DETERMINANTS OF EARNINGS MANAGEMENT IN BASIC INDUSTRY OF INDONESIA PUBLIC COMPANIES

Mas’ut, Abdi Putra Junjungan Cis, Supar Wasesa
masut@fe.uisu.ac.id; alabdi022@gmail.com; dr.suparwasesa@gmail.com
Universitas Islam Sumatera Utara

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Abstract
This study aims to analyze the influence of Corporate Social Responsibility, Leverage, and Intellectual Capital on Earning Management in Manufacturing Companies in the Basic Industry and Chemical Sub-Sector listed on the Indonesia Stock Exchange. In this study, the amount of the alleged profit manipulation in the company was obtained through annual reports using quantitative methods. The data analysis method to test the hypothesis in this study used multiple linear regression.

The results show that the corporate social responsibility index, debt ratio, and VAIC simultaneously effect earnings Management. Meanwhile, partially, corporate social responsibility index and VAIC have a negative effect on earnings management, while the leverage variable has a significant positive effect on earnings management.

Keywords: Corporate Social Responsibility, Leverage, Intellectual Capital, Earnings management
JEL Classification: M1

Introduction

Earnings information is the part contained in the financial statements that is used as an engineering act of opportunism by management in increasing its profits. Behaviors and actions caused by opportunism practised by management use certain accounting policies, with which management will adjust the position in an up or down position as desired. Management's actions when managing earnings or profits based on their will are known as earnings management (Insani, 2017).

The theory of ownership and earnings management is due to the dissimilarity of interests between management as (the agent) and the owner of the company (principal). This difference in interest arises when the manager as an agent does not often decide that fixed shares are intended to fulfil the good interests of the principal, one of which is maximizing the wealth or welfare of the owner or company owner (principal). This is because managers as agents tend to pursue their interests, so they focus on taking projects that generate high profits in the short term, rather than minimizing the risk that the company will bear on projects taken by agents so that efforts to maximize wealth or principals do not, in accordance with what the principles expect in the future (Sumiati, 2019).

In carrying out a business activity, the company must be responsible for the environment around the company. This responsibility made by the company is referred
to a social responsibility by seeing and assessing how much awareness the company has or how business decisions within the company can affect society. This social responsibility is also defined as the company’s commitment to aggravating the impacts of production or operational activities carried out by the company and overseeing the consequences that provide good benefits to the community and the environment (Arief & Ardiyanto, 2014). Initially, the company voluntarily carried out this social responsibility because the company would gain public trust. Public trust in the company is used by management to protect the earnings management actions it does, so that management will find it easier to do so because it is protected by public trust (Santi & Wardani, 2018).

The ratio that explains whether the company's scope has sufficient value to the assets owned by the company, the emergence of the leverage will determine the various assets of the company financed by the company's debt (Ramadhani et al., 2017). Debt that is too increased will make the company to find it challenging to settle the cost of the debt. With this, the company should be able to neutralize the amount of debt obtained and which sources of funds can be used to settle the debt burden (Astuti et al., 2017).

Intellectual Capital is a measure to calculate the amount of what is produced by the organization related to capital, knowledge, experience, seeing technology that is able to provide better value such as competitive advantage for the company (Wispando, 2018). A high amount of intellectual capital will cause a company to have an increased competitive advantage over its resources. With this competitive advantage, management will make reported profits, thereby influencing future investors to be able to provide capital to the company (Kalbuana et al., 2020). This is because the intellectual capital owned by the company, such as knowledge, experience and competence obtained by managers, can provide solutions in increasing profits at the company, with bonuses received by managers will also be considerable (Depari, 2017).

I. LITERATURE REVIEW

Earnings Management Earnings management is divided into two definitions, namely:

1. Definition of small; Management in this definition relates to the selection of the accounting method used. Earnings management is defined as the manager's actions with discretionary accrual components to determine the desired profit level.
2. Extensive definition; Earnings management in this definition is defined as the manager's action to increase (decrease) the desired profit of the company now for which management will be responsible, without worrying about an increase (decrease) in the long-term economic profitability of the company (Amin, 2018).

