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The Interaction Effect of Institutional Ownership and Firm Size on the Relationship between Managerial Ownership and Earnings Management

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Abstract

Prior studies examine the influence of institutional ownership and managerial ownership on earnings management with conflicting results. This research investigates the inconsistent results with a developed framework through the interaction effect of institutional ownership and firm size on the relationship between managerial ownership and earnings management. The study carries out a test using a sample of 115 manufacturing companies listed on Indonesian Stock Exchange from 2008 to 2012. The least square regression analysis serves as statistical analysis tool of the study. The study shows that managerial ownership affects earnings management practices. Institutional ownership and firm size moderate the relationship between managerial ownership and earnings management. The presence of institutional ownership possesses the likelihood of a reduction in the practice of earnings management.

Keywords: Managerial Ownership, Institutional Ownership, Firm Size, Earnings Management, Listed Manufacturing Companies, Developing Country

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1. INTRODUCTION

Various factors have the potentials to affect earnings management practices. Previous studies examine the influence of institutional ownership and managerial ownership on earnings management. In fact, the research studies have not found a consistent result of the effect of institutional ownership and managerial ownership on earnings management. Some studies indicate that corporate governance that includes institutional ownership, and earnings management has an impact on corporate accounting behaviour (Dechow, Sloan, and Sweeney, 1996; Dempsey, Hunt, and Schroeder 1993; Jiambalvo, 1996; Sandra, 2012). Balsam, Bartov, and Marquardt (2002) find that institutional investors, that is, sophisticated investors, are more capable of detecting earnings management than non-institutional investors because they have more access to timely and relevant information. In contrast, another study by Siregar and Sidharta (2008) finds contradictory evidence about the impact of institutional ownership on earnings management that institutional ownership has no bearing on earnings management. Moradi (2011) concludes that no significant relationship between institutional ownership and earnings quality. In essence, institutional ownership has no impact on earnings management. Claessens and Fan (2002), Porter (1992) also found that institutional investors do not play an active role in monitoring management activities. According to (Bushee, 1998; Porter, 1992) institutional owners are overly focused on short-term financial results, and as such, they are unable to monitor management.

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Kazemian and Zuraidah (2015) investigate the role of firm size in the relationship between managerial ownership and earnings management practices. Specifically, their study addresses the question of whether the relationship between managerial ownership and earnings management is different according to firm size. Their findings suggest that the firm size as a 'quasi' moderating variable, which posits the negative relationship between managerial ownership and earnings management. Study of Taheri, Asadollahi, and Niazian (2014) investigate the moderating role of institutional ownership, but on the relationship between free cash flow and asset utilization. The gap arising from the challenges of inconsistency in findings symbolizes the significance of the current study.

The objective of this study is to investigate the moderating role of firm size and institutional ownership on the relationship between managerial ownership and earnings management practices in the developing countries. Based on the problem statement, the study specific objectives are:

a) To examine the relationship between managerial ownership and its cause on earnings management in the manufacturing companies listed on Indonesian Stock Exchange from 2008 to 2012.
b) To investigate the relationship between institutional ownership and firm size and their causes on earnings management in the manufacturing companies listed on Indonesian Stock Exchange from 2008 to 2012.
c) To investigate the interaction effect of institutional ownership and firm size on the relationship between management ownership and earnings management in the manufacturing companies listed on Indonesian Stock Exchange from 2008 to 2012.

The significance of the study is to emphasise the relevance of institutional ownership and firm size as possible explanations of interaction in strengthening and weakening the effect of managerial ownership on earnings management especially in developing country listed manufacturing companies.

2. LITERATUR REVIEW, CONCEPTUAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

2.1 Conceptual Research Framework of the Study

The conceptual research framework of the study is an offshoot of the Ratnawati and Ali (2015), Siregar and Utama (2008), and Mansor, Ahmad Zaluki, and Osman (2013) is demonstrated in Figure 1.

