EARNINGS MANAGEMENT, CEO TENURE, AND GENDER DIVERSITY IN THE BOARD OF DIRECTORS – INDONESIAN EVIDENCE

Sumayyah, evi gantyowati
Master of Accounting Program, UNS
Evi Gantyowati, University of Sebelas Maret

Abstract
This paper describes the result of empirical research examining the effect of CEO tenure and female representation in the board of directors on earnings management for firms listed in Indonesia Stock Exchange (IDX). Using a sample of 388 observations of publicly listed companies on the IDX for the fiscal year that ends on December 31, 2014 through 2016, this study finds that, in general, CEO tenure and female representation in the board of directors negatively affects earnings management. Yet, when analysis is decomposed for each industry, the result shows different findings for different industry. For CEO tenure, the results are consistent for five industries namely Mining, Basic industry and chemicals, Property, Real Estate and Building Construction, and Infrastructure, Utilities and Transportation. For female representative, the results are consistent for five industries namely Basic industry and chemicals, Miscellaneous, Consumer Goods, Property, Real Estate and Building Construction, and Infrastructure, Utilities and Transportation. This study provides further evidence on the effect CEO tenure and gender in board directors on quality reporting on accounting information using data from Indonesia.

Keywords: Earning management, CEO Female, CEO Tenure.

Paper type: Research paper

INTRODUCTION

This paper discusses the result of empirical research examining the impact of CEO tenure and female representation in the board of directors on earnings management for firms listed in Indonesia Stock Exchange (IDX). This research is motivated by the fact that the limited number of female representation on board of director become an important issue, and therefore it needs to be addressed (Julizaerma and Sorib, 2012). The limited number of female participation in the top level and main decision maker position is disclosed in the 2017 gap index where in Indonesia, female’s economic participation and opportunity is in the 108th of 144 position with score of 0.610 (World Economic Forum, 2017) and this score is considered to be the low score. Moreover, this research is also motivated by the survey toward 5,500 companies in 36 countries, disclosed in Woman in Business Annual Report by Grant Thornton, which stated that female in executive position in Indonesia is 46% in 2017 which increase from 36% in 2016 (http://marketplus.co.id/2017/04).
The limited number of female involvement in the board of directors produce a great problem because of the cultural and social views towards what job is fit for women and men. Women might be suitable in some industry. The ability of women to manage the organization is hesitated because of the perception that in average, females are believed to be emotional, dependable and obsessive (Julizaerma and Sorib, 2012). Moreover, some stated that female under representation at decision making level and female may retreat from competition for promotions (Niederle and Vesterlund, 2007) or choose to stay away from the stress (Matsa and Miller, 2011) that lead to the problem in supply. Another reason is that the limitation of female expertise in a certain field of business limits female’s opportunity to move to the higher position (Gavious, Segev, and Yosef, 2012). Therefore, this study is conducted to examine the association of female representation and earnings management of Indonesian companies and address the gaps as compared to the previous study. The gender perspective may rise understanding of the motives for and the extent of engaging in accounting manipulation. As the CEO is the critical agent determining financial reporting quality, his particular conditions on the job are likely to influence the level of earnings management. Therefore, in this research, we also involve another characteristic firm’s CEO which is the CEO’s tenure in the firm. Prior studies have established a link between these characteristics and financial reporting policies. Gibbons and Murphy (1992) show that the agency problem increases as the CEO approaches retirement. In his last year in the job the CEO takes advantage of his private information to improve firm performance in order to achieve higher compensation in the final year or after leaving the job. Yet, the result from other extant literatures are mixed. Zhang (2009) suggests that earnings management decreases as time elapses except for the year before the CEO’s departure, whereas Ghosh and Moon (2005) argue that CEOs with longer tenure are more likely to use their managerial power to manipulate earnings. Based on this situation, we involve such CEO characteristic as one of variables which may affect earnings management. Based on the above description, we formulate the research problems into a research question as follow:

RQ1: Do CEO tenure and female representation in the board of directors affects earnings management in the firms listed in Indonesia stock exchange?

