

International Congress on Interdisciplinary Business and Social Science 2012

(ICIBSoS 2012)

## Gender Diversity in the Boardroom and Firm Performance of Malaysian Public Listed Companies.

Julizaerma M.K.<sup>a</sup>, Zulkarnain Mohamad Sorib<sup>b</sup>

<sup>a</sup>Lecturer, Faculty of Administrative Science and Policy Studies, Universiti Teknologi MARA, Malaysia.

<sup>b</sup>Associate Professor, Dr., Faculty of Economics, Universiti Putra Malaysia, MALAYSIA

---

### Abstract

The lack of women representation on boards become an important issue recently that need to be addressed due to the benefits driven from gender diversity in the boardrooms. This study intends to examine the association between gender diversity in the board of directors and firm performance. The discovery on content analysis is used to collect the data. The population of the study comprises of the companies listed in Bursa Malaysia for both Main and ACE market for the year 2008 and 2009. Quota and simple random sampling techniques were used in order to get an adequate representation of women. The data is analyzed using ordinary least square regression method to determine the association of the variables. The finding indicates that a positive association exists between gender diversity and firm performance. This suggests that women directorship may influence firm performance.

© 2012 The Authors. Published by Elsevier Ltd. Open access under [CC BY-NC-ND license](https://creativecommons.org/licenses/by-nc-nd/4.0/).  
Selection and peer-review under responsibility of JIBES University, Jakarta

*Keywords: Directors; Firm Performance; Gender Diversity; Public Listed Companies*

---

### 1. Introduction

Nowadays, gender diversity has fast becoming an emerging issue in the corporate world. Malaysia's position in encouraging gender diversity in Malaysian Public Listed Companies (PLCs) seems to be lacking prior to 2011. The percentage of women holding the position as the board of directors is decreasing from year 2005 until 2007 at the rate of 10.2 percent, 7.6 percent and 5.3 percent respectively. However, this percentage is slightly increased in 2008 to 7.41 percent (<http://www.kpwkm.gov.my>). The lack of participation of Malaysian women in key decision-making areas was revealed in the World Economic Forum's Global Gender Gap Index 2009, where Malaysia dropped five places to 101 from out

of 115 countries surveyed compared with the year before (Hunt, 2010). This is supported by a study done by Soares, et. al., (2010) that showed Malaysia was in the 9<sup>th</sup> rank of women on boards among Asia-Pacific Country.

An issue may arise on the reasons that lead to the lack of women involvement in the board of directors. One of the reasons is due to the cultural and social attitudes towards what job is suitable for women and men. Women might be stereotyped in some industry. The ability of women to manage the organization is questioned due to the perception of their characteristics that are believed to be emotional, meticulous and fussy. Even, the glass ceiling factor is said to be one of the concern of woman underrepresentation at decision making level. Furthermore, some argued that women may recede from competition for promotions (Niederle and Vesterlund, 2007) or choose to stay away from the stress and work-life imbalance associated with occupying the executive office suite (Matsa and Miller, 2011) that lead to the problem in supply. Another reason lies on the limitation of women expertise in a particular field of business that consequently limit women's opportunity to move the ladder. Therefore, this study is conducted to examine the association of gender diversity and firm performance of Malaysian PLCs and address the gaps as compared to the previous study.

## **2. Literature Review**

Gender diversity can be seen as the process of exploiting diverse characteristics and skills in a man and a woman that could bring benefits to the firm. According to Dutta and Bose (2006), the definition of gender diversity in the boardroom refers to the presence of women as the board of directors which is an important aspect of board diversity. Gender diversity could bring board functioning that eventually could influence firm performance. Carter, Simskins and Simpson (2003) suggest that greater diversity may increase the independence of the board as women have more tendencies to ask questions that would not be asked by male directors. Nonetheless, there is an argument that gender diversity could reduce firm performance as a result of conflicts of different opinions.

