

# The Effect of Gender Diversity on Company Financial Performance

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**ABSTRACT:** This study aims to examine the effect of gender diversity on the board of commissioners and board of directors on the financial performance of non-financial companies listed on the Indonesia Stock Exchange over the period of 2013-2017. The analytical method used was multiple linear regressions with the classical assumption test. As a result, the presence of women on the board of directors and board of commissioners measured by dummy and the proportion of women councils did not affect financial performance as measured by return on asset and return on equity. Meanwhile, control variables of company size and leverage are proven to influence financial performance significantly.

*Keywords:* gender diversity, women on the board, financial performance

## 1 INTRODUCTION

Nowadays, women as leaders are something common, especially in Indonesia. Since the pre-independence era, the figure of Cut Nyak Dien, Martha Christina Tiahahu, and, of course, Kartini as a heroine has fought for equality between men and women, so that women do not only see and follow orders, but women can govern. Dychtwald (2010), author of a book entitled "Influence: How Women's Soaring Economic Power Will Transform Our World for the Better" in Setyanti (2014), said that the 21st century would be marked by the birth of a new world power led by women. With the increasingly fierce competition in the business world today, many successful women occupy important positions in world-level companies, such as Mary Barra (CEO of General Motor Co.) who managed to make the company to earn USD 145.5 billion in 2018, Lisa Davis (CEO Siemens Co.) who is responsible for overseeing more than half of the company's revenue of USD 92 billion, and Wang Feng Ying who is CEO of Deutsche Post DHL Group. The presence of women who can occupy important positions in companies indicates that women's ability in managerial matters cannot be underestimated. Kim et al. (2009) argued that in Corporate Governance Theory, the structure of the board has a large influence on the decisions made, which can ulti-

mately affect the company's performance. One of them is through the diverse composition of the Board of Commissioners and the Board of Directors (i.e., diversity). Overall, the organizational structure is divided into 2, namely the one-tier board structure and two-tier board structure. In Indonesia, the company uses a two-tier board structure, namely the board of commissioners and the board of directors. This two-tier structure was also adopted by several other countries, such as Germany, the Netherlands, and Japan (Weimar & Pape, 1999 in Darmadi, 2013). The board of commissioners has the authority to oversee the management role where the board of directors is in charge of the day-to-day management of the company, or in other words, the executive function is only carried out by the board of directors. In Indonesia, there are independent commissioners on the board of commissioners, namely independent members in company management, which is a corporate governance issue that is widely discussed on an international scale. Many corporate failures have occurred in the last few decades, leading to new guidelines and codes for Corporate Governance. American Law Institute 1994, Business Roundtable 2010, Council of Institutional Investors 2011, and the Financial Markets Authority 2004 suggest that companies must be able to balance between independent members

and insiders in company management, both on the board of commissioners and directors (Koerniadi & Tourani-Rad, 2012). Diversity in the Board of Commissioners and the Board of Directors is expected to encourage objective and comprehensive decision making because decisions made are based on a variety of perspectives. Rose (2007) said that there is a desire to increase the role of women in board members significantly. Norway is a country that already has a law requiring that 40% of councilors are women. Meanwhile, Spain also issued regulations regarding quotas for the number of female councilors (Adams & Ferreira, 2009). In Indonesia, based on the results of a Center for Governance, Institutions, and Organizations (CGIO) study at the National University of Singapore Business School in 2012 showed that the percentage of women on the Board of Commissioners and Board of Directors of public companies listed on the Indonesia Stock Exchange (IDX) was 11.6%. Of this value, 34% of companies have only one woman on board members, and only 2.8% have four or more women on board members. However, a survey conducted by HSBC Singapore stated that 34% of Senior Executives in companies in Indonesia are women, so it can be concluded that Indonesia is a friendly, comfortable, and respectful place for women (www.straitstimes.com, March 4, 2016). These data show that there is an increase in the number of women councilors in Indonesia. Yet, does increasing the number of women on a company's board members really affect company performance? Several previous studies have studied how gender diversity relates to company performance. Kuzey (2016) conducted a study of the effect of council gender diversity on company performance in Turkey and found that the role of women had a positive impact on company performance. Thus, gender diversity in the boardroom has a significant positive impact on company performance (ROA). Meanwhile, according to Gomez (2018), the role of women on company performance (ROA) has a positive but not significant impact, the role of women has a more significant positive impact when performance is measured through a Shareholder-Oriented Metric (ROE). Research on gender diversity was not only conducted outside Indonesia, but there was also a study about gender diversity in companies in Indonesia. The results of Ramadhani & Adhariani's

