has good quality will directly or indirectly give a positive signal to the market, which is expected to allow the market to distinguish between good and bad companies.

Intellectual Capital

Intellectual capital is a resource owned by a company that focuses on knowledge that can provide benefits to the company (Melsia & Dewi, 2021). The following is the formulation and stages of calculating VAIC^{TM} (Nurhidayati & Bone, 2022) :

1. Calculating Value Added (VA)
   Value added (VA) is the difference between sales (OUT) and costs (IN).

   $$VA = OUT-IN$$

   Description:
   VA = Value Added
   Output (OUT) = Total sales and other income
   IN = Expenses and costs (except employee expenses)
2. Calculating Value Added Capital Employed (VACA)
   Value Added Capital Employed (VACA) is an indicator of the efficiency of added value in the use of financial capital.

   $$VACA = \frac{VA}{CE}$$

   Description:
   VACA = Value Added Capital Employed
   VA = Value Added
   CE = Available funds (equity, net profit)

3. Calculating Value Added Human Capital (VAHU)
   Value Added Human Capital (VAHU) is an indicator of the efficiency of human capital value added.

$$VAHU = \frac{VA}{HC}$$

Description:
VAHU = Value Added Human Capital
HC = Labor burden
VA = Value Added

4. Calculating Structural Capital Value Added (STVA)
   Structural Capital Value Added (STVA) is an indicator of the efficiency of structural capital value added.

$$STVA = \frac{SC}{VA}$$

Description :
STVA = Structural Capital Value Added
SC = VA-HC
VA = Value Added Structural Capital

5. Calculating Value Added Intellectual Coefficient (VAIC^{TM})
   VAIC™ is the sum of VACA, VAHU and STVA.

$$VAIC™ = VACA+VAHU+STVA$$

Leverage

Leverage is used to measure assets financed through debt compared to the capital it has. This is a ratio that shows the company's ability to manage its debt so that they can make a profit and repay their debt (Sari et al., 2021). The Debt to Asset Ratio (DAR) formula is as follows:

$$DAR = \frac{\text{Total Debt}}{\text{Total Assets}} \times 100$$

Profitability

Profitability is a financial ratio used to evaluate a company's ability to generate profits (Muniarty et al., 2020). Investors can choose to invest in a company if the company's financial reports are submitted on time and with signals given through the financial reports (Avkarina et al., 2023). According to him, profitability can be calculated using Return on Assets (ROA), which is a ratio used to calculate the level of profit generated on the amount of assets used by a business. ROA is formulated as follows:

$$ROA = \frac{\text{Net Profit After Tax Total Assets}}{\text{Total Assets}}$$

Company Values

Company value is a standard achieved by a company to show the trust that the public has in the company (Putri et al., 2019). If investors want to invest their capital in a company, they will do so if the company reaches a high enough valuation. Therefore, increasing the value of the company is an important part of the business development process (Kusmiyati & Machdar, 2023). Tobin's Q is a measuring tool to evaluate a company's performance, especially in terms

of company value, which reflects the effectiveness of management in managing the company's assets. Tobin's Q is calculated using the following formula:

$$\text{Tobin's Q} = \frac{(\text{Market Value x Equity}) + \text{Debt}}{\text{Total Assets}}$$

Hypothesis

In reference to the conceptual framework, the researcher develops the following alternative hypothesis:

H1 : Intellectual capital affects firm value

H2 : Leverage affects firm value.

H3 : Profitability affects firm value.

H4 : Intellectual capital affects profitability

H5 : Leverage affects profitability

H6 : Profitability mediates the relationship between intellectual capital and firm value

H7 : Profitability mediates the relationship between leverage and firm value

Research Method

This study uses a quantitative approach. This means examining a specific population or sample using research instruments and analyzing quantitative or statistical data to test the hypotheses that have been made. The type of data used in this study is secondary data from external sources. Sekaran & Bougie, (2017) explain that secondary data is information that has been taken from pre-existing sources. Secondary data is obtained through annual financial reports and sustainability reports from companies, which are obtained from the Indonesia Stock Exchange (IDX). The sample is part of the population. In this study, the population in question is companies in the technology sector listed on the Indonesia Stock Exchange (IDX) during the period 2021-2023. The sample can be interpreted as a segment of the population used as a source of data in the study. This study adopts a purposive sampling method in determining participants. In terms of data analysis, this study uses multiple linear regression with the help of SPSS software. This analysis approach has two main objectives: first, to identify the direction of the relationship between the dependent and independent variables, and second, to predict the value of the dependent variable based on changes in the independent variable (Ghozali, 2018).

