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The Effect of Firm Characteristics on Earnings Management Practices among Malaysian Public Listed Companies in the Technological Industry

Erlane K Ghani^a, Nur Afifah Mohd Azemi^b and Evita Puspitasari^c

^aAccounting Research Institute, Universiti Teknologi MARA, Malaysia

^bFaculty of Accountancy, Universiti Teknologi MARA, Malaysia

^cFaculty of Economics and Business, Universitas Padjadjaran, Indonesia

ABSTRACT

This study investigated the effect of firm characteristics on earnings management practices among technology-based public listed companies in Malaysia. Specifically, this study examined the effect of firm size, firm profitability and firm leverage on the companies' practices of earnings management. Using 83 technology-based companies listed in the FTSE Bursa Malaysia KLCI Index for 2015 and 2016, this study showed a statistically positive relationship between firm size and earnings management practices. Such a finding indicates that larger companies tend to use earnings management incentives to enhance their performance. However, firm profitability and firm leverage have no significant relationship to the occurrence of earnings management practices. This study provides evidence that firm size influences the occurrence of earnings management among Malaysian public listed companies in the technological industry.

Keywords: *Firm size, profitability, leverage, technology industry, public listed companies, Malaysia.*

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INTRODUCTION

A financial statement is a set of information that companies make available to investors which serves to contribute to the information symmetry between companies and stakeholders (Wallace, 1987). The preparation process of financial statements involves the management to make a sequence of estimations and judgments on the interpretation of operations. Subsequently, the management chooses which accounting practices are to be adopted that can influence a firm's accounting value. This situation leads to a difficulty on whether it is necessary for the management to make choices or the management does not properly use its power of choice (Hunton, Libby, & Mazza, 2006), due to the management practicing earnings management.

Many researchers, management and other stakeholders have an interest in earnings management (Dechow & Dichev, 2002; Kothari, Leone, & Wasley, 2005; Ball & Shivakumar, 2008). Earnings management refers to manipulation of accounts and financial reports conducted by a company's management. The reason for earnings manipulation is to reflect the positive performance of a company that does not necessarily reflect its true performance (Fong, 1999). A company often involves in earnings management when it fails to meet investors' expectations. Often, it is materially misleading which smooth out fluctuations in earnings in order to meet analysts' earnings projections (Wang, Swift, & Lobo, 1994; Ali & Hwang, 1995; Kothari, 2001). However, earnings management among companies is a disadvantage to the companies if the stakeholders find unethical activities.

The emergence of the global economy and advances in technology suggest that listed companies are becoming more challenging due to environmental uncertainty which subsequently lead to significant constraints on companies and affect the process of decision-making (Child, 1972; Williamson, 1975). The performance of a firm is volatile when the external environment the firm faces changes such as changes in political issues, social issues, cultural and economic incidents. These changes happen when a firm restructures its management level or business process (Thomson, 1967). All of these changes would affect the performance of the companies especially in the financial aspect and may lead to unethical issues such as manipulation of financial reports in order to show good performance to

their stakeholders, One of the industries susceptible to these changes is the technological industry because companies perceiving a high degree of environmental uncertainty are more likely to pursue an aggressive technological policy (Ghosh & Olsen, 2009). Arguably, the technological industry would be more likely to be involved in earnings management practices. However, there is yet a study that has examined the link between earnings management practices and performance among companies in the technology-based industry.

This study investigates the factors influencing companies to practice earnings management. This study investigates the relationship between characteristics and earnings management practices among Malaysian public listed companies in the technological industry. The remainder of this paper is structured as follows. The next section provides a review of the relevant literature. This is followed by a description of the research design. Subsequently, the results are presented. Summary and conclusions are provided in the last section.

LITERATURE REVIEW

Healy and Wahlen (1999, p.368) defined earnings management occurrence ‘...when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the firm or to influence contractual outcomes that depend on reported accounting numbers’. Such definition indicates that financial reports can be manipulated with the complement of managers’ judgmental opinion. Earnings management provides incentives for managers in a firm used to enhance their performance.

