The Effect of Board Diversity on Earnings Management: Evidence from Property, Real Estate, and Construction Firms in Indonesia

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Abstract: The aim of this study is to examine the effect of board diversity on earnings management using evidence of property, real estate, and construction firms listed in Indonesia Stock Exchange in the period of 2010 to 2015. Multiple linear regression is employed in the research as analysis technique while data is processed using STATA/MP 14.2 software. The result shows that diversity in nationality and education can reduce the level of earnings management in a company. However, the gender diversity does not significant negative effect on earnings management, while the board nationality diversity and education diversity proven to have significant negative effect on earnings management.

1 INTRODUCTION

Economic development in Indonesia is growing rapidly and competition between individuals or companies are also increasingly stringent, requiring individuals to be more efficient and effective in managing the company and to produce competent human resource. As one country that adopt ASEAN Economic Community agreement, Indonesia is expected to anticipate the consequences of free-flow of goods, services, and labor. Opening the doors for workers to have easier access which allow transfers of labor in terms of physical and psychological state, enabling inclusive environment for diverse Board of Directors.

Board Diversity can be defined as the degree of diverse traits which possessed by individuals who made up the council. Moreover, diversity can be defined as diverse elements that construct the structure and composition of boards including age, gender, nationality, cultural background, educational background, technical skills, and expertise, life experiences, personal attitudes, and perspectives (Sener and Karaye, 2014). Diverse traits in the composition of board of director helps companies identify and fix issues within the firms, provide diverse human resources with abundant insights, enhance confidence of potential investors, and improving corporate performance.

Board of commissioners and directors of the company is responsible for monitoring the quality of the information contained within the financial statements. Despite having the obligation of providing assurance of truth and fair representation of financial statements, managers may have incentive to conduct earnings management which may obscure investors' rational decision about the real performance of the firm. Diverse council could, to some extent, mitigate the risk of opportunistic management to engage in earnings management practices. Peni and Vahama (2010) and Garvious, *et al.* (2012) stated that the existence of one of the female CEO or CFO women will reduce the level of earnings management. Research conducted by Sander van den Berg (2015) in his research to develop a hypothesis that nationality significant negative effect on earnings management. But in the end, the study get the result that national diversity has a positive effect on earnings management which means that the previous hypothesis is rejected. Research conducted by Rashidah and Fairuzana (2006) which shows that the competence of the audit committee members has a negative correlation with earnings management (discretionary accrual).

Understanding the pervasive impact of earnings management upon investors' ability to discern the real condition of the financial statement, this research revolve around the following problem:

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1. Does board gender diversity affect the level of earnings management?
2. Does nationality of board diversity affect the level of earnings management?
3. Does education board diversity affect the level of earnings management?

2 THEORETICAL REVIEW

2.1 Theory of Agency

According to Jensen and Meckling (1976), agency theory describes a relationship arising from a contract between the principals and others who called the agency, where the principals delegate a job to the agent.

Eisenhardt (1989) argues that there are two problems, namely; different desire or purpose between the agent and the principal as well as asymmetric information of business management perceived by principals).

Agency theory proposed by Jensen and Meckling (1976) further explained that if the two parties, both the agent and the principal are utility maximizers, and then the agent does not necessarily act in accordance with the interest of the principal. Agents are motivated to maximize their interest for example, by retaining their managerial position, remuneration, and other managerial position benefits. This is contrary to the interests of the principals who seek to maximize the return on its resources, so as to give rise to a conflict of interest between the agent and the principal.

3 HYPOTHESES DEVELOPMENT

3.1 Influence of Board Gender Diversity to Earning Management

The emergence of women as both a leader in business and society, and occupies a major portion than men, The importance of the representation of women on boards of companies and their role in providing and securing resources have recently claimed to be clear (Burke and Mattis, 2000). According to research by Garvious et al. (2012) suggest that women tend to be more ethical to make judgments and to behave than men, and the presence of women in top management will provide a drag on earnings manipulation practices because of the involvement of gender issues in it. Therefore, researchers developed the hypothesis as follows:

H1: Board gender diversity negatively affect earnings management.

3.2 Influence of Board Nation Diversity to Earning Management

Boards with different nationalities introduce heterogeneity of ideas, experiences, and perspectives. Furthermore, diversity in board can reduce the asymmetry of information and agency costs associated; increase domestic company's financial flexibility by increasing the potential investors and financing opportunities; and expand the cross-border flow of knowledge and technology (Fogel et al., 2013). Sander van den Berg (2015) in his research to develop a hypothesis that nationality significant negative effect on earnings management. But in the end, the study get the result that national diversity has a positive effect on earnings management which means that the previous hypothesis is rejected. Therefore, researchers developed the hypothesis as follows:

H2: Nation board diversity negatively affect earnings management.

