



Board Gender, Experience and Education on Financial Performance: Evidence From Manufacturing Firms In Indonesia

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Abstract

This study aims to determine the effect of board gender, board experience and board education on financial performance in manufacturing firms in Indonesia. This research is quantitative. The total population is 168 manufacturing companies. A sample of 38 manufacturing companies was determined by using purposive sampling techniques. Research data was obtained from the financial statements of companies for the period 2015-2019. Data analysis techniques using a descriptive statistic, classical assumption test, estimation test and panel data regression. Hypotheses testing by using F-test dan t-test. The results showed that board gender did not affect company performance. The board experience and board education had a positive and significant effect on firms performance.

Keywords: Board Gender, Board Experience, Board Education, Financial Performance

1. Introduction

In the era of globalization and increasingly fierce market competition, triggering various kinds of innovations in the development of business activities. To be able to survive in this increasingly tough competition, companies must have values that can create competitive advantage (Dereli, 2015); (Laszlo & Zhembayeva, 2017). To be able to compete, companies must have management and control so that the company can develop and have good company performance. Every company always wants the company's performance to experience significant development, because corporate governance is a system that regulates and controls the company (Wheelen et al., 2017); (Grayson & Hodges, 2017).

Firm performance is the ability of a company to carry out all its operational activities. Financial performance is fundamental to starting the company's overall performance. Firm performance is a work result that can be achieved by a person or group of people in a company in accordance with their respective authorities and responsibilities in an effort to achieve corporate goals legally, and does not violate the law, and does not conflict with morals and ethics.

Firm performance is the result of management activities in the form of a series of business processes at the expense of human resources and also financial resources owned by the company (Wehrmeyer, 2017). One of the efforts that can be made to improve company performance is by implementing good corporate governance, the board of directors is considered a useful resource, hiring high-level directors will ensure high quality resources, which will improve company performance (Rubino & Napoli, 2020); (Wheelen et al., 2017).

The board of directors is fully responsible for all matters relating to the interests and goals of the company. An efficient board of directors must consist of sufficient human capital and social capital in the boardroom, the proposed board capital is a reflection of the ability of the board of directors to make the best decisions (Ooi et al., 2017). Diversity of the board of directors greatly affects the performance of a company, because diversity is the diversity within a group or organization, whether social, cultural, physical, and environmental diversity affects how they think and behave (Tasheva & Hillman, 2019).

According to (Abdul et al., 2018) gender diversity and company performance in four Asian countries, namely, Hong Kong, South Korea, Malaysia and Singapore where they found that more and more female directors had a positive effect on company performance. The representation of women at the top of the corporate hierarchy may have an important impact on business performance, not only as a signal of a more neutral recruitment and promotion process but also because of the potential benefits of gender diversity itself (Moreno-Gómez et al., 2018). Apart from gender factors, another thing that is thought to affect company performance is experience. Work experience is a knowledge or skill that has been mastered by a person in carrying out the tasks assigned to him (Tejerina-Gaite & Fernández-Temprano, 2020); (Li & Patel, 2019). Education can also affect a person's performance because it can provide broader insights to innovate and then it will affect their performance and education can be an important factor in completing a job. Education and company are related because the output of the education system is the input of the company (Abbasi et al., 2018); (Kagzi & Guha, 2018).

Gender as a cultural concept that is used to differentiate roles, behaviors, mentality, and emotional characteristics between men and women that develop in society (Worell, 2001). Basically it is a provision that is biological in nature that cannot be changed. The presence of women on the board of directors indicates that the company provides equal opportunities for everyone without discrimination. The women's board of directors is part of gender diversity that affects financial performance. Because the board of directors is also directly involved in the preparation of financial statements, the role of women on the board of directors indirectly affects the company's financial performance (Carter et al., 2010); (Post & Byron, 2015).

Experience as the presence or average percentage of the board of directors over a period of time with a specific industry background or strong financial background (Mahadeo et al., 2012). In this study, experience is categorized into specific expertise possessed by a board such as business, lawyers, accountants, government and other expertise possessed by a board of directors. A board of directors with special experience and expertise will be able to improve company performance (Berezinets et al., 2016); (McDonald et al., 2008).