Several studies have been conducted to provide insight on gender diversity in boards of directors and its relation on company performance. However, it can be said that the results obtained are varied. Carter, Simskins and Simpson (2007) found that gender diversity has positive effects on financial performance primarily through audit function and firm financial performance. Erhardt, Werbel and Shrader (2003) discovered that the board of directors' diversity was positively associated with both ROA and ROI. Furthermore, research by Catalyst (2008) showed that on average, Fortune 500 companies with more women directors had significantly performed higher measures of financial performance than those with the least with 53 percent higher return on equity, 42 percent higher return on sales, 66 percent higher return on invested capital. Moreover, Adams and Ferreira (2009) found a significant positive relation between gender diversity and return on assets, which is consistent with the univariate-test result that higher gender diversity in top management is positively associated with higher levels of firm performance. Nevertheless, the ROA is positively correlated when the company possesses weak corporate governance whereas the negative correlation occurs when the company has good corporate governance. This depicts that positive result could be affected by corporate governance mechanism. This study is supported by research done by Johansen (2008), which indicated companies with high women board representation have an average ROA of 8.2 percent while companies with lower women participation, actually lies within companies that have weak corporate governance.

In contrast, the results gained by Wang and Clift (2009) found that there is no strong relationship between gender diversity on the board and financial performance and they assumed it is due to very few female directors in the sample. Matsa and Miller (2011) found that women may have specific skills that are more valuable in some environments, such as the marketing of packaged consumer goods. This means that there is a lack of talented woman in certain fields as found by Jurkus, Park and Woodard (2008) in their study where the positive effect of gender diversity is significant only for women-exclusive work

environment. The only study conducted in Malaysia had covered the effect of board size, firm size and firm age on return on asset (ROA) and return on equity (ROE) but found insignificant effect. Even, the result on regression using cross-sectional data is also inconsistent to prove the relevance of diversity among the board members with regards to financial performance (Maran and Indraah, 2009). On the other hand, this result is challenged by the study on PLCs of five ASEAN countries namely Malaysia, Singapore, Indonesia, Thailand, Philippines and together with Hong Kong, which discovers that the company that involved women in the board of directors had better returns on equity (ROE) or stock prices versus their respective market indices (Muhiudeen, 2010). This proves the advantage of having gender diversity in Asia boards but there is a possibility that the result might vary for Malaysia if the proportion is calculated by country. Overall, these empirical results give opportunity for performing this study by using ROA as a measurement to fulfil the gap in examining the association of gender diversity and Malaysian firm's financial performance.

### 3. Hypothesis Development

This study is conducted to test for any association between gender diversity in the boardroom and firm's financial performance. Women seemed to give positive and significant effect on firm performance due to various factors. A study of Singh, Terjesen and Vinnicombe (2008) found that new women directors are more likely to bring international diversity to the board and possessed MBA degree. This quality of attributes will lead to better performance when it is combined with women characteristics such as communication and listening skills. This permits them to perform better than men on group problem solving and decision making that requires discussion and consensus (Robinson and Dechant, 1997 and Dallas, 2002). As discussed in the literature section, women representation in the boardroom could be fully exploited when there is more than one woman in the particular board. This perhaps could lead to board effectiveness that eventually results in high performance of a company.

The performance measurement used in this study is Return on Assets (ROA), an accounting-based performance measure. ROA is widely used as financial indicator and, it is believed to give positive relationship with gender diversity in the boards as reported by Erhardt, Webel and Shrader, (2003), Adams and Ferreira, (2009) and Catalyst, (2008). Nonetheless, there are still some studies that find negative or no relation between gender diversity and performance (Shrader, Blackburn and Iles, 1997 and Maran and Indraah, 2009). The inconsistent results are caused by certain factors such as different methodology, small sample size, short term observation, different control variables as well as failure to inspect whether board diversity is endogenously related to performance (Wang and Clift, 2009). Study in Malaysia fails to find any significant effect because homogeneous characteristics may be violated due to varied industries in the sample as well as the assumption on curvilinear relationship (Maran and Indraah, 2009). Thus, another study that examines ROA performance measurement might be useful to further explain this issue.