In this study, the dependent variable is Earnings Management. The earnings Management variable is calculated based on one indicator, namely discretionary accruals (Rahay et al., 2018). The calculation of discretionary accruals uses the appropriate steps according to the modified Jones model (1991).

\[
DA_{it} = TAC_{it} - NDA_{it}
\]

\[
NDA_{it} = (\beta_1 (1/ A_{it-1}) + \beta_2 [\Delta REV_{it} - \Delta REC_{it}/A_{it}] + \beta_3 (PPE_{it}/A_{it-1}))
\]

\[
TAC_{it} = NI_{it} - CFO_{it}
\]
Discretionary accruals are components of accruals derived from management activities in utilizing the freedom to set estimates and the application of accounting standards such as determining the estimated percentage of bad debts, choosing the method of depreciation of fixed assets, and others (Winwin Yadiati, 2017).

**Corporate Social Responsibility**

The World Bank defines “Corporate Social Responsibility is a commitment of business to contribute to sustainable economic development working with employees and their representatives, the local community and society at large to improve quality of live, in ways that are both good for business and good for development". However, another opinion from the World Business Council for Sustainable Development (WBCD) world organization gives the opinion that "Corporate Social Responsibility is an ongoing commitment by the business world to act ethically and contribute to the economic development of the local community or society at large, along with increasing the standard of living of the workers and their entire family” (Kurnianingsih, 2013).

Indicators in measuring CSR through the CSDI (Corporate Social Disclosure Index) are used based on the GRI-G4 guidelines, which are based on 91 disclosures, which consist of 6 sub-points of disclosure, namely economic performance (9 disclosures), environmental performance (34 disclosures), employment social (16 disclosures), social human rights (12 disclosures), social community (11 disclosures), and product responsibility (9 disclosures).

\[
\text{CSDI} = \frac{\text{total nilai dalam pengungkapan}}{\text{jumlah nilai item informasi yang diungkapkan}}
\]

**Leverage**

The Leverage Ratio is used to calculate how the assets of the company are financed by debt. Based on this, leverage is a ratio calculation so that it can be used to calculate the amount of debt that the company must have recognized to increase the fulfillment of assets (Hery, 2015). Based on this, leverage is useful to measure the company's ability to fulfill its obligations contained in the company, both related to short-term and long-term obligations.

The dimensions of leverage can be calculated using indicators measuring leverage variables, including the debt ratio; the debt ratio is a comparison of long-term debt or total debt and total assets in a company.

\[
\text{Debt Ratio} = \frac{\text{Total Hutang}}{\text{Total Aset}}
\]

**Intellectual Capital**

Intellectual capital is an intangible asset that does not appear in the accounting report for real because it is a type of asset that can determine a company's performance (Wispando, 2018).

Intellectual capital is formed based on the connection between blocks (system of inter-relational blocks), which consists of three components of the main dimensions of intellectual capital (IC), namely:

1. Structural Capital (SC); The invisible knowledge that embraces the organization. Without this, intellectual capital is only part of human
capital—infrastructure to support the Human Capital component within the organization, as technology and information systems, corporate image, organizational production operational standards, and documentation.

2. Human Capital (HC); Defined as the scope and scope of education, genetic inheritance, experience and behavior towards life and work environment. This capital is individual knowledge owned by the company and is not visible to every employee.

3. Customer Capital (CC); Defined as comprehensive knowledge in the field of market and good relationship with customers activities Bontis in (Wispando, 2018).

Based on this, these dimensions are related to updates regarding knowledge and satisfaction of customers, suppliers and industrial relations, and matters related to government As; long-term cooperation contracts, improvement of customer satisfaction, customer profiles, and renewal of cooperation contracts. The indicator to determine the value of the company's intellectual capital in this study uses the VAICTM value, which can be obtained by adding up the three components, namely VAHU, STVA and VACA.

$$\text{VAIC}^\text{TM} = \text{VAHU} + \text{STVA} + \text{VACA}$$

III RESEARCH METHODS

Research Population
The population is the whole subject and or object that will be used as research (Riyanto, 2020). This study took the population of all basic and chemical industry sub-sector manufacturing companies listed on the Indonesia Stock Exchange (IDX) from 2017 to 2019, which amounted to 76 companies consisting of several sectors, namely metals (17 companies) and plastics, packaging (15 companies), chemicals (12 companies), pulp and paper (9 companies), porcelain and glass ceramics (9 companies), cement (6 companies), wood and its processing (4 companies), animal feed (4 companies).

