

HOW MARKET COMPETITION CAN INFLUENCE BUSINESS STRATEGIES-INDUCED REAL EARNINGS MANAGEMENT: AN EMPIRICAL EVIDENCE FROM INDONESIA

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Abstract

The study explores the relationship between business units' strategy and market competition towards earnings management. Using a balanced sample from Indonesian manufacturing companies, we find convincing evidence that earnings management practice is heavily determined by the choice of firms' strategic decisions. More specifically, we document that while cost leadership strategy positively affects the earnings management, the inverse effect for the relationship between differentiation strategy and earnings management is also apparent. Also, our finding notes that the intensified market competition is also likely strengthen the relationship between cost leadership strategy and earnings management practice, but such moderating role is not apparent for differentiation strategy and earnings management.

Keyword: business strategy, cost leadership strategy, differentiation strategy, market competition, earnings management.

INTRODUCTION

Earnings management is one of the most important areas in the financial accounting since the last several decades as it illustrates the behavior of managers in reporting the company's performance. In Indonesia, several earnings management practices have created some serious turbulence in its financial systems. For example, PT. Kimia Farma Tbk in 2002 raised its reported earnings to Rp 31.7 billion and PT. Indofarma Tbk 2004 overstated its reporting net income to Rp 28.780 billion. Some companies have also been accused of dealing with earnings management practices, such as PT Sinar Mas Group Tbk, PT Indomobil, and PT Lippo Bank Tbk. Leuz (2002) maintained that Indonesia ranked 15th out of 31 countries sampled, and one of the highest countries dealing with earnings management practices in the South East Asia.

Given the negative consequences of earnings management, researches have tried to uncover the determinants of earnings management. Leuz (2002) research was one of many that have shed some light regarding one important, unsolved question: whether the earnings management practice is also influenced by the external, market oriented factor and the strategies the firms engage in. The risk of competition may increase with the number of imported goods that flow would threaten the local industry to compete with foreign products of higher quality. Competitive pressures promotes the increased of myopic behavior like extending research and development costs cutting or other measures to improve short-term profitability (Karuna et al., 2012) such as earnings management. Bently at al. (2013) maintained that the main aspect of

having business strategy in the first place is to survive in the particular industry and this may affect the way the business processes. They extended the Porter's typology to examine whether firms various use of different business strategies will contribute to the extent of earnings management. Although Porter (1980) and Pearce and Robinson (2013) indicate that there are three forms of business strategies, namely cost leadership, differentiation, and focus, this study focuses only on cost leadership and differentiation strategy, because both strategies are commonly used by companies that serve various market segments. This study does not include focus strategy, as it can be divided into focus based on cost leadership or focus based on differentiation which may be troublesome to measure.

Both strategy typologies can be contrasted by their nature which consequently affects the earnings management practices. While cost leadership focuses on the production efficiency and distribution of goods and services, Differentiation strategy on the other hand aims at creating and marketing unique products in the industry by also maintaining the close relationship with customers. Cost leadership can also be regarded as myopic behavior by maximizing cost saving on technology application and R&D expenses, while differentiation strategy may require more time to confirm its implementation success and thus may not be easily measured using financial indicators (Ittner et al. 1997). The myopic nature of cost leadership strategy could also increase the likelihood of the firms to engage in earnings management practices. On the other hand, the earnings management practices may be lower for firms with intensive differentiation strategy since no immediate financial target pressure is sought as firms' performance does not rely upon the financial information (Wu et al. 2015).

Market competition may act as important factor in how business strategy affects firms' earnings management practices. Karuna et al. (2012) maintained that market competition may increase the firms' myopic orientation and increase the firms' risk. Firms can opt to reduce the risk, by delaying the slong-term investment (Raith 2003). However, this may reduce the market power and may also affect in declining profitability and cash flow (Tirole 2006). It is interesting to use earnings management by firms' real activities such as in the R&D expenses, selling, general and administrative expenses or their production activities. Cohen et al. (2008) maintained that management of real income has a smaller risk of being detected by auditors and regulators rather than accrual-based earnings management, although it has a negative effect on future performance (Gunny 2010). Therefore, the effect of business strategy and market competition on real-based earnings management may become more apparent.

THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

Myopic managerial theory assumes that the company would sacrifice long-term goals in order to meet short-term goals (Porter, 1992). According to Miles and Snow (1978) the main purpose of cost leadership strategy is to increase the efficiency of operations, which is closely related to the extent of short-term financial performance.

Porter (1980) has also identified that cost leadership strategy present more often in the maturity and declining phase in the product life cycle which requires more dividend payment. According to the classification Govindarajan and Gupta (1985) cost leadership strategy is a harvest strategy that aims to maximize short-term profits and cash flow. When companies implement this strategy manager under pressure to meet earnings targets in the short term. These pressures escalate among the firms' with high myopic behavior *vis a vis* earning management, so that companies can survive in the industry with real earnings management. Research conducted by Wu et al. (2015) also showed that cost leadership strategy is positively related to the level of earnings management. In contrary, due to the fact that accounting –based performance is loosely used among the differentiators, firms are less motivated to engage in earnings management Based above, this study argues that:

H1. Cost leadership strategy has a positive effect on earnings management.

Ittner et al. (1997) shows that companies which perform a differentiation strategy to increase market share or new product development, will require more time to confirm the successful implementation of the strategy. Particularly, when their performance is measured using accounting-based information. Therefore, for differentiators, use of financial performance is ill-advised. On the other hand, according to its product life cycle, differentiators were usually in the introductory phase or growth (Porter 1980) as they try to seek market opportunities. Similarly, Govindarajan and Gupta (1985) maintain that differentiators are in their build strategy that try to develop their market share

In contrast with its cost-leaders counterparts, differentiators are more likely to focus on long term goals. According to Call et al. (2014) when the company has a long-term profit orientation, especially after long-term investment, it can reduce the myopic behavior of the manager. This myopic behavior can be manifested through the reduction of real earnings management. Research conducted by Wu et al. (2015) also showed that a differentiation strategy is negatively related to the level of earnings management. In this vein, when a company uses a strategy of differentiation managers are less motivated to perform earnings management.

H2. Differentiation strategy has a negative effect on earnings management.

Karuna et al. (2012) insisted that market competition will increase in the company's myopic orientation, as the competition increase firms' risk. This happens because the competition may increase the risk (Raith, 2003). In contrast, managers who avoid the risk will become more conservative by delaying long-term investment. In addition, Karuna et al. (2012) also state that higher market competition will also reduce the power of the market and reduce the level of profitability or cash flow.

Since market competition may also enhance the managerial short-term orientation, tight market competition will also increase the myopic behavior of companies with strong cost-leadership strategies. Consequently, the pressure to meet short-term profit targets will increase and this will further encourage managers to manage earnings in order to meet their short-term objectives. Earnings management becomes a potential alternative when the company is pursuing a strategy of cost leadership in a maturity and declining phase that tend to have lower profit margins and higher market competition in order to survive in the industry.

On the other hand, higher market competition that forces companies to be more slightly more short term oriented, will not effect on how differentiation affects the earnings management practices. The reason of no moderating effect is due to the fact that companies with differentiation strategies have set long term goals. Therefore, whether the competition is tight or loose may not affect the negative effects of differentiation strategy and earnings management. Therefore, the moderating hypotheses can be stated as:

H3a. The level of market competition strengthen the effect of strategy of cost leadership on earnings management.

H3b. Market competition does not moderate the impact of differentiation strategy on earnings management.

RESEARCH METHODS

Population and sample

The population of this study is the industrial and manufacturing firms consisting of base and chemical industry, a variety of industrial, and consumer goods recorded in Indonesian Stock Exchange since 2011 to 2014 accounted for 668 companies. This study imposes several criteria of sample selection, including: a) firms should be in the industrial sub sector with 10 peers, b) IPO should be conducted prior to 2010, as the business strategy takes time to be materialized into firm performance, c) it contains no outlier.

Variables and Measurement

This study examine effect of cost leadership strategy and differentiation strategy to earnings management to market competition as a moderating variable. The dependent variable of this research is the real earnings management. As for the independent variable is cost leadership and differentiation strategies. Market competition is used as moderating variable. This study also uses control variables to isolate the causal effects on earnings management including firms' return on assets (ROA), firm size, leverage, and sales growth.

