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# Application of gender and optimizing the function of the board of commissioners in supervising the practice of corporate earnings management

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## ABSTRACT

The urgency of this research is important to empirically examine the impact of the characteristics of the board of commissioners on earnings management practices in Indonesia by considering gender diversification factors in optimizing the supervisory function of the company's board of commissioners. The sampling method used is purposive sampling with specific criteria on companies listed on the IDX with a research period of 2018-2019 with a total sample of 368 firm years of observation. The results showed that the independence of the board of commissioners was not proven to affect accrual earnings management. However, it was proven to have a negative effect on real earnings management practices. In addition, the size of the board of commissioners is proven to have a positive effect on accrual earnings management and company real earnings management. The role of gender diversification in reducing earnings management practices is proven. Three or more female commissioners can reduce accrual earnings management practices and increase real earnings management practices in companies. In addition, the role of gender diversification is not proven to strengthen the negative effect of the independence of the board of commissioners on earnings management. However, the role of gender diversification where there are three or more people in the size of the company's board of commissioners can further reduce accrual earnings management and real earnings management.



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## Introduction

Earnings management practices in Indonesia can reduce investor confidence in the quality of financial statements because of the discretionary accruals made by management. Therefore, it is necessary to carry out a control mechanism to harmonize the differences in interests between management and shareholders by implementing good corporate governance. One way to control earnings management practices carried out by companies is by increasing the supervisory function of the board of commissioners. This is in line with Gunawan and Situmorang (2019) findings, revealing that the existence of a board of commissioners can reduce earnings management practices.

The role of the board of commissioners is significant as an internal control mechanism to oversee management, promote, and protect the interests of shareholders (Jensen and Meckling, 1976; Fama, 1980).

Several previous studies have linked the characteristics of the board of commissioners through aspects of size, independence, educational background, multiple positions, and the competence of the board of commissioners to the prevention of corporate earnings management practices (Ruth and Tariq, 2009; Liu et al., 2013; Türegün, 2016). However, the results are still diverse in their impact on earnings management practices and show that the independence factor can be the main factor that the board of commissioners must own. In recent years research on the composition of the board of commissioners has developed towards gender diversification, where the representation of women on the board of commissioners is considered to be a key attribute in enforcing the supervisory function in companies (Campbell and Minguez-Vera, 2008; Adams and Ferreira, 2009; Francis, B. et al., 2015).

Gender diversification has become a problem focus for companies both globally and in Indonesia. As time goes by, more and more companies are aware of the priority of gender equality to increase productivity, profitability, and company transparency. If gender equality is applied consistently, it will positively impact companies, communities, and even countries. A research report from the McKinsey Global Institute, entitled "The Power of Equality: How to Promote Women Equality Can Add 12 Trillion Dollars to Global Growth", echoes that if the world were managed more equitably between men and women, this would generate an additional 12 trillion dollars by 2025 (Telkomtelstra, accessed 15 November 2019).

In addition, based on a survey conducted by the ILO (International Labor Organization) regarding the representation of women at four levels of company management positions in Indonesia, it shows that 61% of women hold first-level manager positions (supervisor), 70% of women hold middle-level manager positions, 49% women hold senior manager positions, but only 22% of women are in top management positions such as company directors and boards of commissioners. The relatively small number of women in top management is a problem that needs to be resolved. Other significant issues related to gender equality include inadequate participation of women in information technology, especially information related to STEM (science, technology, engineering, and mathematics).

The issue of gender equality has become an interesting topic to date. Several state regulations in the world have taken the initiative to achieve the level of women's participation to fill the position of the board of commissioners in companies (Francis, B. et al., 2015). For example, Norway, the first country to adopt gender diversification by requiring a 40% quota of women representing the board of commissioners, has been in effect since January 2008. This regulatory initiative was followed by other developed countries such as Spain, Belgium, the Netherlands, and Sweden. Under conditions in Indonesia, the composition of the board of commissioners in companies already involves women, but the number is still relatively small.