First substructure path equation:

$$Y = PYX1 + PYX2 + e1$$

Second substructure path equation:

$$Z = PZX1 + PZX2 + e2$$

Description:

Y = Company value

X1 = Intellectual Capital

X2 = Leverage

Z = Profitability

e1 = Standard error of equation 1

e2 = Standard error of equation 2

Result

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
LN_Intellectual Capital	54	5,26	5,72	5,3440	,06552
LN_Leverage	54	,83	4,59	3,1534	,92399
LN_Nilai Perusahaan	54	-,87	17,37	5,8405	6,23845
LN_Profitabilitas	54	,32	,58	4,513	,04830
Valid N (listwise)	54				

According to Ghozali, (2018) explanation, descriptive statistics provide a complete picture of the data through various quantitative measures such as average, standard deviation, variance, highest and lowest values, total, range, and kurtosis and skewness. Descriptive processing was carried out using IBM SPSS version 27 for the Windows operating system, with the results shown below.

The table above shows the results of descriptive statistics in this study. The data analyzed covers the period 2021-2023 with initial data of 60 entries. However, after identifying and removing unusual data using the SPSS 27 analysis tool, the amount of available data was reduced to 54 entries. Data that shows different properties and deviates greatly from other data, and has extreme values in either one or several variables, is called an outlier. According to Ghozali (2018), this kind of anomaly can be identified using methods such as z-score analysis or case-based diagnostics. Handling outliers can be done in various ways, including adding data, transforming, or eliminating extreme values. In this study, the initial analysis showed that several variables did not meet the classical assumptions, indicating problems with non-normal distribution and heteroscedasticity. Therefore, the researcher carried out a procedure to test for outliers. Through this step, the initial data set consisting of 60 data was refined into 54 observations, which were then used as samples for the final study. Based on the results of the statistical analysis, with a total sample size of 54, details of the descriptive statistics including the minimum, maximum, mean, and standard deviation values for each variable can be found below:

1. Intellectual Capital
   The minimum value of the intellectual capital variable is 5.26, the maximum value is 5.72, the average value is 5.3440 with a standard deviation of 0.06552.
2. Leverage
   The leverage variable shows a minimum value of 0.83, a maximum value of 4.59, an average value of 3.1534 with a standard deviation of 0.92399.
3. Profitability
   The profitability variable has a minimum value of 0.32, a maximum value of 0.58, an average value of 4.513 with a standard deviation of 0.04830.
4. Firm Value
   The company value variable has a minimum value of -0.87, a maximum value of 17.37, an average value of 5.8405 with a standard deviation of 6.23845.

Normality Test

One-Sample Kolmogorov-Smirnov Test

			Unstandardized Residual
N			54
Normal Parameters[a,b]		Mean	,0000000
		Std. Deviation	5,21367926
Most Extreme Differences		Absolute	,105
		Positive	,105
		Negative	-,100
Test Statistic			,105
Asymp. Sig. (2-tailed)[c]			,200[d]
Monte Carlo Sig. (2-tailed)[e]		Sig.	,135
	99% Confidence Interval	Lower Bound	,126
		Upper Bound	,144

The normality test aims to determine whether the relationship between dependent and independent variables follows a normal distribution pattern. The regression model is said to be successful if the data distribution is normal or approaches a normal pattern (Ghozali, 2018).

According to the existing table, normality analysis was carried out using the one-sample Kolmogorov-Smirnov method, which showed a Monte Carlo (2-tailed) significance value of 0.135 (> 0.05), indicating that the data were normally distributed. This conclusion is based on the analysis of 54 samples studied.

Multicollinearity Test

To determine this, we can use the tolerance value and Variance Inflation Factor (VIF) in the regression model. If the tolerance value ≥ 0.10 and the VIF value ≤ 10, then it can be interpreted that there is no multicollinearity problem.