study (2017) were inversely proportional to the research of Gomez and Kuzey which showed that gender diversity in the board of commissioners and board of directors has no significant effect, both on the company's financial performance (ROA) and on the efficiency of corporate investment.

## 2. RESEARCH METHODS

This type of research is basic research and causal because it aims to examine the effect of the independent variable presence and proportion of women in the board of directors and board of commissioners supported by firm size & leverage control variables on the dependent variables of Return on Asset (ROA) & Return on Equity (ROE). The approach used was quantitative because the data were quantitative and processed using quantitative methods. The population of this study was all companies listed on the Indonesia Stock Exchange over the period of 2013-2017 with the characteristics: (1) listed on the IDX for 5 (five) consecutive years, (2) has a complete financial statement, (3) has a board of directors and the female board of commissioners, and (4) not from the financial and investment sectors.

The type of data in this study is secondary data obtained from various sources. This study used historical data taken from the Indonesia Stock Exchange (www.idx.co.id) in the form of financial statements and stock prices. Data were also obtained from www.idx.com. The measurement level in this study was the ratio level for non-dummy variables (proportion of women, ROA, ROE, size, and leverage) and the nominal level for dummy variables (presence of woman).

The data processing method used multiple linear regression analysis with the help of the Eviews 8 application considering the data used is panel data (pooled data). The following are 4 (four) multiple linear regression models:

$$\begin{aligned}
 ROA &= \alpha + \beta DWOMEN_{Board\_Commissioners} + \\
 &\quad \beta_2 DWOMEN_{Board\_Directors} + \beta FSIZE - \beta_4 LEV + e \\
 ROA &= \alpha + \beta PWOMEN_{Board\_Commissioners} + \beta \\
 &\quad PWOMEN_{Board\_Directors} + \beta FIZE - \beta LEV + e \\
 ROE &= \alpha + \beta DWOMEN_{Board\_Commissioners} + \beta \\
 &\quad DWOMEN_{Board\_Directors} + \beta FIZE - \beta LEV + e \\
 ROE &= \alpha + \beta PWOMEN_{Board\_Commissioners} + \beta \\
 &\quad PWOMEN_{Board\_Directors} + \beta FIZE - \beta LEV + e
 \end{aligned}$$

Note

- ROA<sub>it</sub> = Return On Assets of the company i period t
- ROE<sub>it</sub> = Return On Equity of the company i period t
- DWOMEN Board\_Directors<sub>it</sub> = the presence of women as a board of directors in the company i period t
- DWOMEN Board\_Commissioners<sub>it</sub> = The Presence of women as board\_commissioner in the company i period t
- PWOMEN Board\_Directors<sub>it</sub> = Percentage of Female directors on company i period t
- PWOMEN Board of Commissioners<sub>it</sub> = Percentage of female Board of Commissioners in the company i period t
- FSIZE<sub>it</sub> = Company size i period t
- LEV<sub>it</sub> = Composition of debt in company i period t
- α = constant
- β = regression coefficient
- e = error

### 3. RESULT AND DISCUSSION

The study population was 517 non-financial sector companies listed on the Indonesia Stock Exchange over the period of 2013-2017. After being selected using population characteristics, the number of samples to be studied was 291 companies.