This research contributes to the existing literature by addressing the potential effects of CEO tenure and female executives on financial reporting. This research is also based on cognitive psychology and management literature which stated that significant gender differences exist in conservatism, risk averseness, and ethical behavior (Powell and Ansic, 1997; Jianakoplos and Bernasek, 1998; Byrnes, Miller, and Schafer, 1999; Schubert, 2006). In this paper, we presume that the documented behavioral differences between women and men and CEO tenure may influence the firm’s financial reporting practices.

RELATED LITERATURE AND HYPOTHESES DEVELOPMENT

Psychology and management literature have recognized that differences based on gender was exist, especially in term of leadership styles, communicative skills, conservatism, risk averseness, and decision-making style (Peni and Vähämä, 2010). Several studies have recently

The economic psychology literature proves that females are more conservative and risk averse than male (Johnson and Powell, 1994; Powell and Ansic, 1997; Jianakoplos and Bernasek, 1998; Sunden and Surette, 1998; Byrnes et al., 1999; Schubert, 2006). Moreover, female executives and directors may have higher moral standards than male (Bernardi and Arnold, 1997). In addition, MacLeod Heminway (2007) stated that women are more responsible than men, and are less likely to manipulate corporate financial and other disclosures. Scott (2010) states that earnings management is a manager choice to meet a certain objective. Having followed the rule in accounting standard, managers are still able to retain their flexibility in choosing accounting policies which may have positive impact to their private satisfaction or market value of the firm.

Female Representation and Earnings Management


The newer research is conducted by Liu, Wei, and Xie (2016) who find that female CFOs engage in less earnings management and are more conservative in financial reporting than male CEOs. Einer and Soderqvist (2016) find a negative association between earnings management and female representation on board of directors. Enofe, Iyafekhe, and Eniola (2017) find that female gender in the board were negatively related to earnings management. Mulder (2017) find that there is no association between gender diversity and earnings management. Kyaw, Olugbode, and Petracci (2015) report that gender in board mitigates earnings management in countries where gender equality is high. Xiong (2016) find that companies with female, long-tenured, older and more educated Chairman have lower absolute discretionary accruals and lower real earnings management. Based on the above previous research review, we state hypothesis as follows.

\( H_1: \) Female in board of directors negatively affects earnings management.

CEO Tenure and Earnings Management

Previous research find that earnings management associated with CEO turnover in many jurisdictions. First, Pourciau (1993); Kalyta (2009); Dechow, Ge, and Schrand (2010) find that
earnings management is related to executive changes. Earnings can be decreased by CEOs in the first year of their duty because the new CEOs tend to show that performance of the previous CEOs was lower and the better performance for the next period (Pourciau 1993). Moreover, CEOs overstate earnings in their final year of duty to increase the amount of their pension (Kalyta 2009). These research prove that top managers tend to manipulate earnings in the first and last year of their duty.

Bengtsson, Bergström and Nilsson (2007) find that the incentives to use earnings management for heightening compensation contracts are significant. Their research prove that the new CEOs tend to lower their predecessors performance for their personal benefit. Ali and Zhang (2014) also proves that the phenomena of earnings management related to a CEO turnover is exist to a higher degree earlier than later in the tenure. Kuang, Flora and Wielhouwer (2014) find that CEOs seem to be more engaged in earnings management after being hired, even though in the long term CEOs engagement in earnings management tend to diminish. CEOs who are recruited from the outside also have stronger incentives to engage in earnings management (Kuang, Flora and Wielhouwer 2014). Moreover, CEO successors from external background may face the greater pressure from the board and from the market to show their managerial competence (Freidman and Saul 1991). In other side, short-tenured CEOs report earnings more aggressively than long-tenured CEOs (Ali and Zhang 2014). Finally, Liu and Sun (2010) report that there is negative relationship between the proportion of long-tenured directors on the independent audit committee and earnings quality, whereas Kim and Yang (2014) show that the absolute discretionary accruals decreases when the tenure of directors increases. Based on description above, we stated hypothesis as follows.

\[ H_2: \text{CEO tenure negatively affects earnings management.} \]