Coefficients[a]

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	VIF
(Constant)	-105,881	66,336		-1,596	,117		
LN_X1	23,459	12,811	,246	1,831	,073	,772	1,296
LN_X2	2,620	,850	,388	3,082	,003	,881	1,135
LN_Z	-48,541	17,449	-,376	-2,782	,008	,765	1,306

a. Dependent Variable: LN_Y

Autocorrelation Test

To test for autocorrelation, we can use the Durbin-Watson (DW) test. Decision making based on this test is done by checking the Durbin-Watson value. If the DW value is less than -2, this indicates positive autocorrelation. Meanwhile, if the DW value is between -2 and +2, it means there is no autocorrelation. Finally, if the DW value is greater than +2, this indicates negative autocorrelation.

Model Summary[b]

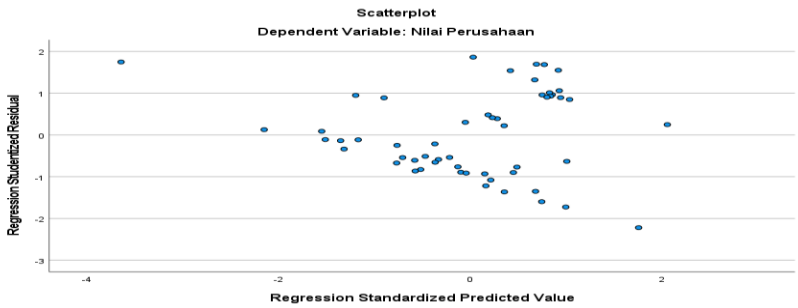
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,549[a]	,302	,260	5,36781	1,022

a. Predictors: (Constant), Profitabilitas, Leverage, Intellectual Capital

b. Dependent Variable: Nilai Perusahaan

Heteroscedasticity Test

In this study, the heteroscedasticity test was conducted through a plot graph. If there is no clear pattern in the graph and the data points are evenly distributed above and below the number 0 on the Y axis, then it can be interpreted that there are no symptoms of heteroscedasticity.



Multiple Linear Regression Test

Multiple regression analysis aims to determine the relationship between dependent and independent variables, while estimating the value of the dependent variable when the value of the independent variable increases or decreases (Ghozali, 2018). The following results were generated with the help of the IBM SPSS version 27 application:

The Influence of Intellectual Capital and Leverage on Company Value with Profitability as a Mediating Variable

The regression equation formed for the intellectual capital and leverage variables is stated as follows:

$$Z = -1.083 + 0.293 + -0.010X$$

The conclusion of the regression equation above is:

1. The constant value produced is -1.083. This shows that without intellectual capital and leverage, the profitability value is -1.083.
2. The regression coefficient value obtained by intellectual capital is 0.293. This shows that if intellectual capital increases by 1%, profitability will increase by 0.293.
3. The regression coefficient value obtained by leverage is -0.010. This shows that if leverage increases by 1%, profitability will decrease by -0.010.

Regression Equation Model I

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
1	(Constant)	-1,083	,510		-2,122	,039		
	Intellectual Capital	,293	,094	,397	3,106	,003	,918	1,090
	Leverage	-,010	,007	-,186	-1,451	,153	,918	1,090

a. Dependent Variable: Profitabilitas

The regression equation formed for variable X against Y is stated as follows:

$$Y = -105.881 + 23.459 + 2.260 + -48.541$$

The conclusion of the regression equation above is:

1. The constant value produced is -105.881. This shows that without intellectual capital, leverage, and profitability, the value of the company is -105.881.
2. The regression coefficient value obtained by intellectual capital is 23.459. This shows that if intellectual capital increases by 1%, the company's value will increase by 23.459.
3. The regression coefficient value obtained by leverage is 2.260. This shows that if leverage increases by 1%, the company's value will increase by 2.260.
4. The regression coefficient value obtained by profitability is -48.541. This shows that if profitability increases by 1%, the company's value will decrease by -48,541.