The managers’ intention to do earnings management can produce a positive or negative impact. Earnings management can provide a positive impact when earnings management practices are conducted to provide benefits to the firm. On the other hand, earnings management practices would provide a negative impact when the intention to practice earnings management is conducted to provide benefits to the managers (Dutta & Fan, 2014). A body of the accounting literature has suggested that earnings management practices is often attributed by the characteristics of a firm

and such characteristics enhance the possibility of earnings management practices (Llukani, 2013; Lusi & Swastika, 2013; Rahmani & Akbari, 2013; Shu & Chiang, 2014). In the context of this study, three characteristics are examined namely, firm size, firm profitability and firm leverage.

Firm Size

A body of the accounting literature has investigated the relationship between firm size characteristics and earnings management practices and the results are mixed. Most studies found that size does matter in which larger companies tend to manipulate their earnings compared to smaller companies. These studies show that larger companies tend to i. reverse current accruals to amplify the earnings of equity offerings (Rangan, 1998; Razaque, Rahman & Salat, 2006), ii. manipulate earnings in order to avoid negative earnings (Barton & Simko, 2002;). Sun and Raith (2009) however, provide contrasting evidence. They found smaller companies are more likely to indulge in earnings management by showing lower profits through the years.

Another group of studies show no relationship between firm size and earnings management practices. For example: Burgstahler and Dichev (1997) found that the impact of earnings management on companies' losses is more significant in order to avoid small losses or small decline in profits regardless whether the firm is large or small. However, these studies were often conducted on non-technology-based companies. This leads to the development of the following hypothesis:

H1: *There is a positive relationship between firm size and earnings management practices among technology-based public listed companies.*

Firm Profitability

A body of the accounting literature has also suggested that companies that gained profitability after a long period of losses are sensitive towards discretionary accounting choices and their impact on their earnings to the extent that there would be strong incentives to ensure that the firm would not return to a loss state (Brown, 2001; Klein & Marquardt, 2005; Mosebach

& Simko, 2005). This scenario influences companies to get involved in earnings management even though they are performing well. For example: Subramanyam (1996) found that the discretionary accruals component of earnings have a positive relationship to future profitability. Similar findings were found in Hartono, Subroto, and Irianto (2013), where they found a significant positive relationship between discretionary accruals and future profitability in efficient earnings management. Arguably, efficient earnings management is one incentive used by managers to enhance their performance in meeting shareholders' expectations.

Another body of the literature however, found contrasting findings. These studies found companies that have quarterly profitability use less discretionary accruals in previous years compared to companies that failed to maintain their profitability (Kanagaretnam, Lono & Mathieu, 2001; Kordlouie & Sheikbeglo, 2012). For example: Kordlouie and Sheikbeglo (2012) found profitability has a negative association with earnings management practices. They found that large companies that gained profitability have low earnings management practices. Similar findings were found in Saleh, Iskandar, and Rahmat (2005), where companies that incurred losses would be more obliged to practice earnings management. This is to provide positive signals to the market or to reduce the impact of negative signals originated from financial distress. Since the results are mixed coupled with firm profitability being seen as crucial to occurrences of earnings management, the following hypothesis was developed:

H2: *There is a positive relationship between profitability and earnings management practices among technology-based public listed companies.*

Firm Leverage

Studies have also investigated the relationship between leverage and earnings management practices. Studies that have examined such a link often predict that leverage would increase or reduce opportunistic behaviour of managers. Leveraged companies often engage in earnings management in order to avoid debt covenant default (Beatty & Weber, 2003) and often increase accrual earnings management (Jelinek, 2007). Studies indicate that managers in high leveraged companies increase their reported earnings to

improve their bargaining power during debt negotiation (Dichev & Skinner, 2002; Jaggi & Lee, 2002; Othman & Zhegal, 2006) and subsequently, reducing the perceived risk of creditors. Of consequence, there would be a positive relationship between the debt/equity ratio and the reported earnings from future periods to the current period.

