

BOARD DIVERSITY AND INTELLECTUAL CAPITAL ON COMPANY VALUE WITH PROFITABILITY AS INTERVENING VARIABLES

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Vol.16 No.3 | 2022

Abstract

Submit :

07/06/2022

Accept :

27/08/2022

Publish :

31/09/2022



Background : This study aims to determine the analysis of the effect of board diversity and intellectual capital on firm value with profitability as the case study intervening variable in manufacturing companies listed on the Indonesia Stock Exchange in 2016-2020. The sample in this study was taken by purposive sampling method on manufacturing companies listed on the Indonesia Stock Exchange in the 2016-2020 period. The number of samples used as many as 33 companies. **Method :** The method of analysis of this research is to use the method of path analysis and hypothesis testing. **Result :** The results of this study indicate that partially the effect of board diversity and intellectual capital has a significant positive effect on profitability, board diversity and intellectual capital have a positive and significant effect on firm value, while profitability has no significant effect on firm value in manufacturing companies listed on the Indonesia Stock Exchange in 2016-2020 years. **Conclusions :** In direct and indirect influence it is stated that board diversity has a significant effect on firm value mediated by profitability as an intervening variable and intellectual capital has a significant effect on firm value mediated by profitability as an intervening variable in manufacturing companies on the Indonesia Stock Exchange in the 2016-2020 period.

Keywords: Board Diversity, Intellectual Capital, Firm Value and Profitability.

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<http://publikasi.lldikti10.id/index.php/jit>

DOI : <https://doi.org/10.22216/jit.v16i3.1344>

PAGE : 499-507

doi: <http://10.22216/jit.v16i3.1344> 499-507

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INTRODUCTION

The rapid spread of the COVID-19 outbreak has certainly had an impact on the Indonesian economy. Indonesia has imposed restrictions on going out of the house, so that many certain economic sectors have been negatively affected by the virus. There are several companies that carry out Termination of Employment (PHK). The condition of a company can be seen from the turnover received, it can also be seen from the company's stock price. The stock price shows how much supply and demand there is for the stock. If the demand for these shares increases, the share price will also increase. Meanwhile, if the demand for these shares decreases, the share price will also decrease. Along with the influence of globalization, the economy is experiencing rapid development which is marked by developments in the fields of innovation, technology and also increasingly fierce competition in business. This raises the motivation of companies to change their business methods. The company was founded with the aim of being able to grow and develop in the long term. The company is also expected to be able to optimize the value of the company according to what has been planned in order to achieve the value desired by the owner of the company. The higher the value generated by the company, the more it describes the welfare of its owners (stakeholders). So that the main goal of a company is not only to maximize profits but also to maximize the value of the company.

Research conducted by [1], entitled "The Influence of the Characteristics of the Board of Commissioners, Characteristics

of the Board of Directors and Company Size on Firm Value Through Profitability as an intervening variable" states that the characteristics of the board of commissioners and the characteristics of the board of directors have no significant positive effect on profitability, company size has a positive effect on profitability. insignificant positive effect on profitability, the characteristics of the board of commissioners and the characteristics of the board of directors have a significant positive effect on firm value, firm size and profitability have a significant positive effect on firm value. According to the path analysis results, profitability can mediate the effect of firm size on firm value. However, profitability cannot affect the characteristics of the board of commissioners and the characteristics of the board of directors on firm value.

The information in the table can be concluded that the movement of several companies with company values increasing and decreasing or also known as fluctuations in various recorded periods. For companies in several years, in general, the value of the company has increased. In 2016-2020, namely PT. Indal Aluminum Industry, Tbk (INAI). While PT. Lion Metal Work, Tbk (LION) has decreased from 2016-2020. At the company PT. Unilever Indonesia, Tbk (UNVR) experienced a drastic decline in 2018 of 38.62 while in 2019 the PBV level was recorded at 82.44. There has also been a decrease in several companies, but it doesn't always decrease every year, there are also those who experience an increase in these companies.