Table 1. Descriptive Data

	Mean	Max	Min	Std.Dev	N
ROA	0.0474	0.7200	-0.4749	0.1617	1455
ROE	0.0848	0.9560	-0.8867	0.2605	1455
DWOMEN_DIRECTORS	0.4749	1.0000	0.0000	0.4995	1455
DWOEN_COMMISSIONERS	0.4509	1.0000	0.0000	0.4978	1455
PWOMEN_DIRECTORS	0.1775	1.0000	0.0000	0.2437	1455
PWOEN_COMMISSIONERS	0.1393	1.0000	0.0000	0.1903	1455
F_SIZE	28.7746	33.3202	24.1499	1.5776	1455
LEV	0.4722	0.9476	0.0003	0.2001	1455

Table 1 shows that the number of observations in this study for the IDX is 1455 data. In the ROA variable, the maximum and minimum values were obtained by LPIN (2017) and SMRU (2015) companies, respectively. Whereas in the ROE variable, the maximum and minimum values were respectively obtained by JSMR (2017) and CNKO (2017) companies. In the DWOMEN\_Directors variable, the maximum value was obtained by CPIN (2013-2017), SMCB (2013-2017), YPAS (2013-2017), and other companies, while the minimum values were obtained by ADES (2013-2017), AISA (2013- 2017), LMPI (2013-2017), and other companies. In the DWOMEN\_Commissioners variable, the maximum value was obtained by MBTO (2013-2017), KAEF (2013-2017), KICI (2013-2017), and other companies, while the minimum values were obtained by

LMPI (2013-2017), MYOR (2013-2017), BREAD (2013-2017), and other companies. In the PWOMEN\_Directors variable, the maximum value was obtained by PTPP (2015), RBMS (2017), SCBD (2016), and other companies, while the minimum values were obtained by ADES (2013-2017), AISA (2013-2017), LMPI (2013-2017), and other companies. In the PWOMEN\_Commissioners variable, the maximum value was obtained by RBMS (2015-2017), RODA (2013-2017), HOTL (2014), and other companies, while the minimum values were obtained by LMPI (2013-2017), ROTI (2013- 2017), MYOR (2013-2017), and other companies. In the Firm Size variable, the maximum and minimum values were obtained by ASII (2017) and PSKT (2013) companies, respectively. In the Leverage variable, the maximum and minimum values were obtained by WAPO (2016) and DNET (2014) companies, respectively.

Afterward, a classical assumption test was carried out, and the results showed that the model had passed the classical assumption test, except the model autocorrelation did not pass the test. However, because the data used were panel data and the research period was annual, the autocorrelation test can be ignored. Then, a Chow test was performed to determine the use of the PLS or fixed-effect method, and the results showed that the fixed effect model was better than the common effect / PLS model. Next, the Hausman test was also performed to see whether the model followed a random effect or a fixed effect, and the results showed that the random effect was better than the fixed effect.

Table 2. Results of Model 1 Regression Analysis

Variable	Coefficient	Probability
C	-0.05341	0.3478
DWOMEN_DIRECTORS	0.00339	0.4762
DWOMEN_COMM.	0.01122	0.3420
F_SIZE	0.00542	0.0065
LEV	0.13112	0.0000
R-Squared		0.57248
Adjusted R-squared		0.54647
S.E. of Regression		0.06727
F-statistic		22.01251
Prob (F-statistic)		0.00000

The presence of women on board variable (DWOMEN\_DIRECTOR) had a coefficient of 0.003390 and a significance level of 0.4762, signifying that the presence of women on board variable has no significant relationship to the return on assets variable. This result is supported by research

conducted by Sila et al. (2016), which used stock return as a performance measurement tool, but contrary to research conducted by Kuzey (2016), who found a significant positive relationship between the presence of women on board and return on assets. Ramadhani's research (2014) also found different results; namely, the relationship of the presence of women on board with return on assets was significantly negative. The results are not significant in this study due to the lack of the presence of women on the board of directors, as evidenced by the 0 mode value of the presence of women on board.

