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Women on Boards and Market Performance: An Exploratory Study on the Listed Companies

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Abstract: The lack of women participation on boards becomes an important issue recently which in turn reflects gender diversity in the top management. This study attempts to examine the effect of gender diversity among corporate boards on market value. Theoretical framework is specially designed using concepts, measures and models. A total sample of large 565 companies is considered based on their market capitalization. The largest sectors are trading/services, finance and industrial products. This study incorporates descriptive statistics, ANOVA, correlation testing and regression analysis. The results indicate that women participation does have a relationship with increasing market value.

Key words: Women, gender diversity, board, market performance, market value

INTRODUCTION

Developing societal, political and cultural views of corporate board members are part of demographic diversity of top management. In additional, the major factor is better corporate governance and the global desire (Monks and Minow, 2004). The world faced high profile scandals like Worldcom, Enron, Adelphia and policy makers began to concentrate on the issues of corporate governance (OECD, 2004). In 1997, Malaysian economy was badly affected by financial crisis and many major corporations had shut down. This corporate failure on financial crisis was the result of poor corporate governance (Mitton, 2002). Good corporate governance is an important part of business philosophy. Corporate governance means something broader than corporate management in view of achieving strategic goals (Bairathi, 2009). In contrast, researchers found that gender diversity among board members could result in poor firm performance (Adams and Ferreira, 2009). Board gender diversity has a positive relationship with organizational performance. There is ambiguity among previous researches (Carter and Silva, 2010). The main contribution is for The Malaysian Government and other regulatory bodies may also use the results of study. This research is unique we consider the relationship between women participation on boards (i.e., gender diversity among board members) with market value. A total sample of 565 large companies is considered from the population of 938 listed companies. The three largest sectors are trading/services, finance, industrial products and comprising of 233, 43, 289 companies, respectively. Descriptive statistics, graphical presentations, ANOVA, regression and correlation test have been used.

Agency theory: Agency theory explains the board functions of monitoring and controlling manages. It based on the "agency problem" that arises when two parties have differing goals. The relationship between principal and agent defined as a contract where the principal engages the agent in his/her duties to the principal. Agency relationship plays a very important role in firm performance and its base on composition of board (Jensen and Meckling, 1976). Diverse boards may better monitor managers and top management teams because board diversity increase board independence (Carter *et al*., 2003). The Agency theory is particularly explains the relationship between gender diversity in boards and a firm performance. According to "Agency theory" women directors behave differently from their male counterparts and their presence changes board behavior as they are said to provide better monitoring and advisory services (Azmi and Barrett, 2013). Having more women on boards may increase the reputation of the company (Luckerath-Rovers and De Bos, 2011). The Agency theory has primary concept of corporate governance that analyze the relationships among different interested parties like shareholders, boards, managers and employees (Jensen and Meckling, 1976). Agency theory can show how the principals of a firm are in a weak

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position compared to the manager (Heath, 2009). The types diversity are gender diversity (Adams and Ferreira, 2009), ethnic diversity (Kusumastuti *et al*., 2008), educational diversity (Bathula, 2008) and board independence (Chamberlain, 2010). Researchers did not found any significant relationship of gender diversity and firm performance.

Upper-Echelon theory: The Upper-Echelons theory is based on behavioral decision-making theories as well as concepts of organizational demography. Corporate boards are important and can be used for organizational outcomes such as firm performance and strategic achievements. This theory explains the impacts of demographic and cognitive diversity in context of firm performance. Researchers argued that diversified boards can make more effective decisions as compare to homogenous boards (Hambrick and Mason, 1984). Organizations can attract, retain and take competitive edge from diverse talent to begin by increasing the diversity among top management teams (Raver *et al*., 2005). This study based on Upper-Echelon theory because it related to top level management characteristics and its effect on firm performance.

