

THE INFLUENCE OF FIRM DIVERSIFICATION TO EARNINGS MANAGEMENT: EVIDENCE FROM INDONESIA

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ABSTRACT

The objective of this study was to investigate whether firm diversification can effect to earnings management in manufacturing companies listed in Indonesia Stock Exchange. Diversification was measured using number of segments owned by the firm. Earnings management was measured using modified Jones. Samples of this study are 100 manufacturing firms from 2003 to 2007 period. The samples are collected from database Indonesia Stock Exchange. This research uses purposive sampling to collect data. Technique of collecting data in this research is Archival. One of archival technique is secondary data. The results of analysis showed that diversified firms positively influence earnings management. It was seen that the existence of earnings management is high for the company's multi-segment. It provided additional funds in order to allocate funds in its business segments so that segment grew older and survive despite the less profitable segment. In fact, they exploited the weakness of the external parties who do not know the actual financial information to show that the company has good business prospects. The result supports the research hypothesis.

KEYWORDS

corporate diversification, segment, and earnings management.

1. INTRODUCTION

The objective of this research is to investigate whether firm diversification can effect earnings management. Diversification is a form of corporate business development by expanding the number of segments both business and geographic. A firm implements strategy of diversification when it operates in an industry or market a wide range simultaneously. Strategy of product diversification is applied when the firm is operating in industries varied simultaneously. In Indonesia, PT Unilever Indonesia Tbk diversify its product as blue band (margarine), lifebuoy (soap and shampoo), *pepsodent* (toothpaste), *sariwangi* (tea), rexona (deodorant), and etc. The company diversifies its products to meet consumers' needs.

Strategy of geographical diversification is conducted when the firm operates in the geographical market simultaneously. The case in Indonesia, PT Berlian Laju Tanker Tbk has diversified its business through establishment of new businesses such as offshore, strengthening of liquid gas cargo transportation, and also geographical expansion through intensification of transportation to several regions outside Asia such as the Mediterranean, Africa, Europe and Latin America. It will improve the firm's flexibility and its ability to operate its fleet in areas offering profitable margins.

In general, the diversified firms are defined as a firm has two or more business segments. Sometime the diversified firms have lower operating profits than the firms have a single business segment (non diversified firms). This situation is related to

excessive investment by the firm. It results lower operating profit because distortions in allocating internal capital to inefficient projects funded at higher risk.

Stultz (1990) has suggested that the diversified firm will invest too large in line its business with low opportunities. While Jensen (1986) has argued that manager with large free cash flow will invest to a project which is negative net present value. It occurs as he/she allocates the resource to his/her segment business.

In addition, the manager tends to manage earnings to show opportunities in the future. It will raise funds to allocate funds in its segment business. Therefore, these segments are increasing rapidly and endure even the less profitable segment. In fact, manager also exploits weakness of external parties who do not know the true financial information (Lim *et al.*, 2008). It will raise managers' private benefits. Based on these conditions, the issue of this research is whether firm diversification in Indonesia positively influences to earnings management. The result of this study is firm diversification positively influence earnings management. It means that more firm diversification is more opportunities manager to manage earnings.

The rest of this paper is organized as follow section 2 presents theoretical and hypothesis development. Section 3 discusses research methods. Section 4 reports the empirical results and Section 5 concludes the result of this research.

2. THEORETICAL AND HYPOTHESIS DEVELOPMENT

2. 1. Firm Diversification and Earnings Management

Montgomery *et al.* (1994) has suggested that three motive of corporate diversification are (1) the view of market power (market power view), (2) resources (resources based view), and (3) the perspective of agency (agency view). In the financial literature, agency theory is an important role in explaining the relationship between principals and agents in carrying out the functions and powers of each others. Agency conflict arises because the divergence of interests leads to problems among the involved various parties (Jensen and Meckling, 1976). In the context of conflicts of interest, diversification policy is not maximal. Managers will direct the diversification in accordance with their interests. It is like measurement managerial performances depend on sales. Therefore, diversification is effective tool to increase revenue of the firm while it does not yield a positive net present value. As a result, the diversification will reduce value of the firm.

Jensen (1986) has focused on the agency problems of overinvestment. He has argued that excess cash flow relative to needed for dividend and debt payments allows. It is too much flexibility to managers to make diversifying investments into low return projects. Firms with high free cash flows and low investment opportunities have incentives to expand beyond their optimal size as lead to high levels of firm diversification. They are some incentive to managers to (1) increase the firm resources under their control, (2) provide promotional opportunities for middle managers and serve an integral component for motivational and reward system in the company, and (3)

enhance managerial compensation which tends to increase with organizational responsibility and size. It causes problem because managers with high free cash flow and low investment opportunities find it difficult to resist the temptation to grow. It is expected returns fail to exceed the cost of capital.

