

# Ownership Factor Towards Performance Of Intellectual Capital In Mining Industry

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**Abstract.** This study aims to prove empirically the effect of managerial, institutional, foreign and government ownership on performance of intellectual capital as dependent variable. The sample in this study was mining sector companies listed on the Indonesia Stock Exchange for 2016-2018 periods. This study uses purposive sampling method. Data analysis technique used is multiple linear regression analysis. This study indicates that managerial ownership, institutional ownership, and foreign ownership have a positive effect on the performance of intellectual capital, while government ownership does not affect the performance of intellectual capital.

**Keywords:** managerial ownership, institutional ownership, foreign ownership, government ownership and intellectual capital performance.

## 1. Introduction

Business competition is getting tougher in this century, forcing companies to change the way they do business by innovating in technology. The company must immediately change its strategy from a labor to a knowledge-based business so that the company can continue to survive [10]. The prosperity of a company will depend on the transformation of the creation and capitalization of knowledge itself, along with changes in science-based economics with the application of knowledge management, [21]. To increase attention to intellectual capital, a new economic development that is controlled by information and knowledge is needed [9].

The use of intellectual capital as a tool to determine the value of a company is one of the concerns of many academics and practitioners [8]. The challenge that deserves to be developed is intellectual capital research. Therefore, some authors suggest not to establish a management and reporting system that can increase the lack of relevance of the system because the system cannot provide important information to executives for management processes based on knowledge and intangible sources [1].

According to [16], intellectual capital performance is the intellectual ability of a company that shows a coherent picture of the use of physical capital and intellectual capital. According to [7], to create company value, the ability of physical capital and intellectual capital is important because both capitals are needed.

The relationship between principal and agent is explained in agency theory. An agency relationship arises when one party is referred to as the principal contracting another party known as the agent who is responsible for some services for its interests which involve how to delegate their decision authority to the agent [13].

Managerial ownership is part of shareholders from management who are involved in the process of the company's decision-making [3]. Managers will be more productive to increase firm value when managerial ownership of managers is high so that contract costs and supervision costs are low. When the more social information the manager will disclose, the greater the manager's ownership in the company.

Research of [14] shows managerial ownership has positive effect on intellectual capital performance, but this study contrasts to the research of [11] ownership of manager negatively effect and insignificant on intellectual capital performance. Meanwhile, [12] research shows managerial ownership does not affect on added value to intellectual capital performance.

One of the factors that can affect company performance is institutional ownership. To encourage increased supervision so that it is more optimal, institutional ownership is needed in a company, as share ownership is a source strength that can be used to support or vice versa in management performance.

Research of [20] shows institutional ownership has positive effect on intellectual capital performance, while research by [14] shows institutional ownership does not affect on intellectual capital performance, meanwhile, other research also showed that institutional ownership has negative effect on intellectual capital performance.

Foreign ownership is the proportion of shares owned by foreign investor. Foreign investors are those who are considered concerned about the existence of foreign investors in a company that can improve company performance so that companies can implement a good corporate governance system [20].

The research by [16] shows foreign ownership has positive effect on intellectual capital performance. While research by [15] shows that foreign ownership does not affect intellectual capital performance.

Research [18] state that government ownership has positive effect on intellectual capital performance. Research by [12] shows government ownership has negative affect on value plus the performance of intellectual capital [22] also show that government ownership does not affect intellectual capital performance.

## 2. Methodology

Quantitative research is type of this research. the data used are secondary data mining sector financial statements listed on the Indonesia stock exchange derived from the 2016-2018. The population are go public manufacturing entities and are listed on the Indonesia Stock Exchange (IDX). The samples in this study were companies in the mining sector in 2016-2018. Purposive sampling method is used as sampling technique in this study. The Operational definitions of variables and measurement of variables are :

- a. Managerial Ownership (X1)  
According to [20], managerial ownership is a proportion of share ownership owned by the executive manager, this executive manager includes the directors, and the board of commissioners.
- b. Institutional ownership (X2)  
Institutional ownership as a condition in which an institution in the form of a company, an insurance company, an investment company. This variable is measured by proportion in percent of share owned institutionally at the end of the year.
- c. Foreign ownership (X3)  
Foreign ownership is the ownership of company shares owned by foreign investors including foreign business entities. Measurement of foreign ownership refers to the research of [20].
- d. Government Ownership (X4)  
Government ownership is the number of shares owned by the government of all managed capital [5].
- e. Value Added Intellectual Capital (VAIC)  
Intellectual capital performance uses the ratio of Value Added Intellectual Capital (VAIC). VAIC indicates an organization's intellectual capital capabilities which can be considered as BPI (Business performance indicators).  
VAIC is the sum of the 3 components namely human capital efficiency, efficiency, capital employed efficiency [16].

$$\text{Managerial Ownership} = \frac{\text{managers shares}}{\text{Numbers of shares outstanding}} \times 100\%$$

The advantage of VAIC is data needed is relatively easy to obtain from various sources and types of companies.