The company or organization selects board members and top managers on the basis of the abilities and skills of the board of directors or commissioners to achieve the desired goals of the company to maximize business (Moreno-Gómez et al., 2018). Skills and knowledge are very important for running a company and with the skills and knowledge a board

has to effectively manage its resources (Hwang & Ng, 2013). The presence of skills and knowledge possessed by board members will have an impact on company performance because the skills of board members come from the experience and special expertise of board members (Terjesen et al., 2016). Education is a process of an experience. An educated board will be more rational in thinking and acting and understanding the duties and responsibilities imposed on him so that he can perform those duties and responsibilities well (Andriof et al., 2017). Education can affect a person's performance because it can provide broader insights to innovate and then it will affect their performance and education can be an important factor in completing a job. Education and company are interrelated because the output of the education system is the input of the company (Abbasi et al., 2018). Educational diversity can give a distinct advantage to a firm's ultimate goals in board discussions and decision-making. Different levels of education can make a difference in decision making and financial performance (Kotlar & De Massis, 2013).

Based on literature review and previous research, the hypotheses in this research are as follows:

- H₁: Board gender has a positive and significant effect on financial performance
- H₂: Board experience has a positive and significant effect on financial performance
- H₃: Board education has a positive and significant effect on financial performance

2. Method

The population used in this study were all manufacturing companies listed on the Indonesia Stock Exchange (IDX) in the 2015-2019 period, totaling 168 companies. The research sample was determined by purposive sampling method. 38 companies were selected as samples. The sampling technique is presented in table 1 below:

Table 1. Sample Determination

No.	Criteria	Total
1	Manufacturing companies listed on the IDX in 2014-2019	168
2	Manufacturing companies listed on the IDX that have not yet IPO from 2014-2019	(33)
3	Manufacturing companies listed on the IDX that suffered losses during 2014-2019	(66)
4	Manufacturing companies listed on the IDX that do not have complete data on research variables during the research year	(31)

Total	38	Observations	190	190	190	190	190
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This study uses one dependent variable, three independent variables and the firm size as control variables. Variable measurements will be presented in table 2 below:

Table 2. Variable Measurement

No	Variable	Formula
1	Financial Performance (Y)	$ROA = \frac{Net\ Income}{Total\ Assets} \times 100\%$
2	Board Gender (X ₁)	$GEN = \frac{Total\ Gender\ of\ boards}{Total\ Boards} \times 100\%$
3	Board Experience (X ₂)	$EXP = \frac{Total\ years\ of\ experience}{Total\ Boards} \times 100\%$
4	Board Education (X ₃)	$EDU = \frac{Total\ Education\ of\ boards}{Total\ Boards} \times 100\%$
5	Firm Size as control variable (X ₄)	SIZE = Log (Total Asset)

Financial performance (Y) is measured by calculating net income divided by the book value of assets. A dummy variable that equals to 1 if board is female and to 0 is otherwise. Firm boards director experience measured by the average age of all board directors experience. Firm boards director education, measured by the average last education of the board director, 1 for senior high school, 2 for associate degree, 3 for bachelor, 4 for master degree and 5 for post graduate. Firm Size is measured by the book value of assets

The data analysis used in this research is descriptive test, classical assumptions, panel data regression analysis and hypothesis testing. The panel data regression model estimation technique was performed using the Chow test, Hausman test and Lagrange Multiplier test to determine the common effect models, fixed effect models and random effect models approach. The panel data regression analysis equation in this study can be summarized as follows:

$$ROA_{it} = \alpha + \beta_1 GEN_{it} + \beta_2 EXP + \beta_3 EDU + \beta_4 SIZE + \varepsilon$$

3. Result and Discussion Result

Below is a summary of the data in the form of descriptive statistics for each variable as follows:

Table 3. Descriptive Statistical Test Results

VARIABLE	X ₁ GEN	X ₂ EXP	X ₃ EDU	X ₄ SIZE	Y ROA
Mean	0.114053	11.11579	3.366789	14.71705	7.758789
Median	0.000000	9.380000	3.400000	14.45500	5.890000
Maximum	1.110000	25.25000	4.200000	19.62000	52.67000
Minimum	0.030000	1.670000	2.500000	11.80000	0.020000
Std. Dev.	0.135888	5.932036	0.327756	1.687702	7.616667
Skewness	-1.429560	0.665555	-0.425130	0.836818	2.401267
Kurtosis	4.325686	2.330624	3.320190	3.265693	11.60665

Data processed by authors

The first step for selecting the estimation model is the Chow test, the test results are shown in table 4 below:

Table 4. Chow Test Result

Statistic	d.f.	Prob.
421.965361	(28,89)	0.0000
597.311502	28	0.0000

Data processed by authors

Based on the test results above, it can be seen that the Chi-square probability of 0.0000 is smaller than 0.05, so it can be concluded that the fixed effect model is more appropriate than the common effect model. To further confirm the selected estimation method, another test was carried out, the Hausman test. The test result are shown in table 5 below:

Table 5. Hausman Test Result

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	5.737281	4	0.2196

Data processed by authors

In table 5 it can be seen that the prob value is 0.2196, the value is > 0.05, it can be concluded that the random effect model is more appropriate than the fixed effect model. then the next step is to perform the Lagrange Multiplier test. The test result are shown in table 6 below:

Table 6. Lagrange Multiplier Test Result

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	149.5428 (0.0000)	2.081584 (0.1491)	151.6244 (0.0000)

Data processed by authors

In table 6, it can be seen that the Breusch-Pagan probability value is 0.0000, which is < 0.05, so it can be concluded that the random effect model is more appropriate than the common effect model. It can be concluded that in this study the estimation used is the Random Effect. The results of the random effect test are presented in table 7 below:

Table 7. Random Effect Test Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1_GEN	0.037127	0.088914	0.417564	0.6772
X2_EXP	0.255794	0.064777	3.848859	0.0002
X3_EDU	1.773105	0.639975	2.714330	0.0105
X4_SIZE	4.290222	0.650193	6.598378	0.0000
C	-20.62989	9.841363	-2.096243	0.0388
R-squared	0.413042	Mean dependent var		1.706850
Adjusted R-squared	0.387241	S.D. dependent var		1.203428
S.E. of regression	0.938135	Sum squared resid		80.08893
F-statistic	16.00915	Durbin-Watson stat		0.950733

Prob(F-statistic) 0.000000

Data processed by authors

Based on the selected estimation model, the following panel data regression model equations are obtained:

$$Y = -20.629 + 0.037X_1 - 0.255X_2 - 1.673X_3 + 4.290Z + \varepsilon$$

Based on the results of the regression of the panel data above, it can be interpreted as follows:

The value of a constant is -20.629, meaning that if gender, experience, educational background and company size are considered constant (constant or no change) then the company's performance is -20.629.

The value of the coefficient β_1 is 0.037, meaning that if the gender increases by one (1), assuming experience, educational background and company size is considered constant (constant), then the company's performance increases by 0.037.

The value of the coefficient β_2 is 0.255, meaning that if the experience increases by one (1), assuming gender, educational background and size of the company is considered constant (constant) then the company's performance decreases by 0.255.

The value of the coefficient β_3 is 1.673, meaning that if the educational background increases by one (1), with the assumption of gender, experience and size of the company is considered constant (constant), then the company's performance decreases by 1.673.

The value of the coefficient β_4 is 4.290, meaning that if the background size of the company increases by one (1), assuming gender, experience and educational background is considered constant (constant), then the company's performance increases by 4.290.

The results of the coefficient of determination test are presented in table 8 below:

Table 8. Coefficient Determination Test Result

R-squared	0.413042
Adjusted R-squared	0.387241

Data processed by authors

The coefficient of determination produced in the Adjusted R-squared test is 0.3872. The results obtained show that the variables that gender, experience, educational background and company size are able to contribute in influencing company performance by 38.72% while the remaining 61.28% are influenced by other variables.