Lakhal. et al. (2015) stated that the more diverse the characteristics of the board of commissioners, the better the company's control mechanism because diversity tends to increase the independence of the board of commissioners. A female board of directors can provide greater oversight and monitoring measures that reduce agency costs and align manager interests with shareholder interests. Adams and Ferreira (2009) found that female board of commissioners were more active in attending important company meetings, so this is undoubtedly very helpful in strengthening the supervisory function of the board of commissioners.

Based on the literature review above, it is exciting to combine the characteristics of the board of commissioners and the role of gender diversification in optimizing the company's supervisory function against earnings management practices in Indonesia. This study has several contributions, namely, to empirically examine the moderating role of gender diversification on the effect of the characteristics of the board of commissioners on earnings management. Second, the results of this study can be used as a basis for recommendations in making criteria and policies for the appointment of the board of commissioners in Indonesia. Third, the measurement of earnings management in this study has used two bases, namely the riil and accrual basis, to describe better the earnings management practices that occur.

### **Literature Review And Hypothesis Development**

Agency problems that occur between management and shareholders encourage management to manage financial statements for their interests. Discretionary accruals are carried out, such as the method of distinguishing property, plant, and equipment used and recognizing accrued expenses and accrued income not at the appropriate time. This is due to the flexibility of accounting standards in managing company profits which encourages management to exercise discretion, resulting in misinterpretation of earnings presented in the financial statements.

In general, previous studies that examined earnings management only focused on management manipulation carried out on a discretionary accrual basis (Kothari, 2005). Earnings management is caused by the accounting methods used and from management's real business decisions (Sellami and Fakhfakh, 2013).

However, a supervisory function from the company's board of commissioners is expected to prevent earnings management practices either through discretionary accruals or in real terms.

In addition, several previous studies found that the higher the independence of the board of commissioners, the higher the company's earnings management actions (Gunawan and Situmorang, 2019). Based on agency theory, to reduce earnings management actions or activities, shareholders supervise management, so it is hoped that the presence of independent commissioners can reduce discretionary accruals and real earnings management carried out by the company. Thus the proposed hypothesis is: 1) H1a: The independence of the Board of Commissioners has a negative effect on earnings management discretionary accruals; 2) H1b: The independence of the Board of Commissioners has a negative effect on earnings management on a real basis

Several studies on the function of the board of commissioners have been associated with companies' earnings management practices and activities. For example, Uwuigbe, OR, & Fakile, AS (2012) studied the effect of board size on the financial performance of banks listed in Nigeria and found that banks with fewer than 13 board members are considered more adequate than banks with more than 13 board members. . Oh, H.M., & Jeon, H.J. (2017) stated that board size is seen as another vital element in board characteristics that may affect earnings management. The optimal number of members of the board of commissioners must be determined appropriately to ensure a sufficient number of members to carry out the responsibilities and carry out the supervisory function.

A smaller board size, between 4 to 6 members, may be more effective because this condition makes the board of commissioners more timely in taking strategy. However, a larger board size can effectively unify top management actions (Ruth, WE and Tariq, HI., 2009). Large board members with varying expertise can enhance supervisory synergies in reducing the occurrence of earnings management. Previous research found that the size of the board of commissioners hurts earnings management (Liu et al., 2013). Based on the literature above, it can be forgotten that: 1) H1c: The size of the Board of Commissioners has a negative effect on discretionary earnings management accruals; 2) H1d: The size of the Board of Commissioners has a negative effect on earnings management on a real basis.

In recent years, gender diversification has begun to receive special attention in reviewing the corporate governance literature. There are indications that men and women have different cognitive characteristics and ways of behaving (Post and Byron, 2015). From the perspective of gender theory, a person's gender is considered to determine his behavior. Terjesen et al. (2016) found that men are more confident and aggressive than women. Meanwhile, Rosener (1995) states that women are more flexible and able to manage situations better. So it can be said that this gender difference is a relevant factor that can affect the effectiveness of the board of commissioners in carrying out the supervisory function of the company's management.

