

GENDER DIVERSITY ON BOARDS AND MARKET PERFORMANCE: AN EMPIRICAL INVESTIGATION ON MALAYSIAN LISTED COMPANIES

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ABSTRACT

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 sample of 565 large 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 firm value.

Keywords: women, gender diversity, boards, market performance

INTRODUCTION

Developing societal, political and cultural views of corporate board members are part of demographic diversity of top management. In addition, the major factor is better corporate governance and the global desire [1]. The world faced high profile scandals like Worldcom, Enron, Adelphia and policy makers began to concentrate on the issues of corporate governance [2]. 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 [3]. Good corporate governance is an important part of business philosophy. Corporate governance means something broader than corporate management in view of achieving strategic goals [4]. In contrast, researchers found that gender diversity among board members could result in poor firm performance [5]. Board gender diversity has a positive relationship with organizational performance. There is ambiguity among previous researches [6]. Undoubtedly, the

Malaysian government and other regulatory bodies may benefit from the findings of study. This research is unique as 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.

The remainder of the paper follows as such Sections 2 and 3 explain literature review, women participation and gender diversity issues in Malaysia. In section 4, 5 & 6, theoretical framework, objectives and focus of the study are included and section 7 explains research design of this study. Empirical results and limitations are explained in section 8 and 9. Finally, our work is concluded in the last section.

LITERATURE REVIEW

A. *Theoretical Perspective on Gender Diversity*

Board members are the highest authority in a firm. The board members generally believed to perform four important functions. Firstly, monitor and control to managers. Secondly, provide guidance and information. Thirdly, monitor conformance with the laws and regulations, and lastly, connecting the organization to the external environment. One basic proposition is that firm performance is partially determined by the board composition. Board composition includes gender diversity, which is directly linked with firm performance. There is no specific theory that predicts the nature of relationship between board diversity and financial performance. In this study, related theories from various aspects discussed.

B. *Agency Theory*

Agency theory explains the board functions of monitoring and controlling manages. It is 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 it is influenced by composition of board [7]. Diverse boards may better monitor managers and top management teams because board diversity increase board independence [8]. The agency theory particularly explains the relationship between gender diversity in boards and a firm performance. 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 [9]. Having more women on boards may increase the reputation of the company [10]. The agency theory is primary concept of corporate governance that analyzes the relationships among different interested parties like shareholders, boards, managers, and employees [7]. Agency theory can show how the principals of a firm are in a weak position compared to the managers [11].

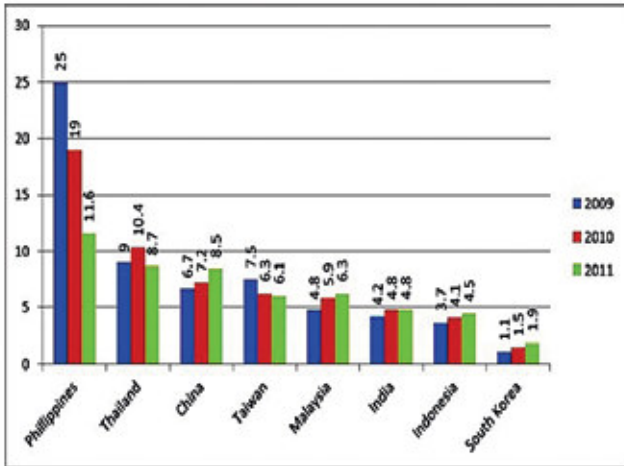
In addition, The types diversity are gender diversity [5], ethnic diversity, educational diversity and board independence [12]. Researchers have not found any conclusive findings with regard to the relationship of gender diversity and firm performance.

C. *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 compared to homogenous boards [13]. Organizations can attract, retain, and gain competitive edge from diverse talent to begin by increasing the diversity among top management teams [14]. This study uses the upper echelon theory as it involves the characteristics of top level management and their effects on firm performance.

WOMEN PARTICIPATION AND GENDER DIVERSITY ISSUES

Gender is a status, which is constructed through social, cultural, and psychological means; it is not based on personal traits [15]. 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 [16]. Diversity among boards always brings a better understanding of market place, innovation, increases creativity, leadership, better decision making and effective global relationships [17]. Gender diversity among board members has drawn the attention of researchers and issues examined includes; why fewer females on corporate boards [18] and what is the female role or how much experience that influences the corporate boards and firm performance [19].