3.3 Influence of Board Education Diversity to Earning Management

Education is high on the board, to be positively associated with attitudes toward new products and innovations. A board with higher secondary education may be more adaptive and competent to develop new strategies to cope with continuously changing market conditions in developing countries. The results of Rashidah and Fairuzana (2006) which shows that the competence of the audit committee members has a negative correlation with earnings management (dicretionary accrual). Therefore, researchers developed the hypothesis as follows:

H3: Board diversity education negatively affect earnings management.

4 DATA AND METHODS

Data used in this study is panel data which is a combination of time series and cross section and obtained from the company’s audited annual report. Data of companies listed in Indonesia Stock Exchange (IDX) during the period of 2010 to 2015.

This study uses a quantitative approach as a method of research that is based on the philosophy of positivism, is used to examine the population or a particular sample, sampling technique is generally done at random, data collection using the instrument of research, analysis of quantitative data / statistics, with the aim to test the hypothesis that has been set (Sugiyono, 2014). Quantitative research was conducted with a level of associative explanation by using the approach of explaining the positions of variables that are studied and the relationship between the variables with other variables through hypothesis.

4.1 Data analysis technique

Before performing data processing of descriptive statistics, each variable will firstly be winsorizing to cope with the data having outliers. Winsorize is chosen to pull out outliers of data set for the level of 1% of the lowest and the highest, leaving dataset rate of 99%.

4.2 Descriptive Statistics Analysis

Descriptive statistics were used to describe and provide a general overview of statistical research data for each variable in the study. Measures of central tendency of data to be used in this research is the average value (mean), standard deviation, minimum value and a maximum value.

4.3 Multiple Linear Regression Analysis

The analysis used in this research is multiple linear regression analysis. This method is an analytical tool forecasting the effect of two or more independent variables on a dependent variable in which to prove the presence or absence of a functional relationship or causal relationship between two or more variables with one dependent variable (Riduwan, 2010). In this case the independent variable is board diversity represented by gender, nationality, and education. While the dependent variable is earnings management. Multiple linear regression equation in this study can be formulated as follows:

$$DA = \alpha + \beta_1 GEN + \beta_2 NAT + \beta_3 EDU + \beta_4 FSIZE + \beta_5 ROA + \beta_6 LEV + \varepsilon$$

For this regression, the study used two regression models, OLS and OLS with robust. When using multiple linear regression analysis there is still a possibility heteroscedasticity symptoms. Therefore, the researchers used multiple linear regression analysis with robust to address the problem. The method is robust regression method is used when there is a distribution of the errors are not normal or there are some outliers that will affect the model (Ryan, 1997). This method is an important tool to analyze data that is affected because of the outliers so that the resulting models are robust or resistance against outliers.

5 RESULTS

5.1 Results Descriptive Statistics

Table 1: Results Descriptive Statistics.

Variable	Mean	Median	Std. Dev.	Min	Max
DA	0.088	0.061	0.085	0.001	0.419
GEN	0.165	0.143	0.152	0.000	0.600
NAT	0.043	0.000	0.069	0.000	0.286
EDU	0.372	0.333	0.216	0.000	0.917
FSIZE	28.056	28.541	2.161	21.765	31.215
ROA	0.056	0.047	0.057	-0.092	0.254
LEV	0.419	0.448	0.189	0.008	0.850

Source: Processed Data Output STATA.

a. The level of earnings management of data distribution (discretionary accrual) has a degree of variation of 96, 59%. This shows earnings management (discretionary accrual) company overall sample is uniform, in which the value of earnings management (discretionary accrual) of each sample company is relatively close to the average of earnings management (discretionary accrual).
b. Data distribution board level gender have this level of variation of 92, 12%. This demonstrates the gender proportion of board members in the

company's overall sample is uniform, where the value of the proportion of female board members in the company by other companies relatively similar or homogenous.

c. Data distribution board level nationality have this level of variation of 160, 47%. It shows the proportion of nationality for board members in the company as a whole is different samples, in which the difference in the proportion of board members who are foreign nationals overall is very volatile and there is a difference in large numbers between one company with another company.
d. Data distribution board level of education has a degree of variation of 58, 06%. It shows the proportion of board members based on the level of education in the company's overall sample is uniform, where the value of the proportion of board members who have the education level of the Master level in one company with another company relatively similar or homogenous.
e. The level distribution of the data firm size (FSIZE) has a degree of variation by 7, 70%. This shows the firm size (FSIZE) the company overall sample is uniform, in which the value of firm size (FSIZE) one company with another company close to the average firm size (FSIZE).
f. Data distribution level return on assets (ROA) has a degree of variation of 101, 79%. It shows the return on assets (ROA) the company overall sample is different, where the value of return on assets (ROA) each sample company in a predetermined observation period showed a fluctuating value. This proves the company's ability to manage the assets to generate profits for each firm is relatively different samples.
g. Data distribution level of leverage (LEV) has a degree of variation of 45, 10%. This demonstrates the leverage (LEV) the company overall sample is uniform, where the level of leverage of the company with other companies in a predetermined observation period is relatively the same. This indicates that each sample company policy is the same relative to the use of debt to assets of the company.