Lang and Stulz (1994) and Berger and Ofek (1995) has explained that the investment opportunities of diversified firms are lower compared to non diversified firms. Chen and Steiner (2000) have also explained that firm diversification is a function of excess discretionary cash flow and managerial risk considerations. Chen and Steiner (2000) has founded that the level of excess discretionary funds in the firm is positive and significant influence the level of firm diversification. Whited (2001) has argued that diversified firms differ from non diversified firms in two important aspects (1) cash flows and (2) investment opportunities. Diversified firms generate higher free cash flows than non diversified firms. Ruland and Zhou (2005) have suggested diversified firms have higher free cash flow and fewer high net present value investment opportunities. It leads the agency costs because the potential overinvestment is greater for diversified firms.

Goldberg and Heflin (1995) and Reeb *et al.* (1998) have argued that a firm's information environment is more complex when it is more diversified geographically. Herrmann *et al.* (2010) also explains that more geographically diversified firms create a more complex information environment. Increased information asymmetries between managers and owners in diversified firms will lead to overinvestment and miss allocation of resources (Stulz, 1990; Matsusaka and Nanda, 2002). Lim *et al.* (2008) has also suggested that information asymmetry is more severe for diversified firms compared to non diversified firms. With increased geographically diversified firm increases organizational complexity and information asymmetry between managers and investors. Managers have incentive to exploit these discretions to make self-maximizing decision, which decreases firm value. Rather than using the internal capital market as a means of allocating resources optimally, managers use the cash flow generated by healthy segments to subsidize under performing segments (Lamont, 1997; Shin and Stulz, 1998; and Rajan *et al.*, 2000). The information asymmetry and agency problems are more serious in a diversified firm relative to non diversified firm. The agency costs also arising due to the separation of ownership and management are exacerbated in diversified firms (Denies *et al.* 1997).

One of the reasons why managers engage in geographical diversification may be to derive private benefits from managing a geographically diversified firm (e.g., Stulz, 1981; Jensen, 1986). The private benefits include prestige or better career prospects associated with running a geographical firm, higher pay, and opportunities for entrenchment when they become more valuable to a more complex firm (Reeb *et al.*, 2001). To avoid private benefits, managers tend to manage earnings. The more complexity and information asymmetry are large incentive for manager to engage earnings management. The opportunity to manage earnings is likely to be higher the greater the level of information asymmetry (Dye, 1988; Trueman and Titman, 1988). Loughran and Ritter (1997), Rangan (1998), and Teoh *et al.* (1998) have shown that earnings management is usually not transparent to investors. It will cost for the firm when

the discovery of the presence of earnings management. It will reduce the credibility of the firm and impair its subsequent ability to raise capital at favorable terms. Richardson (2000) has also provided empirical evidence that earnings management is greater for firms with a higher level of information asymmetry.

Lim *et al.* (2008) has argued that the extent of information asymmetry is varying between diversified and non diversified firms. The accounting information of a diversified firm may be noisier than non diversified firm because the nature of the diversified firm's accounting reports. Divisional cash flows of diversified firms are observable by its managers but they are not known to outsiders and only noisy estimates are available. Thus, consolidated earnings reports convey little value relevant information about the divisions. It is misleading and cost for the outsiders. Lim *et al.* (2008) has shown that diversified firms are more aggressive in managing earnings than non diversified firms. It is conditioned upon degree of business complexity in a diversified firm. Chin *et al.* (2010) also finds that greater corporate internationalization is associated with a higher level of earnings management.

Hope and Thomas (2008) has shown that when information asymmetries induced by geographically diversified firms increase, managers are more likely to build empire in foreign. To mask the adverse effect of these suboptimal decisions arising from their discretion on firm performance, managers have the incentive to manage aggressive earnings. Expansion into international markets increases the complexity of information processing for investors. This situation induces managers tend to engage in a higher level of earnings management as information asymmetry increases. It leads managers to exploit this additional level of information asymmetry to manage earnings.

We follow Healy and Wahlen's (1999) earnings management definition. According to Healy and Wahlen (1999), earnings management occurs when managers used judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers. Hann and Lu (2009) document that managers have discretion on the considerations of cost allocation process. The managers have incentive and ability to manipulate earnings in order to prevent segment losses. In addition, another explanation by Bens *et al.* (2008) investigating the relationship between income smoothing and segments with the conservatism of accounting earnings. Ben *et al.* (2008) have documented that income smoothing among segments associated with greater information asymmetry between outside investors and insider.