The results of the F test are in table 8 below:

Table 9. F-test Result

F-statistic	16.00915
Prob(F-statistic)	0.000000

Data processed by authors

Based on the table above shows the value of F-statistic of 16.009 and probability of 0.0000 with the error rate used of 0.05. The results obtained show that the probability value generated is 0.0000 < 0.05 then the decision is gender, experience and educational background have a positive and significant effect together on the performance of companies with company size as a control variable in manufacturing companies listed on the Stock Exchange Indonesia in 2014-2018. Thus H_a accepted H_0 rejected.

From table 7 it can be seen that gender has a statistic value of 0.417 with a probability of 0.6772 > 0.05. Because the probability value is large from the significance level of 5%, it shows that the gender variable partially does not have a positive and significant effect on the performance of companies in manufacturing companies listed on the Indonesian Stock Exchange in 2014-20178. Thus H_a minus H_0 is accepted.

From table 7 it can be seen that experience has a statistic value of -3.948 with a probability of 0.0002 < 0.05. Because the probability value is small from the significance level of 5%, it shows that the experience variable has a partial negative and significant effect on the performance of companies in manufacturing companies listed on the Indonesian Stock Exchange in 2014-2018. Thus H_a accepted H_0 rejected.

From table 7 it can be seen that the educational background has a statistic value of -2.614 with a probability of 0.0105 < 0.05. Because the probability value is small from the significance level of 5%, it shows that the educational background variable has a partial negative and significant effect on the performance of companies in manufacturing companies listed on the Indonesian Stock Exchange in 2013-2017. Thus H_a accepted H_0 rejected.

4. Conclusion

After conducting a simple study of 38 manufacturing companies listed on the Indonesian Stock Exchange in 2014-2018, the results of the description of the influence of board diversity on company performance with company size as a control variable, can be concluded as follows:

The gender variable has no positive and significant effect on company performance with company size as a control variable in manufacturing companies listed on the Indonesian Stock Exchange in 2014-2018, where it can be seen that the significant value is 0.6772 < 0.05.

The experience variable has a partial negative and significant effect on company performance with company size as a control variable in manufacturing companies listed on the Indonesian Stock Exchange in 2014-20178, where it can be seen that the significant value is 0.0002 < 0.05. The educational background

variable has a negative and significant effect on the performance of companies with company size as a control variable in manufacturing companies listed on the Indonesian Stock Exchange in 2014-2018, where it can be seen that the significant value is $0.0105 < 0.05$.

The company size variable partially has a positive and significant effect on the company's performance in manufacturing companies listed on the Indonesian Stock Exchange in 2014-2016, where it can be seen that the significant value is $0.0000 < 0.05$.

Based on the results of research that has been done, there are some suggestions that can be considered by several parties:

In order before investing, investors should pay attention to the experience and educational background of the board of directors owned by the company, it is proven that the experience and educational background of the board of directors positive impact on the company's performance, so that companies with experience and educational background of the board of directors. well, also has a high performance company, and the company deserves to be used as a place to invest.

Especially for company management, the results of this research are expected to be considered in managing capital and profits, in order to increase profits, minimize risk and improve the ability to repay debts.

To increase shareholders' trust in the company, the company must be able to show good company performance and deliver relevant and reliable information to investors about the company's development.

For further research to conduct research, it is advisable to take a sample from all public companies in Indonesia, increase the period of research time and change the proxy used in order to obtain better results. As well as further research should be able to develop this research by adding other variables such as corporate governance, financial performance, asset growth and other variables that may affect corporate performance.

Using a sample of companies that are not only in the manufacturing sector, but can be developed by using samples from other groups of companies listed on the Indonesian Stock Exchange.

Further research is expected to extend the period of observation years with different periods or time ranges and use more companies, so that the research results will be much more presentative.

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