Research by [3] is about intellectual capital, firm size and capital structure on firm value with profitability as an intervening variable. In contrast to previous research, the current study uses independent variables, namely board diversity and intellectual capital, while the independent variables are firm value and profitability as intervening variables. Research [2] with the title "Does Board Diversity Affect Company Value?". This research was conducted focusing on board diversity where the indicators used were age, education level and nationality or culture as well as company value as the dependent variable. In contrast to previous studies, the current study focuses on board diversity and intellectual capital as independent variables, while the dependent variables are firm value and profitability as intervening variables. Based on the results of previous research conducted [4], which states that Board Diversity has a positive and significant influence on Firm Value. Research conducted by [5], which states that Board Diversity has a positive and significant influence on firm value. Research conducted by [6], which states that Board Diversity has a positive and significant influence on Firm Value.

The results of research conducted by [19], which states that Intellectual Capital has a positive and significant influence on firm value. Research conducted by [7], which states that Intellectual Capital has a positive and significant influence on firm value. Research conducted by [3], which states that Intellectual Capital has a positive and significant influence on firm value. The purpose of this study was to determine and analyze the effect of board diversity on profitability, to determine the

effect of intellectual capital on profitability, to determine the effect of board diversity on firm value, to determine the effect of intellectual capital on firm value, to determine the effect of profitability on firm value, to determine the effect of board diversity on firm value through profitability as an intervening variable, to determine the effect of intellectual capital on firm value through profitability as an intervening variable.

RESEARCH METHODS

The sample used in this company after the purposive sampling method was carried out, namely as many as 33 manufacturing companies listed on the Indonesia Stock Exchange in 2016-2020.

Path analysis technique describes the correlation between panel data regression and the variable to be measured.

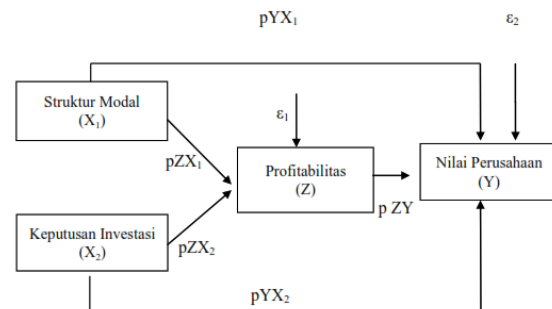
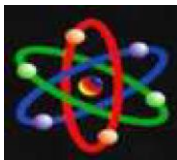


Figure 1
Path Chart

RESULTS AND DISCUSSION

Descriptive statistics are used to analyze data by describing or describing the data that has been collected as it is without the intention of making generally accepted conclusions or generalizations. To provide an overview of the following





descriptive analysis will be explained in table 2 as follows:

	Descriptive Statistics				
	N	Minimum	Maximum	Mean	Std. Deviation
PBV	165	.01	4.75	1.3668	.98132
BD	165	.00	.60	1.454	.18409
MI	165	.77	7.39	2.3724	1.06449
ROE	165	.18	5.56	2.4334	1.11871
Valid N (listwise)	165				

Table 1. Number of Samples (n)

Table 1 explains that the number of samples (n) is 165 out of 33 samples. Board diversity variable has a mean value of 0.145 with a standard deviation of 0.184. The minimum board diversity that occurs is 0.00, the maximum value is 0.60 or 60%. Intellectual capital has a mean value of 2.372 with a standard deviation of 1.064. The minimum intellectual capital value is 0.77 while the maximum intellectual capital value is 7.390. Firm value as measured by PBV, has a mean value of 1.367, with a standard deviation of 0.981. the minimum value of the firm value is 0.01 while the maximum value of the firm value is 4.75. Profitability as measured by ROE has a mean value of 2.433 and a standard deviation of 1.119, the minimum value of profitability is 0.18 while the maximum value of profitability is 5.56.