Based on the previous argument, the study proposes the following hypothesis to be tested:

*Hypothesis: ROA is positively associated with gender diversity in the board of directors.*

### 4. Methodology

This study is adopting quantitative research where the discovery by analysis of secondary sources is used. Based on the objective of the study that aims to examine the association of gender diversity and firm performance, it is more appropriate to select the population from companies listed in both Main and ACE Market of Bursa Malaysia from year 2008 until 2009. Then, content analysis is performed based on the data obtained from the annual report of the companies. In addition, financial database from Capital IQ is used to generate crucial information needed in measuring dependent variables with regards to financial performance of the companies. At the same time, database from Companies Commission of Malaysia is

accessed to verify the incorporation date of companies. Similar to most prior studies, this study will also exclude information from financial institution and banking industry. This is mostly due to the fact that the terms of ownership and the financial policies are subject to a higher degree of regulations and secondly due to the different accounting methodologies used in the financial statement.

Quota sampling is used in order to ensure that companies with women directors are included in the sample. A predetermined proportion of the sample is then applied in which 55 percent of the sample must have at least one woman represented in the board of directors. The sample is selected from comparable companies in the past two years. This technique is chosen to ensure that the population is adequately represented in the sample. Simple random sampling is used together to determine the sample. Sample selection is made based on Krejcie and Morgan (1970) table. The population size is 954 listed companies as at 17 March 2011 in which 840 companies are listed in Main Market and 114 listed in Ace Market, the sample size chosen is 274. However, this sample is extended to 280 for the purpose of ensuring sufficient sample are collected to make up for missing data. This figure uses 95 percent confidence level and the confidence interval or margin of error of 5 as mostly used by researchers.

#### 4.1 Modelling the variables

The study is conducted for the purpose of empirical analysis and classified according to the purpose (Robson, 2002). This study uses explanatory study in order to explain and discover the relationships between variables. An explanatory study sets out to explain and account for descriptive information (Gray, 2009). At this point, the study employs several variables as dependent, independent and control variables which are similar variables used in prior studies. These variables have been tested in previous studies and assumed to be constant when conducting the test as they have the possibility to affect the ROA. The measurement on each variable used is as follows:

Table 1: Measurement of Variables		
Variables	Types of Variables	Measurement Scale
Percentage of Women Directors	Independent variables	Number of women directors / Number of directors sitting on the board
ROA	Dependent variable	EBIT/Total assets
Number of Board Meetings	Dependent variable	Total number of board meeting held within the financial year.
Board Size	Control variable	Number of directors sitting on the board
Firm Size	Control variable	Natural logarithm of total assets of the firm
Firm Age	Control variable	Number of years of business operation

For the purpose of this study, the OLS-regression is constructed for the variables tested. The test will ensure the problem of multicollinearity is conducted first to ensure that the assumptions underlying regression analysis are met. If the residuals have constant variance, OLS estimator has minimum variance of all unbiased estimators. Moreover, if the errors are normally distributed, hypothesis testing using *F* tests will be conducted. Thus, in this study all the regression results are reported using *f-statistics* and the relation is determined using coefficients. The regression model is developed to test the relationship between gender diversity and performance as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \zeta_i$$

$$ROA = \alpha + \beta PWOMEN + \beta BSIZE + \beta FSIZE + \beta FAGE + \beta BMEETING + \zeta_i$$

## 5. Result and Findings

### 5.1 Descriptive Analysis

Generally, overall distributions are similar to previous studies. For instance, the mean of women proportion in board is slightly lower than in the study by Maran and Indraah (2009) where they obtained a mean of 13.5 percent using a sample of top 100 companies in year 2000 until 2006 as compared to 10.6 percent in this study. This average percentage is low but it is higher than the calculated percentage of women representation in boards of Malaysian firms in 2008 which is 7.41 percent (<http://www.kpwkm.gov.my>). Moreover, the mean of the total number of board of directors at 7.63 percent is higher than in the study done by Nielsen and Huse (2010) which they only managed to attain board size of 6.07 members. The mean of total assets in this study is 2058.22 million that constitute the average size of firms in the sample. Furthermore, these companies have an average of 22.58 years of operating the business in their respective industry.

