



Gender Parity on Boards and Firm Financial Performance

Evidence from publicly listed companies in Indonesia

Laksita Putri Arishanty

University of Groningen, School of Business and Management ITB, Netherlands

Abstract

This study investigates board gender diversity in 144 Indonesia's listed firms and its effect on firm performance from 2018 to 2020. By adopting two regression analysis, the study provides a multidimensional view of across-firm and within-firm analysis. The results in this paper show that the gender diversity in the boardroom partially improves firm performance, however there are contradicting results by using different measurements. Further, the findings imply that increasing gender diversity in boardrooms can promote firm performance. Particular industries will benefit more from the inclusion of females to the boardroom, therefore companies might structure their boards according to their industry.

Keywords: Board Diversity, Firm Performance, Gender Equality, Industry Effects

1. Introduction

Gender stereotyping in the workforce has been a subject of increasing interest, mostly due to the disparity in recruitment and promotion opportunities. As long as the firm's employees and markets are generally distributed between male and female, female candidates should have the same prospect of being chosen as directors as male applicants. As per OECD, women make up 65 percent of the workforce in OECD countries, however this figure may be lower than 50 percent in some developing countries (OECD, 2012). Female participation in management and board positions, however, remains low: 28 percent in Fortune 500 businesses (Catalyst, 2017), and 10.2 percent in Asia Pacific countries (Korn & Ferry, 2016). Financial markets around the world only employ roughly 20% of female directors, despite being the most prudent industry. As a result, the issue of gender bias is a universal one.

OECD (2012) states that increasing diversity on boards leads to a greater pool of workers in terms of skill, experience, and network, which leads to improved governance and firm performance. Nevertheless, empirical research indicates that the effects of female directors on



corporate success are contradictory. Some studies found that female directors have a beneficial impact on firm performance (Liu, Wei, & Xie 2014), while others did not (Carter et al. 2010, Galbreath 2011, Ahern & Dittmar 2012, Marinova, Plantenga, & Remery 2016). As a response, it is vital to investigate if the rising representation of women on corporate boards has a favorable impact on firm performance.

This research is carried out in Indonesia - one of the world's largest developing countries and where governance norms differ from those in affluent countries and data is provided by Orbis and Indonesia Stock Exchange. There is no institutional regulation in place to encourage gender diversity on the boards of Indonesian publicly traded companies. As a consequence, female directors in the top 100 Indonesian listed companies stayed stable at roughly 11–12% from 2012 to 2014 (CGIO & Korn Ferry 2016). Furthermore, past research has consistently found a link between female board members and firm performance (Triana & Asri 2017, Syamsudin, Setiany, & Sajidah 2017). The research highlights a question that needs to be discussed.

To what extent does gender diversity on boards affect Indonesian firm performance?

By using OLS and Fixed Effect approaches, the aim of the research is to generate findings on the importance of females in the boardroom on business performance in Indonesian publicly traded companies and to confirm the hypothesis that diversity on boards positively affects financial performance of companies. The study may contribute to the existence of knowledge by providing empirical evidence of the impact of gender diversity in the boardroom and explore the link between the key factors from a cross-firm perspective as well as at a within-firm level of analysis. The body of the paper is organized as follows: discussion of the past literature, such as board diversity theory, empirical studies, and hypothesis formulation, will be reviewed in Section 2. The research methodology used is described in Section 3. The empirical evidence and research discussion will be presented in Section 4, and finally, section 5 will bring the paper to a close with conclusions and limitations of the study.

2. Conceptual Framework

2.1 Theories on Board Gender Diversity

This thesis draws its conceptual basis from four main theories. Firstly, according to agency theory, as managers make company decisions, agency challenges exist when they do not consider the best interests of shareholders. Raising boardroom accountability is one strategy. As per the agency idea, females in the boardroom are considered outsiders who can perform continuous auditing roles than their male peers and effective board supervision and management are critical in resolving these conflicts of interest (Fama & Jensen, 1983). Women directors are more involved in monitoring activities, according to empirical research. As shown in Gul et al. (2008) and Adams and Ferreira (2009), illustrate that more gender-diverse boards necessitate increased auditing and managerial accountability. Furthermore, the presence of female directors will have a favorable impact on CEO power.