## 3. Results and Discussion

Description of objective provide an overview of research variables. The results of the descriptive analysis are as follows:

**Table 1.** Results of Descriptive Statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
MNJR	126	0,000	0,990	0,07012	0,169703
INST	126	0,000	0,970	0,32272	0,274034
ASNG	126	0,000	0,970	0,18064	0,246481
PMRT	126	0,000	0,650	0,02580	0,127401
VAIC	126	-140961,946	811,593	-1095,70038	12560,175330
Valid N (listwise)	126				

Source: Secondary data processed in 2019

Table above shows descriptive statistics for independent and dependent variables of 126 samples.

### 3.1 Classical Assumption Test

From test results carried out, it can be seen that the data used have passed the classic assumption test. The classic assumption test in this study can be explained as follows:

Normality test used Kolmogorov-Smirnov which is one of Non-Parametric Statistical Test (K-S Test). K-S test is done by looking at the significant value, with a level of significance is 0.05 [16]. Normality test show a significance value of 0.053 or  $0.053 > 0.05$ . (Source: SPSS data for 2019).

Multicollinearity test in regression model can be measured from the Tolerance Value and Variance Inflation Factor (VIF). The general limits used to predict the presence of multicollinearity are tolerance values  $> 0.10$  and  $VIF < 10.00$  [6]. In this research shows that tolerance  $> 0.10$  and  $VIF < 10.00$ . (Source: SPSS data for 2019).

Based on the results of Heteroscedasticity test obtained  $X^2$  calculated value of 17.889 of  $n \times R^2$  ( $109 \times 0.158$ ) and  $X^2$  table value of 22.336 of df (0.05.13). Because the calculated  $X^2$  value of  $17,222 < X^2$  of table 22,362 then the regression model does not occur heteroscedasticity symptoms (Source: SPSS data for 2019).

From the results of tests conducted, it can be explained that data used have passed the Classic Assumption test.

### 3.2 Multiple Linear Regression Analysis.

The following is a table of Multiple Linear Regression Test Results.

**Table 2.** Results of Multiple Linear Regression Test

Coefficients <sup>a</sup>						
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	3,021	1,317		2,294	0,024
	LAG MNJR	8,833	5,039	0,170	1,753	0,083
	LAG INST	10,103	3,241	0,349	3,117	0,002
	LAG ASNG	14,527	3,526	0,453	4,120	0,000
	LAG PMRT	-0,045	5,239	-0,001	-,009	0,993

a. Dependent Variable: VAIC  
Source: Secondary data processed in 2019

$$VAIC = 3,021 + 8,833 \text{ MNJR} + 10,103 \text{ INST} + 14,527 \text{ ASNG} + -0,045 \text{ PMRT}$$

**a. Constants ( $\alpha$ ) = 3,021**

The constant value in the regression equation is 3.021. that is, if managerial, institutional, foreign and government ownership variables are 0, then the performance of intellectual capital is 3.021.

**b. Managerial ownership = 8,833**

The regression coefficient value of managerial ownership variable is 8.833 meaning that, if there is an increase in managerial ownership variable by one percent, then the performance of intellectual capital will increase by 8.833 with the assumption that the other variable is zero.

**c. Institutional ownership = 12,702**

Regression coefficient value of institutional ownership variable is 12.702 meaning that if there is an increase in institutional ownership variable by one percent, the performance of intellectual capital will increase by 12.702 assuming the other variables are zero.

**d. Foreign ownership = 16,881**

The regression coefficient value of foreign ownership variable is 16,881 meaning that if there is an increase in the foreign ownership variable by one percent, the performance of intellectual capital will increase by 16,881 assuming the other variables are zero.

**e. Government ownership = -0,045**

The number of the government ownership variable is equal to -0.045 meaning, if there is an increase in government ownership variable by one percent, the performance of intellectual capital is decrease by -0.045 assuming the other variables are zero.

### 3.3 Hypothesis Testing

**Table 3.** Results of Determination Coefficient

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,399 <sup>a</sup>	0,159	0,127	6,59071

Source: Secondary data processed in 2019

Based on following table 3, it's known that the Adjusted R<sup>2</sup> Square is 0.129. This value indicates that the independent variable can explain the variation of the dependent variable by 12% and the remaining 88% is explained by other variables exclude the regression model.