Another group of studies found that debt has a negative relationship on income-increasing manipulation. Such findings indicated that companies with a high debt may reduce earnings (Becker, DeFond, Jiambalvo & Subramanyam, 1998; Mohd & Ahmed, 2005). The managers of a company that produced discretionary accruals is limited by the debt since the company has financial commitments (Harris & Raviv, 1991). These findings indicate a negative significant relationship between debt and income-increasing earnings management. This suggests that companies with high debt levels would face higher monitoring from the bankers and creditors, thus inhibiting the use of positive discretionary accounting accruals (Chung, Firth, & Kim, 2005; Lee, Lev, & Yeo, 2007; Zhong, Gribbin, & Zheng, 2007). However, these studies were mostly set in a non-Malaysian setting, leaving examining this issue in a Malaysian context largely unexplored. This led to the development of the following hypothesis:

H3: *There is a positive relationship between leverage and earnings management among technology-based public listed companies.*

RESEARCH DESIGN

Sample Selection

The sample in this study is the technology-based companies listed in the Bursa Malaysia for two reasons. The first reason is the nature of the technology-based companies which are specialised and prone to high uncertainty due to highly competitive markets as well as rapid technological advances (Balkin, Markman, & Gomez-Mejia, 2000). Hence, these companies may get involved in earnings management.

Secondly, the technology-based companies have different characteristics such as firm size, firm profitability and firm leverage. From 2015 to 2016,

there were 93 technology-based companies actively traded on Bursa Malaysia. Ten companies were excluded from this study after reviewing the annual reports of the companies due to absence of relevant information. Hence, the final feasible sample is 83.

Research Instrument and Data Collection

This study relied on content analysis of Annual Reports of technology-based companies. The annual reports are important sources of information to forecast performance of the companies (Beretta & Bozzolan, 2008). This study extracted the data from the annual reports such as revenue, total assets and trade receivables. In addition, this study relied on the DataStream system to search data on firm size, firm profitability and firm leverage, which was then cross checked with the annual reports to confirm data reliability.

Variable Measurements

This study measured the variables based on the nature of the variables. Earnings management practices was the dependent variable whilst the size, profitability and leverage were the independent variables. The modified Jones model was used to interpret earnings management practices of the companies (Dechow, Sloan & Sweeney, 1995; DeFond & Park, 1997).

The model is presented as follow:

$$E(AC)_t = \alpha_0 + \alpha_1 (\Delta REV_t - \Delta REC_t) + \alpha_2 (PPE_t)$$

Where:

$E(AC)_t$ = Expected normal accrual;

ΔREV_t = Net revenues in year;

ΔREC_t = Net receivables in year t less net receivables in year t – 1;

PPE_t = Property plant and equipment at time t.

The independent variable in this study was firm characteristics. There were three variables representing firm characteristics namely, firm size, firm profitability and firm leverage. Firm size in this study was measured by the companies' total assets at the end of the year. Firm profitability was measured by the return on total assets ratio, an indicator of how profitable a firm is

relative to its total assets and firm leverage was measured based on debt-to-equity ratio, a ratio reflecting the debt of the firm to its shareholders equity.

RESULTS

Descriptive Statistics

Table 1 presents the descriptive statistics for the independent and dependent variables. The dependent variable is earnings management (EM) whilst the independent variables are firm size (COMPANIESIZE), firm profitability (PROFIT) and firm leverage (LEV). Table 1 shows that the technology-based public listed companies have practiced earnings management. The result indicates that the accounting decision made by the management represents managerial interventions into the financial reporting process. The result shows a change in the mean score of 6.9890 whilst the minimum and maximum change occurred were between 5.20 and 8.44 respectively. Meanwhile, the standard deviation on earnings management practices was 0.64624. Such results indicate that changes in the decision made by the management in using new accounting methods and policies are low for this type of industry. This could be attributed to the nature of business that is perceived to be highly risky if changes always occur.

Table 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
EM	166	5.20	8.44	6.9890	.64624
COMPANIESIZE	166	6.48	9.27	7.7520	.54763
PROFIT	166	-2.70	-.58	-1.2481	.49659
LEV	166	-2.10	.75	-.5100	.50966

The independent variables in this study were firm size (COMPANIESIZE), firm profitability (PROFIT), and firm leverage (LEV). Table 1 shows that the mean score value for firm size, firm profitability and firm leverage is 7.7520, -1.2481, and -0.5100 respectively. Meanwhile, for the minimum and maximum value for the three variables are of 6.48 and 9.27 for firm size, -2.70 and -0.58 for firm profitability and -2.10 and 0.75 for firm leverage. The standard deviations for the three variables are 0.54763 for firm size, 0.49569 for firm profitability and 0.50966 for firm leverage.