RESEARCH DESIGN

The sample used in this research are firms listed on the IDX for the period of 2014 to 2016. Using the purposive sampling technique, we involve 388 observations of publicly listed companies. In this research, earnings management is a dependent variable, which is measured by discretionary accrual and estimated by *ModifiedJones Model* (Dechow, 1995) in the following equation:

\[
TAC_{it} = \alpha_{1,t} \left( \frac{1}{TA_{i,t-1}} \right) + \alpha_{2,t} \left( \frac{\Delta Rev_{it} - \Delta AR_{it}}{TA_{i,t-1}} \right) + \alpha_{3,t} \frac{PPE_{it}}{TA_{i,t-1}} + \varepsilon_{it}
\]

where $TAC_{it}$ is the total accruals for firm $i$, for year $t$ scaled by total assets for year $t-1$; $TA_{i,t-1}$ is the total assets for year $t-1$; $\Delta Rev_{it}$ are revenues for firm $i$, for year $t$ less revenues for firm $i$ for year $t-1$ scaled by total assets for year $t-1$; $\Delta REC_{it}$ are receivables for firm $i$ for year $t$ less receivables for firm $i$ for year $t-1$, scaled by total assets for year $t-1$; and $PPE_{it}$ gross property plant and equipment for firm $i$ for year $t$ scaled by total assets for year $t-1$. $\varepsilon_{it}$ is the error term. Discretionary accruals (DA) for year $t$ are estimated as the absolute values of residuals from the cross-sectional ordinary least-square (OLS) estimates of Equation (1). The value of absolute...
discretionary accruals (ABSDA) is a proxy of earnings management. The higher the number, the more earnings management. This research uses two independent variables, the first is GEN. GEN is the female representative in board of director. This is a dummy variable which has value of 1 if a company is directed by female director and 0 otherwise. The second is TEN, CEO tenure. This is a dummy variable which has value of 1 if CEO has experience as an company executive for more than five years and 0 otherwise. We also employ two control variables which are firm size (SIZE) and financial leverage (LEV).

The main statistical method to test the hypotheses is the generalized least square (GLS) regression. The GLS regression models are estimated as follows:

\[ EM_{it} = \alpha + \beta_1 GEN_{it} + \beta_2 TEN_{it} + \beta_3 SIZE_{it} + \beta_4 LEV_{it} + \epsilon_{it} \]  

Where \( EM_{it} \) is earnings management which is measured by discretionary accrual, \( GEN_{it} \) is Gender as independent dummy variable which has value of 1 if a company is directed by female director and 0 otherwise. \( TEN_{it} \) is director tenure firm i in the year t, \( SIZE_{it} \) is the firm size, \( LEV_{it} \) is leverage ratio firm i in the year of t, which is ratio between total liability and total assets and is a control variable, and \( \epsilon_{it} \) is error term. In this research, the variable of interest is GEN and TEN. If the coefficient of both variables are negative and statistically significant, the research hypotheses are accepted and supported by empirical data.

**DATA ANALYSIS AND DISCUSSION**

On the basis of the sampling process described, this study used 387 firms data in the year of 2014 to 2016. The total observations consisted of 1,161 firm-years. Table 1 shows the descriptive statistics for the sample data. From Table 1, it can be seen that the mean of the EM shows a value of 0.481 with a standard deviation of 1.476. The mean of GEN shows the number of 0.078 with a standard deviation of 0.268, whereas TEN has mean value of 0.544 and standard deviation of 0.498.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Median</th>
<th>Maximum</th>
<th>Minimum</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EM</td>
<td>0.481</td>
<td>0.402</td>
<td>36.974</td>
<td>-15.738</td>
<td>1.476</td>
</tr>
<tr>
<td>SIZE</td>
<td>6.387</td>
<td>6.362</td>
<td>8.418</td>
<td>3.884</td>
<td>0.697</td>
</tr>
<tr>
<td>LEV</td>
<td>0.534</td>
<td>0.490</td>
<td>8.490</td>
<td>0.000</td>
<td>0.511</td>
</tr>
<tr>
<td>GEN</td>
<td>0.078</td>
<td>0.000</td>
<td>1.000</td>
<td>0.000</td>
<td>0.268</td>
</tr>
<tr>
<td>TEN</td>
<td>0.544</td>
<td>1.000</td>
<td>1.000</td>
<td>0.000</td>
<td>0.498</td>
</tr>
</tbody>
</table>