Normality Test Results

The results of the normality test to see whether the data is normally distributed or not, can be seen from the Kolmogorov-Smirnov One-Sample Test. If the value of Asymp.sig.(2-tailed) > 0.05, the residual data is normally distributed, and vice versa. The results of the normality test can be seen in table 3 below:

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		165
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	.05107783
Most Extreme Differences	Absolute	.062
	Positive	.062
	Negative	-.052
Test Statistic		.062
Asymp. Sig. (2-tailed)		.200 ^{c,d}

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.
- d. This is a lower bound of the true significance.

Table 2. Results Of The Kolmogorov-Smirnov

Based on the results of the Kolmogorov-Smirnov one-sample normality test in table 3 above, it can be seen that the probability value or Asymp.Sig.(2-tailed) is 0.200 > 0.05 which means that the research data is normally distributed.

Multiple Linear Regression Analysis Results

Path analysis of model 1 was conducted to see the direct effect of the independent variables: Board Diversity (X1) and Intellectual Capital (X2) on Profitability (Z) as intervening variables. The results of the path analysis model 1 can be seen in the table below.

Persamaan	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.474	.076		19.283	.000
BD	.016	.161	.057	.322	.471
MI	.110	.028	.027	.744	.031

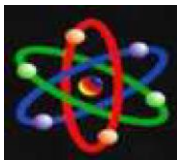
a. Dependent Variable: ROE
 Sumber: Output Spss25 dan data sekunder (diolah), 2022

Table 3. Selected Estimation Model

Based on the selected estimation model, the panel data regression model equation is obtained as follows:

$$Z = 0.016 X1 + 0.110 X2 + e$$





1. The coefficient value of 1 is 0.016, which means that if the board diversity in the *i* and *t* observations increases by one (1) unit, then profitability has increased by 0.016 assuming the intellectual capital variable is ignored.

2. The coefficient value of 2 is 0.110, which means that if the intellectual capital in the *i* and *t* observations increases by one (1) unit, then the profitability decreases by 0.110 with the assumption that the board diversity variable is ignored.

Persamaan		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.462	.128		11.468	.000
	BD	-.084	.207	-.031	-.407	.685
	MI	.152	.076	.154	2.006	.046
	ROE	.385	.155	.190	2.481	.014

a. Dependent Variable: PBV

Sumber: Output Spss 25 dan data sekunder (diolah), 2022

Table 4. Selected Estimation Model

Based on the selected estimation model, the panel data regression model equation is obtained as follows:

$$Y = -0.084 X_1 + 0.152 X_2 + 0.385 Z + e$$

1. The value of the coefficient 1 is -0.084, meaning that if the board diversity in the *i* and *t* observations increases by one (1) unit, then the firm value decreases by 0.084 assuming the intellectual capital and profitability variables are ignored.

2. The coefficient value of 2 is 0.152, meaning that if intellectual capital in the *i* and *t* observations increases by one (1) unit, then the firm value increases by 0.152 with the assumption that the board diversity and profitability variables are ignored.

3. The coefficient value of 3 is 0.385, meaning that if the profitability in the *i* and *t* observations increases by one (1) unit, then the firm value increases by 0.385

assuming board diversity and intellectual capital variables are ignored.

Partial Test Results (t Test)

The *t* test is intended to test the significant effect of the independent and dependent variables partially. Where this test compares the significant probability with alpha 0.05 with the degrees of freedom model I (df) $n-k$ ie $165-2 = 163$ and the degrees of freedom model II (df) $n-k-1$ are $165-3 = 162$, so the results obtained for it can be seen that *t* is 1.974. From testing on the variables of leverage, liquidity and profitability as intervening variables to dividend policy.

1. Effect of Board Diversity on Profitability as an intervening variable.

From the table above, it is known that *t*-count < *t*-table ($0.322 < 1.974$) with a significant level ($0.417 > 0.05$), meaning that partially there is no significant effect between board diversity on profitability. Thus H_0 is accepted and H_a is rejected.