Regression Equation Model II

Coefficients[a]

Model	Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	Collinearity Statistics VIF
(Constant)	-105,881	66,336		-1,596	,117		

	Intellectual Capital	23,459	12,811	,246	1,831	,073	,772	1,296
	Leverage	2,620	,850	,388	3,082	,003	,881	1,135
	Profitabilitas	-48,541	17,449	-,376	-2,782	,008	,765	1,306

a. Dependent Variable: Nilai Perusahaan

F Statistic Test

The goodness of fit test is used to assess the feasibility of a model, namely to determine whether the model built meets the suitability criteria. A regression model is considered suitable if its significance level is adequate.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	621,997	3	207,332	7,196	<,001[b]
	Residual	1440,670	50	28,813		
	Total	2062,667	53			

a. Dependent Variable: Nilai Perusahaan

b. Predictors: (Constant), Profitabilitas, Leverage, Intellectual Capital

Based on the results shown in table above, it was found that the calculated F value was 7.196 with a significance value of <0.001. When we compare it with a significance level of 5% or 0.05, it can be seen that the significance value obtained is much smaller (0.001<0.05). The results of the F test of intellectual capital, leverage, and profitability have a simultaneous influence on company value.

Statistical Test t

According to Ghozali, (2018), the t-test is a statistical technique used to evaluate the impact of each independent variable on the dependent variable.

Model I t-test

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-1,083	,510		-2,122	,039
	LN_X1	,293	,094	,397	3,106	,003
	LN_X2	-,010	,007	-,186	-1,451	,153

a. Dependent Variable: LN_Z

Based on the table above, it shows that:

1. The results of the intellectual capital t-test show a calculated t value of 3.106 with a Sig of 0.003 and when compared to a significance level of 5% or 0.05, the Sig. value is smaller (0.003 <0.05). Based on the results of this hypothesis test, individually or partially intellectual capital has an effect on profitability or **H3 is accepted**.

2. The results of the leverage t-test show a calculated t value of -1.451 with a Sig, of 0.153 and when compared to a significance level of 5% or 0.05, the Sig. value is greater (0.153> 0.05). Based on the results of this hypothesis test, individually or partially leverage does not have an effect on profitability or **H4 is rejected**.

Model II t-test

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-105,881	66,336		-1,596	,117
	LN_X1	23,459	12,811	,246	1,831	,073
	LN_X2	2,620	,850	,388	3,082	,003
	LN_Z	-48,541	17,449	-,376	-2,782	,008

a. Dependent Variable: LN_Y

Based on the table above, it shows that:

1. The results of the intellectual capital t-test show a calculated t value of 1.831 with a Sig. of 0.073 and when compared to a significance level of 5% or 0.05, the Sig. value is greater (0.073> 0.05). Based on the results of this hypothesis test, individually or partially intellectual capital does not affect Company Value or **H1 is rejected**.
2. The results of the leverage t-test show a calculated t value of 3.082 with a Sig. of 0.003 and when compared to a significance level of 5% or 0.05, the Sig. value is smaller (0.003<0.05). Based on the results of this hypothesis test, individually or partially leverage affects Company Value or **H2 is accepted**.
3. The results of the profitability t-test show a calculated t value of -2.782 with a Sig. of 0.008 and when compared to a significance level of 5% or 0.05, the Sig. value is greater. smaller (0.008<0.05). Based on the results of this hypothesis test, individually or partially profitability has an effect on Company Value or **H5 is accepted**.

Coefficient of Determination Test

The coefficient of determination is used to measure how well the dependent variable can be explained by the independent variables. The closer the adjusted R^2 value is to 1, the greater the contribution of the independent variables in providing the information needed to predict the dependent variable, and vice versa.

Coefficient of Determination of Model I

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,484[a]	,235	,205	,04308

a. Predictors: (Constant), LN_X2, LN_X1
b. Dependent Variable: LN_Z

Based on the table above, it shows that the adjusted R² value is recorded at 0.205, or 20.5%. From this data, it can be interpreted that the independent variables, namely intellectual capital and leverage, are able to explain profitability by 20.5%, while the remaining 79.5% is explained by other factors outside of profitability.