Real Earnings Management

The dependent variable in this research is the real earnings management. Real earnings management or manipulation of real activity is the management actions that deviate from normal business practice. This variable was measured using the earnings management proxies developed by Roychowdburry (2006). The proxies consist of the cost of abnormal production caused by the manipulation of the manufacturing process, the operating cash flow abnormal caused by manipulation of sales activity, and discretionary abnormal caused by the manipulation of operating expenses.

Real Earnings Management by Manipulation of Production Costs

Real earnings management by manipulation of production costs (overproduction) is done by producing more goods than needed, which aims to increase the demand for which is expected to increase profits. Production on a large scale causing fixed overhead costs will be lower because of the amount of production lots. This resulted in the reported cost of goods sold is lower. So as to report an operating profit margin higher. The regression model that can be figured out to identify the increase in production (PROD) is as follows:

$$\text{PROD}_t/A_{t-1} = \alpha_i + \alpha_{i1} 1/A_{t-1} + \alpha_{i2} S_t/A_{t-1} + \alpha_{i3} \Delta S_t/A_{t-1} + \alpha_{i4} \Delta S_{t-1}/A_{t-1} + \varepsilon_i$$

Where:

PROD_t = The production cost of firm in year t

A_{t-1} = Total assets of the firm in period t-1

S_t = Sales of the firm in year t

ΔS_t = Changes in the firm's sales in the year t

ΔS_{t-1} = Changes in the firm's sales in the year t

Real Earnings Management by Manipulation of Operating Cash Flow

Real earnings management through operating cash flow manipulation is done by sales management, among others. Sales management is conducted by the manager to increase sales, thereby increasing profits. Expedited sales can generate higher profit for the year but decreased cash inflow in the following year as a result of a rebate or credit sales.

Referring to the research Rowchowdhury (2006), then the regression model for sales management (CFO) is simply calculated as follows:

$$CFO_t/A_{t-1} = \alpha_i + \alpha_{i1} 1/A_{t-1} + \alpha_{i2} S_t / A_{t-1} + \alpha_{i3} \Delta S_t / A_{t-1} + \varepsilon_i$$

In this study, the measure used cash flow is abnormal. The lower the value, the abnormal cash flow reported earnings will be higher:

Real Earnings Management by Manipulation Discretionary Expenditure

Roychowdhury (2006) revealed that the cost of discretionary advertising costs, the cost of research and development, as well as the cost of sales, general and administrative are potentials to be managed in order to manipulate firms' reported earnings. A decrease in discretionary costs can reduce reported expenses and increase profits and create greater cash flow. The regression model used for the reduction of discretionary costs (DISX) is as follows:

$$DISX_t / A_{t-1} = \alpha_i + \alpha_{i1} 1 / A_{t-1} + \alpha_{i4} \Delta St-1 / A_{t-1} + \varepsilon_i$$

This study uses abnormal discretionary costs. The lower the value of the abnormal discretionary costs, the higher the earnings were reported. The model used to assess abnormal discretionary costs (ADISX) are as follows:

$$ADISX_t = DISX_t - DISX_t / A_{t-1}$$

Where:

$$DISX_t = \text{Discretionary expenditure of firm in year } t$$

In this regards, earnings management is also tested simultaneously. More specifically, this study does not differentiate any particular earnings management dimension. Rather, we use composite measure of earnings management that consist of those three proxies of earnings management. Current study uses The higher the value of the number of real earnings management, the higher the possibility that the company manipulated the real activity, or when the value of real earnings management number is positive, it can be said that the company earning management to increase profits.

Referring to the study Cohen et al. (2008), the model equations used to determine the number of third proxy standardization of real earnings management (RM) are as follows:

$$RM_t = APROD_t - ACFO_t - ADISX_t$$

Where:

$$RM_t = \text{Real earnings management in year } t$$

Independent Variable

This study used two independent variables namely cost leadership strategy and differentiation strategy.

1. Cost Leadership Strategy

Cost leadership strategy in this study was measured using operating assets turnover (ATO). The measurement is in line with Banker et al. (2011) proposition maintaining that companies with cost leadership strategy can achieve their competitive advantage through efficiency in its operations and generate high asset turnover. Asset turnover operation was calculated by sales divided by average operating assets. Higher asset turnover value indicates that the company is able to generate revenue through efficient business operations and effective resource utilization.

