The Role of Institutional Ownership Structure on Real Earnings Management in Growth Firms

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ARTICLE INFORMATION

ABSTRACT

The objective of the study was to examine the role of institutional ownership structure on real earnings management on firms in growth stage. The real earnings management was indicated by three proxy such as abnormal CFO, abnormal discretionary expenses, and abnormal production costs. The sample of the study was the manufacturing firms listed in the Indonesia Stock Exchange. The data observation period was 5 years (2016-2020). Total samples are 600 firm-years. The samples are classified into various life cycle using dividend payout, sales growth, capital expenditure value, and age. The empirical results indicate concentration of institutional ownership affect the real earnings management through cash flow operating activities but this study cannot prove that the concentration of institutional ownership affects the real earnings management in firms that are in the growth stage. The findings prove the firms choose real earnings management through cash flow operating activities even though the cost is more in the long term.

Keywords: Corporate Life Cycle, Growth, Ownership Concentration, Real Earnings Management

JEL Classification: G34, M40, M41

INTRODUCTION

This study aims to examine earnings management, especially in real earnings management. Current studies have led to real earnings management because earnings management in the short term is mostly carried out by management. This is the reason for understanding real earnings management actions, so Cohen and Zarowin (2010) examine real earnings management around seasoned equity offerings using the Roychowdhury (2006) model.

Widyastuti (2009) states that the ownership structure has a negative effect on earnings management. However, Widyastuti (2009) research only looks at the effect of ownership structure on accrual earnings management. Research by Farooq and Jai (2012) also shows that institutional ownership as the largest shareholder has a negative impact on earnings management. Research by Liang et al. (2011) shows that the positive relationship between institutional ownership and firm performance is more indicated by growth firms than mature and stagnant firms.

With a positive relationship between institutional ownership and firm performance in growth firms, firms with higher institutional ownership have better firm performance so that the possibility of managers doing real earnings management is lower. This study wants to prove whether the institutional ownership structure has an effect on real earnings management in firms that are in the growth stage.

LITERATURE REVIEW

Real Earnings Management
Earnings management is an action in the financial reporting process that will affect earnings (Schipper, 1989). There are two kinds of earnings management, namely accrual earnings management and real earnings management. Accrual earnings management is usually carried out in the long term while real earnings management is carried out in the short term. Real earnings management is a management action that affects profit targets in 3 ways, namely sales manipulation, decreasing discretionary spending, and overproduction (Roychowdhury, 2006). Zang (2012) shows that real earnings management is usually done before accrual earnings management.

Ownership Structure
Liang et al. (2011) examined the effect of multidimensional ownership structure on firm performance from the perspective of the firm's life cycle. The multidimensional ownership structure can be seen from the concentration of ownership of insiders, boards of commissioners and managers, block holders, institutional investors, pressure-insensitive institutional investors, and pressure-sensitive institutional investors. The concentration of institutional ownership is seen from the percentage of ownership of institutional investors.

Firm Life Cycle
There are several life cycle models used by researchers, namely five-stage, four-stage, and three-stage models. Each of these models is supported by the life cycle literature and can be seen in full in the research of Quinn and Cameron (1983).

Anthony and Ramesh (1992) divide the firm's life cycle into three stages, namely growth, mature, and stagnant. In the growth stage, the firm begins to meet market needs and its growth is fast. This growth is the result of meeting market needs better than the competition and the entrepreneurial spirit of the firm's founders. In the mature stage, the

firm enters a stage where the managers are starting to become professional. But the life of the firm is not long anymore and it leads to the final stage in the life cycle of the firm.

At the stagnant stage, the firm did not experience a drastic increase in sales and a decrease in net income. The sales growth rate is low, the firm does not make large capital expenditures, and the net income earned by the firm are no longer held for firm development.

