JIAI (Jurnal Ilmiah Akuntansi Indonesia) **ISSN (Print) : 2528-6501**
Vol. 5, No. 1, April 2020 **ISSN (Online) : 2620-5432**

DOES WOMEN PARTICIPATION ON BOARDS IS ENOUGH TO IMPROVE THE FIRM PERFORMANCE?

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Abstract: *This research aims to examine the impact of women participation in the boards of director (BOD) on the performance of the firms. Whether the presence of women in BOD could make the performance of the firms become better or worse. Furthermore, the present study also wants to fills the gaps in the extant literature by examining the moderating effect of working experience in the relationship between women participation in BOD and firm performance. This research is a secondary data analysis which is using 280 service companies listed on Indonesia Stock Exchange (IDX) for the year 2014-2017 as its sample. This research use multiple linear regression. The result shows that working experience of the women boards is positively influence the relationship of women participation on boards with the firm performance. This result is expected can make the stakeholder of organization aware of the benefit having more gender diverse boards.*

Keywords : Women BOD, Firm Performance, Working Experience.

1. INTRODUCTION

Globally, men have dominated the top management team (TMT) of the companies (Torchia *et al.*, 2011). The top levels manager positions in the company such as president directors, CEOs, CFOs, and board of directors (BOD) members are mostly seated by men. In fact, there is only a quarter of women seating in senior management position, which means there are three times more men seat on the senior management position of the companies around the world (The Catalyst, 2018).

The under-representation of women in the upper echelon level is believed to be caused by glass ceiling. The term glass ceiling became popular after Wall Street Journal used it as a title of its article in 1986. Glass ceiling is a metaphor that defined as an invisible barrier that keeps minority from rising beyond a certain level of hierarchy. In connection to this topic, it means there

are some difficulties for women to reach the top managerial level position in a company, regardless of their skills and knowledge. For example, there is a stereotype in our society which stated that men are better leaders compared to women (Business Insider, 2018). This stereotype is indirectly limiting or preventing women to become leaders or top managers in a company.

In contrast to the above statement, the current condition has changed. According to the survey conducted by Grant Thornton in International Business Report (IBR), the percentage of business leadership roles held by women in Indonesia had increased significantly from 20% in 2015 to 36% in 2016. It also mentioned that Indonesia ranks sixth for the most women in business leadership, below Russia, Lithuania, Philippines, Estonia and Thailand. This achievement is indicating that currently Indonesia's firms are starting to accept women to participate in their TMT. The percentage of women participation in TMT is predicted will be continuously increase as the gender equality become issue in this modern era. However, as the number of women participations in TMT in Indonesian firms has increased, we do not know about its impact to the firm performances, as the result of the prior study shows an ambigous result (Wu *et al.*, 2017). According to Reguera-Alvarado *et al.* (2017) gender diversity positively influence the financial performance of the company. Meanwhile, Chapple & Humphrey (2014) cannot find an evidence of the relationship between board's gender diversity with the firm performance.

In general, there are many factors that could affect the performance of a company. One of the most important factors is the strategies and decisions made by the BOD of the companies. Their strategies and decisions can influence the performance of the companies. Good strategies and decisions can lead to better firm performance. Conversely, wrong strategies and decisions can put the companies make the performance of the firm become worse.

By including women in the BOD there will be an impact to the performance of the firms because women can give different benefits to the firms as compared to men (Martínugedo and Minguezvera, 2014). Board

diversity, in this case in terms of gender, is often associated with better firm performance because the presence of women on boards can bring different perspective, and experience (Terjesen *et al.*, 2009). This resource can be very beneficial during the process of decision making in order to produce better quality of strategic decisions that eventually will improve the performance of the company.

However, the presence of women in BOD would not significantly influence the performance of the company if they have no adequate working experience. According to upper echelon theory, the manager's individual characteristic such as working experience can influence the organizational outcomes (Hambrick, 2007). Their working experiences play a significant role in the process of analyzing problems that the companies face, so that they could give the best solution to that problem.

If the women BOD members have lack of experiences then they will have lack of knowledge and understanding about their business, eventually they could not give many contributions for the best interest of the company. Moreover, their presence would not make any improvement on the performance of the company. That is why, this research use working experience as one variable that can influence the relationship between women participation in BOD and firm performance.