The presence of women on board of commissioners (DWOMEN\_COMM.) variable had a coefficient of 0.011218 and a significance level of 0.3420, signifying that the presence of women on board of commissioners variable has an insignificant relationship to the return on assets variable. This result is supported by research conducted by Gomez (2018), but contrary to research conducted by Kuzey (2016), who found that the presence of women on board of commissioners has a significant positive effect on return on assets. The results were not significant in this study due to the lack of women's presence on board of commissioners, as evidenced by the mode value of the presence of women on commissioners, which is 0.

Table 3. Results of Model 2 Regression Analysis

Variable	Coeff.	Probability
C	-0.056087	0.3373
PWOMEN_DIRECTORS	0.001088	0.9131
PWOMEN_COMM.	0.013219	0.3609
F_SIZE	0.005653	0.0055
LEV	-0.129702	0.0000
R-Squared		0.54188
Adjusted R-squared		0.51579
S.E. of Regression		0.06727
F-statistic		20.76863
Prob (F-statistic)		0.000000

The proportion of women on board variable had a coefficient of 0.001088 and a significance level of 0.9131, meaning that the proportion of women on board variable has no significant relationship to the variable return on assets. This result is supported by research conducted by Gomez (2018), but contrary to research conducted by Kuzey (2016), which found a significant positive relationship between proportions of women on board with return on assets. Ramadhani & Adhariani's study (2017) also found different results, namely the relationship between the proportion of women on board with a negative return on assets. The results were not significant in this study due to

the small number of women on the board of directors, as evidenced by the mean value of the proportion of women on board of 0.177524, showing that the presence of women on the board of directors is only 17.75%.

The proportion of women on board of commissioners variable had a coefficient of 0.013219 and a significance level of 0.3609, meaning that the proportion of women on board of commissioners variable has an insignificant relationship to the return on assets variable. This result is supported by research conducted by Ramadhani & Adhariani (2017), but it contradicts the Resources Dependency Theory, which states that the diversity of the board of commissioners has the potential to increase unique information to be given to management so as to produce a better financial performance of the company. The results are not significant in this study because of the small presence of women on the board of commissioners position as evidenced by the mean value of the proportion of women on commissioners of 0.139347, showing that the presence of women on the board of commissioners is only 13.93%.

Table 4. Results of Model 3 Regression Analysis

Variable	Coeff.	Probability
C	-0.201770	0.0816
DWOMEN_DIRECTORS	0.015063	0.1066
DWOMEN_COMM.	0.010535	0.3156
F_SIZE	0.011141	0.0060
LEV	-0.097290	0.0007
R-Squared		0.13522
Adjusted R-squared		0.10801
S.E. of Regression		0.01292
F-statistic		4.968892
Prob (F-statistic)		0.00000

The presence of women on board variable (DWOMEN\_DIRECTORS) had a coefficient of 0.015063 and a significance level of 0.1066, meaning that the presence of women on board variable has no significant relationship to the return on equity variable. This result is supported by research conducted by Marimutu & Kolandaisamy (2009) that found the influence of the presence of women on the board of directors on company performance. Research shows women as boards of directors do not affect corporate financial performance, but contrary to research conducted by Gomez (2018) and Kuzey (2016), who found a significant positive relationship between the presence of women on board and return on equity. The results are not significant in this study due to the lack of women's presence on board of directors, as evi-

denced by the mode value of the presence of women on board, which is 0.

The presence of women on board of commissioners variable had a coefficient of 0.010535 and a significance level of 0.3156, meaning that the presence of women on board of commissioners variable has no significant relationship to the variable return on equity. This result is supported by research conducted by Elghuweel et al., (2017), but contrary to research conducted by Aryani (2018), who found that the presence of women on board of commissioners has a significant negative effect on return on equity. In addition, the hypothesis in this study also states that there is a significant positive relationship between the presence of women on board of commissioners with return on equity variables. The results were not significant in this study because of the small presence of women on board of directors, as evidenced by the mode of presence of women on board of commissioners, which is 0.