Furthermore, to resource dependence theory, firms rely on commodities in their external contexts to keep it afloat. As a result, these reliances entail concerns to the business, and firms might make connections with the external groups that control those resources to mitigate



unpredictability. Boardroom ties provide three benefits: advice and guidance, legality, and connection networks. In terms of guidance and support, study shows that board diversity is associated with higher-quality board considerations of complex matters, some of which may be unappealing to all-male boards (Pfeffer & Salancik, 1978). Firms' practices are justified in terms of validity by acknowledging sociocultural values and beliefs. In terms of information channels, women CEOs are more positioned to engage their business to female clients, women labor, and society in general due to their diverse life experiences and perceptions. In summary, the resource dependence theory also suggests that gender-diverse boards have positive impacts.

By looking at the stakeholder approach, a board's primary responsibility is to foster positive connections with the firm's shareholders. The boards of directors are not always the representatives of the shareholders (owners). As a result, in order to observe society, the boards should be constituted of individuals of all races, genders, and ethnicities. Firms may face some demands to do so, but the pressure is lessened when company ownership is particularly high (Hodigere & Bilimoria, 2015). Lastly, as per human capital approach, female traits such as knowledge, expertise, connections, expertise, as well as other personal traits may have an effect on the company. Female competences are generally comparable to male qualifications in terms of degree and professional experience. Likewise, female directors in France have the same management experience and educational background as male directors (Dang et.al, 2014). Nonetheless, Terjesen (2009) argues that in the US, females are less likely to be elected as directors candidates due to less adequate network of connections.

To conclude, the aforementioned hypotheses suggest that gender diversity in boardrooms may have beneficial or bad implications for boardroom judgment. The effects of gender diversity in boardrooms on overall firm performance will be the subject of this research.

2.2 Female Directors on Firm Performance

As the impact of gender diversity in the boardroom on corporate performance is complex, which could be attributed to a variety of factors. To begin with, certain studies are carried out in underdeveloped countries, while others are carried out in developed countries. In industrialized countries (i.e. Nordics), mandates are more likely to get involved in the presence of females on boards. Female directors are more likely to be marginalized as a result of such legislation (Ahern & Dittmar, 2012). However, this criterion doesn't quite hold in public firms in developing countries (for example, Indonesia), due to the board structure flexibility in structuring their boards of directors in compliance with their strategic aims. Second, specific conditions, such as present firm level governance (Adams & Ferreira, 2009), size of the company (Pasaribu, 2017), and sector (Chapple & Humphrey, 2014), must be met. Third, the research methodology, datasets, and time frames evaluated are all distinct, making the results complicated to draw comparisons. Finally, some analyses adopt simple regression analysis, such as the OLS model, while others employ complex techniques. Simple regression evaluation studies found a positive relation (Mahadeo, Soobaroyen, & Hanuman 2012, Lücknerath-Rovers 2013) whereas the others struggled to find consistent patterns (Jurkus, Park, & Woodard 2011). Because of the unobserved heterogeneity, using the OLS model may result in biased computation and affect the robustness result.



2.3 Female Directors in Indonesian Listed Firms

Despite the fact that men and women work in equal numbers in Indonesia, only about 6% of boardroom seats are filled by women. Such percentages are significantly lower than in the US and Europe, where women directors account for roughly 17% and 15%, respectively (The World Bank Group, 2013). Darmadi (2013) unable to prove that females in the boardroom can improve the firm's ROA and Tobin's Q. He claims that the number of women on the board is primarily due to nepotism or family ties and this study only employed a one-year timeframe, which may make it challenging to generalize the findings. Conversely, Triana and Asri (2017) did a comparable analysis with a bigger sample and are able to demonstrate the positive linkage of female directors and firm performance using Tobin's Q. Likewise, Syamsudin, Setiany, and Sajidah (2017) agreed that adding females on boardrooms has an impact on business performance in Indonesia's construction sector. Indonesian listed companies have more autonomy than their peers in developed nations, where female board members are obliged by law. The boards of Indonesian publicly traded companies can be structured according to industry dynamics and the firm's strategic ambitions. The first hypothesis, according to the above arguments is formed as below:

H1. Women in the boardroom have a positive influence on firm performance.