Women participation and gender diversity issues: Gender is a status which constructed through social, cultural and psychological means; it is not base on personal traits (West and Zimmerman, 1987). Gender diversity is an integral of board diversity. Board diversity claims that board should reflect society and represent the gender, ethnicity, professional experience and background (Milliken and Martins, 1996). Diversity among boards always bring a better understanding of market place, innovation, increases creativity, leadership, better decision making and effective global relationships (Robinson and Dechant, 1997). Gender diversity among board members has drawn the attention of researchers and issues were examined like why fewer females on corporate boards (Burke, 1997) and what is the female role or how much experience influence the corporate boards and firm performance (Jamali *et al*., 2007).

In corporate world, female participation on boards is very low. According to Catalyst census, female participation among boards is only 12.4% in the US and 6.4 in the UK (Singh and Vinnicombe, 2004). Women representation was <5% in Canadian boards (Burke, 1997). These data are based the US companies' reports. A researcher found that women on boards have significant positive impact on firm performance (Smith *et al*., 2006) and another researcher found that there is no significant relationship between women directors and shareholder returns (Farrell and Hersch, 2005). In view of these inconsistent findings, there is a need to investigate this issue. A developed country, Norway, requires at least 40% women participation on board since 2008 (Monbiot, 2006). In the view of such regulations and increasing importance of women in the corporate world, there is a need to explore the impact of gender diversity on firm performance.

Figure 1 presents the breakdown of market capitalization by sector. The leading sectors are

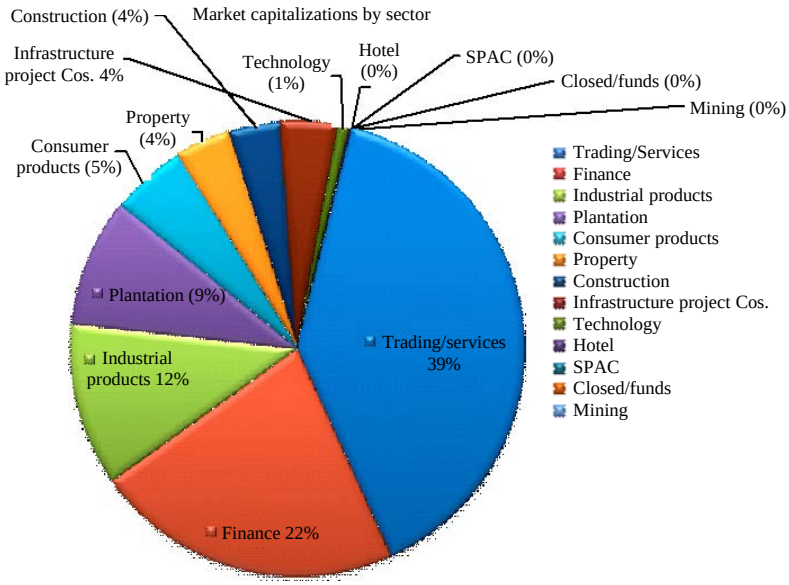

Fig. 1: Total market capitalization by sector

trading/service, finance and industrial products. In this study, we focused the three major sectors to examine the effect of women participation on boards on market value.

Table 1 presents descriptive statistics of the three largest sectors in Malaysia based on market capitalization. These three sectors accounted for 565 companies listed on Bursa Malaysia. The leading sector is trading/services with the largest market capitalization but women participation rate in the finance sector was the highest. Figure 2 shows the percentage of total market capitalization controlled by the three largest sectors.

In the context of Malaysia, conducting studies on diversity among the board members is always a great challenge. This makes the understanding of diversity in the boardrooms becoming more complex and time consuming. According to the 2009 data, the average percentage of women on boards in Malaysia is 5.9%. The representation of women in Malaysian boardrooms is relatively lower as compared to that of other emerging markets in Asia.

The line graphs in Fig. 3 offers more insights where as gender diversity fluctuates, board size also constantly fluctuates with some spikes and market capitalization is presented in a descending order. It can be concluded that there is a positive relationship between gender diversity and market capitalization. Figure 3 involves data of all the 938 companies listed on Bursa Malaysia.

Women representation in the boardrooms in some of the developing countries is presented in Fig. 4. This may reflect the importance of women participation on corporate boards. In relation to this, researcher suggested that a critical mass is needed to allow a board to take advantage of gender diversity.