Coefficient of Determination of Model II

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,549[a]	,302	,260	5,36781

a. Predictors: (Constant), LN_Z, LN_X2, LN_X1
b. Dependent Variable: LN_Y

The table above shows that the adjusted R² value reaches 0.260 or 26%. From this result, it can be interpreted that the ability of the independent variables, namely intellectual capital, leverage, and profitability, is only able to explain the company's value by 26%. Meanwhile, the remaining 74% is influenced by other factors outside of intellectual capital, leverage, and profitability.

Path Analysis

Path analysis is conducted to measure the influence of mediating variables. This test requires regression coefficients and standard errors of estimation to calculate the strength of the indirect influence of the mediating variables, using the Sobel Test.

Model I Regression Equation for Path Analysis

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-1,083	,510		-2,122	,039
	LN_X1	,293	,094	,397	3,106	,003
	LN_X2	-,010	,007	-,186	-1,451	,153

a. Dependent Variable: LN_Z

Hypothesis testing of the influence of intellectual capital on company value through the mediating variable of profitability is carried out using the Sobel-test, so that the following calculations are obtained:

$sab = \sqrt{b^2sa^2 + a^2sb^2 + sa^2sb^2}$

$sab = \sqrt{-48.54120.094^2 + 0.293217.449^2 + 0.09420.17.449^2}$

$sab = \sqrt{(2,356.228681)\ (0.008836) + (0.085849)\ (304.467601) + (0.008836)\ (304.467601)}$

$sab = \sqrt{20.819636625316 + 26.138239078249 + 2.690275722436}$

$sab = \sqrt{49.648151426001}$

$sab = 7.046144$

The Influence of Intellectual Capital and Leverage on Company Value with Profitability as a Mediating Variable

Description:

Sab: the magnitude of the standard error of the indirect effect

a: the regression coefficient of the independent variable on the mediation variable

b: the regression coefficient of the mediation variable on the dependent variable

Sa: the standard error of estimation of the effect of the independent variable on the mediation variable

Sb: the standard error of estimation of the effect of the mediation variable on the dependent variable

To test the significance of the indirect effect, it is necessary to calculate the t value of the ab coefficient with the following formula:

t = ab = -14.222513 = -2.018481739799

Sab 7.046144

Description:

sab: the magnitude of the standard error of the indirect effect

ab: indirect effect

The results obtained t count of -2.018 and when compared with t table of 1.96 with a significance level of 0.05, then t count is greater (-2.018>1.96). Based on the results of this hypothesis testing, it can be produced that the mediation coefficient of -2.018 has a negative influence of profitability mediation in the relationship between intellectual capital and company value or **H6 is accepted**.

Model II Regression Equation for Path Analysis

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-105,881	66,336		-1,596	,117
	LN_X1	23,459	12,811	,246	1,831	,073
	LN_X2	2,620	,850	,388	3,082	,003
	LN_Z	-48,541	17,449	-,376	-2,782	,008

a. Dependent Variable: LN_Y

Furthermore, hypothesis testing of the influence of leverage on firm value through the profitability mediation variable is carried out using the Sobel-test, so that the following calculations are obtained:

sab = $\sqrt{b^2sa^2 + a^2sb^2 + sa^2sb^2}$

sab = $\sqrt{-48.54120.007^2 + -0.010217.449^2 + 0.00720.17.449^2}$

sab = $\sqrt{}$(2,356.228681) (0.000049) + (0.0001) (304.467601) + (0.000049) (304.467601)

sab = $\sqrt{}$0.115455205369 + 0.0304467601 + 0.014918912449

sab = $\sqrt{}$0.160820877918

sab = 0.401024784

To test the significance of the indirect effect, it is necessary to calculate the t value of the ab coefficient with the following formula:

t = ab = $\frac{0.048541}{}$ = 1.2104239422768

Sab 0.401024784

The results obtained t count of 1.210 and when compared with the t table of 1.96 with a significance level of 0.05, then t count is smaller (1.210 <1.96). Based on the results of this hypothesis test, namely the mediation coefficient of 1.210, there is no mediation effect of profitability in the relationship between leverage and company value or **H7 is rejected**.