Several previous studies have found that gender diversity in members of the board of commissioners can improve the quality of corporate financial reporting. Companies with higher levels of female representation in board positions tend not to manipulate earnings. This suggests that gender differences, women's motivation, and moral values have important implications for financial reporting and corporate governance (Gul et al., 2011; Gavius et al., 2012). In addition, Lakhal et al. (2015) found consistent evidence that a strong woman on the board of directors can reduce earnings management practices. Women commissioners tend to be more respectful of ethical values and applicable regulations (Ittonen et al., 2013). Based on the literature review above, it can be assumed that gender diversification can reduce corporate earnings management in both real and accrual earnings management practices: 1) H2a: Gender diversification has a negative effect on earnings management discretionary accruals; 2) H2b: Gender diversification has a negative effect on real base earnings management.

There is a lot of sociological and psychological literature to combine gender considerations into accounting and finance. Several previous studies have shown that women are financially wiser and more likely to adopt accounting practices than men (Schubert, 2006; Francis et al., 2015). Based on the literature above, the application of gender to the composition of the board of commissioners can shape the characteristics of the board of commissioners who are strong in monitoring and preventing real earnings management accruals because the balance between the board of commissioners makes the board more stable and creates more risky decisions for the company so that it can be ascertained that both genders can strengthen the characteristics of the board of commissioners both from the aspect of the size of its independence in reducing real and accrual earnings management practices.

H3a: Gender diversification can strengthen the negative influence of the independence of the Board of Commissioners on discretionary accrual earnings management

H3b: Gender diversification can strengthen the negative influence of the independence of the Board of Commissioners on real-based earnings management

H3c: Gender diversification can strengthen the negative effect of Board of Commissioners Size on discretionary accrual earnings management

H3d: Gender Diversification can strengthen the negative effect of Board of Commissioners Size on earnings management on a real basis.

## Method

The population in this study are companies listed on the IDX from 2018 to 2019. The data source is secondary data from the issuer's annual financial statements published by the IDX. Sample selection was made by the purposive sampling method. Based on table 1, it can be seen that there were 677 companies listed on the Indonesia Stock Exchange as of December 2020 for all industries. After selecting the sample, 368 companies were obtained that met the criteria used as observation samples in this study.

**Table 1.** Population and sample

|  | Firm-Year<br>Obs. | Firm Obs.  |
|--|-------------------|------------|
| Indonesia Stock Exchange Listing (BEI) per 31 Des 2020 | 1354              | 677        |
| Less:  |                   |            |
| - Financial, Investment, and Banking Industries        | (286)             | (143)      |
| - Not using the fiscal year ending 31 December         | (126)             | (63)       |
| - using foreign currency                               | (84)              | (42)       |
| - Incomplete data from year 2018-2019                  | (490)             | (245)      |
| <b>Total Observation</b>                               | <b>368</b>        | <b>184</b> |

The data analysis model used to test the H1a, H1b, H2a, H2b, H3a, H3b, H3c and H3d hypotheses is Multiple Linear Regression analysis with panel data using Generalized Least Square (GLS). Model 1 is used to test the independent variable on the dependent variable by measuring accrual earnings management. While Model 2 is for testing real earnings management.

### Model 1

$$EM1_{it} = \beta_0 + \beta_1 BIND_{it} + \beta_2 BSIZE_{it} + \beta_3 GENDER_{it} + \beta_1 BIND_{it} * \beta_3 GENDER_{it} + \beta_2 BSIZE_{it} * \beta_3 GENDER_{it} + \beta_4 SIZE_{it} + \beta_5 LEV_{it} + \beta_6 ROA_{it} + \beta_7 GROWTH_{it} + e_{it} \dots \dots \dots (1)$$

Model 2

$$EM2_{it} = \beta_0 + \beta_1 BIND_{it} + \beta_2 BSIZE_{it} + \beta_3 GENDER_{it} + \beta_1 BIND_{it} * \beta_3 GENDER_{it} + \beta_2 BSIZE_{it} * \beta_3 GENDER_{it} + \beta_4 SIZE_{it} + \beta_5 LEV_{it} + \beta_6 ROA_{it} + \beta_7 GROWTH_{it} + e_{it} \dots \dots \dots (2)$$

Independent variables are measured by two methods, namely in measuring accrual earnings management using discretionary accruals from the Jones model (1991), namely:

$$\frac{TA_{it}}{A_{it-1}} = \alpha_0 + \beta_1 \left( \frac{\Delta REV_{it}}{A_{it-1}} \right) + \beta_2 \left( \frac{PPE_{it}}{A_{it-1}} \right) + e_{it} \dots \dots \dots (1)$$