Table 2  
Descriptive Statistics of Variables used in the Study

<i>Variables</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>
<i>Return on Assets</i>	-0.2683	0.4726	.0341
<i>Percentage of Women Directors</i>	0.0000	.6667	.1062
<i>Total No. of Board of Directors</i>	3	15	7.63
<i>Total Assets of the Firm (in RM millions)</i>	15.15	71363.00	2058.22
<i>No. of Years of Business Operation</i>	1	126	22.58
<i>Number of Board Meeting held in a year</i>	1	16	5.26

### 5.2 Correlation Analysis

Table 3 depicts the correlation between each variable tested in this study and the control variables when it is analyzed using bivariate analysis. In general, some of the variables are highly correlated with each other and possess high significance effect when  $p < 0.01$  at 99 percent significance level and  $p < 0.05$  at 95 percent significance level. The significance relationship between some predictor variables highlights the importance of checking for potential multicollinearity problem in the regression as studied by Van der Walt, Ingley, Shergill and Townsend (2003). Nonetheless, some variables documented negative correlation but have a significant effect.

In general, the result of this study is quite consistent with previous studies where the control variables such as board size and firm size are positively correlated and have high significant impact at 1 percent which is consistent with research documented by Lehn, Patro and Zhao (2004). Besides, board meeting is negatively correlated with performance but is significant at 5 percent level. This is similar with the study done by Lishenga (2010) where it is reported that board meeting is negative but lagged relationship with financial performance. Moreover, women representation also have negative and insignificant relations with the variables except board meeting which signifies that it has to be tested in the regression due to its weak relations that could prevent the multicollinearity issue.

Table 3  
Correlation Analysis

### 5.3 Regression Analysis

<b>ROA</b>	1	-0.015	0.094*	0.158**	0.042	-0.092*
<b>PWOMEN</b>		1	-0.029	-0.080	-0.013	0.048
<b>BSIZE</b>			1	0.389**	0.073	0.138**
<b>FSIZE</b>				1	0.343**	0.345**
<b>FAGE</b>					1	0.055
<b>BMEET</b>						1

\*. Correlation is significant at the 0.05 level (two-tailed).

\*\*. Correlation is significant at the 0.01 level (two-tailed).

ROA = Return on Assets

PWOMEN = Percentage of Women Directors

BSIZE = Total No. of Board of Directors

FSIZE = Total Assets of the Firm

FAGE = No. of Years of Business Operation

BMEET = No. of Board Meeting held in a year

Regression analysis is important in this study as it shows whether the model fits the data and whether the independent variable in this study has an impact on the dependent variable. Based on the regression results presented in table 4, some variables have positive relationship and significant effect with firm performance that is measured by return on assets (ROA) as expected. However, some variables possess negative and insignificant relationship with performance. The independent variable tested in this study which is the percentage of women directors has a positive relationship with firm performance. This supports the hypothesis that *ROA is positively associated with gender diversity in the board of directors*. However, the results do not have a significant effect when  $p > 0.05$ . This may be influenced by the small number of woman director in the boardroom even though the overall board size is controlled in this study. It can be explained by a previous study done by Wang and Clift (2009) where there is no strong relationship between gender diversity on the board and financial performance, and it is assumed that this is due to very few female directors in the sample. Besides, Kramer, et. al. (2008) argued on the effectiveness of having more than one woman in the boards to fulfil the interest of the stakeholders and lead to better decision making. Since most of the companies who have women directors in the sample of this study have one woman only, the benefits of gender diversity might not be fully utilized and thus the result cannot be generalized. This reason is supported by Huse and Solberg (2006) in which the reason for failure to find a significant relation between women directorship and firm performance is due to the benefits of increased gender diversity does not materialize as expected. Therefore, it can be said that the larger number of women in boards could significantly have an effect on the company performance.

For the control variables, the influence of firm size and the board size demonstrate positive relationship with performance. However, only firm size shows the significant effect. This might reflect that the larger firms are performing better than small firms in terms of profitability as recommended by Van der Walt et. al. (2003). Interesting enough, a board size that is represented by the total number of directors in a firm does not have significant effect on performance. The other control variables which are the firm age that is represented by number of years of operation and the number of board meetings have a negative relationship with performance. This is consistent with previous research that fails to find any positive and significant relationship between firm age and performance Adam and Ferreira, 2004 and Mínguez-Vera and López-Martínez, 2010. The negative result may suggest that younger firms in the

sample are performing better as compared to older firms. This suggestion is consistent with the argument by Van der Walt, et. al (2003) in the study of board diversity. Nevertheless, board meeting has significant effect on performance.