Hypothesis
Farooq and Jai (2012) show that institutional ownership as the largest shareholder has a negative effect on earnings management. In addition, firms with institutional or local ownership as the largest shareholder perform lower earnings management than firms with other ownership. With institutional or local ownership as the largest shareholder, monitoring of management is better than individual investors. Dong, et al. (2020) show that there is a relationship between ownership structure and earnings management. Dong et al. (2020) find that Chinese companies with the largest and most influential shareholders tend to engage in real earnings management.

Sari, et al. (2010) examined systematic differences in earnings management through real activity manipulation and accrual manipulation among 7 Asian countries. The argument is that in an economy with high investor protection, managers are more likely to manipulate real activity earnings management than accrual manipulation because accrual manipulation represents more careful research than real decisions about prices and production. The results of this study indicate that in an economy with high investor protection, managers do more earnings management through real activities than accrual manipulation. Saona, et al. (2020) show that when the institutional environment increases, earnings management will decrease. Adiguzel (2017) show that real earnings management is more informative in signaling future performance in firms with debt than frims without debt.

Research by Liang et al. (2011) shows that the positive relationship between institutional ownership and firm performance is more indicated by growth firms than mature and stagnant firms. In addition, there are significant differences in the impact of ownership structure on firm performance between periods, regardless of whether different or the same firms are in the same cycle stage. Based on the expectations described above, an alternative hypothesis is formulated as follows:
H_1: The concentration of institutional ownership has an effect on real earnings management in firms that are in the growth stage.

RESEARCH METHOD

Samples
The selection of the research sample was based on purposive sampling with the aim of obtaining a representative sample according to predetermined criteria. The following are the characteristics of the sample selection used for this study:
1. Manufacturing firms listed on the Indonesia Stock Exchange (IDX) in the period 2016-2020.
2. Firms that have complete data in accordance with the research variables.
3. Firms that have institutional ownership.

Definition and Measurement of Variables
Real Earnings Management
Real earnings management is calculated by the approach used by Roychowdhury (2006), which is as follows:

a. Abnormal CFO

$$CFO_t / A_{t-1} = \alpha_0 + \alpha_1(1/A_{t-1}) + \alpha_2(S_t/A_{t-1}) + \alpha_3(\Delta S_t/A_{t-1}) + \varepsilon_t \quad \ldots\ldots\ldots\ldots(1)$$

CFO$_t$=cash flow operating activities in period t
A$_{t-1}$=total asets in period t-1
S$_t$=net sales i in period t

b. Abnormal Discretionary Expenses

$$DISEXP_t / A_{t-1} = \alpha_0 + \alpha_1(1/A_{t-1}) + \alpha_2(S_{t-1}/A_{t-1}) + \varepsilon_t \ldots\ldots\ldots\ldots\ldots\ldots(2)$$

DISEXP$_t$= discretionary expenses are research and development expenses, advertising expenses, selling expenses, and administrative & general expenses.

c. Abnormal Production Costs

$$PROD_t / A_{t-1} = \alpha_0 + \alpha_1(1/A_{t-1}) + \alpha_2(S_t/A_{t-1}) + \alpha_3(\Delta S_t/A_{t-1}) + \alpha_3(\Delta S_{t-1}/A_{t-1}) + \varepsilon_t \ldots..(3)$$

PROD$_t$=production costs are cost of goods sold and the changes of inventory.

Abnormal value for CFO, DISEXP, and PROD are the residual value of each the estimated regression equation model (1), (2), and (3).
To detect whether the firm performs real earnings management follows Roychowdhury (2006) with the equation:
$Y_t = \beta_0 + \beta_1 \text{Suspect\_NI}_t + \beta_2 \text{NI}_t + \beta_3 \text{CL}_t + \varepsilon_t$

Y_t:	real activity manipulation proxies (respectively abnormal operating cash flow, abnormal production costs and abnormal discretionary costs)
Suspect $\_NI_t$:	the indicator variable is with a value of 1 for suspect firms (firms with total net income/assets worth 0-0.005, assumed to have motivation to do real earnings management because of their poor performance) and given a value of 0 for others (nonsuspect firms/rest of the sample).
NI (Net Income):	income before extraordinary items divided by total assets.
CL (Current Liabilities):	current liabilities divided by total assets.