Research Sample
The research sample has the same characteristics as the population characteristics, so it can be concluded that the selected sample can represent the entire population. The sampling technique used purposive sampling, which is the determination of the selection through the specified criteria. The number of samples studied this time was 11 manufacturing companies in the primary and chemical industry sub-sectors listed on the Indonesian Stock Exchange (IDX).

Data Analysis Techniques
Descriptive Analysis
Descriptive analysis testing is output data to analyse the data obtained by explaining or telling the data obtained as they are and not to trigger general or general conclusions.
Classic Assumption Test
Normality Test
In normality testing, it is useful to see whether there is a distribution of data obtained that follows or approaches the value of a normal distribution. In other words, the distribution of data must be bell-shaped. Data distribution can be used when a data distribution does not skew to the left or the right.

Multicollinearity Test
Multicollinearity testing aims to assess whether or not there is an increasing data correlation between the independent and dependent variables in a data model of regression.

Autocorrelation Test
In autocorrelation testing, the test is used to see the data in a regression model, whether or not there is a correlation caused by the coexistence of the defects of the confounders in the year t with the confounders in the previous year (t - 1).

Heteroscedasticity test
Heteroscedasticity is used to see the data in a regression model of data whether there is a difference in variance from a residual model in one review to another.

Hypothesis Testing
Multiple Linear Regression Analysis
Multiple Linear Regression Analysis aims to see the relationship between Corporate Social Responsibility (CSR), Leverage, Intellectual Capital and Earnings Management in manufacturing companies in the primary and chemical sub-sectors listed on the Indonesia Stock Exchange (IDX).

Partial Test (t Test)
This t test is also called partial. It aims to test the partial significant effect between the independent variables on the dependent variable.

Simultaneous Regression TEST (f Test)
Statistical testing on f is a guideline to see in all the independent variables that are tested on a regression model that has a joint effect on the dependent variable.

Determinant Coefficient Test (R2)
Testing the coefficient of determination is the magnitude of the contribution of the independent variable to the dependent variable. The higher the coefficient of determination, the higher the ability of the independent variable to explain the dependent variable. The value of the determinant coefficient ranges from zero to one.

IV RESEARCH RESULT
Descriptive Analysis

Table 5.1 Test Output Description
Descriptive Statistics
Based on table 5.1, the average value of alleged Earnings Management (Y) actions carried out by management on 11 samples of companies listed on the Indonesian stock exchange during 2017-2019 is 0.0212 or 2.12%. This shows that the average value of Earnings Management carried out on the sample companies is increasing profits or income increasing because the value is above 0, which means there is no opportunity for profit manipulation. The minimum score is -0.39 or -39%. The maximum value obtained is 0.62 or 62%, while the number of standard deviations was obtained with a value of 0.31406. The difference in the acquisition of the minimum and maximum numbers is quite different in the Earnings Management variable; this can occur because of varying management desires in manipulating earnings according to their wishes.

1. The first independent variable, namely Corporate Social Responsibility (CSR) shows the average value is 0.3057. This shows that the average company that is the sample of this study discloses CSR by 30.57% (28 points of disclosure out of a total of 91 points of CSR disclosure). The minimum value of CSR disclosure is 0.13 or 13% of the 33 sample data, and the maximum value is 0.57 or 57% of the 33 sample data.

2. The second independent variable, namely Leverage, shows the average value is 0.4390. This indicates that the average company has a debt of 43.9% of its total assets, which means that the company has less debt than its current assets. The minimum value is 0.12, and the maximum value is 0.78. The minimum value of the 33 data companies that are sampled have debts of 12% of their total assets. In comparison, the maximum value of 33 data companies have a debt of 78% of total assets.

3. The third independent variable tested in this study is Intellectual Capital. The average value of Intellectual Capital is 2.3819, which means that the average sample of companies to increase intellectual capital in the form of competitive advantage is 238.19%, meaning that 163% of the companies increase their Intellectual Capital and the maximum value of 3.73 suggests that the sample companies increase their Intellectual Capital by 373%.

Classic Assumption

Test Normality Test
From the results of Figure 5.1 the histogram graph shows a normally distributed pattern where the graph is not skewed to the left or skewed to the right. Based on this, it can be concluded that the residual data is normally distributed. The results of Figure 5.2 on the normal P-Plot graph, show the data is distributed with points that spread and collect and follow the direction. Based on that, it can be concluded that the residual data is normally distributed.