In determining the existence of multicollinearity, test of variance inflation factor (VIF) is conducted as suggested by previous study (Maran and Indraah, 2009). Referring to the rule of thumb, if the VIF of variables exceeds 10, that variable is said to be highly collinear. Hence, there is no multicollinearity issue in the analysis because all the predictor variables are ranging from 1.014 – 1.505.

Table 4  
OLS Regression of the Firm Performance and Gender Diversity

<i>Model</i>	<i>Coefficient</i>	<i>t-statistic</i>	<i>Significant</i>
<i>(Constant)</i>	<i>-.113</i>	<i>-3.168</i>	<i>.002</i>
<i>Percentage of Women Directors</i>	<i>.006</i>	<i>.269</i>	<i>.788</i>
<i>Total No. of Board of Directors</i>	<i>.001</i>	<i>.822</i>	<i>.411</i>
<i>Total Assets of the Firm</i>	<i>.020</i>	<i>4.155</i>	<i>.000</i>
<i>No. of Years of Business Operation</i>	<i>-0.00008053</i>	<i>-.531</i>	<i>.596</i>
<i>No. of Board Meeting held in a year</i>	<i>-.006</i>	<i>-3.824</i>	<i>.000</i>
<i>R-Square</i>	<i>0.51</i>		
<i>F-Statistics</i>	<i>5.990</i>		

## 6. Conclusion and Limitations

This study is important in addressing the benefits of women involvement in the boardrooms. The finding shows the positive association exists between gender diversity and ROA, which suggests women, could give impact to a better financial condition of the company. This is aligned with the Malaysian government policy of having at least 30 percent women representation in decision making level of corporate sector. The requirement of having gender diversity in boards also has been initiated by Securities Commission in Corporate Governance Blueprint in 2011. Therefore, it is recommended that this policy should be continuously enforced and utilized by corporate sector in order to gain the advantage of having the mixing of women and men in board composition for better financial performance. The representation of two or more women in board could better served the company decision making, as diverse characteristics in boardrooms could fulfil the obligations of boards to effectively monitor and play oversight roles on top management in order to maximize shareholders' wealth. Nevertheless, there are some limitations that can be improved on this study for future research. Firstly, there is a difficulty to find consistent sample that consisted of women directors for two consecutive years. Secondly is the likelihood of omitted variables in the regression model. Perhaps, the existence of omitted variables could lead to better prediction and explain the firm performance well. Thirdly, the use of ROA as a proxy for financial performance has its own limitations. The findings may be challenged with the use of other methods or other financial indicator as a measurement to obtain a better result. Fourthly, the exclusion of banking and financial institution might lead to a different result. Lastly, the period of the study could be one of the reasons for failure to find a significant effect with variables. The analysis only covers two financial years of 2008 and 2009. Most companies were facing financial difficulties for these years due to the economic downturn. Thus, other studies that cover a longer period will have more comprehensive results.

## Acknowledgements

A special thanks to Government of Malaysia, Kementerian Pengajian Tinggi, Universiti Teknologi MARA and Graduate School of Management, Universiti Putra Malaysia for their support in producing this research.