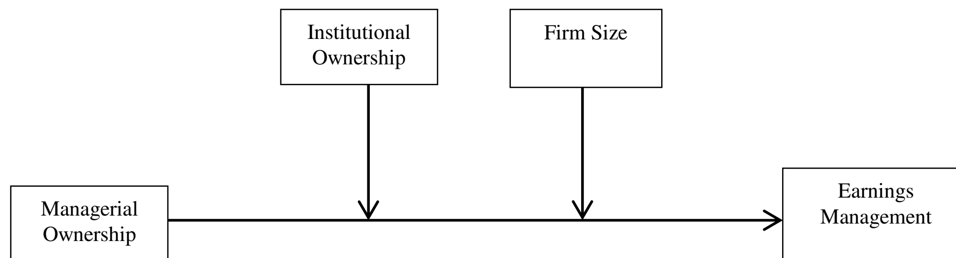

Figure 1: Conceptual Framework for the Study
Source: Adapted from Morck, Shleifer and Vishny (1988); Siregar and Utama (2008); Mansor, Ahmad Zaluki, and Osman, (2013); and Ratnawati and Ali (2015).

2.2 Managerial Ownership, Institutional Ownership, and Earnings Management.

Based on an understanding of agency theory, institutional investors have the opportunity, resources, and ability to monitor managers. It indicates that institutional ownership is associated with a better monitoring of management activities, and thus reduces the manager's ability to manipulate earnings opportunistically. The efficient monitoring hypothesis suggests an inverse relationship between a firm's earnings management activity and its institutional share ownership. Several studies also document that institutional ownership inhibits managers to engage opportunistically in earnings management (Bange and De Bondt, 1998; Bushee, 1998; Chung, Firth, and Kim, 2002; Cornett et al., 2008; Ebrahim, 2007; Koh, 2003; Kazemian and Zuraidah, p 620). The phenomenon reduces the willingness of managers to own shares in the company because the freedom to do things to satisfy their private benefit is limited by surveillance carried out by institutions that have ownership. Thus it can be said that the larger institutional ownership in the company, hence diminishing the desire of managers to participate in the own interest of the company. High institutional ownership leads to decreased managerial ownership so that earnings management practices can be curtailed.

Chung et al. (2002) also find that the institutional shareholdings inhibit managers from managing accruals to achieve the desired level of earnings. Dechow et al. (1996) suggest that large block-holders of shares improve the credibility of a firm's financial statements by providing scrutiny over its earnings management activity. Bathala, Moon, and Rao found that use of managerial stock ownership is inversely related to institutional ownership in the firm. The institutional ownership negatively affects managerial ownership as a form of shareholders intervention on the performance of managers. Increased institutional ownership means improving the supervision and control of the opportunistic behaviour of executives. High institutional ownership leads to decreased managerial ownership (Kartika, 2010). These conditions will reduce its earnings management practices. Therefore it can be concluded that managerial ownership moderates the influence of institutional ownership on earnings management.

H1: Managerial ownership has a significant negative influence on earnings management.
H2: Institutional ownership has a significant negative impact on earnings management
H3: Institutional ownership moderates the relationship between managerial ownership and earnings management.

2.3 Managerial Ownership, Firm Size, and Earnings Management.

In general, managerial ownership occurs in small firms than large firms (Imanta, 2011). Previous researchers' results show that firm size has a negative influence on managerial ownership (Mahadwartha, 2003; Vidyantie, 2006). Additionally, Wahidahwati (2002) argues that the bigger the company, the less managerial ownership. The circumstances happen when there exists a provision that limits the ability for the manager to acquire company's shares. According to Ali et al. (2010) firm size may be one of the important reasons that affect the managerial ownership and agency conflict relationship. This result suggests that managerial ownership should be encouraged in small firms so that it can represent a substitute for the weakness of other corporate governance mechanisms. Their study also indicates that other types of ownership play a major role in monitoring firms' activities (Kazemian and Zuraidah, 2015, p 621).