2. Differentiation Strategy

Differentiation strategy in this study was simply measured using profit margins plus R&D expenses. As also outlined by Banker et al. (2011) companies with differentiation strategy are more likely to have higher profit margins because it is able to sell their unique products at premium prices to customers. To create a unique product or service, companies need to invest more in Research and Development activities (R & D). Correspondingly David et al. (2002) in Banker et al. (2011) found that the higher the value of R & D, indicates the company is pursuing product differentiation. Therefore, Profit margin calculated by operating income plus R&D expenditure divided by sales. High profit margin shows the company has a profit margin and a higher investment in R&D activity than any other company and thus indicates higher differentiation strategy.

Moderating Variable (Market Competition)

In this study, the degree of market competition in a particular industry is measured using an Competition of Herfindahl-Hirschman index (CHHI) that was also adapted by Markarian and Santalo (2010). A low value of CHHI indicates a high level of competition in the industry, and contrary, a higher CHHI value indicates a low degree of competition. CHHI is calculated as follows:

$$\text{CHHI} = \left[\sum_{i=1}^n \left(\frac{X_i}{X} \right)^2 \right] * -1$$

Where:

X_i = Sales company i

X = Total sales in the sub-sector

Control Variables

In order to isolate the impact of other substantial variables, but are not becoming the focus of the study, we use ROA, firm size, leverage and sales growth as control variables on affecting

earnings management. ROA was calculated with net income divided by total asset. Firm size on the other hand, was measured using natural logarithm of total asset. Leverage was calculated with total liabilities divided by total asset, while Sales growth was measured with current year sales minus sales of the previous year divided by the previous year's sales.

Data Analysis

Current research employed univariate and multivariate statistics. For instance, this study used descriptive statistics, and classical assumption tests (multivariate normality, heteroscedasticity, autocorrelation and multi-collinearity; those results are depicted in appendices A and B) as well as multiple regressions. Descriptive statistics provide a description of the data that could provide ample information about average, minimum values, maximum values, and variables' standard deviation. On the other hand, multiple regression were used to test the hypothesis.

In order to test hypothesis 1 and 3a, we run the following regression models:

$$| \text{RMt} | = \alpha_i + \alpha_{i1}\text{ATO} + \alpha_{i2}\text{ROA} + \alpha_{i3}\text{LEV} + \alpha_{i4}\text{SIZE} + \alpha_{i5}\text{GROWTH} + \varepsilon_i \dots (1)$$

$$| \text{RMt} | = \alpha_i + \alpha_{i1}\text{ATO} + \alpha_{i2}\text{CHHI} + \alpha_{i3}\text{ROA} + \alpha_{i4}\text{LEV} + \alpha_{i5}\text{SIZE} + \alpha_{i6}\text{GROWTH} + \varepsilon_i \dots (2)$$

$$| \text{RMt} | = \alpha_i + \alpha_{i1}\text{ATO} + \alpha_{i2}\text{CHHI} + \alpha_{i3}\text{ATOXCHHI} + \alpha_{i4}\text{ROA} + \alpha_{i5}\text{LEV} + \alpha_{i6}\text{SIZE} + \alpha_{i7}\text{GROWTH} + \varepsilon_i \dots (3)$$

While hypothesis 2 and 3b were tested using the following regression models:

$$| \text{RMt} | = \alpha_i + \alpha_{i1}\text{PM} + \alpha_{i2}\text{ROA} + \alpha_{i3}\text{LEV} + \alpha_{i4}\text{SIZE} + \alpha_{i5}\text{GROWTH} + \varepsilon_i \dots (4)$$

$$| \text{RMt} | = \alpha_i + \alpha_{i1}\text{PM} + \alpha_{i2}\text{CHHI} + \alpha_{i3}\text{ROA} + \alpha_{i4}\text{LEV} + \alpha_{i5}\text{SIZE} + \alpha_{i6}\text{GROWTH} + \varepsilon_i \dots (5)$$

$$| \text{RMt} | = \alpha_i + \alpha_{i1}\text{PM} + \alpha_{i2}\text{CHHI} + \alpha_{i3}\text{PMXCHHI} + \alpha_{i4}\text{ROA} + \alpha_{i5}\text{LEV} + \alpha_{i6}\text{SIZE} + \alpha_{i7}\text{GROWTH} + \varepsilon_i \dots (6)$$