The importance of this research is to investigate the impact of women participation in BOD to the firm performance. Whether the presence of women in BOD could make the firm performance become better or even worse. Furthermore, the present study also wants to fills the gaps in the extant literature by examining the moderating effect of working experience in the relationship between women participation and firm performance.

2. LITERATURE REVIEW

2.1 Women BOD

The literature review about the impact of the women presence on the TMT seems to be favorable for the firms. According to Smith *et al.* (2006) women participation on TMT can make image of the firm to become better and they also found can improve the customers' behavior. They also can improve the effectiveness of the board

in risk management with respect to research and development investment (Chen *et al.,* 2016). Gender diversity on board is also found to have a positive impact to the corporate social responsibility strengths (Harjoto *et al.*, 2015). They also found can reduce earning managenment (Gavious *et al.*, 2012). In addition, Women senior managers are also found more likely to make the growth rate of the firm become more stable (Bardasi *et al.*, 2011).

2.2 Firm Performance

There are many prior studies attempted to investigate the relation between women participation on boards and the performance or value of a company. However, the results are still ambiguous and contradictory (Wu *et al.*, 2017).

Some studies suggest that women participation in the BOD have positive relationship with the performance of the company. By using 497 non-financial firms in Spain as the samples, Reguera-Alvarado *et al.,* (2017) found that board gender diversity has a positive impact to the financial performance of the firms (measured by TOBIN's Q). Similarly, Farag and Mallin (2016) found a bi-directional relationship between financial performance (measured by ROA and ROE) and the proportion of female directors sitting on the boards in 892 listed companies in China. In addition, Dezső & Ross (2012) also argued that women participation in BOD improve firm performance but only to the extent that a firm's strategy is focused on innovation. The presence of women on corporate boards was also found to have indirect effect on the firm value (Isidro & Sobral, 2015)

On the other hand, some other studies cannot found significant impact of women participation in BOD to the performance of the firm. By using 577 Australian companies, Chapple & Humphrey (2014) were unable to found evidence of an association between board's diversity and firm performance. In addition, Ellwood & Garcia-Lacalle, (2015) were also argue that women representation on BOD does not result in significant differences either in financial return (measured by ROA) or in service quality.

In conclusion, the results of the prior studies are still inconclusive and ambiguous. Some studies suggested

that the presence of women in BOD have a positive impact to the firm performance. It is consistent with the resource dependency theory which suggests that more diverse boardroom will provide more beneficial resources to the firm. This beneficial resources can help the company in order to improve their performance. On the other hand, some studies suggested otherwise. In this case, the researchers viewed that board's gender diversity will only creating an internal conflict on the boards. Because men and women have difference perspective, then it will only creating slack between the boards member. Eventually, the board members cannot optimally synergize and collaborate in order to achieve the comapny's goals. As a result the firm performance is becoming worsen. The difference in the results of the prior studies may occurred because the researchers used different samples and measurements in their research.

2.3 Working Experience

According to Custódio *et al.* (2013) managers with more working experience are paid higher than those with fewer working experience. The working experience is measured using General Ability Index (GAI) which describing how broad is the manager's working experience. Managers who worked for a lot of companies in the different industries and have experience to handle more positions during their carrier are called generalist which means they have more generic skills due to their broad working experience. Conversely, managers who worked for a fewer company on the same type of industries, and have a fewer number of positions are called specialist which means they have specific or limited skills. By using 1,500 firms as the samples, during 1993 until 2007, Custódio *et al.* (2013) argues that generalist managers are paid estimated 19% higher than specialist one. It means that generalist and specialist compensations are different almost one million dollar per year.

2.4 Hypothesis Development

2.4.1 Women participation in BOD and firm performance

There are several factors that could influence the performance of a company. One of the factor that should be taking into account is the strategic

decision made by the top managers. Their decision plays a significant role in determining the performance of the company. A perfectly matched strategic decisions may bring the company into higher performance, conversely wrong strategic decision can put the company at risk.

A heterogeneous composition of the boards, in this case in terms of gender, is often being associated with a better firm performance because women have different characteristics and background as compared to men. According to Bardasi *et al*. (2011) women boards are more risk averse than men, and tend to bring a stable growth rate to the firm. In addition, according to Liu and Li (2010) in Wu *et al.*, (2017) women have different experiences from their working or professional life and private life, and also have different human and social capital as compared to men. They are also known for their ability to do multitasking job. These varieties of skills and thoughts can be beneficial in the process of the decision making so that they are able to produce a higher quality of decisions that eventually will improve the performance of the firm. Based on that statement, the following hypothesis is proposed:

H_1: Women participation on the boards positively influences the performance of the company.