Larger companies would have less incentive to manage earnings because they face greater political costs and are more subject to scrutiny from financial analysts and investors (Watts & Zimmerman, 1990). Furthermore, Mansor et al. (2013) discover that smaller sized companies have the tendency to be involved in income smoothing activities as their actions would not be scrutinized. The current study measures firm size as the natural log of total assets. Kazemian and Zuraidah (2015) also investigate the moderating effect of firm size on the relationship between managerial ownership on earnings management. They argue that although management ownership may reduce the earnings management activities, other factors such as firm size may also affect the behavioural pattern. Managerial ownership is more prominent and hence, an efficient monitoring mechanism, particularly in small firms. Their findings show that the size of the firm is a 'quasi' moderating variable where the negative and significant relationship between the level of management ownership and discretionary accruals weakened by a positive and significant relationship between the interaction between the size of the firm and executive ownership and discretionary accruals. Based on this foundation, a conclusion can be reached that firm size moderates the influence of managerial ownership and earnings management.

According to Kazemian and Zuraidah (2015), although an increase in managerial ownership will reduce earnings management practices, their study shows that managerial ownership is less significant in large-sized companies compared with small-sized enterprises. Large-sized companies differ regarding the adoption of corporate governance mechanisms than medium-sized organizations. This is because the agency conflict is higher in large-sized organizations. Therefore, managerial ownership is becoming less a role in controlling.

H4: Firm size has a significant negative influence on earnings management
H5: Firm size moderates the relationship between managerial ownership on earnings management.

3. RESEARCH METHODOLOGY

3.1. Population and sample

The population of the study encompasses the manufacturing companies listed on the Indonesian stock exchange from 2008 to 2012. A total of 136 companies serves as a sample. After screening based on criteria depicted in Table 3, the final sample size was 115 companies. The detailed sample of description is illustrated in Table 1 of the study.

Table 1: Sample Description

Manufacture companies listed 2008-2012	136
Incomplete data	(21)
Qualified sample	115
No. of years	5
Total year-observations	575

3.2 Measurement of Earnings Management

Earnings management is measured by using a discretionary accrual (DACC). The findings of the study Tsai and Chiou (2009) found that the cross-sectional Jones model (Jones, 1991) is the most popular model in the literature for detecting earnings management.The following model is cross-sectional Jones model to estimate for non-discretionary accrual (Ratnawati & Ali, 2014).

The Jones model:
NDAijt = α0it (1/TAijt-1) +α1it (Δ REVijt/TAijt-1)+α2it(PPEijt/TAijt-1).. ………(1)
In which:
Δ REVt = earnings changes for periodt and t-1
PPEt=the fixed assetsof firm in year tdivided bytotalassets offirm i atthe end ofyear t-1
TAt_1 = total asset at the end of the year t-1 period
i = industry
J = the sample of companies
α0, α1 and α2 = company-specific parameters, obtained from the following models:
TACCijt = α0it (1 / TAijt-1) + α1it (Δ REVijt / TAijt-1) + α2it ((PPE ijt / TAijt-1) + εijt .. (2)
DACC = $TACC_{it}$ - $NDACC_{it}$
TACC = total accrual
NDACC = nondiscreationary accrual

3.3 Measure of independents variables

Managerial ownership = % managerial ownership in the company (Morck, Shleifer & Vishny, 1988; Ratnawati & Ali, 2015).