To test the suitability or eligibility on the model researcher use F statistical test aims

**Table 4.** F Statistical Test Result

ANOVA <sup>a</sup>						
	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	847,022	4	211,756		0,001
	Residual	4474,061	103	43,437		
	Total	5321,084	107			

Source: Secondary data processed in 2019

How far the influence of one variable individually explain the variation of the dependent variable, researcher use t statistical test.

**Table 5.** t Statistical Test Result

Coefficients <sup>a</sup>						
	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,021	1,317		2,294	0,024
	LAG MNJR	8,833	5,039	0,170	1,753	0,083
	LAG INST	10,103	3,241	0,349	3,117	0,002
	LAG ASNG	14,527	3,526	0,453	4,120	0,000
	LAG PMRT	-0,045	5,239	-0,001	-,009	0,993

a. Dependent Variable: VAIC

Source: Secondary data processed in 2019

## 4. Discussion

### 4.1 First Hypothesis Result

The results of partial test calculations on managerial ownership variables, the value of tcount 1.753 with a significance value of 0.083. Because 0.083 is more than 0.10 and the tcount is 1.753 > ttable 1.65895. Then it indicates there is no influence of managerial ownership on the performance of intellectual capital. Thus, first hypothesis is accepted. To reduce agency conflicts that arise in companies, managerial ownership is needed because managerial parties have stock action as either the principal or the agent. This research is in line with agency theory relating to managerial ownership of intellectual capital performance which explains that agency problems can occur due to the asymmetry of information between principals and agents. when managers have more internal company information and are relatively quick to obtain information compared to external parties, such as investors and creditors, information asymmetry appears [13]. Results of this study are in line with [14].

### 4.2 Second Hypothesis Result

The results of the partial test calculation on the institutional ownership variable, the value of tcount 3.117 with a significance value of 0.002. Because 0.002 less than 0.10 and the tcount is 3.117 > ttable 1.65895. Thus,

the second hypothesis is accepted. This study is in line with agency theory relating to institutional ownership of intellectual capital performance. By increasing institutional share ownership, this can reduce conflicts of interest between principals and agents. Based on agency theory, conflicts of interest between principals and agents through a control mechanism by institutional investors aim to direct, control, and supervise managers as agents who act in the interests of shareholders. Institutional investors prefer policies to increase the company's long-term profits, one of which is by managing intellectual capital. To produce high intellectual capital performance, optimal intellectual capital management is needed [20]. Research in line with research conducted by [17], [20] which state institutional ownership has positive affect on intellectual capital performance.

### **4.3 Third Hypothesis Result**

The results of the partial test calculation on the foreign ownership variable, the value of  $t_{count}$  is 4.120 with a significance value of 0.000. Because 0.000 is less than 0.10 and the value of  $t_{count}$   $4.120 > t_{table}$  1.65895. Then it indicates a positive influence between the variables of foreign ownership toward the performance of intellectual capital. So that the third hypothesis accepted. The results of study supports agency theory regarding the role of foreign investors as foreign ownership of intellectual capital performance. Management can improve performance of intellectual capital. The efficiency of management and utilization of intellectual capital will increase when the company has the full support and optimal supervision of foreign shareholders. This finding is in line with research by [2], [20] which show that foreign ownership has positive affect on performance of intellectual capital.

The results of the study are in line with agency theory related to foreign ownership of the performance of intellectual capital with the presence of foreign investors. Management can improve the performance of intellectual capital. The company has full support and optimal supervision from foreign shareholders so the efficiency of management and utilization of intellectual capital will increase. This research is in line with research conducted by [2], [20] which state that foreign ownership has positive effect on the performance of intellectual capital.

### **4.4 Fourth Hypothesis Result**

The results of the calculation of partial tests on government ownership variables, the value of  $t_{count}$  is -0.009 with a significance value of 0.993. Because 0.993 is more than 0.10 and the  $t_{count}$   $0.009 < t_{table}$  1.65895. Then it indicates the absence of influence of government ownership variables on the performance of intellectual capital. Thus, the fourth hypothesis is rejected. Based on the company's sample data, government ownership does not affect the performance of intellectual capital because not all mining companies have a proportion of government ownership. Of the 99 mining company samples that were sampled, only 3 companies (2%) were owned by the government. So that government ownership cannot affect the performance of intellectual capital. The results of research according with the research of [22] and [19] show that government ownership has no affect on the performance of intellectual capital.

## **5. Conclusion**

The finding of this study can be concluded that managerial, institutional, and foreign ownership have a positive effect on the performance of intellectual capital in mining sector companies listed on the Indonesia Stock Exchange for 2016-2018 periods. Meanwhile, government ownership does not affect the performance intellectual capital.

## **6. Suggestion**

For further research, researcher can adding other variables that can affect the performance of intellectual capital such as family ownership and is expected to examine other companies in the sector such as manufacturing companies.

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