2.4.2 Women participation in BOD and firm performance moderated by working experience

According to upper echelon theory, the performance of a company is depend on the actor, which is the upper echelon or top level mangers (Plöckinger *et al.*, 2016). They are the primary decision makers that their strategic decision will significantly determine the performance of the company itself.

Upper echelon theory also argues that in the process of making a decision, where the situation is very complex, managers tends to simplify the problem so that it can be more acceptable by their minds (Hambrick, 2007). The level of simplification of the problem can be influenced by the manager's individual characteristics such as the manager's working experiences and educational backgrounds. Managers who have more experience and better education tend to

be able to see the problem clearer. This is very important in order to be able solving the company's problem. Because if they are failed to identify what the real problem is, then they cannot select the best alternative to solve that problem.

By having more working experience, women boards will have a better understanding about the business, and accordingly they will be able to create a better strategic decision that is needed to solve their business problems. Moreover, this strategic decision can improve the performance of the company. In the other hand, if their working experience is not good enough, they could not give many contributions for the company, and accordingly their presence would not make any significant changes in the performance of the company. Hence, working experience of the women boards can influence the relationship between women participation in BOD and firm performance. Therefore, the following hypothesis is proposed.

H_2: Working experience positively moderates the relationship between women participation on boards and the firm performance.

2.5 Research Framework

Based on the hypotheses above we can draw the research framework as the figure below. As it can be seen form the figure, the first hypothesis draws the direct reationship between the dependence and independence variable which in this case are women boards ratio and the firm performance. Meanwhile, the second hypothesis, assessing the effect of moderating variable which is working experience into the relationship between women boards ratio and the firm performance.

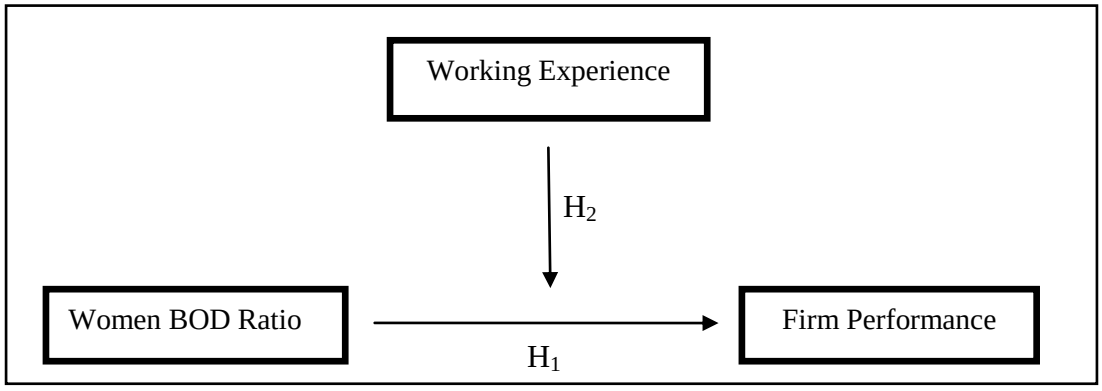

Figure 1.1 Research Framework

3. RESEARCH METHOD

3.1 Sampling Design

A quantitative research is a research that uses numerical data to prove or disapprove a notion or hypothesis. Quantitative research designs are consist of four types: correlational, descriptive, experimental, and quasi-experimental. This research is a quantitative research since it focuses to investigate the correlation between women participation in BOD and firm performance. In addition, this research also uses many numerical representations such as percentage of women participation in BOD, financial performance of the firms, and working experience.

The data that is used for this research is secondary data which are annual reports and financial statements. They provide the necessary information to conduct this research such as information about the firm performance, number of women participated in BOD and their working experience. To ensure the reliability of the data, the annual reports and financial statement will be taken from Indonesia Stock Exchange (IDX) database which is free-online-access. IDX database is regarded as an authoritative data source of the listed firms in Indonesia, and it reports the exchange data of the Indonesian securities market and relevant financial information.