Table 5.2
Output Kolmogorov-Smirnov
One-Sample Kolmogorov-Smirnov Test

<table>
<thead>
<tr>
<th>N</th>
<th>33</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.070c</td>
</tr>
</tbody>
</table>

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

Source: SPSS Versi 25,00. Year 2020

Table 5.2 provides the results of testing the data for analysis. Testing in this normality is carried out by means of testing the normality of residual data so that it can be reviewed with Asymp.Sig (2-Tailed) is worth 0.070. The value is above the significant value of 0.05. Based on the test, it was concluded that the data is normally distributed.

Multicollinearity Test

Table 5.3
Output Mutikinearitas Coefficientsa

<table>
<thead>
<tr>
<th>Model</th>
<th>Collinearity Statistics</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Constant)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CSR</td>
<td>.990</td>
<td>1.010</td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>.854</td>
<td>1.171</td>
</tr>
<tr>
<td>INTELLECTUAL CAPITAL</td>
<td>.848</td>
<td>1.179</td>
</tr>
</tbody>
</table>

a. Dependent Variable: EARNINGS MANAGEMENT

Source: SPSS Versi 25,00. Year 2020

Table 5.3 contains the value of Tolerance and VIF. It can be concluded that all the variables used in this study have the amount of tolerance above the value of 0.1 and the
amount that has been obtained by the VIF is below the value of 10.00. This means the residual data of this study did not experience the multicollinearity contained in all independent variables.

**Autokolerasi Test**

**Table 5.4**

Output Autokorelasi

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.933&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.870</td>
<td>.839</td>
<td>.33598</td>
<td>2.311</td>
</tr>
</tbody>
</table>

<sup>a</sup> Predictors: (Constant), INTELLECTUAL CAPITAL, CSR, LEVERAGE

<sup>b</sup> Dependent Variable: EARNINGS MANAGEMENT

Source: SPSS Versi 25,00 Tahun 2020

From table 5.4 it is found that the DW value is 2.311. This value will be reviewed based on the DW d-statistics table: level of significance, with the sample value used in this study (n) as much as 33 and the independent variable used as much as (k=3). Based on the DW table, the DL value in this study is at a value of 1.2576, while the DU value is at a value of 1.6511. Thus, based on the Durbin Watson value found based on data processing, the value is 2.311, which can be interpreted as greater than DU (1.6511). It can be concluded that the data of a regression model in this study does not contain autocorrelation.

**Heteroskedasicity Test**

The scatterplot graph (Figure 5.3) illustrates there are no points that form a visible pattern as well as the points in the image also spread above and below the value 0 to the Y axis. From these results, it can be concluded that the data does not experience heteroscedasticity in the regression. Thus, a model in the regression is good to use as a
race in determining earnings management based on dependent variables (CSR, leverage, and intellectual capital).

Hypothesis Testing

Multiple Linear Regression Analysis

Table 5.5
Output Regression Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(Constant)</td>
</tr>
<tr>
<td>CSR</td>
<td>-0.599</td>
</tr>
<tr>
<td>LEVERAGE</td>
<td>0.906</td>
</tr>
<tr>
<td>INTELLECTUAL CAPITAL</td>
<td>-0.214</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>SPSS Versi 25,00, Year 2020</td>
</tr>
</tbody>
</table>

Based on table 5.6, the results of the method with multiple linear regression analysis, Earnings Management has a constant value of 0.316. The calculation of these results means that if the independent variable in this study is constant (fixed), then the probability of Earnings Management action being taken is 0.316. To find out the results and calculations of the influence test (CSR, Leverage, Intellectual Capital) on Earnings Management so that the following equation is obtained:

\[ Y = 0.316 - 0.599 x_1 + 0.906 x_2 - 0.214 x_3 + e \]

1. Based on the calculations found through the SPSS output in the Corporate Social Responsibility (CSR) coefficient table is -0.599, it can be concluded that if there is an increase in 1 CSR disclosure, it can reduce Earnings Management (EM) with a value of -0.599 assuming that the other independent variables are fixed. The results of the negative coefficient values on the CSR and Earnings Management variables can be concluded that the higher the disclosure value on the CSR variable will be able to cause a decrease in Earnings Management, and vice versa.

