

# The Influence of Intellectual Capital (IC), Green Accounting, Foreign Investment, and Company Size on Profitability at Company registered Mines On the Indonesia Stock Exchange

Nuri Shofa Allina<sup>1</sup>, Muhammad Abdul Aris<sup>2</sup>

<sup>1</sup>Faculty of Economics and Business, University of Muhammadiyah Surakarta, Indonesia

<sup>2</sup>Faculty of Economics and Business, University of Muhammadiyah Surakarta, Indonesia

**Abstract:** This study aims to analyze the effect of intellectual capital, green accounting, foreign investment, and company size on the profitability of mining companies listed on the Indonesia Stock Exchange 2018-2020. This study uses a quantitative research approach, using secondary data obtained from the IDX's official website, namely [www.idx.ac.id](http://www.idx.ac.id) and the company's official website. Sampling in this study using purposive sampling method. From this method obtained 36 samples from 14 companies that meet the criteria. The analytical method used is multiple linear regression analysis using SPSS 21 software. The results show that intellectual capital, green accounting, and foreign investment have no effect on profitability, while firm size has an effect on profitability.

**Keywords:** Profitability, Intellectual Capital, Green Accounting, Foreign Investment, Company Size

## I. INTRODUCTION

The current era of globalization provides real changes in the industrial world. Industrial developments have contributed significantly to the development of other sectors. The rapid development of industries throughout the world has led to very tight competition, this which requires companies to achieve the company's targets to be achieved, including mining companies. One of the targets of a company is to obtain maximum profit or profit. The company's success in managing resources and facing business competition competitively can be seen from its profitability ratios.

The role of profitability itself is very important for companies and investors. Investors can observe and analyze the company's development in managing its resources as well as the profits obtained by a company in a competitive business competition. Companies with a high level of profitability will attract investors to invest, because investors will benefit from their investments in the company (Ningtyas & Triyanto, 2019).

As technology develops, it causes companies that initially run a labor-based business to turn into a knowledge-based business so that the prosperity of a company which is reflected in profitability will depend on a creation of transformation and capitalization of the knowledge itself (Wijayani, 2017). For a company that is oriented towards long-term growth, Intellectual Capital is known as an economic value creator. Besides, in an effort to increase profitability, the company will continue to influence the use of natural resources (Putri et al., 2019). Companies in carrying out their activities use available resources to achieve their goals, in achieving these goals the company always interacts with the environment, therefore the company must pay attention to waste management so that environmental sustainability is maintained.

Another factor that can affect the profitability of a company is the ratio of foreign investment. Foreign ownership is one of the factors that can affect the company's profitability. As the company's profitability increases, investors will be interested in investing in the company. Based on data from the Indonesian Central Securities Depository (KSEI), foreign share ownership is more dominant than local share ownership. Data as of the end of 2020 shows the value of foreign stock assets reached 44.15%.

In research conducted by (Kusuma, 2018) stated that the size of the company is one of the factors that are often considered in obtaining external funding. Generally the size of the company is measured by the number of assets that

describe the size of a company. Companies with large sizes will find it easier to get an agreement, especially in the financial sector to finance the company's operational activities. Usually the company will find it easier to obtain external funds in the form of large amounts of debt. Companies that are relatively large will tend to use large external funds to increase company productivity so that company profitability will also increase. However, the large size of the company does not mean that it can be a guarantee that the company will have good performance.

This research refers to research(Widichesty & Arief, 2021)about the influence of intellectual capital, foreign ownership, and capital structure on profitability. With the addition of green accounting independent variables and company size. Based on the described background, the title of this research is "The Influence of Intellectual Capital (IC), Green Accounting, Foreign Investment, and Company Size on Profitability in Mining Companies Listed on the Indonesia Stock Exchange".

## **II. HEADINGS**

### **Resource Based Theory**

*Resource Based Theory*(RBT) analyzes and interprets organizational resources to understand how organizations achieve sustainable competitive advantage. According to Barney in(Wijayani, 2017)*resource based theory*is a resource in the company that is usually used as a competitive advantage and can direct the company to achieve better long-term performance.