3. Research Methodology

3.1 Sample and Data

The sample data for this study is 136 limited to companies who provide boardroom gender identity and non-financial listed firms on the Indonesian Stock Exchange (IDX) during the period 2018 to 2020. Financial companies (banking, insurance) are excluded from this study since they tend to be highly indebted, which is deemed acceptable for this type of firm but signifies a distress call for non-financial companies. Furthermore, when it comes to making strategic decisions or structuring boards, financial firms are heavily regulated. All variables for this study are using a variety of sources, including Orbis, financial records, and the IDX website. The majority of board features, such as position, function, gender, and so on, are based on hand-collected financial records, thus with Orbis is where most proxies for firm performance are compiled.

3.2 Variables and Regression Models

Dependent Variable

Tobin's Q, return on asset (ROA), and return on equity (ROE) are used in the study to approximate market-based indicators of company performance. The ratio of the firm's market value to its book value serves as a proxy for Tobin's q (*tobinq*). The market value of a company is determined by subtracting the book value of assets from the book value of equity plus the market value of equity. When such Tobin's Q ratio is between 0 and 1, replacing a company's assets costs more than the company is worth. If Tobin's Q is greater than one, the company is worth more than the cost of its assets. Because Tobin's premise is that companies should be valued at the same as their assets, anything above 1.0 suggests that a company is overvalued (Bartlett & Partnoy, 2018). The return on assets (**ROA**) is calculated by dividing net income before by the book value of the company's assets. An acceptable ROA is 5%, while 20% or



more is considered excellent. In general, the higher the ROA, the more profit-generating efficiency the company has. Furthermore, return on equity (**ROE**) is a metric of how well a firm is managing the money that its shareholders have invested by dividing net income by shareholder equity. In other words, it assesses a company's profitability in relation to its stockholders' equity. The higher the ROE, the better a company's management is at creating income and growth from its equity financing.

Independent Variable

Gender diversity measures are the focused variable. It can be in several forms depending on the analysis. It can be a continuous variable, which is the proxied proportion of females (**Bdiv**) in the boardroom in testing the first hypothesis. The data is derived from Orbis database for each company by calculating the number of women on the board director. Additionally, the study is presenting other independent variables to characterize the board and the firm. Board characteristics are separated into two categories: board size and board independence. The former refers to the total number of directors on each sample firm's board of directors, whereas the latter refers to the BvD independence indicators, which take into account the number of shareholders and shared holdings, and are denoted by letters A, B, and C each indicating a varying type of ownership concentration. Along with that, numerically the letter is denoted as number 1 to 9 based on the lowest to highest ownership concentration from A (A+, A, A-) referred to as independent companies with known recorded shareholders, each of them having less than 25% of direct or total ownership of the company. As for B (B+, B, B-) is for companies with below 50% ownerships and C (C+, C, C-) is for companies with a total or calculated ownership above 50% in total. Furthermore, firm size (**fsize**) is the logarithm of the total assets and firm age (**fage**) is the difference from the firm initial creation and the present time (in years), both are used to estimate the firm characteristics. The letters γ and δ stand for firm and year, respectively.

Estimation Models

The study incorporates two approaches namely OLS and Fixed Effect (FE) by using the software SPSS and STATA respectively. The regression model for the **OLS** estimation is shown as below.

$$\text{FirmPerformance } (i,t) = \beta_0 + \beta_1 \text{GenderDiversityMeasures } (i,t) + \beta_2 \text{BoardCharacteristics } (i,t) + \beta_3 \text{FirmCharacteristics } (i,t) + \varepsilon (i,t)$$

Additionally, the regression model for the **fixed effect (FE)** estimation is shown as below.

$$\text{FirmPerformance } (i,t) = \beta_0 + \beta_1 \text{GenderDiversityMeasures } (i,t) + \beta_2 \text{BoardCharacteristics } (i,t) + \beta_3 \text{FirmCharacteristics } (i,t) + \alpha (i) + \varepsilon (i,t)$$

Both OLS and FE estimation models present similar elements where β_0 is the intercept of the regression line; $\beta_1 \text{GenderDiversityMeasures } (i,t)$, $\beta_2 \text{BoardCharacteristics } (i,t)$, and $\beta_3 \text{FirmCharacteristics } (i,t)$ are the coefficients for the independent variables. Moreover, all elements are expressed for each firm i and for each year t . The random error term in the OLS model is $\varepsilon (i,t)$, which accommodates for potential model uncertainty and a lack of precise goodness of fit. In the FE model, however, $\varepsilon (i,t)$ is referred to as a time-varying error, explaining why the models may not fit due to time-varying factors that were not considered in the analysis. Furthermore, the FE estimation equation has an additional component: $\alpha (i)$ which



is known as the undetected or fixed effect. All time-invariant elements existing in each firm under study are included in the $\alpha (i)$ term.