NI and CL are control variables.
With conclusion:
1. For Y_t = abnormal CFO, if β_1 is negative and significant then the firms suspect are manipulating sales so that they have lower abnormal operating cash flows than other firms.
2. For Y_t = abnormal production costs, if β_1 is positive and significant then the firms suspect are manipulating by producing excessively so that they have abnormally higher production costs than other firms.
3. For Y_t = abnormal discretionary costs, if β_1 is negative and significant then the firms suspect are manipulating by reducing discretionary costs so that they have abnormal discretionary costs that are lower than other firms.

Institutional Ownership Concentration
The concentration of ownership is measured by the percentage of institutional ownership as the largest shareholder. Institutional can be a foreign institution or a local firm.

Firm Life Cycle
Classification into three stages based on research by Anthony and Ramesh (1992). There are four classification variables: (1) dividend payments per year as a percentage of net income (DP), (2) sales growth percentage (SG), (3) capital expenditure as a percentage of total firm value (CEV), and (4) firm age (AGE). The expectations of the four variables are as follows (Anthony and Ramesh, 1992):

Table 1. Expectation Four Variable to Detect Life Cycle Stages

Life Cycle Stages	Life Cycle Classification Variables			
	DP	**SG**	**CEV**	**AGE**
Growth	Low	High	High	Young
Mature	Medium	Medium	Medium	Adult
Stagnant	High	Low	Low	Old

(Anthony dan Ramesh, 1992)

Each of these variables is calculated in the following way:

$DPt = (DPS / EPS)x100$ ....(4)

$SG_t = ((SALES_t - SALES_{t-1}) / SALES_{t-1})x100$ ....(5)

$CEV_t = (CE_t / VALUE_t)x100$ ....(6)

$AGE = current\ year - firm\ founding\ year$......................................(7)

Note:

DP$_t$ = dividend payout
DPS = dividend per share
EPS = earnings per share
SG$_t$ = sales growth
SALES$_t$ = net sales in period t
SALES$_{t-1}$ = net sales in period t-1
CEV$_t$ = capital expenditure value
CE$_t$ = capital expenditure in period t
VALUE$_t$ = market value of equity (closing price x shares outstanding) plus non-current liabilities in period t
AGE = firm age

DP, SG, and CEV variables are financial variables that are directly related to firm risk. To minimize the effect of risk correlation with the stage of the firm's life cycle, this study uses the AGE (firm age) variable which is a non-financial variable. The three financial variables for the classification are calculated annually for each sample firm using the above equation. DP is calculated using the formula DPt=DPS/EPS. The AGE variable is calculated by means of the current year minus the year the firm was formed.

Then, the four variables are each sorted and given a ranking score with the highest-ranking score is 1. The ordering for the four variables is different. DP and AGE variables are ordered in ascending order because their values are in ascending order according to the firm's life cycle classification, namely from small to large (Low, Medium, and High) for the Growth, Mature, and Stagnant stages. On the other hand, the SG and CEV variables are ordered in descending order because their values are in descending order according to the firm's life cycle classification, namely from large to small (High, Medium, and Low) for the Growth, Mature, and Stagnant stages.

According to Anthony and Ramesh (1992), the variables of sales growth and capital expenditure are proxies for the evolution of the firm. Firms with high sales growth and capital expenditures are generally firms that are still in the early stages of development and have high growth opportunities, so for the purposes of classifying firms into growth, mature, and stagnant stages, the sales growth rating score is combined with the capital expenditure rating score. Low dividend payments can describe two different conditions, namely the firm needs cash to develop its firm (the firm is in the growth stage) or the firm has cash flow problems (the firm is at a stagnant stage). Therefore, specifically for determining the growth stage, the dividend payout rating score is combined with the firm's age rating score (Atmini, 2002). After that, the ranking scores of the classification variables and the combined ranking scores are divided into quintiles.