Table 5. Results of Model 4 Regression Analysis

Variable	Coeff.	Probability
C	-0.230570	0.0518
PWOMEN_DIRECTORS	0.041882	0.3200
PWOMEN_COMM.	0.017101	0.5514
F_SIZE	0.012192	0.0031
LEV	-0.09592	0.0009
R-Squared		0.14363
Adjusted R-squared		0.11644
S.E. of Regression		0.01290
F-statistic		528244
Prob (F-statistic)		0.000000

The proportion of women on board variable had a coefficient of 0.041882 and a significance level of 0.3200, meaning that the proportion of women on board variable has no significant relationship to the return on equity variable. This result is supported by research by Tanikawa (2017), but contrary to research conducted by Gomez (2018) and Kuzey (2016), who found a significant positive relationship between the proportion of women on board with return on equity. In addition, the hypothesis in this study also states that there is a significant positive relationship between the variables of the proportion of women on board with return on equity. The results were not significant in this study because the small number of women on the board of directors position as evidenced by the mean value of the proportion of women on board of 0.177524, meaning that the presence of women on the board of directors is only 17.75%.

The proportion of women on board of commissioners variable had a coefficient of 0.017101 and a significance level of 0.5514, signifying that the proportion of women on board of commissioners variable has an insignificant relationship to the variable return on equity. This result is supported by research conducted by Faramita (2016), who found that the proportion of women on board of commissioners had a significant positive relationship to the variable return on equity. In addition, the hypothesis in this study also states that there is a significant positive relationship between the proportion of women on the board of commissioners with return on equity variables. The results are not significant in this study because the small presence of women on board of directors position, as evidenced by the mean value of the proportion of women on commissioners, is 0.139347, meaning that the presence of women on the board of directors is only 13.93%.

The Firm size variable in Model 1 - 4 had a positive and significant effect. This result is supported by research conducted by Kuzey (2016), but contrary to research by Gomez (2018), which found significant negative results. The results of this study are in accordance with the initial hypothesis that firm size has a significant positive effect on profitability as measured by return on assets and return on equity. Large companies will get more attention, so the board of directors and commissioners will work harder in conducting supervision and management activities. Thereby, firm size is expected to provide added value for improving the company's financial performance (Bhatt & Bhattacharya, 2015). The effect of firm size on profitability is due to the larger size of the firm, the higher total assets and operating income of the firm and will increase the profitability of the firm (Koriawan & Wirawati, 2014). A similar statement was made by Ismi et al. (2017) that firm size (company size) has a significant positive effect on profitability.

The leverage variable in Model 1 - 4 also had a negative and significant effect on the profitability variable measured by return on assets and return on equity. The results of this study are in accordance with the initial hypothesis that leverage has a significant negative effect on the return on assets and return on equity. Leverage, which is usually measured as a percentage of the total book value of debt to total assets, determines the company's specific risk. This means that the higher the leverage, the closer the company is to the risk of bankruptcy (Abdullah, 2016). The level of bankruptcy

costs is associated with high levels of debt. Thus, a negative association is expected between leverage and firm performance (Campbell & Vera, 2008). Leverage shows the company's capital structure. A company that has a high degree of leverage shows its capital structure is dominated by debt. The company will tend to pay off the debt first. Therefore, this research suggests that leverage has a negative effect on company performance as measured by ROE (Bukair & Rahman, 2015).

#### 4. CONCLUSION

Based on the results of hypothesis testing, it is known that gender diversity, as measured by the presence of women on the board of directors and the board of commissioners variables does not affect profitability as measured by return on assets and return on equity. While firm size had a significant positive effect, and leverage had a significant negative effect on company profitability. Thus, the presence of women who are still very few in the company has not been able to play its role in influencing decisions that have an impact on company profitability.