Source: GovernanceMetrics International (2011)

Figure 1. Aggregate percentage of women on boards in Asian emerging economies (2009-2011)

In corporate world, female participation on boards is very low. According to Catalyst census, female participation among boards is only 12.4 per cent in the US and 6.4 in the UK [20]. Women representation is less than 5 percent in Canadian boards [18]. A researcher finds that women on boards have significant positive impact on firm performance [21] but there could be no relationship between women directors and shareholder returns. Thus, there is a need to further investigate this phenomenon. Developed countries like Norway, requires at least 40 per cent women participation on board since 2008 [22]. In the view of such regulations and increasing importance of women in the corporate world, there is a need to explore and justify the impact of gender diversity on firm performance.

Women representation in the boardrooms in some of the developing countries is presented in Fig.1. This may reflect the importance of women participation on corporate boards. In relation to this, researchers suggest that a critical mass is needed to allow a board to take advantage of gender diversity (Governance Metrics International, 2011).

In relation to this, European countries have recently implemented laws for gender quotas in the business and public sectors since they believe that the presence of women in boardrooms may affect firm performance significantly. For example, Spain legislated that by 2015 women must represent 9.3 percent of seats in boardrooms, and in the Netherlands the requirement is that 30 percent of board members shall be women by 2015 (Governance Metrics International, 2011). In Wall Mart, females account for 30 percent who are holding managerial positions and in Malaysian scenario females hold only 2 percent of the managerial positions (Diversity and Inclusion Network Asia, 2012). 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 percent females at board level (MCCG, 2012). In June 2011, the Malaysian government established a goal of 30 percent female on holding of senior positions in public sector by 2016 (SCM, 2011).

THEORETICAL FRAMEWORK OF GENDER DIVERSITY AT BOARD LEVEL AND FIRM PERFORMANCE

Fig.2 below shows the theoretical framework describes presents the relationship between diversity and firm performance. Here, variable of investigation is gender diversity. Gender diversity can be measured through dividing total females by total board members on board. The dependent variable of this study is firm performance which can be measured using market capitalization .The control variables of this study is board size. "Board size" refers to total number of directors on the board.

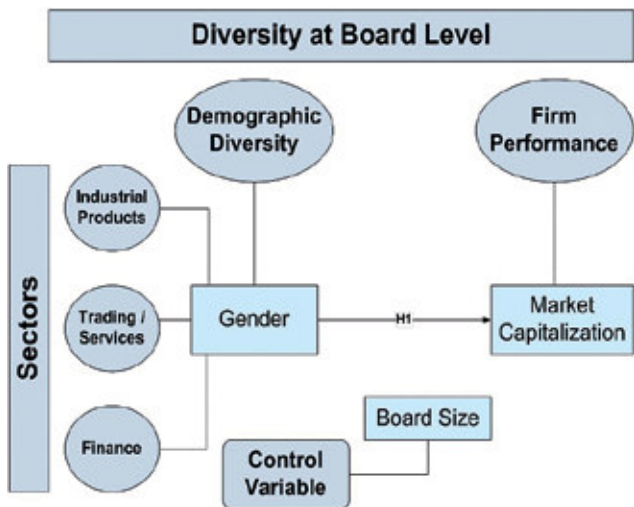


Figure 2. Theoretical Framework (Gender diversity at board level and its impact on firm performance)

OBJECTIVE OF THE STUDY

This study seeks to examine the effect of women participation at board level on firm 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. The empirical examination offers 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. The following are hypotheses of this study

H1: Gender diversity among the board members (BODs) has a positive impact on firm (market) performance.

H2: Board size has a positive impact on firm (market) performance.