Where:

RMt	= Real earning management
ATO	= Asset turnover operation
PM	= Profit margin
CHHI	= Competition herfindahl-hirschman index
ROA	= Return on asset
LEV	= Leverage
SIZE	= Firm size
GROWTH	= Sales growth

In addition to using the criteria of the level of significance of regression coefficients interaction variables in determining the moderating variable, then moderating variables were analyzed and further identified using the framework developed by Sharma et al. (1981) formulated as follows:

	Related with the criterion or predictor	Unrelated to the criterion or predictor
Unrelated to the predictor	1 Intervening, Exogen, Antecedents, Predictors	2 Moderator <i>(Homologizer)</i>
Related with the predictor	3 Moderator <i>(Qub) asi Moderator)</i>	4 Moderator <i>(Pure Moderator)</i>

RESULTS

The population of this research is the manufacturing companies listed in Indonesian Stock Exchange from 2011 to 2014. Samples were selected using purposive sampling method. The sample selection criteria includes a) companies are listed in the manufacturing industry sector with a minimum of ten peers, b) initial public offer was made prior to 2010, and c) no outliers. Samples were selected based classification company JASICA industrial and manufacturing companies which consists of three sub-sectors of the base and chemical industry and a variety of industrial and consumer goods industry. Final samples consisted of 220 firm-year companies.

We also found that there were 44 companies that did not reveal the Rupiah value of firms' financial statements, and thus, they were not included in the study, resulting in 176 samples. We further deleted 27 observations as they contained outliers (i.e. absolute value of z-scores are more than 3). We believe that those outliers are detriment and are not reflecting the actual phenomenon. Final sample consist of as 149 firm year observations.

Descriptive Statistics

Results of descriptive statistics are displayed in table 2. It can be seen that the average of earnings management was -0.337. Highest score for earnings management was 0.720, indicating that such company engage heavily on accounting engineering in order to justify reported earnings. Lowest earnings management was -3.190, indicating that such firm engaged in income-decreasing activity on their reported earnings.

Cost leadership strategy is measured by the ATO is the ratio that indicates the level of efficiency and effectiveness in firms' assets management. Cost leadership strategy in the sample had an average of 1,269 and a standard deviation of 0.646, indicating firms' degree of efficiency of diverse operations. The lowest value on the indication operating asset turnover strategy implementation cost leadership of 0.280 indicates that such company is only able to generate sales amounting to 0.280 times of its operating assets; this also shows that firm's asset management is less efficient. The highest value of is 3.892 indicating that firm's ability to

generate sales amounting to 3,892 times of its operating assets; this also shows that the company's asset management is effective and efficient.

Regarding differentiation strategy, an average value is 0.084 with 0.101 on its standard deviation. It means that on average, that for one rupiah earned as profit and used for R&D activities, companies must pay operating expenses for about 0.084. Mean for market competition (CHII) was -0.009 and its standard deviation was 0.023. Profitability ratio which is measured using Return on Assets, indicates company's ability to earn profits through its assets had an average of 0,045 or 4.5%. This means an average sample company is able to obtain a net profit of 4.5% of total assets in a period, with a standard deviation of 0.063.

Leverage (LEV) shows the company's risk as measured by the ratio of total liabilities to total assets. LEV has an average of 0,053 which shows that on average, companies have 0,053 times greater debts than assets. Standard deviation for Leverage is 0.312. On average, Firm size (SIZE) of the sampled observation was 21.020 with a standard deviation of 1.217. On the other hand, Sales growth (GROWTH) which is a measure of firms' ability to maintain its position compared to other competitors in the same industry had an average value of 0,139, or 13.9%. This shows that on average, firms sales growths are relatively small.