Institutional ownership = % institutional ownership in the company (Siregar & Utama, 2008; Ratnawati & Ali, 2015)

Firm Size = is defined as the nature log (ln) of total assets (Hasan & Ahmed, 2012; Mansor, Ahmad Zaluki, & Osman, 2013)

3.4 Techniques of data Analysis

The test of hypotheses was done using multiple regression models as stated below:
DACC = α + β1Mgr +β2 Inst +β3CR + β4CFR + β5CFRLev + ε
Where:
DACC = Discretionary Accrual
Mgr = Managerial Ownership
Inst = Institutional Ownership
Firm Size = Log Total Asset

3.5 Data Normality and Classical Assumption Test

3.5.1 Normality Testing

The normal distribution of data obtained for the study was detected using normal probability plot analysis. Normality test results in this study showed that the points spread around the diagonal line, and the distribution follows the direction of the diagonal line. This indicates that the data meet the normality assumption.

3.5.2 Multicollinearity Testing

To determine whether there is autocorrelation, the result of the test conducted to shows Variance Inflation Factor (VIF) value of each independent variable as depicted in Table 2.

Table 2: Multicollinearity Evaluation of the Study

	Collinearity Statistics			
Model	**Tolerance**	**VIF**	**T Value**	**P Value**
MgrOwn	1.000	1.000	-6.385	0.000
MgrOwnInstOwn	0.437	2.290	2.136	0.033
MgrOwnFirmSize	0.229	4.375	-2.170	0.030

Dependent variable: DACC (Y)

The Table 2 shows that all the independent variables have a tolerance value > 0.10 and VIF < 10. Therefore, it can be concluded that the independent variables used in the regression model of this research are free from the problem of multicollinearity (Gozali, 2013).

3.5.3 Autocorrelation Testing

To determine whether there is autocorrelation can be seen from the DW value was calculated for each variable, as shown in Table 3. The Durbin-Watson value of 1.761 and the value range between the values DW -2 to +2, which means there is no autocorrelation (Gozali, 2013). Thus, there is no problem of autocorrelation in the regression model of this study.

Table 3: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig F Change	Durbin-Watson
1	0.266a	0.071	0.068	0.12639601	0.071	21.848	2	572	0.000	1.761

[a] Predictors (Constant), MgrOwn, FirmSize, MgrOwnInstOwn
[b] Dependent Variable Y

3.5.4 Heteroscedasticity Testing

The results showed that the points on the image does not form a specific pattern and the data spread above and below the number 0 on the Y axis, where this indicates that the model did not experience heteroscedasticity, which means that the sample variance of the observation residuals to other observations have in common and can be said to be efficient. Thus, based on the assumptions of a standard test result as illustrated in Figure 2, the model is free of autocorrelation, multicollinearity, and heteroscedasticity. It can, therefore, be concluded that this model is fit for use in this study.