There are a lot of companies listed in Indonesia Stock Exchange (IDX), because of that there is a need to limiting the companies to be sampled. The criteria of the companies that is taken to be sample is as follow:

1. Service companies listed on IDX from 2014 -2017 respectively and has published its audited annual reports and financial statements. According to Forbes (2016), women who work as senior managers are mostly found in the field of hospitality, education, socio services and health care, which are all included as service companies. That is why, this study will only use service companies listed in IDX as the samples. Most of the prior studies examined the relationship of women participation in BOD with the firm performance in the developed countries such as U.S and European countries. There are few studies discussed on the topic in developing countries such as in Indonesia

context so far. The present study wants to find a new evidence of the relationship between women participation on BOD to the firm performance in Indonesia context. In order to capture the most recent condition, the annual reports and financial statement that is taken is only from the period 2014-2017. The number of service companies listed in IDX is 255 companies. It comprises 45% of all the listed companies in IDX.

2. The annual reports and financial statements must be complete and provide all the necessary data for this research.

   To ensure the validity of the data, the annual reports and financial statements of the company which have incomplete information about the necessary data such as bio data of the boards members will be excluded.

3. Financial statements must be stated in Indonesian Rupiah (IDR) currency.

   If the financial statements use foreign currencies then they will be excluded from the sample. Because when they are converted into Indonesian rupiah, the result may be distorted by the different translation method that each company may use.

4. Non-financial institution.

   Financial institutions are excluded from the sample because they have different regulations that is required by the government. Financial institutions have a more rigid regulation compare to other industries.

3.2 Operational Definition of Variables

3.2.1 Dependent Variable

The dependent variable of this research is firm performance. The performance of a firm can be measured in several ways, but basically it is divided into two categories: financially and non-financially. The example of non-financial measurement of firm performance is products or services quality, customer's satisfaction, etc. But since it is difficult to collect the data that is needed for measuring non-financial firm performance, so this research will only focus on financial firm performance. To measure the firm performance of the companies, this research uses Tobin's Q. It is defined as

of the total of the market value of equity added with debt to total asset ratio (Tobin, 1969). Tobin's Q is a future-oriented measurement of firm performance that captures the value of a firm as a whole Tobin's Q has been extensively used in economics as a proxy for firm value (e.g., Greene and James, 2013; Carter *et al*., 2010; Adams and Ferreira, 2009; Campbell and Mı´nguez-Vera, 2008). Tobin's Q is formulated as follow:

$$\text{Tobin's Q} = \frac{\text{Market Value of Equity}}{\text{Book Vakue of Assets}}$$

3.2.2 Independent Variable

The independent variable of this research is women BOD ratio. It is defined as the percentage of women who seats on the boards. It is measured by using women participation ratio (Wpro) which is calculated as the number of women in BOD divided by total number of BOD members. This measurement is oftenly used to measure the women BOD ratio by the most recent studies such as Wu *et al*. (2016) and Carrasco *et al*. (2015). Wpro is formulated as follows:

$$\text{Wpro} = \frac{\text{Number of Women BOD}}{\text{Total member of BOD}} \text{ x } 100\%$$

3.2.3 Moderating Variable

The moderating variable of this research is working experience. Working experience is measured by General Ability Index (GAI) which is created by Custodio *et al*. (2013). Originally this measurement is used to measuring the CEO's human capital. However in this study, GAI is modified to measuring the BOD's human capital.

GAI is measured by five components, but only four components that is used in this research since there is no available data for the last components. The definition of each components as follow:

1. Number of Positions

   It measures how many job positions that BOD performed during their career. BOD who ever worked in many different job positions will have more skills and experience that they learned during their career.
2. Number of Firms

   It measures how many firms where a BOD has worked. A BOD who worked for many firms is likely to have broader experience.

3. Number of Industries

   It measures how many numbers of industry based on four-digit SIC level where a BOD worked. BOD who has ever worked in many different industries will get better understanding of many types of organization they ever worked. Conversely, BOD who worked for the same industry tend to have fewer knowledge.

4. BOD Experience Dummy

   It is a dummy variable which equals one if BOD held the same position at another firm, other than that is equals to zero.

   After all of the data is gathered, it will be run using the Principles Component Analysis (PCA). It is used to classifying the components which have relation with other components. This is needed to be done to reduce the multicollinearity problem.

3.3 Statistical Analysis

The observation unit in this study is service companies which listed in Indonesia Stock Exchange for the period 2014-2017. This study uses multiple linear regression with the research method is Panel Least Square (PLS).

3.4 Classical Assumption Test

There are several tests that must be passed to ensure that this study is free from distraction of normality, multicollinerity, autocorrelation and heteroscedasticity.