Table 2
Statistics Descriptions

	N	Minimum	Maximum	Mean	Std. Deviation
RM	176	-3,190	0,720	-0,337	0,595
ATO	176	0,280	3,892	1,269	0,646
PM	176	-0,282	0,426	0,084	0,101
CHHI	176	-0,144	0,000	-0,009	0,023
ROA	176	-0,091	0,279	0,045	0,063
LEV	176	0,037	2,554	0,531	0,312
SIZE	176	18,400	23,879	21,020	1,217
GROWTH	176	-0,576	0,802	0,139	0,217

Hypothesis test results are shown in Table 3. Model 1 test the hypothesis 1 on how cost leadership strategy affects earnings management practices. The results of hypothesis test model 1 shows the strategy of cost leadership (ATO) is positively affect the level of earnings management. It is seen from the *p*-value of 0.005, with a coefficient (α) of 0.155.

Model 3 shows the testing of hypotheses 3a to test the moderating effect of the relationship between cost leadership strategy and earnings management. Our finding indicates that the effect of cost leadership on earnings management is more prevalent among firms in the high market competition. It can be seen that *p*-value of 0.020 is below 0.05, with a coefficient (α) of 0.315.

Table 3
Summary of Multiple Regression results

	N	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<i>Constant</i>	149	-0,300 (0,625)	-1,513 (0,058)	-1,803** (0,024)	0,182 (0,747)	-0,667 (0,357)	-0,929 (0,204)
ATO	149	0,155* (0,005)	0,182** (0,001)	0,177* (0,001)	-	-	-
PM	149	-	-	-	-1,101* (0,005)	-1,137* (0,004)	-1,089* (0,005)
CHHI	149	-	4,156** (0,020)	4,014** (0,022)	-	3,215 (0,067)	3,277 (0,059)
ATOXCHHI	149	-	-	0,315** (0,020)	-	-	-
PMXCHHI	149	-	-	-	-	-	-
ROA	149	1,762* (0,003)	1,819*(0,002)	1,990* (0,001)	3,105* (0,000)	3,234* (0,000)	3,392* (0,000)
LEV	149	0,010 (0,929)	0,308 (0,731)	0,035 (0,747)	-0,049 (0,663)	-0,031 (0,778)	-0,025 (0,823)
SIZE	149	0,020 (0,929)	0,077** (0,036)	0,092** (0,012)	0,025 (0,745)	0,50 (0,149)	0,063 (0,073)
GROWTH	149	0,248 (0,093)	0,219(0,133)	0,176 (0,223)	0,147 (0,026)	0,314** (0,033)	0,271 (0,066)
<i>Adj R-squared</i>	149	0,417	0,201	0,226	0,176	0,189	0,205
<i>F-statistic</i>	149	7,316* (0,000)	7,219* (0,000)	7,714*(0,000)	7,306*(0,000)	6,760* (0,000)	6,461* (0,000)
<i>Kolmogorov-Smirnov</i>	149	1,107 (0,172)	0,986 (0,286)	0,909 (0,381)	1,135 (0,152)	1,037 (0,233)	1,000 (0,270)
<i>Asymp. Sig. (2-tailed)</i>	149	-3,863* (0,000)	-2,877*(0,004)	-3,534*(0,000)	-3,205*(0,001)	-3,534* (0,000)	-3,205* (0,001)

** , * indicates the level of significance at the level 5%, 1%

Dependent Variable: RM: real earning management

Independent Variable: ATO : asset turnover operation (cost leadership strategy); PM: profit margin (differentiation strategy); CHHI: competition of

Herfindahl-Hirschman index (level market competition); ROA: return on asset; LEV: leverage; SIZE: firm size; GROWTH: sales growth

Results on model 2 indicates the market competition (CHHI) has significant influence on earnings management with a p -value of 0.020 and an estimated coefficient (α) of 4.156. Interaction product of cost leadership strategy and market competition (ATOXCHHI), which is used to test the moderating impact of market competition on the relationship between cost leadership and earnings management is also statistically significant. These results indicate that the market competition (CHHI) is a quasi moderator. In other words, market competition can both act as moderating variable as well as independent variable in determining firms' earnings management practices.