Firms are classified into growth, mature, and stagnant stages with the following criteria:
1. Growth: if a firm is in the highest quintile (first quintile) combined score of sales growth and capital expenditure ratings and is in the lowest quintile (first quintile) combined dividend payout rating score and firm age.
2. Mature: if a firm is in the middle quintile of the combined sales growth and capital expenditure rating scores, is in the middle quintile of the dividend payout rating score, and is in the middle quintile of the firm's age rating score.
3. Stagnant: if a firm is in the lowest quintile (4th quintile) combined sales growth and capital expenditure rating scores, is in the highest quintile (4th quintile) dividend payout rating score, and is in the highest quintile (4th quintile) firm age rating score.

Hypothesis Testing

To test the hypothesis, the following steps are carried out:
1. Identify firms that do real earnings management.
2. Identify firms that are in the growth stage.
3. Doing hypothesis testing using regression test with the following regression equation:
   $$Y_t = \beta_0 + \beta_1 \text{ Suspect\_NI}_t + \beta_2 \text{ INS} + \beta_3 \text{ INS} * \text{CYCLE} + \varepsilon_t$$

   Yt: real activity manipulation proxies (respectively abnormal operating cash flow, abnormal production costs and abnormal discretionary costs)

   Suspect _NIt: indicator variable with a value of 1 for suspect firms (firms with total net income/assets worth 0-0.005, assumed to have motivation to do real earnings management due to poor performance) and assigned a value of 0 for others (nonsuspect firms/rest of the sample).

   INS: concentration of institutional ownership.

   CYCLE: dummy variable, 1 for firms that are in the growth stage, 0 for other firms.
4. Summarizing the results of the analysis.
   a. For Yt = abnormal CFO, if β_3 is positive and significant then H1 is supported or in other words the concentration of institutional ownership affects real earnings management through cash flow operating activities in firms that are in the growth stage.
   b. For Yt = abnormal production costs, if β_3 is positive and significant then H1 is supported or in other words the concentration of institutional ownership affects real earnings management through production costs in firms that are in the growth stage.
   c. For Yt = abnormal discretionary expenses, if β_3 is negative and significant then H1 is supported or in other words the concentration of institutional ownership affects real earnings management through production costs in firms that are in the growth stage.

RESULTS

Descriptive Statistics

This study uses a sample of manufacturing firms listed on the Indonesia Stock Exchange (IDX) for the period 2016-2020. Manufacturing firms that meet the criteria during the 2016-2020 period are 120 firms with 600 firm-years.

Table 2. Samples

Description	Total
Manufacturing firms listed in BEI for period 2016-2020	128
Firms with incomplete data	(6)
Firms that do not have institutional ownership	(2)

Total Samples	120
Total Observation (120 x 5 years)	600

Table 3. Descriptive Statistics

SUSPECT_NIt		ABN_CFO	ABN_PROD	ABN_DISEXP	NI_t	CL_t	INS	CYCLE
Nonsuspect	Mean	0.005	-0.152	0.001	0.669	0.438	0.725	0.491
	N	556	556	556	556	556	556	556
	StDev	0.187	0.351	0.230	0.293	0.481	0.176	0.500
Suspect	Mean	-0.063	-0.047	-0.017	0.002	0.451	0.729	0.432
	N	44	44	44	44	44	44	44
	StDev	0.094	0.334	0.197	0.001	0.193	0.138	0.501

Table 3 shows that the mean abnormal CFO (ABN_CFO) in the suspect firm is lower than the nonsuspect firm (-0.063 <0.005) meaning that the reporting of cash flow from the suspect firm's operations is lower than the nonsuspect firm. The mean abnormal PROD (ABN_PROD) in the suspect firm is higher than the nonsuspect firm (-0.047<-0.152), meaning that the suspect firm has a higher overproduction ratio than the nonsuspect firm. The abnormal mean DISEXP (ABN_DISEXP) in suspect firms is lower than nonsuspect firms (-0.0017<0.001). This result is consistent with Roychowdhury (2006), namely firms that are suspected of carrying out real earnings management have a lower mean operating cash flow and discretionary costs and a higher mean production cost than nonsuspect firms. The number of suspect firms that are in the growth stage (44 firm-years) is lower than the number of nonsuspect firms (556 firm-years).