RESEARCH DESIGN

A. *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-year 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.

B. *Model*

The below modeling equation shows relationship between gender diversity (women participation) and market capitalization. Regression model to determine the relationship between gender diversity and market capitalization is as follows;

$$\text{Firm Performance}(Y) = \alpha + \beta_{\text{Gender Div}} + \epsilon$$

EMPIRICAL ANALYSIS AND DISCUSSIONS

A. *Market Capitalization by Sector*

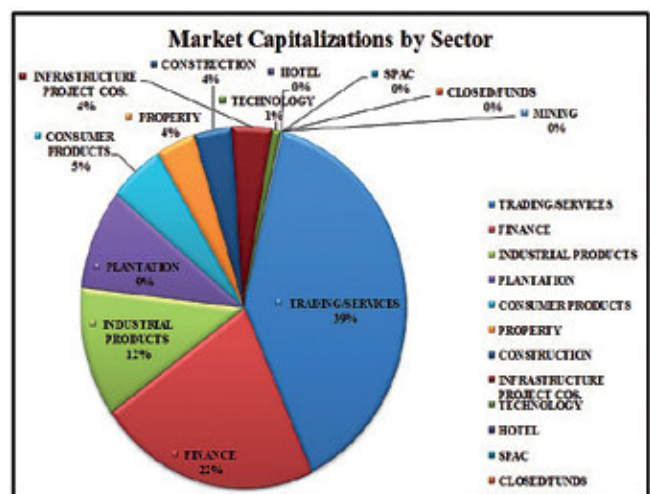


Figure 3. Total Market Capitalizations by Sector

Fig.3. presents the breakdown of market capitalization by sector. The leading sectors are 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 I. 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. Fig.4. below shows the percentage of total market capitalization controlled by the three largest sectors.

Table I. Summary of major sectors

No	No Of Companies	Sector	Total Market Cap (Billion)	Proportion (%)	Board Size	Females on Board	% of Female on Board
1	233	Trading/ Services	1.95	53.94	1745	134	7.67
2	43	Finance	1.09	30.14	340	37	10.8
3	289	Industrial Product	0.57	15.90	2053	148	7.20
Total	565		36.08	100	4138	319	7.70



Figure 4. Market Capitalizations of Trading/Services, Finance & Industrial Products

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 percent. The representation of women in Malaysian boardrooms is relatively lower as compared to that of other emerging markets in Asia (Governance Metrics International, 2009).

The line graphs in Fig.5 offers more insights, while 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. This involves data of all the 938 companies listed on Bursa Malaysia.

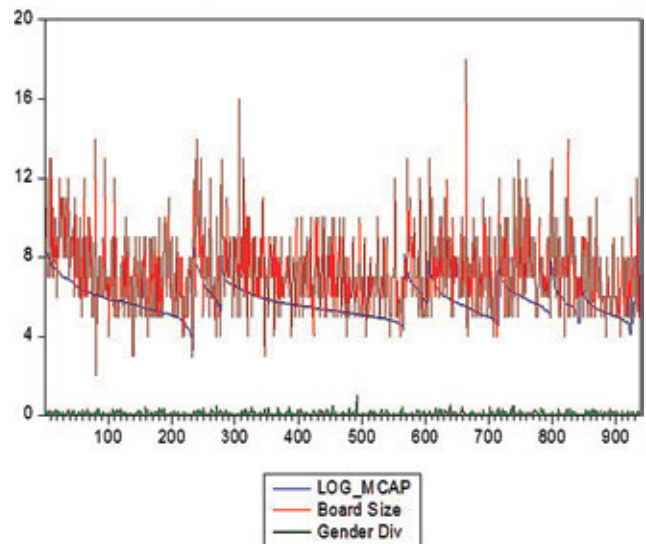


Figure 5. Graphical expression of Market Capitalization, Board Size and Women Participation

B. Descriptive Statistics

The descriptive statistics results of variables are presented in TABLE II. 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.

Table II. Descriptive Statistics on Market Capitalization & Gender Diversity

	Market Cap.	Board Size	Gender	Gender Div.
Mean	5.7862	7.33	.57	.0763
Median	5.6500	7.00	.00	.0000
Mode	6.23	7	0	.00
Std. Deviation	.81046	1.939	.800	.11097
Variance	.657	3.761	.640	.012
Skewness	.783	.717	1.692	2.090
Kurtosis	.809	1.019	4.428	8.878
Range	5.11	14	6	1.00
Minimum	3.32	2	0	.00
Maximum	8.43	16	6	1.00

N= 565

C. Graphical Expressions

The bar chart below Fig. 6 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 more persistent in finance sector.