Results on Model 4 which are used to test the second hypothesis indicates that differentiation strategies has a negative effect on earnings management in which the p -value of 0.005 is well below 0.05, with a coefficient of -1.101. Results on Model 6 are used to test hypothesis 3b. The results show that the interaction product of cost leadership and market competition (ATOXCHHI) has no significant effect on earnings management ($p = 0.052$). In order to determine the moderating role of market competition, we use results presented in Model 5. The results indicate that market competition (CHHI) has no significant effect on earnings management. The interaction product of differentiation strategy and market competition (PMXCHHI) also showed no significant effect on earnings management that has a p -value of 0.052. This indicates that the market competition (CHHI) is homologizer moderator; or in other terms, market competition could potentially be a moderating variable, but not for the relationship of product differentiation strategy and earnings management.

Discussion

The results of the analysis in Table 3 model 1 shows that the strategy of cost leadership (ATO) has a positive influence on earnings management. These results indicate that the hypothesis was supported in which cost leadership strategy has a positive influence on the level of earnings management. When companies use the strategy of cost leadership, the level of earnings management is likely to be higher. Miles and Snow (1978) stated that the main purpose of cost leadership strategy is to increase the efficiency of operations and it is closely related to the size of short-term financial performance. Consequently, firms with cost leadership strategy are more likely to focus more on short-term financial performance.

According to the classification Porter (1980), cost leadership strategy is the strategy needed when the company is in a phase of maturity and decline that could be paying high dividends. According to the classification Govindarajan and Gupta (1985), cost leadership strategy is a harvest strategy that aims to maximize short-term profits and cash flow. When

companies implement this strategy, managers are under pressure to meet earnings targets high in the short term. These pressures will increase myopic actions such as earning management to meet the targets. These results support the research conducted by Wu et al. (2015), which states the manager on cost leadership strategy have a greater motivation to perform earnings management in order to improve its financial performance.

The results of the analysis of the data in Tables II model 4 indicate that the differentiation strategy (PM) has a negative effect on earnings management. These results support the second hypothesis, on which differentiation strategy adversely affect the level of earnings management. Companies that do a differentiation strategy to increase market share or new product development, will require more time to confirm the successful implementation of the strategy, especially if evidenced in the form of financial statement information (Ittner et al., 1997). Call et al. (2014) also mentioned that when the company has a long-term profit orientation, it will reduce myopic orientation activities through the reduction of real earnings management.

The results of the analysis of the data in Tables III model 3 shows that the interplay strategy of differentiation and market competition (ATOXCHHI) positive effect on earnings management. These results support the hypothesis 3a, in which market competition strengthened the relationship between cost leadership and earnings management. According to Karuna et al. (2012) market competition will increase managerial myopic orientation. Intense market competition which also increases short-term orientation, will further encourage the orientation of myopic companies when implementing cost leadership strategy. The pressure to meet short-term profit targets encourages managers to manage earnings in order to meet short-term objectives. These results support the research conducted by Wu et al. (2015) which coined the moderating influence of market competition strategy of cost leadership to earnings management.

Interaction product of cost leadership strategy and market competition (ATOXCHHI) on model 6 also have a significant effect on earnings management. These results indicate that the market competition (CHHI) effect the relationship between cost leadership strategy and earnings management. In this vein, market competition is a quasi moderator for its dual roles as moderating variable and independent variable in affecting earnings management.

Meanwhile, the insignificant effect of differentiation strategy and market competition on earnings management supports our third hypothesis. These results show the influence of differentiation strategy on the level of earnings management does not depend on the level of market competition. These results support the research conducted by Wu et al. (2015), which states that market competition does not moderate the effect of differentiation strategy on earnings management.

CONCLUSION

Our findings indicate that real earnings management practices are determined by the business units strategies and their coupling effects with market intention. More specifically, although we found that real earnings management practices are positively determined by cost leadership strategy, it is negatively affected by differentiation. This study argues that cost leadership strategy have bigger motive to engage in real earnings management as their performance is linked with financial information. However, this is not to be the case for differentiation strategies as the performance of those firms are difficult to be quantified in short term.

Our study also indicates that market competition plays important roles in changing those relationships, particularly for the cost-leadership and earnings management. However, this study also inhibits some inherent limitation. First, the proportion of the income increasing and income decreasing are not well-balanced. Consequently, it is difficult to assume that the findings hold for all types of earnings management. In addition the scope of the investigation only focused on the industrial and manufacturing companies based classification JASIC. Therefore, generalization should be made with cautions.

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