Correlation Analysis

Table 2 shows the results of the correlation analysis of the firm characteristics and earnings management practices. The results show a significant positive significant correlation between the variables in this study, an indication of a significant positive relationship between firm size and earnings management practices at a p-value less than 0.01 with r value equal to 0.679. The result also shows a positive significant relationship between firm size and firm leverage at p-value less than 0.01 with r value equal to 0.342. Such result indicates that firm size of a firm influences the occurrences of earnings management practices. The result also indicates that the level of debt allocated in a firm also influences earnings management practices. In other words, larger companies that have more debt for their financing are likely to have higher occurrences of earnings management.

Table 2: Correlation Analysis

	EM	COMPANIESIZE	PROFIT	LEV
EM	1			
COMPANIESIZE	.679**	1		
PROFIT	.028	.032	1	
LEV	.157	.342**	-.124	1

Regression Analysis

This study developed three hypotheses that represent the influence of firm characteristics on earnings management practices. Multiple regression analysis was used to investigate the association between the variables based on the following equation:

$$EM = \beta_0 + \beta_1 FIRM_SIZE + \beta_2 ROA + \beta_3 LEVERAGE + \varepsilon$$

Where,

EM = Earnings management

FIRM_SIZE = Firm size (measure by total assets)

ROA = Firm Profitability

LEVERAGE = Firm Leverage

ε = Error

Table 3 shows that the overall explanatory factors of earnings management practices at adjusted R-squared is 42.6% (F-value=10.050; p-value=0.000). This study found that the earning management practices among the technology-based public listed companies are 42.6% whilst the remaining 57.4% is explained by other variables which are not examined in this study. Such a result shows that there is a significant positive relationship between firm size and the occurrences of earnings management practices among the technology-based companies at the 1% significant level (t-statistics=6.701; p-value=0.000). The result indicates that larger companies tend to practice more of earnings management consistent with previous studies such as by (Kim, Liu & Rhee, 2003; Llukani, 2013; Shu & Chiang, 2014). However, this study shows no significant relationship between firm profitability and leverage on earnings management practices. Therefore, hypothesis 1 in this study is supported but not hypothesis 2 and hypothesis 3.

Table 3: Regression Analysis

Variables	Coefficient	t-statistics	P-value
(Constant)		.629	.532
COMPANIESIZE	.703	6.701	.000**
PROFIT	-.018	-.182	.856
LEV	-.096	-.912	.366
R ²		47.3%	
Adj. R ²		42.6%	
F-statistics (P-value)		10.050 (0.000) **	
Df		165	

SUMMARY AND CONCLUSION

This study investigated the relationship between firm characteristics and earnings management practices of technology-based public listed companies. Examining earnings management is important as it can distort the information value of the financial reports. Of consequence, the impact may provide positive or negative impact to stakeholders. Stakeholders need to have confidence on the reliability of the information for decision-making. Specifically, this study investigated the relationship between firm size and earnings management practices. The results show only firm size in firm characteristics has a significant relationship with earnings management

practices in the technology-based public listed companies. The result indicates that firm size has a positive impact in occurrences of earnings management. That is, larger companies are more likely to be involved in earnings management practices to meet their shareholder and stakeholder expectations.

This study is not without limitations. First, this study only examined three firm characteristics in examining earnings management practices namely, firm size, firm profitability and firm leverage. Secondly, this study relied on annual reports of the companies over a two-year period. This study only focussed on the development years for technology-based companies in Malaysia and not on observing the trend of earnings management practices across several years.

In sum, the findings in this study provide an understanding to academics, practitioners and other interested parties on the effect of company's characteristics on earnings management practices in the context of a technology-based industry. Such an understanding could also assist these parties to be cautious on using the data contained in the annual reports when making decisions for investment.

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