OLS regression is used to investigate the effects of gender diversity on board and firm performance across different firms. On the other hand, the FE analysis is focused on the within-firm aspects of the said relationship. Nevertheless, in this study, the FE is crucial since it investigates the relationship between predictor and result variables within an entity, as the focus of the study is on examining the impact of factors that change over time (country, firm, industry, etc.). Each firm has unique properties that may or may not influence the predictor variables, necessitating regulation. The assumption of a correlation between the entity's error term and predictor factors is based on this logic. The effect of the time-invariant traits is removed by FE, allowing the net effect to evaluate the predictors on the outcome variable and assumes that those time-invariant features are unique to the individual.

4. Results And Discussion

4.1 Variable Overview

The study begins by presenting the descriptive statistics shown in Table 3 which comprises variables that are used in the regression analysis. Due to missing information obtained from the secondary data, several variable observations are less than the intended sample size which is 414. Firstly, from the “*firm performance*” proxies, *tobinsq* has a mean of 0.553 indicates that the average number of Indonesian firms are undervalued or not as valuable as their assets. Furthermore, the last two variables are explained in percentage, namely *ROA* has a mean of 0.042 or 4.2% indicates with each investment made with company assets, it rises by 4.2% on profit. It shows lack of efficiency as the benchmark is 5% to be considered as a decent value, thus there is room for improvement to flourish. Furthermore, the minimum and maximum value have a considerably big gap of -0.728 or -72.8% and 0.54 or 54% respectively. The number may be affected by the pandemic where there are industries that are positively impacted, namely health care and consumer goods while others like tourism and retail are deeply affected. However, it is only acceptable to compare ROA within the same industries since each industry utilizes their assets differently. On the last “*firm performance*” proxies, *ROE* has slightly higher mean of 7.1% and has a significantly wider gap of maximum and minimum value range between 295.1% and -414.2%.

Secondly for the “*gender diversity*” proxies, *bdiv* has a mean of 0.966 which is rounded to 1 meaning that the average number of female participation on Indonesian boardrooms is significantly low with 1 member on average with a maximum value of 6 female members. Moving on to the board and firm characteristics, *boardind* has an average of 6.95 or 7 point of Bvd Independence Indicator (C+) revealing that the average Indonesian firms are medium to high ownership concentration type with known shareholders having a total or calculated ownership of the company above 50%. The average size of the board by *bsize* is 6.16 or 6 with highest number of 29 board members and 5 as the lowest number. Furthermore, Indonesian firms on average by *fage* are 30 years old or in other words founded in the early 1990 with the youngest age of 1 year old and the most mature one is 125 years old. The average size is 5.598 and has maximum value of 11.58 and 0.832, indicating that the average Indonesian firm is a medium-sized company by taking into account the company's natural assets.

Table 3. Descriptive Statistics

Variables	N	Mean	Std.	Min	Median	Max
<i>Firm Performance</i>						
tobinsq	360	0.553	0.761	0.151	0.472	0.98
roa	406	0.042	0.115	-0.728	0.034	0.54
roe	399	0.071	0.422	-4.142	0.086	2.951
<i>Gender Diversity</i>						
bdiv	414	0.96	1.173	0	1	6
<i>Board Characteristics</i>						
boardind	414	6.95	2.68	1	9	9
bsize	414	6.16	4.169	1	5	29
<i>Firm Characteristics</i>						
fage	407	30.15	23.051	1	24	125
fsize	411	5.598	2.28	0.832	5.134	
11.58						

4.2 Regression Analysis on Firm Performance

The results of the OLS and fixed effect (FE) regression analyses are displayed in Table 4 and Table 6. Moreover, OLS regression with conducting robust standard errors is shown in Table 5. The discussion of the analyzed model is shown in this order. Model 1 to 3 are utilizing OLS regression while Model 4 to 6 are using FE. All six models measure and test whether board diversity and firm performance have positive correlation by using different proxies for each model.