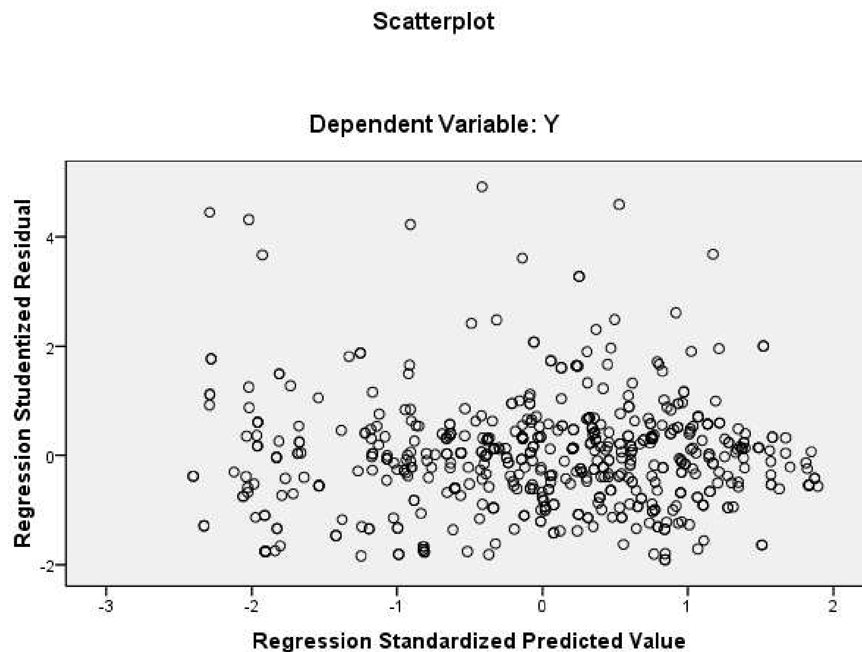

Figure 2: Scatterplot of the Heteroscedasticity Assessment of the Study

4. FINDINGS AND DISCUSSION

4.1 Managerial Ownership, Institutional Ownership, and Earnings Management.

From Table 2, the results revealed that MgrOwn t-value and the p-value of -6.385 and 0.000 respectively. Therefore, managerial ownership has a negative influence on earnings management. Based on that findings, it can be concluded that the higher managerial ownership, will decrease the possibility of earnings management practices.

Regression result also showed that t-value and p-value of MgrInstOwn each 2.136 and 0.033 and has a positive sign. Its indicates that institutional ownership strengthens the influence betweenI managerial ownership and earnings management. Based on that finding, it can be concluded that with the occurrence of institutional ownership, the influence of managerial ownership on earnings management getting stronger. The higher the managerial ownership will decrease the possibility of earnings management practices, and with the presence of institutional ownership, then the possibility of earnings management practices will decrease from the previous. This finding collaborates prior literature (Bushee, 1998; Chung, Firth, and Kim, 2002; Cornett et al., 2008; Ebrahim, 2007; Koh, 2003) that argued that institutional ownership inhibits managers to engage opportunistically in earnings management.

4.2 Managerial Ownership, Firm Size, and Earnings Management.

From Table 2, the t-value and p-value for MgrOwnFirmSize, each -2.170 and 0.030 respectively. Based on that value, it can be argued that firm size weakens the negative influence between managerial ownership on earnings management. Furthermore, as a result of the significant value and positive sign of the interaction between managerial ownership and firm size, it can be concluded that firm size moderates the influence of managerial ownership on earnings management. The positive sign of beta indicated that interaction between managerial ownership and firm size weakened the influence of managerial ownership and earnings management.

The current study results are in agreement with Kazemian and Zuraidah (2015) study, which found that the firm size as a 'quasi' moderator, and had the negative and significant relationship between the level of management ownership and discretionary accruals, and is weakened by a positive and significant relationship between the interaction between firm size and discretionary accruals. These scholars argued that although management ownership may reduce the earnings management activities, other factors such as firm size may also affect the behaviour. Therefore managerial ownership is found to be an effective monitoring mechanism, particularly in small firms. Their suggests that managerial ownership should be encouraged in small firms so that it can be the substitute for the weakness of other corporate governance mechanisms. Their study also argued that other types of ownership play a major role in monitoring firms' activities. Therefore it can be concluded that managerial ownership is less significant in large-sized firms compared to small-sized firms (Kazemian and Zuraidah, 2015, p 621).

5. CONCLUSION AND IMPLICATIONS

The objective of this study is to provide some empirical evidence of the interaction effect of institutional ownership and firm size on the relationship between managerial ownership and earnings management. In this study, it was proposed that managerial ownership has adverse effects on earnings management, and institutional ownership and firm size influence the relationship between managerial ownership and earnings management. While this study found that managerial ownership affects earnings management, institutional ownership strengthens the influence of managerial ownership on earnings management. This finding also suggests that interaction of managerial ownership and firm size weakened the influence of managerial ownership on earnings management.

The results of this study have the potentials to assist institutions such as the Indonesia Stock Exchange and investors to know how the ownership structure and size of the firm can influence the existence of earnings management practices. Besides, from the theoretical aspect, these findings provide a better understanding of the agency theory more broadly vis-a-vis the relative impacts of agency theory on the existence of earnings management practices.

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