3.4.1 Normality Test

Normality test is used to know whether the data is equally distributed or not. Kolmogorov-Smirnov test is used to test the normality of the data in this research. It is based on the maximum difference between the expected total normal distribution and the observed distribution. Normal distributed data tend to has smaller maximum difference between the observed distribution and the expected total normal distribution. If the normality value is greater than 5%, it implies that the data is normally distributed.

3.4.2 Multicollinearity Test

Multicollinearity test is used to examine whether the independent variables is correlated with the other independent variables in the regression

model or not. The good regression model has no correlation between the independent variables. High collinearity between independent variables will disturb the correlation between the dependent and independent variable. Variance Inflation Factor (VIF) is used to test the multicollinearity of the data in this research. A data that is free from multicollinerity problem has a VIF value less than 10 and the tolerance value more than 0.1.

3.4.3 Heteroscedasticity

To examine whether the regression model has a constant residual variance or not, heteroscedasticity test must be done. Scatterplot is used to examine whether the model has problem with heteroscedasticty or not. A model could be said free from heterscedasticity problem if the data are spreading arround 0 in Y-axis and not forming any patterns.

3.4.4 Autocorrelation

Autocorrelation is used to test whether there is any correlation among variables in one period (t) with variables in the prior period (t-1). It is required to be done to test whether the error variances are independent or have a correlation with others. Since this study uses time series data, the autocorrelation test must be done. This study will use Durbin – Watson value to test the autocorrelation. Data that has no autocorelation problem has a Durbin-Watson value which is higher than dU but smaller than 4 – dU. The value of dU itself is taken from the Durbin Watson's table with n equals to number of sample and k refers to number of variables.

3.5 Regression Analysis

Regression analysis method for least square as follows:

3.5.1 Determination Analysis (R2)

Determination analysis or R-squared shows the ability of independent variable (women participation in BOD) in explaining the dependent variable (firm performance). In the other words, this test is to measure how tight the regression model fit with the regression line that can explain the independent variable. The bigger the determination value of a model, the better the independent variable describing the dependent variable. If the R2 value implies the

amount of 1, the regression could be said better. If the amount is lower, it could be said that independent variable has a lower ability to describe the dependent variable.

3.5.2 Simultaneous Test (F-Test)

F test is needed to be done to determine whether independent variables could simultaneously influence the dependent variable or not. If the value of probabilities is less than 0.05, the model could be said significant. It implies that independent variable influences the dependent variables simultaneously.

3.5.3 Partial Test (t-test)

The aim of t-test is to measure how strong the relation between each of the independent variables (women participation in BOD and working experience) and dependent variable (firm performance). If the value of probabilities is less than 0.05, it could be said that there is a relation between independent variable and dependent variable partially, or in other words it implies that the test is considered significant.

3.5.4 Research Model

The objective of this research is to examine the influence of working experience as the moderating variable between the relationship of women participation in BOD and firm performance. Thus, this following research model is designed as follow:

$$Fper_{it} = \beta_0 + \beta_1 Wpro_{it} + + \beta_2 Wexp_{it} + (\beta_2 Wpro_{it} \times Wexp_{it}) + \varepsilon_{it}$$

Where:

FPer : Firm performance

Wpro : Women BOD proportion

Wexp : Working experience of women BOD

4. DATA ANALYSIS AND INTERPRETATION OF RESULT

4.1 Sample Characteristics

The sample used in this research is service companies. Since, according to the Forbes, women who work as senior managers are mostly found in this industry. The data that are needed for this research are annual reports and financial statements that are taken from IDX's website. However, since IDX only provides the data from the period 2016-2018. Alternatively, the rest of the

data are taken directly from the companies' websites.

Since this research is using purposive sampling, so there are several characteristics that needs to be fulfilled. First, it must be a published annual report and audited financial statement for the period 2014-2017. Second, it must provide all the necessary data such as identity of the board's members especially their work experiences. Next, it must report the financial statements using rupiah as the currency. And last, although financial institution is also considered as service company, but it will be excluded from the samples because it has different and more rigid regulation that is required by the government. All of these criteria must be fulfilled in order to get valid and reliable data.

Table 4.1 Sample Selection

No.	Criteria of Sample	Number of Companies
1.	Service companies listed in IDX	1,360
2.	Service companies which do not publish annual reports sequentially during 2014-2017.	648
3.	Service companies which do not provide complete information about the BOD profile	12
4.	Service companies which do not use Rupiah as the currency of their financial statements	32
5.	Financial institutions	388
	Total Sample	280

In total there are 280 company-years which fulfilled the criteria as mentioned before. Details of the sample selection is provided on the above table.