H_0 = There is no significant effect between board diversity on profitability.

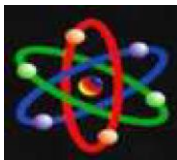
H_1 = There is a significant effect between board diversity on profitability.

2. Effect of Intellectual Capital on Profitability as an intervening variable.

From the table above, it is known that *t*-count < *t*-table ($0.031 < 1.974$) with a significant level ($0.031 < 0.05$), meaning that partially there is a significant influence between intellectual capital on profitability. Thus H_0 is rejected and H_a is accepted.

H_0 = There is no significant effect of intellectual capital on profitability.





H_2 = There is a significant influence between intellectual capital on profitability.

3. Effect of Board Diversity on firm value.

From the table above, it is known that t-count < t-table (-0.407 < 1.974) with a significant level (0.685 > 0.05), meaning that partially there is no significant effect between board diversity on firm value. Thus H_0 is accepted and H_a is rejected.

H_0 = There is no significant effect between board diversity on firm value.

H_4 = There is a significant effect between board diversity on firm value.

4. The Influence of Intellectual Capital on Firm Value.

From the table above, it is known that t arithmetic > t table (2.006 > 1.974) with a significant level (0.046 < 0.05), meaning that there is a partial significant influence between intellectual capital on firm value. H_0 is rejected and H_a is accepted.

H_0 = There is no significant effect of intellectual capital on firm value.

H_5 = There is a significant influence between intellectual capital on firm value.

5. Effect of Profitability on Firm Value.

From the table above, it is known that t count > t table (2.481 > 1.974) with a significant level (0.014 < 0.05), meaning that in partial there is a significant influence between profitability and firm value. H_0 is rejected and H_a is accepted.

H_0 = There is no significant effect of profitability on firm value.

H_7 = There is a significant effect between profitability on firm value

Coefficient of Determination Test Results (Test R2)

Board Diversity (X1) and Intellectual Capital (X2) variables on Profitability (Z)

Model Summary				
Persamaan	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.062 ^a	.114	.018	.37987

a. Predictors: (Constant), MI, BD

Source: SPSS 25 and processed secondary data

Table 5. Coefficient of Determination Test Results (Test R2)

Based on table 7 above, the number of Adjusted R2 (R square) in model I is 0.114 or 11.4%, this shows that the percentage of contribution of model I independent variables Board Diversity (X1) and Intellectual Capital (X2) to Profitability (Z) of 11.4%, while the remaining 88.6% is influenced by other variables not examined.

Model Summary				
Persamaan	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.243 ^a	.159	.142	.65926

a. Predictors: (Constant), ROE, MI, BD

Source: SPSS 25 and processed primary data

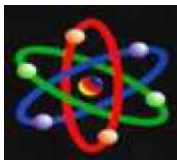
Table 6. Number Of Adjusted R2 (R Square)

Based on table 8 above, the number of Adjusted R2 (R square) in model II is 0.159 or 15.9%. This shows that the percentage contribution of the model II independent variables Board Diversity (X1) and Intellectual Capital (X2) and Profitability (Z) to Firm Value (Y) is 15.9%, while the remaining 84.1% is influenced by other variables not examined.

Path Analysis Results

Path analysis is an extension of panel data regression, or path analysis is the use of panel data regression analysis to





estimate causality between variables (causal models) that have been determined previously based on theory. From the output, it can be seen the path diagram as follows:

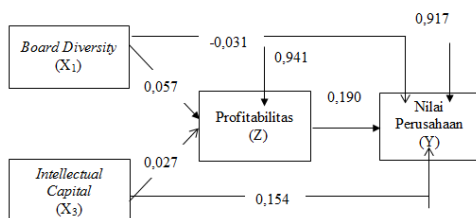


Figure 2. Path Chart

Based on the path diagram in Figure 2 above, the effect of Board Diversity (X1) on Profitability (Z) is 0.057. The influence of Intellectual Capital (X2) on Profitability (Z) is 0.027. The effect of Board Diversity (X1) on Firm Value (Y) is -0.031. The influence of Intellectual Capital (X2) on Firm Value (Y) is 0.154. Effect of Profitability (Z) on Firm Value (Y) of 0.190.