Discussion

The Influence of Intellectual Capital on Company Value

Based on data analysis and testing, it shows that the intellectual capital variable on company value shows a t-value of 1.831 with a significance value of 0.073. The significance and t-values indicate that the intellectual capital variable has no effect on company value. This is because intellectual capital is not considered important by investors when making decisions. Intellectual capital is within the scope of management that only needs to be understood by investors if the value of intellectual capital is adequate, but its increase does not have much impact on the decision-making process.

In relation to signal theory, company management can send information to investors through various signals, such as financial reports, strategy disclosures, and innovations, to reduce information asymmetry between management and investors. In this context, intellectual capital should be a positive signal that reflects the company's growth potential and competitive advantage. However, because intellectual capital is not disclosed adequately or is not well understood by investors, the signal becomes weak or ineffective.

The results of this study are in line with previous studies which stated that intellectual capital has no effect on company value conducted by (Rahmawati & Dewi, 2025), (Rasendriya et al., 2024), (Prastiyo, 2024), and (Yasri & Achyani, 2024) which states that intellectual capital

does not influence company value because the market tends to give a higher assessment to a company based on its profit level.. However, the results of this study are not in line with those conducted by (Azizah & Kabib, 2024) which states that investors tend to give greater appreciation to companies that are able to manage intellectual capital well.

The Effect of Leverage on Company Value

Based on data analysis and testing, it shows that the leverage variable on company value shows a t-value of 3.082 with a significance value of 0.003. The significance and t-values indicate that the leverage variable has a positive effect on company value. The regression coefficient that shows a positive direction indicates that the company uses debt as an additional source of financing, both internally and externally.

This study supports the principle of signal theory, it is known that leverage has a positive and significant effect on company value. This theory explains that the use of debt can provide a signal of trust from the company to investors regarding future cash flows and potential profitability, which in turn can increase the company's market value.

The results of this study are in line with previous studies which state that leverage has a positive effect on company value conducted by (Indraswari et al., 2025), (Yulianti et al., 2023), (Manurung & Lubis, 2022) and (Christiaan, 2022), which states that leverage has a positive effect on company value. However, the results of this study are not in line with those conducted by (Khoeriyah, 2020) which stated that leverage has a significant negative impact on company value.

The Effect of Profitability on Company Value

Based on data analysis and testing, it shows that the profitability variable on company value shows a t-count value of -2.782 with a significance value of 0.008. The significance and t-count values indicate that the profitability variable has a negative effect on company value. This shows that as profitability increases, the company's value will actually decrease. In this situation, investors tend to be reluctant to invest their capital, which in turn gives a negative signal to the market. This condition has the potential to cause a decrease in stock prices and company value (Pradanimas & Sucipto, 2022).

The results of this study are in line with previous studies which state that profitability has a negative effect on company value conducted by (Ardianto, 2023), (Pradanimas & Sucipto, 2022), and (Imnana et al., 2023), an increase in company value, which is triggered by its profitability, ultimately encourages investors to buy shares. However, the results of this study are not in line with those conducted by (Setyabudi, 2022), which states that companies with high profitability values tend to have high company values.

The Influence of Intellectual Capital on Company Profitability

Based on data analysis and testing, it shows that the intellectual capital variable on company profitability shows a t-value of 3.106 with a significance value of 0.003. The significance and t-values indicate that the intellectual capital variable has a positive effect on company profitability. The regression coefficient showing a positive direction indicates that

companies that successfully manage resources optimally and utilize them wisely will be able to increase their profitability.

This study supports the principle of signal theory, because companies that have utilized and optimized employee expertise, knowledge, networks, and thinking to create valuable value for the company. This is certainly beneficial for shareholders, because it reflects the management's ability to manage the organization for the benefit of the owners.

The results of this study are in line with previous studies that state that intellectual capital has a positive effect on company profitability conducted by (Azizah & Kabib, 2024)), (Rasendriya et al., 2024), and (Qurrotulaini & Anwar, 2021), which state that companies that successfully manage and utilize resources optimally will have a positive impact on increasing profitability. However, the results of this study are not in line with those conducted by (Hatta & Fitri, 2020), because they still do not maximize intellectual capital to increase company profitability.