4.2 Descriptive Statistic

Table 4.2 Descriptive Statistic

	N	Min.	Max.	Mean	Std. Deviation
Firm Performance	280	.21	7.84	1.4608	1.12229
Women Proportion	280	.00	.67	.1447	.17196
Working Experience	280	-.81	2.74	.01154	1.00245
Moderator	280	-.08	1.39	.1284	.24450

Based on table 4.2, firm performance has a minimum value of 0.21 and the maximum value of 7.84. It also has mean of 1.46 which is higher than its standard deviation. It implies that the data is free from bias.

Meanwhile, women BOD proportion has a minimum value of 0 and maximum value of 0.67. It has the average of 0.14 which indicating how small women representation in the board member. This number is also lower than its standard deviation. It is because in fact, from total 280 samples, half of them have no women BOD at all. So there are too many samples which have zero women on boards. It is also affecting the moderating variable which is the women BOD's working experience, because if the company has zero women on boards, the moderating variable will also equal to zero. As a result, its mean also lower than its standard deviation. It is indicating for both independent variables, the data is not normally distributed.

4.3 Principle Components Analysis

After all of the components of GAI is gathered, they will be running using Principle Components Analysis (PCA). It is a statistical technique to transforming a set of variables which have the same characteristics into a more consice data set which can represent the existing vairations (Owen, 2014). This is need to be done in order to reduce the multicollinearity problem. The result of the analysis is as follow.

4.3.1 KMO & Bartlett's the Sphericity

Table 4.3 KMO & Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.766
Bartlett's Test of Sphericity	Approx. Chi-Square	1346.790
	Df	6
	Sig.	.000

From the above table, KMO measure of sampling adequacy shows a value of 0.766 which is higher than 0.5 and the Bartlett's test of sphericity shows significant value of 0.000 which is lower than 0.5. It implies that sample is adequate and can be process further.

4.3.2 Anti Image

Table 4.4 Anti-image Matrices

		X1	X2	X3	X4
Anti-image Correlation	X1	.970[a]	-.136	-.032	-.152
	X2	-.136	670[a]	-.951	-.252
	X3	-.032	-.951	.681[a]	.098
	X4	-.152	-.252	.098	.933[a]

The model can be said valid when the anti-image correlation values are greater than 0.5. Based on the table 4.4, it shows that the numbers in the diagonal line (which has signed a) are greater than 0.5. It indicates that the data is valid and can continue to the next step.

4.3.3 Total Variance

Table 4.5 Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings	
	Total	% of Variance	Cumulative %	Total	% of Variance
1	3.222	80.553	80.553	3.222	80.553
2	.412	10.295	90.847		
3	.348	8.705	99.553		
4	.018	.447	100.000		

A component could be used if it has total eigen value of more than 1. The above table shows that only the first component has total initial eigenvalues which is more than 1. Meanwhile, the other components show value of less than 1. It implies that only the first component which can be used to explain the total variants. Those components have percentage of variance equals to 80.553% which means that the component could describe 80.553% of all the variables.

4.4 Classical Assumption Test

4.4.1 Normality Test

Kolmogorov test used to know whether the data is normally distributed or not. The data could be said normal, if it has p-value more than 0.05. The result of the test shows p-value amounted 0.000 which is lower than 0.05. It indicates that the data is not equally distributed.

Since the previous data not passed the normality test, then the data is being transformed. Outliers are also excluded from the model in order to make it become normal. In total, there are 177 data which are deleted from the samples. The significant value shows number of 0.092 which is more than 0.05. It means the data is normally distributed and has passed the normality test.

P-P Plot can also be used to test normality. If the data are spread following the diagonal line, it implies that the data are normally distributed. The figure above shown that the data are spreading along the diagonal line, which indicates that the data are normal.

4.4.2 Multicollinearity Test

To examines whether the independent variable has correlation with the other independent variables in the regression model, multicollinearity test must be done. A data could be said free from multicollinearity problem if it has VIF value smaller than 10 and has tolerance value greater than 0.1. Based on the table above, all variables show VIF values of both variables are less than 10 and the tolerance values are more than 0.1, it means the model is free from multicollinearity problem.

