American Journal of Sciences and Engineering Research | wwww.iarjournals.com

*American Journal of Sciences and Engineering Research*

*E-ISSN -2348 – 703X, Volume 6, Issue 1, 2023*

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# The Effect of Institutional Ownership, Company Size, and Leverage on Earnings Management in Basic and Chemical Industry Sector in Indonesia

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**ABSTRACT:** *This study aims to analyze the effect of institutional ownership, company size, and leverage on earnings management. The population in this study are companies in the basic and chemical industry sectors listed on the Indonesia Stock Exchange (IDX) for the 2019-2021 period. The sampling technique used was purposive sampling method and obtained a sample of 150 companies. The data analysis method used is logistic regression analysis with SPSS 25. Results show that the institutional ownership variable proxied by KI and company size proxied by SIZE had no effect on earnings management, while leverage proxied by DER affects earnings management.*

**Keywords:** *Earnings Management, Institutional Ownership, Company Size, Leverage*

## I. INTRODUCTION

One of components in the financial statements is the income statement which is one of the main focuses of users of financial statements. Income statement describes the performance of banking companies in a certain period of time (Lestari & Wulandari, 2019). A company needs to provide financial information to interested parties in the financial statements. Financial reports are a source of information data used by external parties to the company. Financial reports are very important to determine the company's financial condition and can be said to be a means of communicating financial information to parties outside the corporation and become information products produced by companies that cannot be separated from the preparation process (Anggreni & Adiwijaya, 2020).

The importance of information presented through financial statements. Thus, the financial statements should be presented appropriately in accordance with the condition of the company in that period, as described in PSAK 01. But sometimes the company management takes advantage of its position, namely the party who knows more about transactions faster and more valid.

The component in the financial statements is the income statement which is one of the main focuses in using financial statements. The income statement is one of the most important components of financial statements, because it contains profit information that is useful for users of financial statement information to determine the company's financial capabilities and performance.

The chemical industry is one of the sectors that get the prioritized for development, because it is able to make a significant contribution to the Indonesian economy. This is because chemicals are strategic commodities to be used as raw materials in various other industrial sectors. The chemical industry's ranked as the 3rd largest contributor to the performance of the non-oil and gas processing industry sector. It is a sector that plays an important role in the growth of the national manufacturing industry in Indonesia.

 Received-16-02-2023, Accepted- 27-02-2023

Earnings management is management intervention in the process of preparing the company's financial statements for external purposes in order to achieve a certain level of profit with the aim of benefiting itself or its own company. The existence of earnings management fraud makes companies must have the right strategy to anticipate conditions that can cause problems in corporate finance. This study aims to improve supervision of management performance and provide encouragement for management to do their job properly in basic and chemical industry sector companies in Indonesia.

## II. MATERIAL AND METHODS

### *2.1 Agency Theory*

Agency theory is the theoretical basis underlying corporate business practices used so far, including management relations with owners (shareholders), management relations with creditors, and management relations with the government according to Watts and Zimmerman (1986). Agent theory is rooted in the synergy of economic theory, decision theory, sociology, and organizational theory. The main principle of this theory states that there is a working relationship between the authorizing party (principal) namely the investor and the party who receives the authority (agency) namely the manager, in the form of a cooperation contract called "nexus of contract" Managers and shareholders have different goals and each wants their goals to be met, as a result of which a conflict of interest arises. Managers will want to provide incentives or compensation as much as possible.

### *2.2 Earnings Management*

Earnings management is a manager's behavior to play with the discretionary accrual component to determine the size of the company's profit, because accounting standards do provide several alternative methods and procedures that can be used. This earnings management action is also caused by the manager's own interests in increasing the value of the company to be more advanced, so that in the future investors are interested in investing and minimizing the corporate's income tax burden issued by the company.

### *2.3 Institutional Ownership*

Institutional ownership is the percentage of voting rights owned by institutions. Institutional investors with large shareholdings will have a strong enough impetus to gather information, monitor management actions, and encourage better performance. If institutional investors have relatively low share ownership, then institutional investors have little incentive to supervise the manager's opportunistic actions.

Research conducted by Meilani Dwi Anggreni (2020), Dina Cahyani and Kartika Hendra (2020) shows that the institutional ownership variable has a negative effect on earnings management proxied by discretionary accruals. Company supervision actions carried out by institutional investors can encourage managers to focus more attention on company performance so that it will reduce opportunistic or selfish behavior.

**$H_1$ : Institutional ownership affects Earnings Management.**

### *2.4* Company Size

Company size greatly affects the occurrence of earnings management, because the larger a company, it must be able to meet the expectations of its shareholders. Company size affects the company's funding structure. Large companies tend to require larger funds than smaller companies. Additional funds can be obtained from additional debt or issuance of new shares.