### **Stakeholder Theory**

Stakeholder theory states that all stakeholders have the right to obtain information about company activities that can influence their decision making. Stakeholders can choose not to play a direct role in the company or in the use of company information(Sulistiawati & Dirgantari, 2017).

### **Agency Theory**

*Agency theory*or agency theory explains the separation between ownership and control of the company which can cause conflict according to Ritha (2019) in her research(Widichesty & Arief, 2021). The separation between the ownership functions based on agency theory causes a conflict of interest to occur where there is a conflict of interest between shareholders and management.

### **Profitability**

According to Kasmir in(Agustia, Yofi Prima & Suryani, 2018)Profitability ratio is a ratio to measure the company's ability to seek profit or profit. If a company has high profits, it means that its performance is good, on the other hand, if the profits of a company are low, then its performance is bad or less effective.

### **Intellectual Capital (IC)**

According to Nahapiet and Goshal in(Wijayani, 2017)Intellectual Capital (IC) is an invisible asset and is a combination of human, process and customer factors that provide a competitive advantage for the company. Intellectual capital can be used as a resource in achieving the company's organizational goals by increasing the productivity of sustainable corporate learning.

### **Green Accounting**

*Green accounting*or environmental accounting is defined as the prevention, reduction, and or avoidance of impacts on the environment, starting from the remediation of events that cause disasters from various activities by Ikhsan in(Sulistiawati & Dirgantari, 2017).

### **Foreign investment**

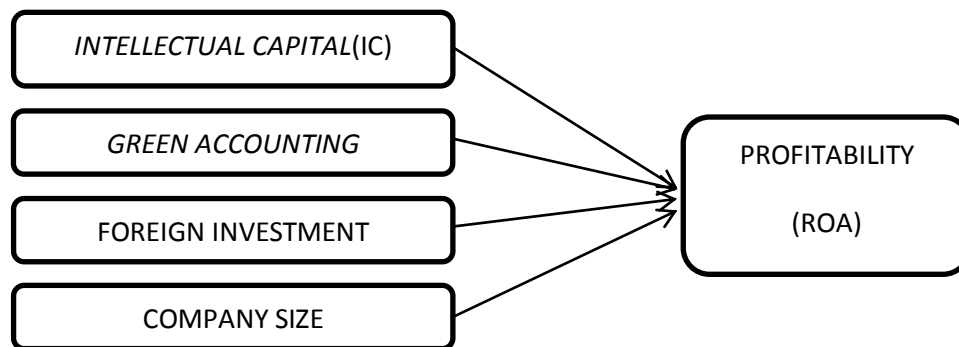
Based on the Law of the Republic of Indonesia No. 25 of 2007 concerning Investment Article 1 paragraph 3, it is stated that foreign investment is an investment activity to conduct business in the territory of the Republic of Indonesia which is carried out by foreign investors, both using fully foreign capital and joint ventures with domestic investors.

### **Company Size**

Company size is a scale where the size of a company can be classified in various ways, such as total assets, log size, sales, and market capitalization by Riyanto in(Agustia, Yofi Prima; Suryani, 2018)

The framework of thinking and developing hypotheses in this study are as follows:

- H<sub>1</sub>: Intellectual Capital has an effect on Profitability.  
H<sub>2</sub>: Green Accounting has an effect on Profitability  
H<sub>3</sub>: Foreign Investment has an effect on Profitability.  
H<sub>4</sub>: CompanySizehas an effect onProfitability.



### III. INDENTATIONS AND EQUATIONS

#### Types of research

This study uses a quantitative research approach that focuses on testing hypotheses, measuring the variables being studied, and will produce conclusions.

#### Population, Sample and Sampling Criteria

The population is a generalization area consisting of objects or subjects with certain qualities and characteristics determined by the researcher to be studied and then conclusions are drawn (Sugiono, 2016). The population used in this study are all mining companies listed on the Indonesia Stock Exchange in 2018-2020. While the sample is part of the research population itself(Sugiono, 2016). The sampling technique used in this study is purposive sampling with the following criteria:

1. Mining companies listed on the IDX in the 2018-2020 period.
2. Companies that issue financial reports (annual reports) in the 2018-2020 period.
3. Companies that use rupiah currency in their financial statements.
4. Has all the data used to calculate the variables that are the focus of this research, namely: intellectual capital, green accounting, foreign investment, company size, and profitability.