Table 2 shows the correlation between the two variables. The correlation between EM and GEN is negative and significant at the level of 5%. The correlation between EM and TEN is negative and insignificant. This provide a preliminary support hypotheses. This result indicates that both variables negatively associated with earnings management. This will be further examined in the regression analysis.
4.1. Data Analysis

To test the hypotheses, this study uses a multiple regression model. The procedure uses generalized least square (GLS) estimation method. The classic assumptions of regression model were tested before the regression statistics analysis was conducted. The assessment shows that the residual were normally distributed and there were no problems with multicolinearity, heteroscedasticity, and autocorrelation in the data. The regression analysis results to test the hypotheses are presented in Table 3.

To test whether there is an association between GEN and EM (H1), the variable investigated is GEN. Table 3 shows the regression result. The result shows a negative (-0.263) and significant coefficient in the level \( \alpha=0.01 \). This result indicates that GEN which is the proxy of female representation in the board associated negatively with EM. Therefore, when GEN increase, EM will decrease. It can be concluded that H1 which states that female representative negatively affects earnings management supported by empirical data. This result is consistent to and confirms the research conducted by Liu, Wei, and Xie (2016) who find that female CFOs engage in less earnings management, Einer and Soderqvist (2016) who find a negative association between earnings management and female representation on board of directors, Enofe, Iyafekhe, and Eniola (2017) who find that female gender in the board were negatively related to earnings management, Kyaw, Olugbode, and Petracci (2015) who find that a gender diverse board mitigates earnings management in countries where gender equality is high, and Xiong (2016) who find that companies with female Chairman have lower absolute discretionary accruals and lower real earnings management.

Table 3.
Regression Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t-Statistic</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-0.471***</td>
<td>-25.384</td>
<td>0.000</td>
</tr>
<tr>
<td>GEN</td>
<td>-0.263***</td>
<td>-17.612</td>
<td>0.000</td>
</tr>
<tr>
<td>TEN</td>
<td>-0.048***</td>
<td>-7.337</td>
<td>0.000</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.151***</td>
<td>37.085</td>
<td>0.000</td>
</tr>
</tbody>
</table>
LEV 0.033 *** 5.415 0.000

Adjusted R-squared 0.587
F-statistic 413.847 ***

***, **, * show that correlation is significant at the 0.01 level, 0.05 level, and 0.10 respectively.

To test whether there is an association between TEN and EM (H2), the variable investigated is TEN. Table 3 shows the regression result. The result shows a negative (-0.048) and significant coefficient in the level α=0.01. This result indicates that TEN which is the proxy of CEO tenure associated negatively with EM. Therefore, when TEN increase, EM will decrease. It can be concluded that H2 which states that CEO tenure negatively affects earnings management supported by empirical data. This result is consistent to and confirms the research conducted by Liu and Sun (2010) who find that there is negative relationship between the proportion of long-tenured directors on earnings quality, and Kim and Yang (2014) who find that the absolute value of discretionary accruals decreases when the tenure of directors increases. For control variables, the analysis shows that size positively affect earnings management. This means that the bigger a firm, the more managers engage in earnings management. Leverage is also positively affects earnings management. This means that, the higher leverage level, the higher directors involve in earnings management.

Additional Analysis

Additional analysis is performed by decomposing the data based on industry. The main objective of additional analysis is to confirm whether the regression test result for each industry is also consistent to that of the whole data. The regression analysis result for each industry is presented in Table 4. The result shows that GEN negatively affects EM in Basic Industry and chemicals; Miscellaneous Industry; Consumer Goods Industry; Property, Real Estate and Building Construction; and Infrastructure, Utilities and Transportation. This means that female representation in the board negatively affect earnings management are only happened in such five industries. This results are consistent to analysis for the whole industry and confirm some previous research. The other industries which are Agriculture and Mining, GEN positively affect earnings management whereas in Trade, Services & Investment GEN does not affect earnings management. This means that in Trade, Services & Investment there is no different whether there is female representative in board of director or not.