TA<sub>it</sub> is the total accruals of firm i in year t from the company's profit before deducting the total cash flow from operations. A<sub>it-1</sub> is the total assets in the last year (t-1) company i. ΔRev<sub>it</sub> is the change in income t minus last year's revenue (t-1) at firm i. PPE<sub>it</sub> is the total fixed assets of year t firm i. The residual value (e<sub>it</sub>) in equation (1) is an absolute value to show the discretion of the company's management that can affect the quality of the company's financial statements. Equation (1) is regressed on a per-industry-per-year basis during the study period. Meanwhile, in measuring real profit using abnormal CFO (Cash Flow from Operation) from Roychowdhury (2006) model, after this referred to as Ab\_CFO, namely:

$$\frac{CFO_{it}}{A_{it-1}} = \alpha_0 + \alpha_1 \left( \frac{1_{it}}{A_{it-1}} \right) + \beta_1 \left( \frac{Sales_{it}}{A_{it-1}} \right) + \beta_2 \left( \frac{\Delta Sales_{it}}{A_{it-1}} \right) e_{it} \dots \dots \dots (2)$$

Where CFO<sub>it</sub> is the operating cash flow of firm i in year t. Sales<sub>it</sub> is the total sales of firm i in year t. Meanwhile, ΔSales<sub>it</sub> is the difference between total sales in year t minus total sales in year t-1 at firm i. The

higher the value, the more management performs real earnings management by manipulating the sales made, cutting production costs, and manipulating the amount of inventory.

## Results and Discussions

Based on the results of testing procedures such as the normality test through the histogram graph and the comparison of the Jarque-Bera value of 0.67, which is greater than the 0.05 significance level, the data is normally distributed. Furthermore, several classical assumption tests such as multicollinearity, heteroscedasticity, and autocorrelation tests have met the criteria or passed the assumption test. So that the specification model can be tested through the hausman test and the chow test, where the results of the specification test for the two research models used are the common effects model, so this model can be applied to test the hypothesis with multiple regression.

Table 2 shows the results of hypothesis testing that have been carried out where H1a is rejected. There is no negative effect between independent commissioners (BIND) proportion on accrual earnings management (EM1). In comparison, H1b shows a negative influence between the proportion of independent commissioners (BIND) on real earnings management (EM2) with a significance level of 5% and a negative direction coefficient of -1.68. Consistent with the results found by Gunawan and Situmorang (2019), it means that the more significant the proportion of independent commissioners in the company, the lower the real profit made by the company.

When discussing these research results in the context of field facts or practical implementation, it is essential to consider the broader implications. The findings suggest that a higher proportion of independent commissioners in a company is associated with reduced real earnings management. This indicates that the presence of independent commissioners can contribute to enhancing corporate governance practices and promoting financial transparency. By having a strong independent oversight, companies may be less inclined to engage in manipulative practices that inflate their reported profits.

These results align with the growing recognition of the importance of good corporate governance and the role of independent oversight bodies in ensuring accountability and ethical behavior. Therefore, in the implementation of field practices, it is advisable for companies to carefully consider the composition and effectiveness of their board of commissioners, with emphasis on maintaining a sufficient proportion of independent commissioners. This can potentially lead to improved corporate performance, investor confidence, and long-term sustainability.

Hypothesis H1c regarding the effect of the size of the board of commissioners (BSIZE) on accrual earnings management (EM1) is proven with a significance level of 1% and a negative direction coefficient of 9.78. These results are consistent with Ruth, W.E., and Tariq, H.I. (2009), which means that the larger the size of the company's board of commissioners, the lower the accrual earnings management practice in the company. H1d shows a positive effect with a coefficient of 3.75 and a significance level of 10%, meaning that the larger the firm size (BSIZE) will increase real earnings management (EM2).

This result has important implications in the field of corporate governance. A larger board of commissioners can bring diverse perspectives and expertise to the decision-making process, reducing the likelihood of biased or aggressive accounting practices. The presence of a larger board may enhance checks and balances, leading to greater scrutiny and oversight of financial reporting activities. As a result, companies with larger boards of commissioners may exhibit more conservative financial reporting practices, thereby reducing the extent of accrual earnings management.