Moreover, diversified firm will affect the agency cost when its complexity of organizational form is increase (Denis *et al.*, 1997). Organizational complexity can create problems between asymmetric information and expropriation problem. In this situation, the problem is difficult to detect. Guidry *et al.* (1999) also found that managers of a multinational conglomerate manipulated earnings to maximize its short-term bonus plan. The more information asymmetry between management and investors creates an opportunity for managers to manage earnings. The information asymmetry is more acute

among diversified firms. We expect that degree of diversified firm is positively associated with earnings management proxied by the level of discretionary current accruals.

H1: Firm diversification positively effect on earnings management.

3. RESEARCH METHOD

3. 1. Sample

Sampling methods in this study based on purposive sampling with specified criteria as follows:

- a. Sample a group of manufacturing industries in Indonesia Stock Exchange and has a segment between the years 2003 to 2007.
- b. The firm publishes financial reports from 2002 until 2007.
- c. The firm should have a comprehensive financial report, including an explanation and disclosure of segment.
- d. The firm has more than one business segment.

Table 1 Screenings process of research sample

Criteria	Sum
Sample is a group of manufacturing industry in Indonesian Stock Exchange and has a segment from 2003 until 2007	97
Sample does not publish financial statement during 5 years	(48)
Sample does not have the end of accounting period on December 31	(15)
Sample does not have a complete financial report, including an explanation and disclosure of segment reporting	(8)
Sample does not have more than one business segment	(6)
Final Sample	20

3.2. Data and Sources of Data

Data used in this study is historical data. Secondary data is collected from 100 manufacturing companies during five years. Data is collected from various sources as Exchange Corner Atma Jaya Yogyakarta University and PDBE Gadjah Mada University.

3. 3. Operational Definition and Measurement Variable

- a. Independent variable in this research is diversification. Diversification (diversified firms) is a form of business development by expanding the business and geographical segments. Diversification is measured by counting the number of segments that are owned by the firm.

There are six control variables as growth, leverage, inside, institutional, decline, and loss.

- b. Growth (growth opportunities) is a growth company that is a corporate investment opportunity. In this case, it is measured by the amount of change in sales. Gul *et al.* (2003) documents that manager of high growth companies more often manage earnings to inform about the firm's growth opportunities in the future.
- c. Leverage is the ratio of total debt to equity. If funding is obtained through debt means that the risk of debt to equity ratio will increase. Ultimately it will increase risk and uncertainty to obtain profits in the future.

- d. Inside (managerial ownership) is the ownership of shares held by management. Stock ownership by the management will motivate managers to manage firm very well. Inside (managerial ownership) is measured by the percentage ownership of shares held by managers.
- e. Institutional (institutional ownership) is the ownership of shares held by institutional investors. The presence of institutional ownership such as insurance companies, banks, investment companies, and ownership by other institutions encourage a more optimal control to management performance. Institutional (institutional ownership) is measured by the percentage ownership of shares held by institutional investors.
- f. Decline is an effort to prevent reducing profits by managers.
- g. Loss is loss is efforts to prevent declining firm performance so that the firm is look better in investors and creditors.
- h. Dependent variable in this research is earnings management. Earnings Management is an act of management affecting reported earnings and misleading financial information. Discretionary current accrual is proxy for earnings management. It is measured using cross-sectional model of the modified Jones (Dechow *et al.*, 1995).

3.4. Data Analysis Method

Data are analyzed the following steps.

- a. Diversification measure based on the number of companies owned by business segment.
- b. Discretionary Current Accrual is calculated using the modified Jones model.

CA = Δ (Current Assets - Cash) – Δ (Current Liabilities – Current Portion of Long Term Debt)

$$\left(\frac{CA}{TA}\right)_{i,t} = \beta_1 \left(\frac{1}{TA}\right)_{i,t} + \beta_2 \left(\frac{\Delta REV}{TA}\right)_{i,t} + \varepsilon_{i,t}$$

Where TA is total assets of firm i at year t. ΔREV is the change in earnings of firm i in year t. $\varepsilon_{i,t}$ is the random residual term.

$$DCA_{i,t} = \left(\frac{CA}{TA}\right)_{i,t} - \hat{\beta}_1 \left(\frac{1}{TA}\right)_{i,t} - \hat{\beta}_2 \left(\frac{\Delta REV - \Delta TR}{TA}\right)_{i,t}$$

DCA is discretionary current accruals. Empirical model to test hypothesis is as follow.

$$EM_{it} = \beta_0 + \beta_1 DIVERSIFICATION_{it} + \beta_2 GROWTH_{it} + \beta_3 LEV_{it} + \beta_4 INSIDE_{it} + \beta_5 INST_{it} + \beta_6 DECLINE_{it} + \beta_7 LOSS_{it} + \varepsilon_{it} \quad (1)$$