Research conducted by Yogi Kusuma Wardana and Mulyo Haryanto (2019) shows that company size has a positive effect, while Dendi Purnama (2017) and Robert Jao and Gagaring Pagalung (2011) show that company size has a positive effect. Large companies have a considerable incentive to carry out earnings management, because the main reason is that large changes must meet the expectations of shareholders.

**$H_2$ : Company size affects Earnings Management.**

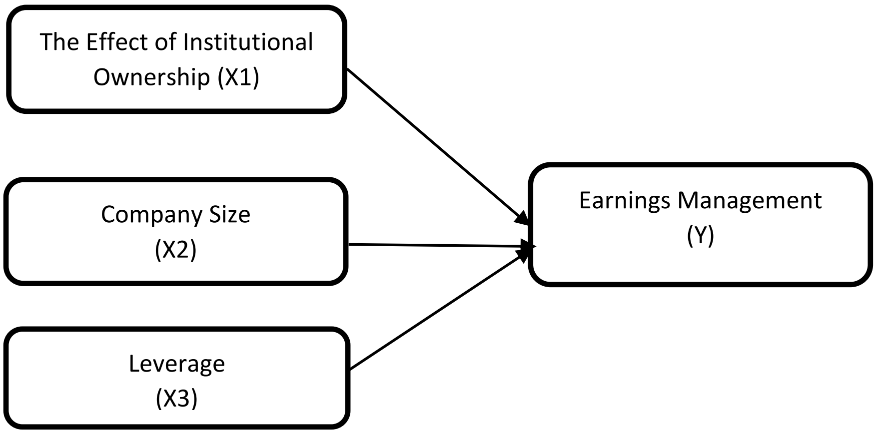
### *2.5* Leverage

Leverage is the ratio between total liabilities and total company assets (Purnama, 2017). In general, the leverage ratio serves to measure the company's ability to meet its financial obligations, both in the short and long term. This ratio is also used to determine the composition of capital sourced from debt or loans. In analyzing company finances, the leverage ratio has an important role. Because, this ratio can inform the source of funds used to finance operations, from own capital or debt.

Research conducted by Maria Theresia Cinthya, Luh Gede Novitasari and Ni Luh Putu Sandrya Dewi (2022), Meilani Dwi Anggreni (2020), also Dina Cahyani and Kartikaendra (2020) shows that company size has a positive effect, while Ra'aina, Jack Febriand Adel and Sri Ruwanti (2019) show that company size has a negative effect. High leverage encourages company management to manage earnings.

**$H_3$ : Leverage affects Earnings Management**

### *2.6* Research Framework




## III. RESEARCH METHODS

Based on the data used in this study, the type of this research is quantitative research by conducting hypothesis testing. This research was conducted to determine the effect between institutional ownership, company size, leverage on earnings management. The population in this study are all companies in the basic and chemical industry sector in Indonesia from 2019 to 2021 which are listed on the IDX. Sampling using purposive sampling method, namely determining the sample from a population based on certain criteria. So that in this study a sample of 150 samples was obtained.

The analytical method used to test the hypothesis in this study is multiple linear regression. It is chosen to determine whether there is a significant influence of one dependent variable (dependent) and more than one independent variable (independent).

In this research, hypothesis use multiple linear regression analysis which includes the hypothesis of the effect of institutional ownership, company size, and leverage (X1, X2, X3) on earnings management (Y). The regression equation model is as follows:

$$\boxed{\textbf{EM} = \beta 0 + \beta 1\ \textbf{SIZE} + \beta 2\ \textbf{LEV} + \beta 3\ \textbf{INSTOWN}}$$

Description :

**EM**= Earnings Management

**SIZE** = Company Size

**LEV** = Leverage

**INSTOWN** = Institutional Ownership

**β0,β1,β2,β3,β4** = Constant

**Operational Variable**

| **Dependent Variable** | Indicator | Reference |
|---|---|---|
| Earnings Management (EM) | TAC = Nit – CFOit<br>The total accrual value is estimated with the Ordinary Least Square regression equation<br><br>TAit/ Ait-1 = β1 (1/ Ait-1 ) + β2 ( ΔREVt / Ait-1 ) + β3 (PPEt / Ait-1 )<br><br>By using the regression above, the value of Non Discretionary Accruals can be calculated using the formula<br><br>NDAit = β1 (1/ Ait-1 ) + β2 (ΔREVt / Ait-1 - ΔRECt / Ait-1) + β3 (PPEt / Ait-1 )<br><br>Furthermore, discretionary accrual (DA) can be calculated as follows:<br><br>Dait = Tait/ Ait-1 – NDAit. | Yogi Kusumawardana and Mulyo Haryanto, 2019 |
| **Independent Variable** | | |
| Institutional Ownership (KI) | $\frac{\text{Total Institutional Shares}}{\text{Outstanding Shares}}$ | Dina Cahyani, 2020 |
| Company Size (Size) | $Ln\ (Total\ Asset)$ | Ra'aina and Jack Febriand, 2019 |
| Leverage (DER) | $DER = \frac{Total\ Debt}{Total\ Equity}$ | Dendi Purnama, 2017 |