The Effect of Leverage on Company Profitability

Based on data analysis and testing, it shows that the leverage variable on company profitability shows a t-count value of -1.451 with a significance value of 0.153. The significance and t-count values indicate that the leverage variable has no effect on company profitability. This assumes that if the company relies too much on debt funds, the interest expense that must be paid will burden the company excessively, resulting in a decrease in profits. The use of capital can have different impacts on profit or profitability. In addition, this finding also indicates that increasing leverage has no effect on profit or profitability.

The results of this study are in line with previous studies which state that leverage has no effect on company profitability conducted by (Mahulae, 2020), (Febriani, 2020), the profitability of equity is influenced not only by economic conditions, but also by the existing capital structure. However, the results of this study are not in line with those conducted by (Febrian, 2025) which states that optimal use of leverage can increase company profitability.

Intellectual Influence on Firm Value Mediated by Profitability

Based on data analysis and testing, it shows that the intellectual capital variable on firm value through profitability shows a t-count value of -2.018. This shows that the profitability variable has a negative effect on the relationship between intellectual capital and firm value. According to signal theory, companies send information to the market through various signals, such as financial performance and management quality. If a company has high intellectual capital but is unable to convert it into optimal profitability, then the signal received by the market can be negative.

The results of this study are in line with previous studies which state that intellectual capital has a negative effect on firm value through profitability conducted by (Makmur et al., 2022), stating that intellectual capital has a negative effect on firm value, both directly and indirectly through profitability as a mediating variable. The results of this study are not in line with those conducted by (Yulianatasya & Manunggal, 2023), stating that profitability can significantly mediate the effect of intellectual capital on firm value.

The Effect of Leverage on Firm Value Mediated by Profitability

Based on data analysis and testing, it shows that the leverage variable on firm value through profitability shows a t-count value of 1.210. This shows that the profitability variable does not function as a mediator in the relationship between leverage and firm value, considering the partial mediation criteria.

The high value of debt used by the company can result in a decrease in profit, due to the interest expense that must be paid. Therefore, excessive use of debt can reduce the net profit obtained by the company. This has an impact on the decline in stock prices, because investors receive a signal that the company does not promise good prospects in the future. As a result, the value of the company is also affected (Christiaan, 2022).

The results of this study are in line with previous studies which stated that leverage does not affect company value through profitability conducted by (Yanuariski et al., 2023), (Christiaan, 2022), and (Fajri et al., 2023), stating that the use of high debt can have a negative impact on the company, where the profits obtained are not comparable to the costs incurred. However, the results of this study are not in line with those conducted by (Wati et al., 2023), which stated that profitability successfully mediates leverage on company value and has a significant effect.

Conclusion

Intellectual capital does not affect the value of the company. Companies that have high intellectual capital can experience a decrease in value if they are unable to utilize and manage intellectual capital properly.

Leverage has a positive effect on the value of the company. This means that the use of debt is used to support the company's operational activities and for business development.

Intellectual capital has an effect on profitability. This means that companies that successfully manage resources optimally and utilize them wisely will be able to increase their profitability.

Leverage has no effect on profitability. This is caused by the imbalance between debt and equity in funding the company's activities. The use of capital can have different impacts on profit or profitability.

Profitability has a negative effect on the value of the company. This shows that there is an inverse relationship between profitability and the value of the company. When profitability increases, the value of the company actually decreases due to a significant increase in costs.

Intellectual capital has a negative effect on the value of the company mediated by profitability. If a company has high intellectual capital but is unable to convert it into optimal profitability, then the signal received by the market can be negative.

Leverage does not affect the value of the company mediated by profitability. This means that the high value of debt used by the company can result in a decrease in profit, due to the interest expense that must be paid.

Limitation

Some of the limitations in this study are as follows.

1. The use of samples used in this study is only in the technology sector so that the number of samples that are met according to the purposive sampling criteria is 20 companies.
2. The research period is limited to only the last 3 years since 2021-2023.
3. This study only uses two independent variables, namely intellectual capital and leverage.

Further researchers should expand the research sample to companies in other sectors, extend the research period, add several other independent variables such as good corporate governance, environmental performance, company size, company age and other variables that support the research. So that it can increase the research determination coefficient and add other mediating variables to produce a good research model.

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