4. RESULTS

4.1. Descriptive Statistics

Table 2 Descriptive Statistics

No.	Variables	Minimum	Maximum	Mean	Standard Deviation
1.	Diversification	1.00	5.00	3.0500	1.11351
2.	Growth	-0.82	2.58	0.1222	0.45405
3.	Leverage	-69.98	117.70	2.1217	15.16565
4.	Inside	0.00	83.21	1.9842	9.94192
5.	Institutional	0.10	100.00	69.2281	24.64692
6.	Decline	0.00	1.00	0.5600	0.49889
7.	Loss	0.00	1.00	0.4000	0.49237
8.	Earning management	-1.02	0.95	-0.0127	0.26567

The results of descriptive statistics in Table 2 suggest that the variable of diversification (diversified firms) has a minimum value of 1.00 and a maximum value of 5.00. Growth (growth opportunities) has a minimum value of -0.82 and a maximum value of 2.58. Leverage has a minimum value of -68.98 and a maximum value of 117.70. Inside (managerial ownership) have a minimum value of 0.00 and a maximum value of 83.21. Institutional (institutional ownership) has a minimum value of 0.10 and a maximum value of 100.00. Decline (prevention of falls in profits) has a minimum value of 0.00 and a maximum value of 1.00. Loss (loss prevention) has a minimum value of 0.00 and a maximum value of 1.00. Earnings management (earnings management) has a minimum value of -1.02 and a maximum value of 0.95.

4. 2. Test of Hypothesis

Table 3 the Result of Analysis

$$EM_{it} = \beta_0 + \beta_1 DIVERSIFICATION_{it} + \beta_2 GROWTH_{it} + \beta_3 LEV_{it} + \beta_4 INSIDE_{it} + \beta_5 INST_{it} + \beta_6 DECLINE_{it} + \beta_7 LOSS_{it} + \varepsilon_{it}$$

Variable	Coefficients	t-statistic	p-value
<i>Constant</i>	-1.147	-1.692	.094*
DIVERSIFICATION	.044	2.094	.039**
GROWTH	.164	3.977	.000***
LEV	.003	2.654	.009***
INSIDE	-.006	-3.291	.001***
INST	-.002	-2.517	.014*
DECLINE	.150	3.495	.001***
LOSS	.089	2.418	.018**
<i>Adjusted R²</i>	0.574		
F-statistik	20.062		
Probabilitas F-statistik	.000		
N	100		

***, **, * = significant at alpha 0,01; 0,05; and 0,1.

Before testing of hypothesis, this research tests classical assumption. The results show normal distribution. There are not heterocedastity, autocorrelation, multicolinearity. The results of regression analysis based on Table 3 show coefficient of diversification (diversified firms) are positive and significant. The results suggest that diversified firm positively influence earnings management. It means manager of diversified firm to manage earnings. The results are consistent with research Stulz (1990), Han *et al.* (2008), and Lim *et al.* (2008) which states that higher information asymmetry between managers and owners of diversified firm. Because the many segments owned can lead to excessive investment and allocate resources. It is not appropriate because managers use cash flow from healthy segments to hide low performing from the other segments.

The results also show that growth variables positively and significant influence earnings management. Positive effect on investment opportunities for earnings management indicates that the firm's investment opportunities with high growth most common smoothing earnings. Leverage variable positively and significant influences earnings management. the positive effect leverage to earnings management because according to the debt covenant hypothesis which states that the closer the firm with violations of accounting-based debt covenant, managers tends to choose accounting procedures that move from reported earnings in the next period to the current period.

Inside variable (managerial ownership) influences negatively and significant to earnings management. It indicates that manager is not interested to manage earnings. Manager aligns his/her interest with the various interests. Institutional variables influence negatively and significant to earnings management. It indicates that the ownership of shares by institutions can oversee opportunistic behavior of managers using earnings management to private interests. Decline variable (prevention of falls in profits) influences positively and significant to earnings management. It indicates that the strong motivation of managers to perform in order to prevent the decline in earnings accrued so that the company is not threatened bankruptcy. Loss variable (loss prevention) influences positively and significant to earnings management. It indicates managers to avoid losses (loss).

5. CONCLUSION

This study concludes that diversified firm positively influences earnings management. The results suggest that the many segments will require the large funds. It can lead to manage earnings. In addition, firm tends to reduce taxes by reducing earnings in all segments when its profit is high. It occurs because the many segments will facilitate to reduce tax payment. The results of this study do not represent all companies in the Indonesian Stock Exchange. This study only uses manufacturing companies as sample. The future research can use more types of diversification. It also represents all types of industries and differences earnings management in all industries.

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