## IV. RESULT AND DISCUSSION

**Multiple Linear Regression**

| Model | *Unstandardized Coefficients* | | *Standardized Coefficients* |
|---|---|---|---|
| | **B** | ***Std. Error*** | **Beta** |
| 1 (Constant) | -0,244 | 0,157 | |
| KI | -0,036 | 0,030 | -0,108 |
| SIZE | 0,009 | 0,009 | 0,147 |
| DER | -0,017 | 0,005 | -0,315 |

Based on the table above, the results of multiple linear regression analysis are obtained with the multiple linear regression analysis model equation, as follows:

**EM = -0,244 – 0,036KI + 0,009SIZE – 0,017DER + e**

Based on the regression equation, it can be interpreted as follows:

1) The constant value is -0,244 with a negative direction, this can be interpreted if the independent variables (institutional ownership, company size, and leverage) can be assumed to be constant, then the average earnings management proxied by earning/accrual measures decreases by -0,244.
2) The regression coefficient on the institutional ownership variable is -0,036 with a negative direction. This means that the smaller the proportion of institutional ownership of a company, the lower the application of earnings management. Conversely, the greater the institutional ownership, the higher the implementation of earnings management.
3) The regression coefficient on the firm size variable is 0,009 with a positive direction. This can be interpreted that the larger the size of the company proxied by Ln total assets, the more the application of earnings management increases. Conversely, the smaller the company size, the lower the implementation of earnings management.
4) The regression coefficient on the leverage variable is -0,017 with a negative direction. It can be interpreted that the higher the leverage in a company proxied by DER, the lower the implementation of earnings management. Conversely, the lower the leverage in a company, the application of earnings management will also increase.
5)

**Model Feasibility Test (F-Test)**

| Model | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 0.099 | 3 | 0.033 | 4.858 | 0.003 |
| Residual | 0.838 | 124 | 0.007 | | |
| Total | 0.937 | 127 | | | |

Based on the table above, the F test results show a significance value of 0,003. The significance value produced by the F test is smaller than 0,05. It can be concluded that the multiple regression model has met the requirements and can be said to be a fit regression model.

**Determination Coefficient Test ($R^2$)**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0.324 | 0.105 | 0.084 | 0.08222 |

Based on the table above, it shows that the Adjusted R Square value is 0,084 or 8,4%. This shows that the independent variables, namely institutional ownership, leverage, and company size are very limited in explaining the variation in the dependent variable, namely earnings management of 0,084 or 8,4% while the remaining 91,6% is explained by other variables not included in this study.

**Statistical Test (T-test)**

| Model | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | -0.244 | 0.157 | | -1.555 | 0.123 |
| KI | -0.036 | 0.030 | -0.108 | -1.202 | 0.232 |
| Size | 0.009 | 0.006 | 0.147 | 1.645 | 0.102 |
| DER | -0.017 | 0.005 | -0.315 | -3.629 | 0.000 |

This study uses a significance level of 5%. If the significance value is <0,05 or <5%, it means that the variable has an effect on earnings management and vice versa.

1. The institutional ownership variable (KI) has a significance value of 0,232 or 23,2%, which means it is greater than 0,05 or 5%. Thus, it can be concluded that $H_1$ is rejected, meaning that institutional ownership has no effect on earnings management. These findings are consistent with the research of Dendi Purnama (2017) and Veni Zakia et al. (2019), which prove that institutional ownership has no effect on earnings management.
2. The firm size variable (SIZE) has a significance value of 0,102 or 10,2% which means it is greater than 0,05 or 5%. Thus, it can be concluded that $H_2$ is rejected, meaning that company size has no effect on earnings management. The results of this study are in accordance with the results of research by Meilani Dwi Anggreni (2020) and Putu Indah Purwanti et al. (2021), which prove that company size has no effect on earnings management.
3. The leverage variable (DER) has a significance value of 0,000 or 0% which means it is smaller than 0,05 or 5%. Thus, it can be concluded that H3 is accepted, meaning that leverage has an effect on earnings management. These findings are consistent with the research of Dina Cahyani, Kartika Hendra (2020) and Maria Theresia Cinthya et al. (2022), which prove that leverage affects earnings management.

## V. CONCLUSION

Based on the results of the research that has been conducted regarding the prediction of earnings management using financial measures with a statistical approach in basic and chemical industry companies in Indonesia, several important conclusions can be drawn as follows:

1. Institutional Ownership (KI) has no effect on earnings management in basic and chemical industry companies listed on the Indonesia Stock Exchange in 2019-2021.
2. Company Size (Size) has no effect on earnings management in basic and chemical industry companies listed on the Indonesia Stock Exchange in 2019-2021.
3. Leverage (DER) affects earnings management in basic and chemical industry companies listed on the Indonesia Stock Exchange in 2019-2021.

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