OLS Regression Analysis

Table 4 presents the OLS estimation result for the effect of the female presence in the boardroom. The focused variable, *bdiv*, tends to significantly improve firm performance in Model 1 with Tobin's Q at the 1% level of significance. Furthermore, *boardind* and *fsize* are positive and significant at 1% and 5%, however *fsize* is negative and significant at 5%. Model 2 shows that there is positive but insignificant relation using *ROA*, however *boardind* and *fage* are positive and significant at 10% and 5% respectively. Like in the previous model, the *fsize* in Model 2 is also negative and significant at 10% level with rising number of coefficients. Moreover, Model 3 using *ROE* has no big difference with Model 2 but the coefficient of *boardind*, *fage*, and *fsize* are significantly higher.

Table 4. OLS regression of Board Diversity on Firm Performance

VARIABLES	MODEL 1 <u>Tobin's Q</u>	MODEL 2 <u>ROA</u>	MODEL 3 <u>ROE</u>
Bdiv	0.685* (0.402)	0.822 (1.064)	3.588 (4.013)
Boardind	0.171* (0.087)	0.986*** (0.214)	1.693** (0.820)
Bsize	0.027 (0.071)	0.267 (0.175)	0.534 (0.662)
Fage	0.002 (0.013)	0.083** (0.032)	0.268** (0.122)
Fsize	-0.336** (0.157)	-1.817*** (0.385)	-4.474*** (1.445)
Constant	3.284*** (0.784)	1.421 (1.896)	1.264 (7.322)
Observations	360	406	399
F-statistics	2.5	7.917	3.803
Prob>F(Sig.)	0.016	0.000	0.001
R ²	0.048	0.124	0.065
Adjusted R ²	0.029	0.108	0.048

Standard errors in parentheses reported under the regression coefficients *** p<0.01, ** p<0.05, * p<0.1

Fixed Effect Regression Analysis

The following table, Table 6, provides the results where time-invariant of each firm are concerned in the firm dummies. Unlike the previous models conducted in OLS, the coefficients in the FE models are substantially higher but have less significant variables. Model 4 shows that *bdiv* is positive and significant at 5% interpreting that when the board diversity increases by 1 member, firm performance increases by 108.209 points with Tobin's Q. Moreover, *bsize* and *fage* are negative and significant at 5% and 1% respectively, while *fsize* is positively significant at 5%. Intriguingly, Model 5 and Model 6 show that *bdiv* are negative and insignificant while *boardind* are positive and significant at 5% in both models. Moreover, by looking at the R-2 the recommended model with the highest value of R-2 is Model 5 (0.764), followed by Model 6 (0.758) and the last is Model 4 (0.684) although there are slight differences amongst the models.

Between the two regression approaches of OLS and FE, the data analysis produced slightly different results. The hypothesis is partially validated by all of the models in the OLS and model 4 of FE while the remaining two models are contradicting. Even when robust standard error is computed to the OLS, the conclusions did not differ appreciably. This shows that endogeneity issues may contribute to the regression results being inconsistent between between-country and within-country analyses. Measurement mistakes in independent variables, reverse causality, and omitted factors are the most common causes of endogeneity issues.



Table 6. FE regression of Board Diversity on Firm Performance

VARIABLES	MODEL 4 <u>Tobin's Q</u>	MODEL 5 <u>ROA</u>	MODEL 6 <u>ROE</u>
Bdiv	108.209** (43.086)	-72.551 (66.632)	-108.651 (71.945)
Boardind	-2.017 (16.827)	61.087** (23.905)	66.724** (25.845)
Bsize	-16.303** (7.060)	14.419 (9.110)	13.699 (9.886)
Fage	-2.783* (1.602)	3.603 (2.534)	3.987 (2.736)
Fsize	32.858** (14.109)	-16.696 (15.126)	-7.873 (16.573)
Observations	360	406	399
F-statistics	3.57	6.10	5.83
Prob>F(Sig.)	0.000	0.000	0.000
R ²	0.684	0.764	0.758
Adjusted R ²	0.493	0.636	0.628

Standard errors in parentheses reported under the regression coefficients *** p<0.01, ** p<0.05, * p<0.1

4.3 Discussion

This study is to examine the effect of females in the boardroom on firm performance and the results show thought-provoking results when compared to previous studies in Indonesia, especially when looking at the within-firm aspect. The results are significantly positive yet insignificantly negative between gender diversity on board and firm performance by using different measurements. When looking at the descriptive analysis, it indicates that the average participation of females in the boardroom remains low, which is around 1 female in each boardroom from the average board size of 6 members or only 16.66% female participation. This phenomenon can be attributed to two main factors.