Table 4. Estimation of Regression Coefficient for SUSPECT_NI_t

SUSPECT_NIt	Coef.	Sig.
Abnormal CFO	-0.054	0.048
Abnormal Prod. Costs	0.077	0.141
Abnormal Discretionary Exp.	-0.010	0.775

Table 4 shows the regression results for each real earnings management equation. Table 4 shows that only the SUSPECT_Nit regression coefficient on abnormal CFO is significantly negative (0.048 <0.05) meaning that the firm carries out real earnings management only through operating cash flow.

Before testing the hypothesis, the classical assumption test was carried out. The results of the normality test showed that the significance was lower than 0.05 so that the data were not normally distributed. However, the central limit theorem states that the sample mean of a sample size consisting of at least 30 observations will be close to normal (Gujarati, 2006). The sample in this study amounted to 600 firm-years so that it can be said to be close to normal.

From the results of the Durbin-Watson (DW) test, the DW value is 1.815. The DW value is between du (1.7536) and 4-du (2.2464) so it can be concluded that there is no autocorrelation. From the results of the heteroscedasticity test using the Spearman correlation test, it shows that the residual significance of each independent variable is greater than 0.05. This shows that there is no heteroscedasticity. From the results of the multicollinearity test, the tolerance value is > 0.1 and the VIF (variance inflation factor) < 10. This shows that there is no multicollinearity.

Hypothesis Testing Results
Hypothesis testing is done by multiple regression test. Table 5 shows the results of hypothesis testing.

Table 5. Hypothesis Testing Results

	Coef.	**Sig.**
(Constant)	-0.126	0.007
SUSPECT_NI$_t$	-0.068	0.017
INS	0.178	0.004
CYCLE	0.048	0.454
INS*CYCLE	-0.061	0.474

Table 5 shows that the significance of the variable concentration of institutional ownership (INS) <0.05 (0.004) which means that the concentration of institutional ownership has a significant effect on real earnings management through operating cash flows. However, by conducting an interaction between the concentration of institutional ownership and the growth stage, the results of the significance of INS*CYCLE> 0.05 (0.474) means that the concentration of institutional ownership has no significant effect on real earnings management in firms that are in the growth stage.

DISCUSSION

Based on Table 4 shows that firms that carry out real earnings management only through the flow of operating activities so that the hypothesis testing only uses abnormal CFO as the dependent variable. Then, the results of hypothesis testing are based on Table 5 shows that the concentration of institutional ownership has no significant effect on real earnings management in firms that are in the growth stage so that H$_1$ is not supported. This may be due to the fact that most firms that carry out real earnings management (suspect) are mostly carried out on firms that are not in the growth stage. Classification into stages of the growth life cycle requires a dividend payout variable. However, many manufacturing firms in Indonesia do not distribute dividends. Classification into stages of the growth life cycle requires a dividend payout variable. However, many manufacturing firms in Indonesia do not distribute dividends. This causes the low dividend payout ratio.

CONCLUSION

This study aims to examine whether the concentration of institutional ownership has an effect on real earnings management in firms that are in the growth stage. This study proves that the firm performs real earnings management through operating cash flow. However, this study cannot prove that the concentration of institutional ownership has an effect on real earnings management in firms that are in the growth stage.

This research is limited to firms that are in the growth stage. Then, the research can only prove that the firm performs real earnings management through operating cash flow. This research is expected to provide ideas for the development of further research. Based on the existing limitations, further research can consider the following: (1) It is necessary to test firms that are in the mature and stagnant stage, (2) It is necessary to test using other life cycle models so that grouping into growth groups, mature, and stagnant are easier without dividing into quintiles, but dividing by determining the score for each life cycle indicator (Liang et al. 2011).

DECLARATION OF CONFLICTING INTERESTS
This article has nothing to do with conflicting interest.

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