Description	(direct effect)	(indirect effect)	Total effect
The Effect of Board Diversity on Firm Value through Profitability	-0,031	0,01083 (0,057 x 0,190)	-0,0127

Source: SPSS 25 and processed secondary data

Figure 3. Direct Effect Value

Based on the findings of the comparison above, it can be analyzed the value of the indirect effect of board diversity on firm value through profitability. If board diversity directly affects the value of the company, the estimated coefficient value obtained is -0.031. Meanwhile, if through indirect influence or the influence of board diversity on company value through profitability, the additional coefficient estimate value obtained is 0.01083. Thus

the total effect of this hypothesis is -0.0127, namely the direct effect of -0.031 plus the indirect effect through communication of 0.01083 or $-0.031 + 0.01083 = -0.0127$. So it can be concluded that the value of the indirect effect is greater than the direct effect or $0.01083 > -0.031$. This means that the indirect relationship is greater than the direct relationship, which means that profitability is able to mediate the relationship between board diversity and firm value.

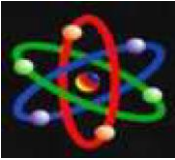
Description	direct effect	indirect effect	Total effect
The Influence of Intellectual Capital on Firm Value through Profitability	0,154	0,00513 (0,027 x 0,190)	0,15913

Source: SPSS 25 and processed secondary data

Figure 4. Findings Of The Comparison

Based on the findings of the comparison above, it can be analyzed the value of the indirect effect of intellectual capital on firm value through profitability. If intellectual capital directly affects firm value, then the estimated coefficient value obtained is 0.154, whereas if through indirect influence or intellectual capital influence on firm value through profitability, the additional estimate coefficient value obtained is 0.00513. Thus the total effect of this hypothesis is 0.15913, namely the direct effect of 0.154 plus the indirect effect through probability of 0.00513 or $0.154 + 0.00513 = 0.15913$. So it can be concluded that the value of the indirect effect is smaller than the value of the direct effect or $0.00513 < 0.154$. This means that the indirect relationship is smaller than the direct relationship, which means that profitability is not able to mediate the relationship between intellectual capital and firm value.





CONCLUSION

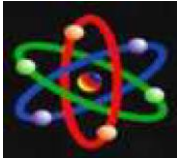
After conducting a simple study for five years (2016-2020), the results of the description of the effect of board diversity and intellectual capital on firm value with profitability as the intervening variable, can be concluded as follows:

1. Board diversity has no significant effect on profitability as an intervening variable in Manufacturing companies on the Indonesia Stock Exchange (IDX) in 2016-2020.
2. Intellectual capital has no effect on profitability as an intervening variable in Manufacturing companies on the Indonesia Stock Exchange (IDX) in 2016-2020.
3. Board diversity has no significant effect on firm value in Manufacturing companies on the Indonesia Stock Exchange (IDX) in 2016-2020.
4. Intellectual capital has an effect on firm value in Manufacturing companies on the Indonesia Stock Exchange (IDX) in 2016-2020.
5. Profitability has an effect on firm value in Manufacturing companies on the Indonesia Stock Exchange (IDX) in 2016-2020.
6. Profitability is able to mediate the relationship between board diversity on firm value in Manufacturing companies on the Indonesia Stock Exchange (IDX) in 2016-2020, this is obtained from the indirect effect which is greater than the direct influence with a significant level ($0.01083 > -0.031$).
7. Profitability is not able to mediate the relationship between intellectual capital and firm value in Manufacturing companies on the Indonesia Stock Exchange (IDX) in 2016-2020, this is obtained from the indirect effect which is smaller than the direct effect with a significant level ($0.00513 > 0.154$).

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