#### REFERENCES

- Abdulah, S.N. 2016. Does Having Woman on Boards Create Value? The Impact of Societal Perceptions and Corporate Governance in Emerging Markets. *Strategic Management Journal*, 37: 466-476.
- Adams, R. & Ferreira, D. 2009. Woman In The Boardroom and Their Impact on Governance and Performance. *Journal of Financial Economics* 94: 291-309.
- Aryani, Y.A. 2018. Apakah Struktur Dewan Komisaris Berpengaruh Terhadap Kinerja Perusahaan?, *Journal Ilmiah Management*, 8(3): 597-613.
- Bhatt, R. & Bhattacharya, S. 2015. Board Structure And Firm Performance In Indian IT Firms. *Journal of Advances in Management Research*, 12(3): 232-248.
- Bukhair, A.A. & Rahman, A.A. 2015. Bank Performance and Board of Directors Attributes by Islamic Bank, *International Journal of Islamic and Middle Eastern Finance and Management*, 8(3):291-309.
- Campbell, K. & Vera, A.M. 2008. Gender Diversity In The Boardroom and Firm Financial Performance, *Journal of Business Ethics*, 83: 435-451.
- Darmadi, S. 2013. Do Woman in Top Management Affect Firm Performance? Evidence From Indonesia. *Corporate Governance* 13(3): 288-304.
- Elghuweel, M.I., Ntim, C.G., Opong, K.K., & Avson, L. 2017. Corporate Governance, Islamic Governance and Earnings Management in Oman: A New Empirical Insight from Behavioural Theoretical Framework. *Journal of Accounting in Emerging Economies*, 7(2): 190-224.
- Faramita, Y. 2016. Pengaruh Keberadaan Dewan Direksi Wanita Dan Dewan Komisaris Wanita Terhadap Manajemen Laba (Earnings Management) Pada Perusahaan Publik Di Indonesia. *Thesis*. Universitas Lampung.
- Gomez, J. 2018, Gender Diversity in The Board, Women's Leadership and Business Performance, *An International Journal*, pp.1754-2413.
- Ismi, N., Wayan Cipta, N.N. & Yulianthini. 2016. Analisis Pengaruh Debt to Equity Rasio dan Firm Size Terhadap Return on Equity pada CV. Dwikora Usaha Mandiri, *E-Journal Business Universitas Pendidikan Ganesha*. 4: 1-9.
- Kim, B., Burns & Prescott. 2009. The Strategic Role of the Board: The Impact of Board Structure on Top Management Team Strategic Action Capability. *Corporate Governance: An International Review*, 17(6): 728-743.
- Koerniadi & Tourani-Rad. 2012., Does Board Independence Matter? Evidence from New Zealand. *Australasian Accounting, Business and Finance Journal* 6(2): 13-18.
- Koriawan & Wirawati. 2014. Pengaruh Ukuran Perusahaan, Struktur Finansial, dan Pertumbuhan Jumlah Nasabah Kredit pada Profitabilitas. *EJournal Akuntansi Universitas Udayana* 9(3): 608-616.
- Kuzey, C. 2016. The Effect Of Board Gender Diversity on Firms Performance : Evidence from Turkey. *Gender in Management: An International Journal*, 31(7): 434-455.
- Marimutu, M. & Kolandaisamy, I. 2009. Ethnic and Gender Diversity in Boards of Director and Their Relevance to Financial Performance of Malaysian Companies. *Journal of Sustainable Development*, 2(3): 139-148.
- Ramadhani, Z. & Adhariani, D. 2017. Semakin Beragam Semakin Baik? Isu Keberagaman Gender, Keuangan, dan Investasi Perusahaan. *Jurnal Keuangan dan Perbankan*, 21(1): 1-13.
- Rose, C. 2007. Does Female Board Representation Influence Firm Performance? The Danish Evidence, *Corporate Governance*, 15(2): 404-413.
- Setyanti, C.A. 2014. Peluang Perempuan Jadi Pemimpin Baru 5 Persen, accessed on [www.female.kompas.com/read/2012/10/17/11412422/PeluangPerempuan.Jadi.Pemimpin.Baru.5.Persen](http://www.female.kompas.com/read/2012/10/17/11412422/PeluangPerempuan.Jadi.Pemimpin.Baru.5.Persen)
- Sila, V., Gonzalez, A., & Hagendorff, J. 2016. Women on Board: Does Boardroom Gender Diversity Affect Firm Risk, *Journal of Corporate Finance*.
- Tanikawa, T. 2017. Top Management team Diversity and Firm Performance, 23(3/4): 156-170.