5.2 Results of Multiple Linear Regression Analysis Model

Table 2: Results of Multiple Linear Regression Analysis.

Variables	**Prediction Relationship**	**DA**	
		Multiple Linear Regression	**Robust regression**
GEN	-	-0.029 (-0.92)	-0.029 (-1.08)
NAT	-	-0.129 * (-1.81)	-0.129 * (-1.95)
Communities	-	-0.056 ** (-2.32)	-0.056 ** (-2.55)
FSIZE	+	0,001 (0.53)	0,001 (0.64)
ROA	+	0,302 *** (3,62)	0,302 *** (2.60)
LEV	-	-0.001 (-0.03)	-0.000 (-0.03)
year dummies		Including	Including
adjusted R2		0.241	
R-Squared		0.272	0.272
N		265	265

Source: Data Output STATA Sports

Big contribution of variable gender, nationality, education, firm size (FSIZE), return on assets (ROA) and leverage (LEV) to earnings management amounted to 27.23%. While the rest of 72.77% is explained by other variables that are not included in this study.

a. Gender board regression coefficient of -0.029 and have a negative effect on earnings management. H al indicate if gender-board increase one time, then the earnings management will be decreased by 0,029, and vice versa, assuming other variables held constant. This variable has a p value of 0.280 indicates that it is not significant.
b. Nationality board regression coefficient of -0.129 and have a negative effect on earnings management. H al indicate if the board increases one nationality, then earnings management will be decreased by 0.129, and vice versa, assuming other variables held constant. This variable has a p value of 0.052 indicates that significant at the 10% level.
c. Regression coefficient of -0.056 and the board of education has a negative effect to earnings management. H al indicate if the board of education increased by one, then earnings

management will be decreased by 0.056, and vice versa, assuming other variables held constant. This variable has a p value of 0.011 indicates that significant at the 5% level.

d. The regression coefficient firm size (FSIZE) of 0.001 and has a positive influence on earnings management. H al indicates if the firm size (FSIZE) increased by one, then earnings management will increase by 0,001, and vice versa, assuming other variables held constant. This variable has a p value of 0.523 indicates that it is not significant.

e. Regression coefficient value return on assets (ROA) of 0,302 and has a positive influence on earnings management. H al indicate if the return on assets (ROA) increased by one, then earnings management increased by 0,302, and vice versa, assuming other variables held constant. This variable has a p value of 0.010 indicates that significant at the 1% level.

f. The regression coefficient of leverage (LEV) amounted to - 0.001 and has a negative effect on earnings management. H al indicate if leverage (LEV) increased by one, then earnings management decreased by 0,001, and vice versa, assuming other variables held constant. This variable has a p value of 0.976 indicates that it is not significant.

6 DISCUSSION

6.1 Influence of Board Gender Diversity to Earning Management

The results showed that board's gender diversity has negative and insignificant effect to earnings management. This is because the directors with female gender would avoid the risk caused by these opportunistic actions and agency problems between agents and principals. This has resulted in the directors with female gender to avoid aggressive earnings management practices in accounting policies.

However, companies having male director seeks to avoid the practices of earnings management. This is because the board of directors with the male gender more have the ability to run operations thoroughly, so that practices such as the manipulation of earnings management can be minimized. Due to the similarity of standpoint, gender alone is not enough to predict the actions of management. According to research conducted by Peni and Vahama (2016), it can be inferred that the presence of female CEO or CFO women will reduce the level of earnings management.

6.2 Influence of Board Nationality Diversity to Earning Management

The results shows that nationality and diversity of board of directors have insignificant and negative effect on the earnings management. The result indicate that diverse nationality of board of directors may reduce earnings management. Furthermore, heterogeneous group provides diverse ideas and knowledge from wide range of perspective leading towards more constructive discussion which is useful for board's dynamic within the firms. The composition of the board of directors which entails different backgrounds of individuals can improve and maintain management's credibility, mitigating the incentives to engage in earnings management practices.

Sander van den Berg (2015) in his research develop a hypothesis that diverse nationality has significant negative effect on earnings management yet, the study finds that nationality has positive effect on earnings management which means that the previous hypothesis is rejected.

6.3 Influence of Board Education Diversity to Earning Management

The board diverse education background proven to have significant and negative effect on earnings management which translate into the reduction of earnings management. The more members of the board who have higher secondary education, the lower the level of earnings management. So the diversity of educational backgrounds and experiences are important to the composition of the board as a whole, because ultimately affect earnings management in the company. The results of the study concurs with research conducted by Rashidah and Fairuzana (2006) shows that the competence of the audit committee members has a negative correlation with earnings management (dicreationary accrual).

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