## References

- Adams, R. B., & Ferreira, D. (2009). Women in the Boardroom and Their Impact on Governance and Performance. *Journal of Financial Economics*, 94(2), 291–309.
- Adams, R. B., & Ferreira, D. (2004). Gender Diversity in the Boardroom. ECGI Finance Working Paper 57(2004). Retrieved from <http://ssrn.com>.
- Carter, D. A., Simskins, B. J., & Simpson, W. G. (2003). Corporate Governance, Board Diversity and Firm Performance. *Financial Review*. 35, 371–390
- Carter, D. A., Simskins, B. J., & Simpson, W. G. (2007). The Gender and Ethnic Diversity of US Boards and Board Committees and Firm Financial Performance. *Corporate Governance: An International Review*
- Catalyst. (2008). 2008 Catalyst Census of Women Boards Directors of the Fortune 500. New York, NY.
- Dallas, L. (2002). The New Managerialism and Diversity on Corporate Boards of Directors. *Tulane Law Review*. 76, 1363–1405.
- Dutta, P., & Bose, S. (2006). Gender Diversity in the Boardroom and Financial Performance of Commercial Banks: Evidence from Bangladesh. *The Cost and Management*. 34(6), 70–74.
- Erhardt, N. L., Werbel, J. D., & Shrader, C. B. (2003). Board of Director Diversity and Firm Financial Performance. *Corporate Governance: An International Review*, 11, 102–111.
- Gray, D. E. (2009). *Doing Research in the Real World*. 2<sup>nd</sup> Ed. London. Sage Publications Ltd.
- Hunt, L. (2010, February 27). More room for women's participation in decision-making. *The Star*. Retrieved February 22, 2011 from <http://biz.thestar.com.my/>
- Huse, M., & Solberg, A. (2006). Gender-related Boardroom Dynamics: How Scandinavian Women Make and Can Make Contributions on Corporate Boards. *Women in Management Review*. 21, 113–130.
- Johansen, E., R. (2008). Gender Diversity and Firm Performance- An Empirical Approach. Retrieved December 20, 2010 from <http://www.bf.uzh.ch>
- Jurkus, A.F., Park, J.C. & Woodard, L.S. (2008). Gender diversity, firm performance, and environment. SSRN Working Paper, Feb. 28.
- Kramer, V. W., Konrad, A. M., & Erkut, S. (2008). Critical Mass on Corporate Boards: Why Three or More Women Enhance Governance. *Organizational Dynamics*. 37(2), 145–164
- Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*. 30, 607–610.
- Lehn, K., Patro, S., & Zhao, M. (2004). Determinants of the Size and Structure of Corporate Boards: 1935–2000. University of Pittsburgh Working Paper.
- Lishenga, J. (2010). Board Meeting Frequency And Firm Performance: Evidence From NSE. African International Business and Management African International Business and Management. Kenyatta International Conference Centre (KICC).
- Maran, M., & Indraah, K. (2009). Ethnicity and Gender Diversity in Boards of Directors and Their Relevance to Financial Performance of Malaysian Companies. *Journal of Sustainable Development*. 2(3), 139–148.
- Matsa, D. A., & Miller, A. R. (2011). Chipping Away at the Glass Ceiling. Gender Spillovers in Corporate Leadership. (Working paper WR-842). Retrieved from RAND Labor and Population Working Paper Series website <http://www.rand.org/>

- Mínguez-Vera, A. & López-Martínez, R. (2010). Female Directors And SMEs: An Empirical Analysis. *Journal of Global Strategic Management*. 8,34-46.
- Muhiudeen, S. (2010, November 20). Board of Men: Governance Matters. *The Star*. Retrieved November 22, 2010 from <http://biz.thestar.com.my/>
- Niederle, M., & Vesterlund, L. (2007). Do Women Shy away from Competition? Do Men Compete too Much?. *Quarterly Journal of Economics*, 122(3), 1067-1101.
- Nielsen, S., & Huse, M. (2010). The Contribution of Women on Board of Directors: Goes Beyond the Surface. *Corporate Governance: An International Review*. 18(2), 136-148.
- Robinson, G., & Dechant, K. (1997). Building a Business Case for Diversity. *Academy of Management Executive*. 11, 21-30.
- Robson, C. (2002). *Real World Research*. 2<sup>nd</sup> Ed. Oxford. Blackwell.
- Shrader, C.B., Blackburn V.B., & Iles P. (1997). Women in Management and Firm Financial Value: An Exploratory Study. *Journal of Managerial Issues*. 9.
- Singh, V., Terjesen, S. & Vinnicombe, S. (2008) Newly appointed directors in the boardroom: How do women and men differ?. *European Management Journal*. 26(1), 48–58.
- Soares, R., Combopiano, J., Regis, A., Shur, Y., & Wong, R. (2010) 2010 Catalyst Census: Fortune 500 Women Board Directors. Retrieved from <http://www.catalyst.org>
- Statistics on Women, Family and Social Welfare, Ministry of Women, Family and Community Development. Retrieved January 6, 2011 from <http://www.kpwkm.gov.my>
- Van der Walt, N., Ingley, C., Shergill, G. S., & Townsend, A. (2003). Board Configuration: Are Diverse Boards Better Board? *Journal of Corporate Governmace*. 6(2), 129-147.
- Wang, Y., & Clift, B. (2009). Is There A “Business Case” For Board Diversity?. *Pacific Accounting Review*. 21(2), 88-193.