In relation to this, European countries have recently implemented laws for gender quotas in the business

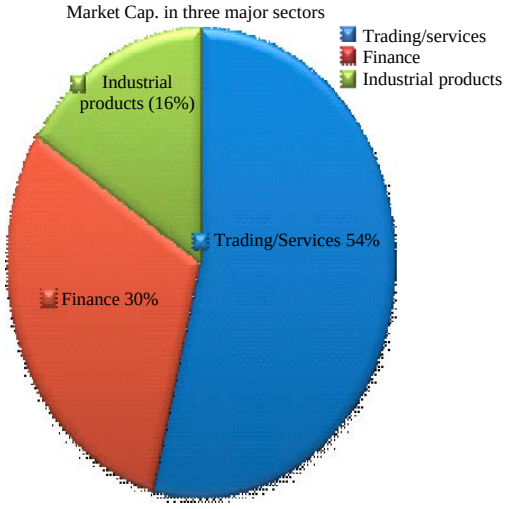

Fig. 2: Market capitalizations of trading/services, finance and industrial products

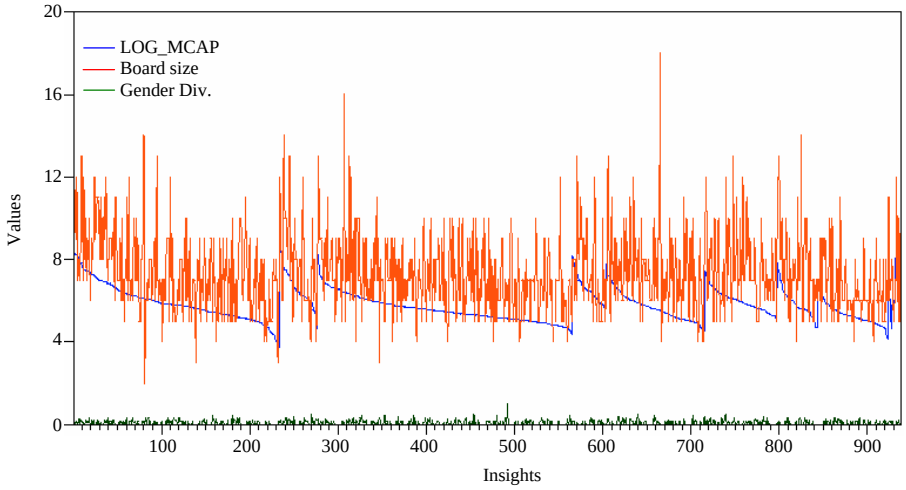

Fig. 3: Graphical expression of market Cap., board size and women participation

Table 1: Summary of major sectors

No. of companies	Sector	Total market Cap. (billion)	Proportion (%)	Board size	Females on board	Female on board (%)
233	Trading/services	1.95	53.94	1745	134	7.67
43	Finance	1.09	30.14	340	37	10.80
289	Industrial products	0.57	15.90	2053	148	7.20
Total	565	36.08	100.00	4138	319	7.70

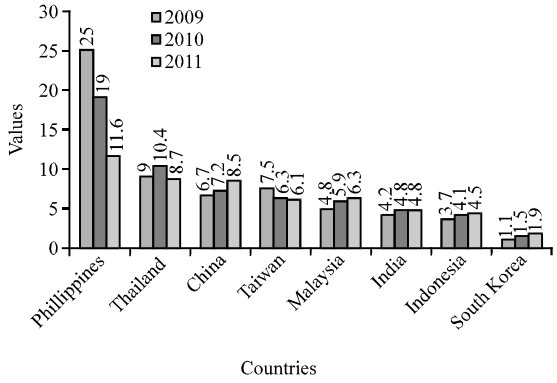

Fig. 4: Aggregate percentage of women on boards in Asian emerging economies (2009-2011)

and public sectors since they believe that the presence of women in boardrooms may affect firm performance significantly. For example, Spain legislates that in 2015 women must represent 9.3% of seats in boardrooms and in the Netherlands the requirement is that 30% of board members shall be women by 2015. In Wall Mart, females account for 30% holding managerial positions and in Malaysian scenario females hold only 2% of the managerial positions. Currently, Malaysia has laws and regulations which are encouraging women participation quotas on boards in private sector and required companies to engage at least 30% females at board level. In June 2011, the Malaysian government established a goal of 30% female on holding of senior positions in public sector by 2016.