#### Data and Data Sources

Data is an information or a collection of facts obtained through observation or searching from certain sources that can be used as a reference in a study. The data used in this study is secondary data, where the data is obtained indirectly in the form of evidence of financial reporting through intermediary media. Sources of data obtained from the official website of the Indonesia Stock Exchange (IDX), namely ([www.idx.co.id](http://www.idx.co.id)) and the company's official website. The data is the annual report data of mining companies listed on the IDX in the 2018-2020 period.

#### Data analysis method

The data analysis model in this research is descriptive statistical analysis, classical assumption test, multiple linear regression analysis and hypothesis testing. Using SPSS 21 .based on multiple regression analysis, the regression model in this study is expressed in the following equation:

$$Y = \alpha + \beta_1 VAIC + \beta_2 GA + \beta_3 PMA + \beta_4 SIZE + \epsilon$$

Information:

Y : Profitability

- $\alpha$  : alpha (constant)
- $1, \beta_2, \beta_3, \beta_4$  : Beta (regression coefficient)
- VAIC : *Intellectual Capital*
- GA : *Green Accounting*
- PMA : *Foreign Investment*
- SIZE : *Company Size*
- $\epsilon$  : Level error in research (Error Term)

#### IV. FIGURES AND TABLES

##### Descriptive statistics

**Table 4.1 Descriptive Statistical Analysis**

|                    | N  | Minimum | Maximum | mean     | Std. Deviation |
|--------------------|----|---------|---------|----------|----------------|
| IC                 | 36 | -28,966 | 203.070 | 20.75194 | 45.084774      |
| GA                 | 36 | ,200    | 1,000   | ,73889   | ,286135        |
| PMA                | 36 | ,000    | ,477    | ,12314   | ,130147        |
| UP                 | 36 | 24,995  | 31,137  | 28,43172 | 1.652387       |
| ROA                | 36 | -,579   | ,212    | -,00519  | ,117871        |
| Valid N (listwise) | 36 |         |         |          |                |

Source: Secondary data processed by the author, 2022

The Intellectual Capital (IC) variable has 36 samples (N), a minimum value of -28,966 and a maximum of 203,070 with an average of 20,752 and a standard deviation of 45.085. The Green Accounting (GA) variable has 36 samples (N), a minimum value of 0.200 and a maximum of 1,000 with an average of 0.739 and a standard deviation of 0.286. The Foreign Investment Variable (PMA) has 36 samples (N), a minimum value of 0.000 and a maximum of 0.477 with an average of 0.123 and a standard deviation of 0.130. Firm Size Variable (UP) has 36 samples (N), the minimum value is 24,995 and the maximum is 31,137 with an average of 28,432 and a standard deviation of 1,652. Profitability variable (ROA) has 36 samples (N), minimum value is -0.

##### Classic assumption test

##### 1. Normality test

**Table 4.2 Normality Test Results**

|                                  |                | Unstandardized Residual |
|----------------------------------|----------------|-------------------------|
| N                                |                | 36                      |
| Normal Parameters <sup>a,b</sup> | mean           | .0000000                |
|                                  | Std. Deviation | .09879700               |

|                          |          |       |
|--------------------------|----------|-------|
| Most Extreme Differences | Absolute | .127  |
|                          | Positive | .093  |
|                          | negative | -.127 |
| Kolmogorov-Smirnov Z     |          | .765  |
| asympt. Sig. (2-tailed)  |          | .602  |

Source: Secondary data processed by the author, 2022

Based on the table above, it shows that the p-value is 0.602, so it can be interpreted that the p-value is  $0.602 > 0.05$ . This shows that the data is normally distributed.