4.4.3 Heteroscedasticity Test

Heteroscedasticity is tested by using scatterplot. If the data are spreading not far from 0 in Y-axis without forming any patterns, it means the data are free from heteroscedasticity problem. From the figure below, it can be seen that the data are spreading around 0 in Y-axis and not forming any patterns. It indicates that the model is free heteroscedasticity problem.

4.4.4 Autocorrelation

A model can be said free from autocorrelation problem if it has Durbin-Watson value between dU and 4 – dU. From the table above, it is shown that the Durbin-Watson value is equals to 1.850. dU value is taken from Durbin-Watson's table, with α equals to 0.05, number of sample equals to 103

and k equals to 3. It is found out that dU has a value of 1.7392, which means 4 – dU is equal to 2.2608. Hence, the Durbin-Watson value which is 1.850 is higher than dU but still lower than 4 – dU. It can be concluded that the model is free from autocorrelation problem.

4.5 Hypotheses Result

4.5.1 Determination Analysis (R Square)

Table 4.6 Determination Analysis Result

R Squared	Adjusted R Square
.890673	.820140

Determination analysis measures how strong the ability of the independent variables can explain the dependent variable. The closer the p-value to 1, the stronger the relationship between the independent and dependent variables. From the table above, the value of R squared is equals to 0.890673 which implies that the independent variables are able to explain the dependent variable as much as 89.06%. Meanwhile, the rest which is 10.94% is explained by other variables outside of this research.

However, to analyze the result of determination test, it is better to use the adjusted R square. The adjusted R square has a value of 0.820140 which implies that the relation of women participation on BOD and their working experiences toward the performance of the firm is only 82.01%. The rest which is 17.99% is going to be explained by other variables out of this study. Based on the result, it can be conclude that the relation between women participation on BOD and their working experience towards firm performance is strong.

4.5.2 Simultaneous Test (F-Test)

Table 5.2 F-Test Result

F-statistics	Prob(F-statistic)
12.62768	.00000

Simultaneous test is examined to know whether there is any influence of the independent variables toward the dependent variable simultaneously. A good research model has a p-value amounted less than 0.05. The result of the simultaneous test on the table above shown a p-value of 0.00 which is lower than 0.05. It can be said that women participation on BOD and their working experiences are simultaneously influence performance of the firm.

4.5.3 Partial Test (T-Test)

T-test is used to know whether there is any relation between each of the independent variables (women participation in BOD and working experience) towards the dependent variable (firm performance). First, we need to determine which test is most suitable for this model, whether it is going to use common, fixed or random test.

Table 4.7 Redundant Fixed Effect – Chow Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	12.415888	(37.62)	0.0000
Cross-section Chi-square	219.324066	37	0.0000

Based on the result of Chow test above, the probability value is amounted 0.00 which means that the model more suitable to use fixed effect rather than common effect. However, we still need to see the result of Hausman test to determine whether we will use fixed effect or random effect.

Table 4.8 Correlated Random Effects – Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	5.768310	3	0.1234

The result of the Hausman test shows a probabilty value of 0.1234 which is higher than 0.05. It means that this model is prefer to use random effect rather than fixed effect. Langrage Multiplier test needs to be done to ensure whether random effect is the most suitable for this model.

Table 4.9 Omitted Random Effects – Lagrange Multiplier Test

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	56.28122	2.34E-06	56.28122
	(0.0000)	(0.9988)	(0.0000)
Honda	7.502081	-0.001531	5.303690
	(0.0000)	(0.5006)	(0.0000)
King-Wu	7.502081	-0.001531	2.164199
	(0.0000)	(0.5006)	(0.0152)
Standardized Honda	8.104309	0.373823	1.551754
	(0.0000)	(0.3543)	(0.0604)
Standardized King-Wu	8.104309	0.373823	-0.207871
	(0.0000)	(0.3543)	(0.5823)
Gourieroux, et al.*	--	--	56.28122
			(0.0000)

The result of Lagrange Multiplier test above confirms that random effect is most suitable for this model. It is shown by the Breusch-Pagan p-value which is amounted 0.00 that is lower than 0.05. Thus, this model will use random effect result for the T-test.

Table 4.10 Random Effect test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	1.317365	0.850776	1.548427	0.1266
Women Proportion	1.065309	0.719549	1.480525	0.0719*
Working Experience	-0.244734	0.183476	-1.333872	0.0936*
Moderating	0.555957	0.412522	1.347703	0.0914*

* implies significant value of 10%

Based on random effect result, women participation on BOD has a p-value equals to 0.1438. However since it is using two tail, so the number must be divided by two. As a result, the p-value equals to 0.0719 which is lower than with significance level of 0.10. It implies that there is a relation between women participation on BOD with the firm performance partially. Hence, the first hypothesis is supported.