Objectives of the study: This study seeks to examine the effect of women participation at board level on market performance.

Focus of the study: It is of great interest for many researchers to explore the gender diversity with regard to firm performance. Listed companies have different scenarios of corporate boards with regard to women quota. This empirical study is therefore able to offer more insights on gender diversity (women participation) at board level. This study also includes the extent to which the findings differ from the general expectation as argued by the previous studies.

MATERIALS AND METHODS

Sample and data: This study is specially designed to examine the gender diversity trend among corporate boards of listed companies in Malaysia. A sample of 565 companies was considered based on the population of 965 companies. The sampling technique was judgmental in nature and a 5 years average market capitalization was used to measure the significance of the individual sectors. Hence, three major sectors were identified; they were trading/services, finance and industrial products. As for data analysis, different statistical techniques were adopted, they include descriptive analysis, ANOVA, correlation test and bivariate regression model.

Model: The below modeling equation shows relationship between gender diversity (women participation) and market capitalization. By running, the t-test shows that there is a significant relationship between gender diversity and market capitalization:

$$\text{Firm performance-market Cap. (Y)} = \alpha + \beta_{\text{Gender Div.}} + \varepsilon$$

RESULTS AND DISCUSSION

Descriptive statistics: The descriptive statistics results of variables are presented in Table 2. The largest board size is 16 and a maximum woman on a board is 16. The average women participation at board level is 0.57. Sample is N = 565. The Kurtosis score for gender diversity is 8.878.

Graphical expressions: Figure 5 offers insightful information that as women participation percentage in three major sectors trading/service, finance and industrial products. It can be concluded that women participation is high in finance sector.

In addition, the line graph Fig. 6 presents that as gender diversity fluctuates and market capitalization constantly fluctuates with spikes. Market capitalization is presented in a descending order. It can be concluded that there is a positive relationship between women participation and market capitalization.

Figure 7 presents that as women participation at board level fluctuates, board size also constantly fluctuates with some spikes. It can be concluded that there is a relationship between women participation and board size. Figure 7 involves data of all selected 565 companies listed on Bursa Malaysia.

Figure 8 presents that gender diversity which is more concentrated between 4 and 14 members on board. It can be concluded that companies that have board size between 6 and 12 tend to have greater gender diversity.

Figure 9 presents line graphs of board size, gender size and gender diversity. As the gender diversity fluctuates, board size also constantly fluctuates with

Table 2: Descriptive statistics on market Cap. and gender diversity

Descriptive statistics	Market Cap.	Board size	Gender	Gender Div.
Mean	5.78620	7.330	0.570	0.0763
Median	5.65000	7.000	0.000	0.0000
Mode	6.23000	7.000	0.000	0.00
SD	0.81046	1.939	0.800	0.11097
Variance	0.65700	3.761	0.640	0.012
Skewness	0.78300	0.717	1.692	2.090
Kurtosis	0.80900	1.019	4.428	8.878
Range	5.11000	14.000	6.000	1.00
Minimum	3.32000	2.000	0.000	0.00
Maximum	8.43000	16.000	6.000	1.00

N = 565

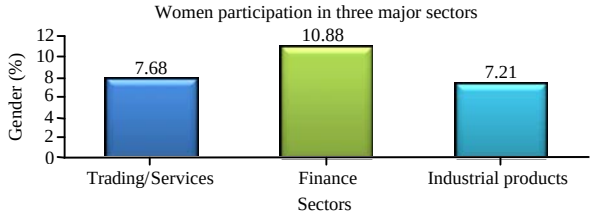

Fig. 5: Bar chart-percentage of women participation in three major sectors

some spikes. Figure 9 involves data of all the 938 companies listed on Bursa Malaysia. In nutshell, as board size increases, the women participation also increases and indirectly it has some impact on gender diversity.