## 2. Multicollinearity Test

**Table 4.3 Multicollinearity Test Results**

| Model        | Collinearity Statistics |       | Information                      |
|--------------|-------------------------|-------|----------------------------------|
|              | Tolerance               | VIF   |                                  |
| 1 (Constant) |                         |       |                                  |
| IC           | 0.896                   | 1.116 | Multicollinearity does not occur |
| GA           | 0.885                   | 1.130 | Multicollinearity does not occur |
| PMA          | 0.964                   | 1.037 | Multicollinearity does not occur |
| UP           | 0.973                   | 1.028 | Multicollinearity does not occur |

Source: Secondary data processed by the author, 2022

Based on the table above, the calculation results show that the Tolerance value of each variable is greater than 0.1, and the VIF value is less than 10. The Tolerance value for the IC variable is 0.896 and the VIF value is 1.116, for the GA variable the Tolerance value is 0.885 and the VIF value is 1.130, while the Tolerance value for the PMA variable is 0.964 and the VIF value is 1.037, then for the UP variable the Tolerance value is 0.973 and VIF value 1.028. From the calculation of the Tolerance and VIF values, it can be concluded that all variables in this regression model do not have multicollinearity.

## 3. Autocorrelation Test

**Table 4.4 Autocorrelation Test Results**

| $D_u < d < 4 \cdot d_u$ | Information                    |
|-------------------------|--------------------------------|
| $1,724 < 1,814 < 2,276$ | No symptoms of autocorrelation |

Source: Secondary data processed by the author, 2022

Based on the table above shows that the value of  $d > d_u$  and  $d < 4 \cdot d_u$ , so it can be concluded that the regression model used does not occur autocorrelation.

## 4. Heteroscedasticity Test

**Table 4.5**Summary of Heteroscedasticity Test Results

| Variable                    | Sig.  | Critical Value | Information             |
|-----------------------------|-------|----------------|-------------------------|
| <i>Intellectual Capital</i> | 0.979 | 0.05           | Heteroscedasticity Free |
| <i>Green Accounting</i>     | 0.107 | 0.05           | Heteroscedasticity Free |
| Foreign investment          | 0.103 | 0.05           | Heteroscedasticity Free |
| Company Size                | 0.154 | 0.05           | Heteroscedasticity Free |

Source: Secondary data processed by the author, 2022

Based on the table above, the significance value is greater than 0.05, so it can be concluded that all variables do not occur heteroscedasticity.

### Multiple Linear Regression Analysis

**Table 4.6**Multiple Linear Regression Analysis Results

| Model        | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig.  |
|--------------|-----------------------------|------------|---------------------------|--------|-------|
|              | B                           | Std. Error | Beta                      |        |       |
| 1 (constant) | -1.061                      | 0.306      |                           | -3,465 | 0.002 |
| IC           | 0.000                       | 0.000      | 0.123                     | 0.775  | 0.444 |
| GA           | 0.019                       | 0.066      | 0.045                     | 0.283  | 0.779 |
| PMA          | 0.072                       | 0.139      | 0.080                     | 0.521  | 0.606 |
| UP           | 0.036                       | 0.011      | 0.506                     | 3,316  | 0.002 |

Source: Secondary data processed by the author, 2022

Based on the table above, the following equation can be arranged:

$$\text{ROA: } -1.061 + 0.000 (\text{IC}) + 0.019 (\text{GA}) + 0.072 (\text{PMA}) + 0.036 (\text{UP}) + \epsilon$$

### Hypothesis Testing and Data Accuracy

#### 1. F Uji test

**Table 4.7**F . Test Results

| Model        | Sum of Squares | Df | Mean Square | F     | Sig.               |
|--------------|----------------|----|-------------|-------|--------------------|
| 1 Regression | 0.145          | 4  | 0.036       | 3,281 | 0.024 <sup>b</sup> |

|          |       |    |       |  |  |
|----------|-------|----|-------|--|--|
| Residual | 0.342 | 31 | 0.011 |  |  |
| Total    | 0.486 | 35 |       |  |  |

Source: Secondary data processed by the author, 2022

Based on the table above, it shows that the significance value is 0.024 which means it is smaller than the 0.10 significance level, so it can be concluded that the independent variables simultaneously affect the dependent variable. It also shows that the regression model used is fit.