For instance, it could be linked to a deficiency of female experience, competence, and connections. Second, most boards are still likely to be biased towards women. Most variables in OLS models are statistically significant, but they are no longer statistically significant in FE models especially for ROA and ROE proxies. It means that a positive sign in OLS models does not imply that females have a beneficial impact on firm performance, but rather that well-performing firms are more likely to appoint women to the boardroom. Thus, it may be addressed by endogeneity issues and hence the FE model is employed afterwards. However, the FE regression is only confirmed by one model where it significantly influences firm performance (5% significance level) and the rest gives contradicting results. This may lead to unobserved factors that may influence the extent to how gender diversity on board presumes to negatively correlate with firm performance.

Aside from the hypothesis that is partially supported by the Model 1 to 4, it is crucial to take into account the factors behind the inconsistent results. It shows that there are more elements that are most likely to play a role in the firm circumstances namely critical mass theory, tokenism issue or industry-based factors. According to the critical mass study, firms that elect more than one female to the board of directors may have an advantageous influence on firm performance. In Indonesia, male directors and commissioners predominate. Due to the



tokenism problem, it is challenging for a female director to contribute to aggregate firm performance (Joecks et.al, 2013). Also, the presence of females in the boardroom may assist particular sectors more than others, namely healthcare, or public utilities are among these sectors. This conclusion is reinforced by the stakeholder theory stating that boards must consider not only the interests of shareholders, but also the interests of stakeholders. In this example, companies with gender-balanced clients gain from getting a gender-diverse board. Additionally, the human capital theory can be used to understand the marginal effect of gender diversity on company performance in Indonesia. According to Darmadi (2013), top positions in smaller firms are often occupied by those with family connections instead of just expertise. Females in boardrooms are typically not the ideal candidates, which has an impact on female contributions to corporate performance.

5. Conclusions And Limitations

The objectives of this study are to examine the effect of the presence of females in the boardroom on firm performance in Indonesian listed firms. As an emerging market, there is no formal regulation in Indonesia with respect to gender diversity in the boardroom. Indonesian listed firms have more freedom in structuring their boards than their counterparts in developing countries, namely EU countries or US. The empirical evidence shows that females marginally influence firm performance. Initially by OLS regression, the diversity coefficient is statistically significant at level 1% and after robust standard error is conducted, it is no longer significant. However, the estimation is prone to endogeneity problems, thus the study employs Fixed Effect analysis. The result is significant and positive with one model at 5% confidence level, but the remaining models are insignificant and negative compared to the OLS models. These results are consistent after controlling the absolute number of female and firm industries. The regression analysis results are slightly similar from previous study (Pasaribu et.al, 2019), in which the authors have inconsistent results when doing OLS and 2SLS models. Those results are caused by the reverse causality problem which leads to the endogeneity problem, meaning that well-performed Indonesian listed firms tend to promote gender diversity in the boardroom rather than gender diversity in the boardroom could improve performance.

The research revealed that firms should arrange their boards according to their industry. Females in the boardroom may be essential for companies with commodities that are rather direct to the end consumer, whereas others like basic commodities may not. And for government, it is the obligation of the Indonesian law to support that there is no workplace discrimination caused by race, religion, or gender in terms of wage or promotion opportunities. Most laws and regulations in the Indonesia stock market are structured after those in industrialized stock markets, like the two-tier board structure and the mandate of independent directors. The Indonesian stock exchange officials, namely Otoritas Jasa Keuangan (OJK) and Indonesian Stock Exchange (IDX) may strive for particular legislation or policies to encourage the inclusion of women in the boardroom. In order to obtain that, the study advice for stock market administrators impose transparency requirements on gender diversity on boards of directors for listed companies as a corporate governance guideline rather than implementing quotas legislation.

For future research that wants to perform comparative projects on gender diversity, at least two approaches to regression analysis are recommended. When gender variables are associated



with firm performance in OLS models, bias estimates are revealed in this study. Lastly, like other ones, this study has limitations. First, the study is using a smaller dataset and did not go into detail regarding female attributes such as competence, skill, education, and connections. Further research into the impact of these factors on firm performance may be desired. Other implications of gender diversity on boards, such as investing decisions, corporate social responsibility performance, are also worth investigating. These concerns can be researched and acknowledged in the future.

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