The moderating variable has a p-value of 0.0914, after the number is divided by two. It implies that working experience moderates the relationship between women participation on BOD

and firm performance. It could be concluded that the second hypothesis is also supported.

Fper = 1.317 + 1.065 Wpro – 0.244 Wexp + 0.556 Wpro * Wexp

Based on the table 5.5 the research model above is constructed. The constant value amounted 1.317 implies that if all the independent variables were ignored, the firm performance will be equals to 1.317.

4.6 Interpretation Analysis

4.6.1 The influence of women participation on BOD towards firm performance

Women participation on BOD has a positive beta coefficient amounted to 1.065 which implies that every increase in women participation on BOD amounted to 1 the performance of the firm will also increase for 1.065. This result is supporting the first hypothesis of this research which posits that the higher women seating on the boards will positively influences the firm performance.

This result is contradictory with arguments from Ellwood & Garcia-Lacalle (2015) who argued that the presence of women boards does not result in significant differences either in financial return or service quality. However, this result is in line with resource dependence theory which suggest that the more diverse the boards, the more resources that the companys own. This resources can give an additional benefit for the firm in order to improve the decision making process. As a result the boards can make a better strategic decision that can lead to better firm performance. Therefore it can be concluded that women participation on boards positively influence the firm performance.

4.6.2 The influence of working experience towards the relationship of women participation on BOD to the firm performance

Working experience as the moderating variable, has an influence towards the relationship of women participation on boards with firm performance. The positive beta coefficient equals to 0.556 implies a positive relationship. It can be mentioned that working experience as the moderating variable, has an influence towards the relationship of

women participation on boards with firm performance. The positive beta coefficient equals to 0.556 implies a positive relationship. Thus, the second hypothesis which posits that working experience is positively moderates the relationship of women participation on boards and the firm performance, is also supported.

This argument is supported by upper echelon theory which mentioned that the performance of firms is depend on their top managers' personal traits, including the board's working experience. By having more experience, women boards are able to give more contribution to the firm because they have more knowledge and skill. Eventually it can lead to better firm performance. Conversely, without adequate working experience, women boards are unable to give many contributions to the firm, as a result their presence will not make any changes to the firm performance. Thus, it can be concluded that working experience of the women BOD moderates the relationship of women participation on boards and the firm performance.

5. CONCLUSION AND RECOMMENDATION

5.1 Conclusion

The result of this research reveals that the presence of women on the boards has an influence over the performance of the firms. In fact, working experience of women boards is positively moderates this relationship, which means the more working experience that women boards have, the more significant the relationship between women BOD and firm performance will be. It can be concluded that the representation of women BOD is enough to improve the firm performance. However, this relationship is stronger when it is moderated by working experience.

5.2 Limitation and Recommendation

There are some limitations of this study that requires further research. This research only examines the effect of boards' gender diversity to the firm performance as measured by the quantitative measurement. Future research may extend the literature by examining the influence of boards' gender diversity into the other qualitative performance of companies as

mentioned by The Balancescorecard such as to customer loyalty, effectiveness and efficiency of the companies' operational, and other qualitative measurements.

This research also only examines the effect of working experience of the women boards, and it is only one aspect of many other human capital. Future research may examine other aspect of human capital into the relationship of boards' diversity and firm performance.

5.3 Implication of the Study

From the theoretical viewpoint, this paper contributes to the existing literature on board's gender diversity and the performance of the firm. To the best of the author's knowledge, this is the first study which examines the moderating effect of working experience to the relationship between women participation on the boards and the firm performance.

Meanwhile, from the practical perspective, this paper aims to encourage stakeholders of the company to realize the importance of having more diverse boards, especially in this topic is in terms of the gender. Because by having more diverse boards, the firm would get benefit from the economic result. For the government and the policy makers, this paper wants to promote gender equality on the senior managements as according to The Catalyst, in 2018, only 1 out of 4 senior managers position held by women. Some of the European countries already started to make a regulation about gender quota in order to solve this issue. Their companies are obligated to have at least some proportion of women seating on their boards. Eventually, it will help to solve the issue of women underrepresentation on the senior managements and promote gender equality.

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