For CEO tenure, the results are consistent for five industries namely Mining; Basic industry and chemicals; Property, Real Estate and Building Construction; and Infrastructure, Utilities and Transportation; Trade, Services & Investment. This means that CEO tenure negatively affect earnings management are only happened in such five industries. This results are consistent to analysis for the whole industry and confirm some previous research. The other industries which are Agriculture, Miscellaneous Industry, and Consumer Goods Industry, TEN does not affect earnings management. This means that in the three industries there are no different whether CEO tenure or not. Based on this empirical evidence, it can be stated that
hypothesis 4 which stated that CEO tenure affects earnings management differently among industries can be accepted and supported by empirical data.

Table 4
Regression Analysis Per Sector

<table>
<thead>
<tr>
<th>Variable</th>
<th>Agriculture</th>
<th>Mining</th>
<th>Basic Industry and Chemical</th>
<th>Miscellaneous Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.163</td>
<td>-0.517 ***</td>
<td>0.712 ***</td>
<td>-0.409 **</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.013</td>
<td>0.151 ***</td>
<td>-0.057 ***</td>
<td>0.127 ***</td>
</tr>
<tr>
<td>LEV</td>
<td>0.005</td>
<td>-0.021</td>
<td>0.080</td>
<td>0.039</td>
</tr>
<tr>
<td>GEN</td>
<td>0.091 ***</td>
<td>0.219 ***</td>
<td>-0.342 ***</td>
<td>-0.304 ***</td>
</tr>
<tr>
<td>TEN</td>
<td>-0.032</td>
<td>-0.099 ***</td>
<td>0.061 ***</td>
<td>0.042</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.678</td>
<td>0.572 ***</td>
<td>0.189</td>
<td>0.250</td>
</tr>
<tr>
<td>F-statistic</td>
<td>33.642 ***</td>
<td>61.111 ***</td>
<td>6.015 ***</td>
<td>13.733 ***</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Consumer Goods Industry</th>
<th>Property, Real Estate and Building Construction</th>
<th>Infrastructure, Utilities &amp; Transportation</th>
<th>Trade, Services &amp; Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-0.540 ***</td>
<td>0.352 ***</td>
<td>0.321 ***</td>
<td>-1.195 ***</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.116 ***</td>
<td>0.029 *</td>
<td>0.031 ***</td>
<td>0.244 ***</td>
</tr>
<tr>
<td>LEV</td>
<td>0.704 ***</td>
<td>-0.154 ***</td>
<td>-0.045 ***</td>
<td>0.372 ***</td>
</tr>
<tr>
<td>GEN</td>
<td>-0.127 **</td>
<td>-0.060 *</td>
<td>-0.323 ***</td>
<td>-0.026</td>
</tr>
<tr>
<td>TEN</td>
<td>-0.008</td>
<td>-0.074 ***</td>
<td>-0.041 **</td>
<td>-0.036 **</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.383</td>
<td>0.102</td>
<td>0.337</td>
<td>0.448</td>
</tr>
<tr>
<td>F-statistic</td>
<td>17.336 ***</td>
<td>3.970 ***</td>
<td>20.767 ***</td>
<td>63.195 ***</td>
</tr>
</tbody>
</table>

***, **, * show that correlation is significant at the 0.01, 0.05 and 0.01 level respectively

CONCLUSION

This research investigates the effect of female representation in the board of directors on earnings management. The result shows that, in general, female representation in the board of directors negatively affects earnings management. When analysis is decomposed for each industry, the result shows different condition for different industry. In five industries, the result is consistent to that of the first total analysis, but in two industries, the results are opposite.
whereas in one industry it is no effect. Per sector analysis for CEO tenure also shows varied results. Five industries show consistent result to that of total analysis, whereas the other three sectors, TEN does not affect earnings management.

The result of this research opens for future continued research. First, we do not involve several important variables which may affect earnings management such as managerial characteristics, corporate governance, and management accounting system. Second, this research uses three years observation data, which may be considered to be relative short period of data. Therefore, future research could be conducted by involving more variables and a longer period of data to get a more robust results.

REFERENCES


Http://marketplus.co.id/2017/04/melonjak-drastis-jumlah-perempuan-pemimpin-perusahaan-di-indonesia/


Jiang, J., Petroni, K. and Wang, I. 2008.CFOs and CEOs: Who has the most influence on earnings management. working paper, Michigan State University, East Lansing.