Hypothesis H2a regarding the effect of gender (GENDER) on accrual earnings management (EM1) is proven with a significance level of 1% and a negative direction coefficient of -6.10. These results are consistent with Lakhal et al. (2015), which shows that the presence of 3 or more women in the company's board of commissioners can reduce accrual earnings management practices in the company. While the H2b hypothesis is proven with a significance level of 1% and a positive direction coefficient of 7.92, meaning that the presence of 3 or more women (GENDER) in the position of the company's board of commissioners increases real earnings management (EM2).

These findings highlight the importance of gender diversity in the boardroom and its potential impact on financial reporting practices. Having a diverse board with gender representation can introduce different perspectives and decision-making styles, which may lead to more conservative accounting practices. Women directors may bring unique skills, experiences, and ethical considerations to the board, contributing to a stronger governance framework that discourages aggressive earnings management.

**Table 2.** Hypothesis Testing Result

| Independent Variable      | Independent Variable |                     |                      |
|---------------------------|----------------------|---------------------|----------------------|
|                           | Sign Prediction      | EM 1                | EM 2                 |
| <b>Intercept</b>          |                      | 1.99*<br>(1.85)     | -3.63***<br>(1.35)   |
| <b>BIND</b>               | -                    | 1.09<br>(1.18)      | -1.68**<br>(-1.89)   |
| <b>BSIZE</b>              | -                    | -9.78***<br>(-3.30) | 3.75*<br>(1.88)      |
| <b>GENDER</b>             | -                    | -6.10***<br>(-2.59) | 7.92***<br>(4.16)    |
| <b>BIND*GENDER</b>        | -                    | 1.50<br>(0.55)      | -1.67<br>(-0.77)     |
| <b>BSIZE*GENDER</b>       | -                    | -1.17***<br>(-3.45) | -59.10***<br>(-5.13) |
| <b>SIZE</b>               | +                    | -0.02<br>(-0.62)    | 0.06***<br>(2.64)    |
| <b>LEV</b>                | +                    | 0.00<br>(0.18)      | 0.00<br>(0.27)       |
| <b>ROA</b>                | -                    | -0.02***<br>(-2.96) | 0.04**<br>(1.92)     |
| <b>GROWTH</b>             | +                    | -0.11***<br>(-3.87) | 0.21***<br>(7.19)    |
| <b>R-Squared</b>          |                      | 0.10                | 0.21                 |
| <b>Adjusted R-Square</b>  |                      | 0.08                | 0.19                 |
| <b>Prob (F-Stat)</b>      |                      | 0.00                | 0.00                 |
| <b>Durbin-Watson Stat</b> |                      | 2.13                | 1.81                 |
| <b>#Total Obs</b>         |                      | 368                 | 368                  |

EM1it=earnings management accruals of company i in year t using discretionary accruals measurement from the Jones model (1991), EM2it=real earnings management using abnormal CFO (Cash Flow from Operation) from Roychowdhury model (2006), BINDit=Independent board of commissioners proportion of total all members of the board of commissioners of company i in year t, BSIZEit=The number of members of the board of commissioners divided to the natural logarithm of the total assets of company i in year t, GENDERit=Dummy, 1 if there are 3 or more female members of the board of commissioners and 0 otherwise for company i in year t, SIZEit=Natural logarithm of total assets company i in year t, ROAit=Comparison of net income and total assets of company i in year t, GROWTHit=Company growth as measured by market to book ratio of company i in year t, LEVit=comparison between total liabilities and total assets of company i in year t. The signs \*\*\*, \*\*, and \* indicate a significance level of 1%, 5%, and 10% (one-tailed)

In contrast, hypothesis H2b suggests a positive effect between the presence of three or more women (GENDER) in the board of commissioners and real earnings management (EM2). The results indicate a significant positive relationship. This finding implies that the presence of women in positions of leadership within the board of commissioners may increase the likelihood of real earnings management practices. This result may seem contradictory to the previous findings on accrual earnings management. However, it is important to note that real earnings management involves more direct manipulation of operational activities, such as revenue recognition or discretionary expenses. The positive relationship between gender diversity and real earnings management suggests the need for additional investigation into the underlying factors and dynamics at play.