Correlations test: Table 3 presents the results of correlations test. Market capitalization has a strong relationship with board size and gender diversity at 0.05 significance level. However, there is no correlation between board size and gender diversity. We can conclude that gender influence does have impact on market performance.

One-way ANOVA: Table 4 presents the results of One-way ANOVA test. We can conclude, there is no significant difference among the three sectors with regard to market performance as represented by p = 0.162 at 0.05. This signifies that there is no sectoral influence on market performance in the presence of the gender effect.

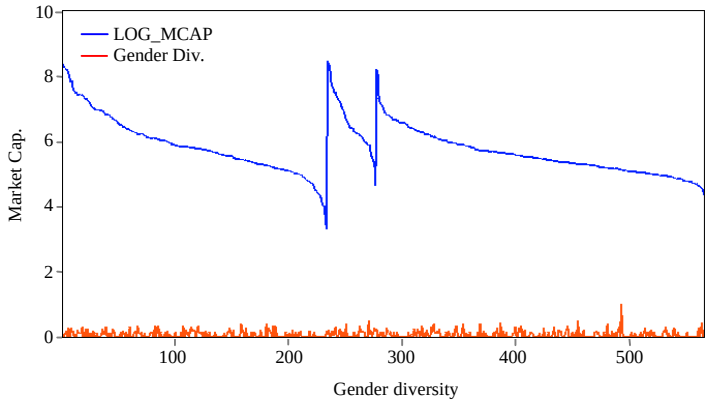

Fig. 6: Line chart market Cap. versus gender diversity

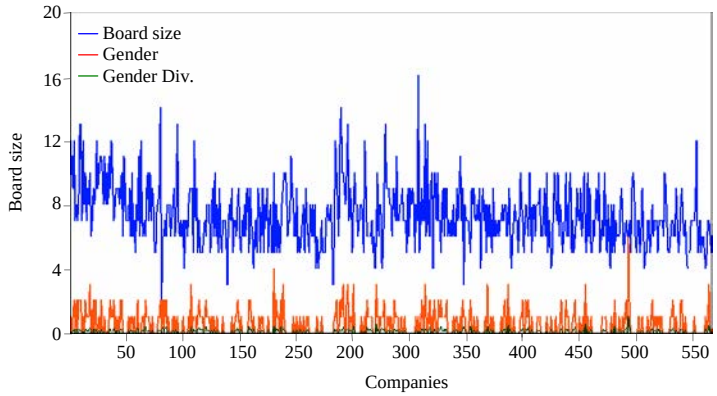

Fig. 7: Graphical expression of board size, gender diversity

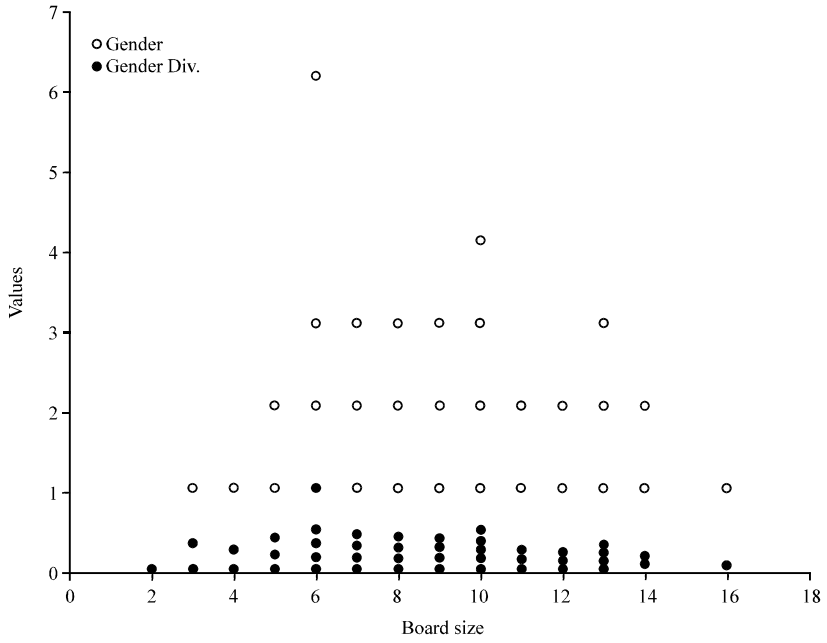

Fig. 8: Scatter diagram b/w gender Div., gender and board size

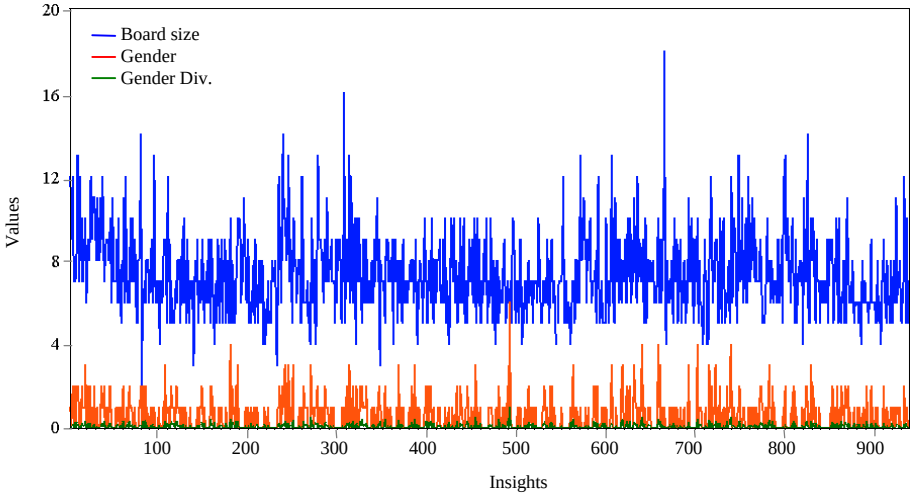

Fig. 9: Graphical expression of gender, board size and gender Div.

Table 3: Correlation results

Variables	1	2	3
Market Cap.	1	0.433**	0.083*
Board size	-	1.000	0.034
GD	-	-	1.000

**Correlation is significant at the 0.01 level (2-tailed); *Correlation is significant at the 0.05 level (2-tailed)

Table 4: One way ANOVA: gender Div. versus category

Sources	df	SS	MS	F-value	p-value
Category	2	0.0446	0.0223	1.82	0.162
Error	561	6.8616	0.0122	-	-
Total	563	6.9062	-	-	-

*S = 0.1106; R^2 = 0.65%; R^2 (Adj.) = 0.29%, individual 95% CIs

Regression analysis: In addition, a bivariate regression test was conducted on the gender effect with regard to market performance. The result shows that there is a significant positive relationship between gender diversity and market performance at 0.05 as illustrated as:

$$\text{Firm performance-market Cap. } (Y) = \alpha + \beta_{\text{Gender Div.}} + \varepsilon$$

$$\text{Market Cap. } (Y) = 5.740 + 0.68_{\text{Gender Div.}} + 0.307$$

Beta coefficient of gender effect is 0.68 (t-value is 1.981) and the F-test (3.923) is very significant at 0.05.

CONCLUSION

Admittedly, women participation at board level has a significant and positive relationship with market performance. Women participation should be encouraged at top management level. It should be noted that only large companies seem to serious about promoting gender diversity (women participation) at top level management. Hence that women participation should be leveled at top management level that in turn can enhance the profits and perhaps improving internal operations of their companies.

LIMITATIONS

This study only focuses on gender diversity (women participation) and large listed companies. In addition, this study incorporated only the three major sectors (trading/services, finance, industrial products) and thus it would be quite challenging to generalize the findings but however, these three sectors' contribution is exceeding 50% of the total market capitalization.

RECOMMENDATIONS

Based on empirical findings, some recommendations can be suggested for encouraging women participation among board level in listed companies of Malaysia. Obviously, a mandatory quota for women at board level should be established. Government and other regulatory bodies should ensure that necessary requirements should be imposed on companies.

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