2. Based on the results the Leverage coefficient table is 0.906. It can be concluded that if there is an increase of 1 Leverage, it can increase Earnings Management with a value of 0.906 by assuming that the other independent variables are fixed. The results of positive coefficient values on the Leverage and Earnings Management variables can be concluded that the higher the value on the Leverage variable will be able to cause an increase in Earnings Management, and vice versa.

3. Based on the results in the Intellectual Capital (IC) coefficient table is -0.214. It can be concluded that if there is an increase in 1 IC, it can reduce Earnings Management with a value of -0.214 assuming that the other independent variables are fixed. The results of the negative coefficient values on the Intellectual Capital and Earnings Management variables show that the financing value on the Intellectual Capital variable will cause an increase in Earnings Management, and vice versa.

Partial Test (t Test)

Table 5.6
From the SPSS output in table 5.6 t test, the following conclusions can be drawn:

a. Corporate Social Responsibility has a significance value of 0.032 < the test significance level of 0.05 and a T value of \( T_{\text{count}} > T_{\text{table}} \) (-2,248 > -2.262) was found. The results of the hypothesis test can be concluded that H1: Corporate Social Responsibility has a significant effect on Earnings Management.

b. Leverage has a significance value of 0.000 < the test significance level of 0.05 and with a T value of \( T_{\text{count}} > T_{\text{table}} \) (5.710 > 2.262). The results of testing this hypothesis is H2: Leverage has a significant effect on Earnings Management.

c. Intellectual Capital has a significance value of 0.001 < the test significance level value of 0.05 with a T value of \( T_{\text{count}} < T_{\text{table}} \) (-3.567 < -2.262). Based on the results of hypothesis testing, it can be concluded that H3: Intellectual Capital has a significant effect on Earnings Management.

Simultaneous Regression TEST (f Test)

From the results of the SPSS output table 5.7 ANOVA, it can be seen that the Fcount is 26,731 with a significant level value of 0.05. It was found from the statistical value of table F with a significance level of 0.05 and df1 = 5 and df2 (33-3-1) = 29. It can be found that the level of the table F value is at a value of 2.93. From this value, Fcount is greater than the Ftable value, namely (26.731 > 2.93). And from the significance value, it is known that the significance value obtained from the F test is 0.000. It can be concluded that the value of the F test is smaller than the value of 0.05 (0.000 < 0.05). Based on the results of hypothesis testing, it can be concluded that:

H4: Corporate Social Responsibility, Leverage, and Intellectual Capital have a significant effect on Earnings Management
Determinant Coefficient Test (R2)

### Table 5.8
Output Result of Coefficient Determination

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.933a</td>
<td>.870</td>
<td>.839</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), INTELLECTUAL CAPITAL, CSR, LEVERAGE
b. Dependent Variable: EARNINGS MANAGEMENT
Serber: SPSS Versi 25,00. Year 2020

From the results of the SPSS output in table 5.8 of the summary model, it is found that the value of the determinant coefficient (Adjust R2) obtained is at a value of 0.839 or 83.9%. It can be concluded that Corporate Social Responsibility, Leverage and Intellectual Capital contribute a value of 83.9% to the total amount of earnings management. And the value of 16.1% can also be influenced by other supporting variables not included in this research variable.

## VI CONCLUSION

Based on the tests that have been described and researched in the previous discussion the following conclusions can be drawn:

1. The partial test of the Corporate Social Responsibility (CSR) variable has a significant effect on Earnings Management.
2. Partially the Leverage variable has a significant effect on Earnings Management.
3. Partially, the Intellectual Capital variable has a significant effect on Earnings Management.
4. The results of the simultaneous variable test (F statistic test) show that the variables of Corporate Social Responsibility (CSR), Leverage, and Intellectual capital and jointly have a significant effect on Earnings management (Y).
5. The determinant coefficient (Adjusted R square/R2) indicates that the number owned by the dependent variable Earnings management (Y) affects the Corporate Social Responsibility (CSR), Leverage, and Intellectual capital variables with a value of 83.9%. The remaining 16.1% change in the value of the dependent variable can be influenced through other variables that have not been used for research such as GCG, company size, tax planning, information asymmetry, etc.

## REFERENCES