When considering the implementation of these research results in the field, it becomes important for companies to promote gender diversity within their boards of commissioners. The presence of women in leadership roles can contribute to a more balanced decision-making process and enhance corporate governance practices. However, it is crucial to establish strong monitoring mechanisms and ethical guidelines to ensure that the increased representation of women does not inadvertently lead to unintended consequences, such as an increase in real earnings management practices.

Overall, these research findings emphasize the importance of gender diversity in corporate governance and its potential impact on earnings management practices. While gender diversity can contribute positively to reducing accrual earnings management, further research is needed to better understand the dynamics and

nuances of gender diversity and its relationship with real earnings management. This will enable companies to implement more effective strategies and policies that leverage the benefits of gender diversity while mitigating the risks associated with earnings management practices.

Hypothesis H3a and Hypothesis H3b regarding the moderating effect of gender (GENDER) on the negative relationship between the independence of the board of commissioners (BIND) and earnings management (EM1 and EM2) is not proven so that the hypothesis is rejected. As for the proven hypothesis regarding the role of the moderating variable of gender (GENDER) in strengthening the effect of the negative variable size of the board of commissioners (BSIZE) on accrual earnings management (EM1), with a significance level of 1% and a direction coefficient of -1.17.

This result is consistent with Schubert (2006) and Francis et al. (2015), which means that the presence of 3 or more women in the proportion of the company's board of commissioners can reduce the company's accrual earnings management practice. In addition, the H3d hypothesis is also proven to have an effect with a significance level of 1% with a negative coefficient of -59.10, meaning that the presence of 3 or more women (GENDER) in the proportion of the board of commissioners (BSIZE) can also reduce the practice of real earnings management.

The lack of evidence supporting the moderating effect of gender on the relationship between board independence and earnings management implies that gender diversity alone may not significantly influence the impact of board independence on controlling earnings management practices. This finding suggests that other factors or mechanisms may play a more prominent role in shaping the relationship between board independence and earnings management practices. However, the proven hypothesis regarding the moderating role of gender in strengthening the effect of board size on accrual earnings management provides valuable insights. The results indicate a significant interaction between gender and board size, suggesting that gender diversity can enhance the effectiveness of larger boards in curbing accrual earnings management practices.

These research findings underscore the importance of considering both board size and gender diversity simultaneously when designing corporate governance structures. While board independence is critical in ensuring effective oversight, the results suggest that the impact of board size on earnings management is strengthened by the presence of gender diversity. Implementing a larger board with diverse gender representation may offer a more robust governance framework for mitigating accrual earnings management. The findings also highlight the need for companies to adopt comprehensive governance practices that account for multiple factors influencing earnings management. It implies that achieving effective governance and combating earnings management practices may require a holistic approach that considers various elements, including board independence, size, and gender diversity.

Overall, the research results emphasize the complexity and interplay of different variables in corporate governance and their effects on earnings management practices. Companies should strive for a balanced and diverse board composition while considering the specific contextual factors and dynamics within their industry and organization. By doing so, they can enhance their governance practices and improve their ability to mitigate earnings management, leading to more reliable financial reporting and increased stakeholder trust.

## Conclusions

This study aims to provide empirical evidence regarding the impact of the characteristics of the board of commissioners as a supervisory function in earnings management practices that occur in companies. Several conclusions can be drawn from the research results. Namely, the independence of the board of commissioners has not been proven to affect accrual earnings management. However, it has been shown to have a negative effect on real earnings management practices. In addition, the size of the board of commissioners is proven to have a positive effect on accrual earnings management and company real earnings management.

In addition, the role of gender in reducing earnings management practices is proven where the presence of 3 or more women on the board of commissioners can reduce accrual earnings management practices, and vice versa can increase real earnings management practices in companies. Finally, the role of gender oversight has not been proven to strengthen the negative effect of the board of commissioners' independence on earnings management. However, the role of describing gender with three people or more than the size of the company's board of commissioners can reduce accrual earnings management and real earnings management.

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