## 2. T test (Partial test)

**Table 4.8 Summary of t test results**

| Variable | T     | Sig.  | Information     |
|----------|-------|-------|-----------------|
| IC       | 0.775 | 0.444 | Not significant |
| GA       | 0.283 | 0.779 | Not significant |
| PMA      | 0.521 | 0.606 | Not significant |
| UP       | 3,316 | 0.002 | Significant     |

Source: Secondary data processed by the author, 2022

Based on the table above, it can be explained as follows:

1. IC variable is known that the significance value of 0.444 is greater than 0.05, so it can be concluded that IC has no significant effect on profitability.
2. The GA variable is known that the significance value of 0.779 is greater than 0.05, so it can be concluded that GA has no significant effect on profitability.
3. The PMA variable is known that the significance value of 0.606 is greater than 0.05, so it can be concluded that FDI has no significant effect on profitability.
4. UP variable is known that the significance value of 0.002 is smaller than 0.05, so it can be concluded that UP has a significant effect on profitability.

## 3. Coefficient of Determination Test (R<sup>2</sup>)

**Table 4.9 Coefficient of Determination Results (R<sup>2</sup>)**

| Model | R                  | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|--------------------|----------|-------------------|----------------------------|
| 1     | 0.545 <sup>a</sup> | 0.297    | 0.207             | 0.104978                   |

Source: Secondary data processed by the author, 2022

Based on the table above shows the Adjusted R Square of 0.207. This means that the variables of intellectual capital, green accounting, foreign investment, and company size contribute to profitability by 20.7% while the remaining 79.3% is influenced by other factors or not examined.

## Discussion of Research Result

### 1. The Effect of Intellectual Capital on Profitability

The results showed a significant level that intellectual capital was 0.444 (greater than 0.05), so H<sub>1</sub> was rejected. This means that intellectual capital has no significant effect on profitability. The results show that there is no influence between intellectual capital and profitability, so that high or low intellectual capital does not affect high or low profitability. The results of this study contradict the research Widichesty & Arief, (2021) which states

that intellectual accounting has an effect on profitability

**2. The Effect of Green Accounting on Profitability**

The results showed a significant level that green accounting was 0.779 (greater than 0.05), so  $H_2$  was rejected. This means that green accounting has no significant effect on profitability. The results show that there is no influence between green accounting and profitability, so that high or low green accounting does not affect high or low profitability. The results of this study contradict the research Putri et al., (2019) which states that green accounting has a significant effect on profitability.

**3. The Effect of Foreign Investment on Profitability**

The results showed a significant level that foreign investment was 0.606 (greater than 0.05), so  $H_3$  was rejected. This means that foreign investment has no significant effect on profitability. The results showed that there was no influence between foreign investment and profitability, so that high or low foreign investment did not affect high or low profitability. The results of this study contradict the research of Sari, Rafika, (2020) which states that foreign ownership has an effect on profitability.

**4. The Effect of Firm Size on Profitability**

The results showed a significant level that the size of the company was 0.002 (greater than 0.05), so  $H_4$  was accepted. This means that the size of the company has a significant effect on profitability. The existence of a positive influence indicates that the higher the size of the company, the higher the profitability. Company size is often used as a consideration for financial institutions to provide views to the company. Larger companies will find it easier to get funding. The results of this study are in line with research Kusuma (2018) which states that the size of the company has an effect on profitability.

**V. CONCLUSION**

Based on the result of the research conducted, it can be concluded as follows:

1. Intellectual Capital has no effect on profitability.
2. Green Accounting has no effect on profitability.
3. Foreign Investment has no effect on profitability.
4. Company size has an effect on profitability.

**Limitations and Suggestions**

Based on the results of data analysis, it can be concluded that intellectual capital, green accounting, and foreign investment have no effect, while company size has an effect on profitability. Thus  $H_1$ ,  $H_2$  and  $H_3$  in this study were rejected, while  $H_4$  was accepted.

This research can be said to be still not perfect, because there are still some limitations that can affect the accuracy and consistency of the results. The limitation in question is that the sample studied is only in the mining sector with an observation period of only three years. As suggestions that can be put forward, researchers and further research are expected to add other variables to see what factors can affect profitability, use companies with annual report other than Rupiah, increase the scope of the sample not only in mining companies, and increase the range of observation periods used more than three years, so that the research results obtained are better and closer to perfection.

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