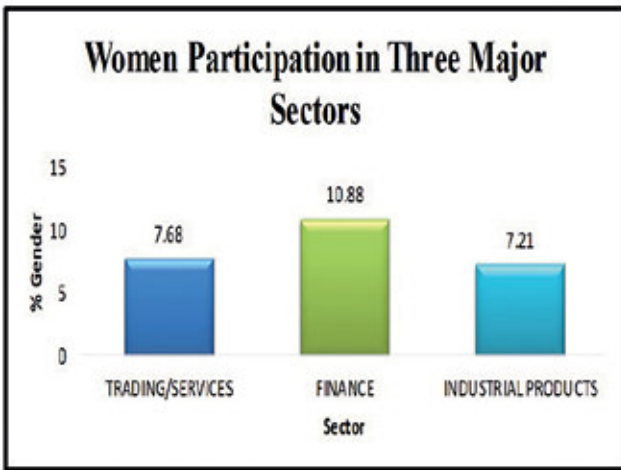


Figure 6. Bar Chart – Percentage of Women Participation in Three Major Sectors

In addition, the line graph Fig.7 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.

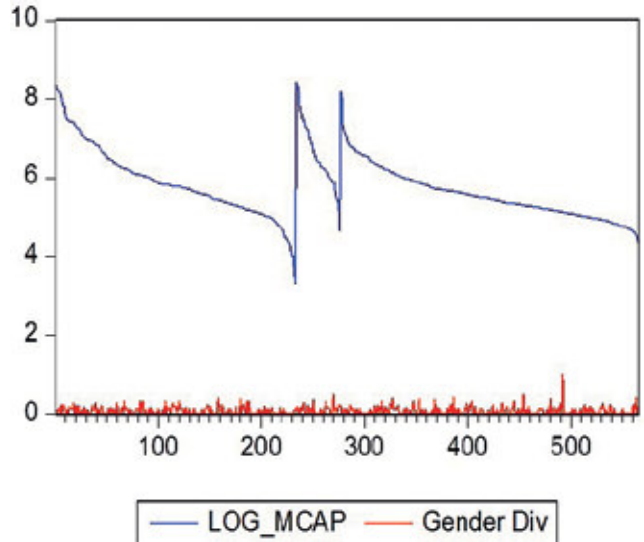


Figure 7. Line Chart Market Capitalization Versus Gender Diversity

The line graph Fig. 8 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. Fig.8 involves data of all selected 565 companies listed on Bursa Malaysia.

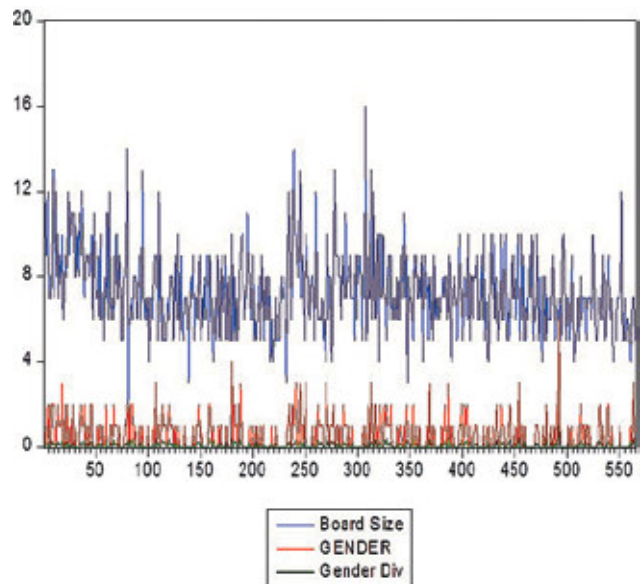


Figure 8. Graphical Expression of Board Size, Gender Diversity

The scatter diagram Fig.9 presents that gender diversity which is more concentrated between 4 & 14 members on board. It can be concluded that companies that have board size between 6 and 12

tend to have greater gender diversity.

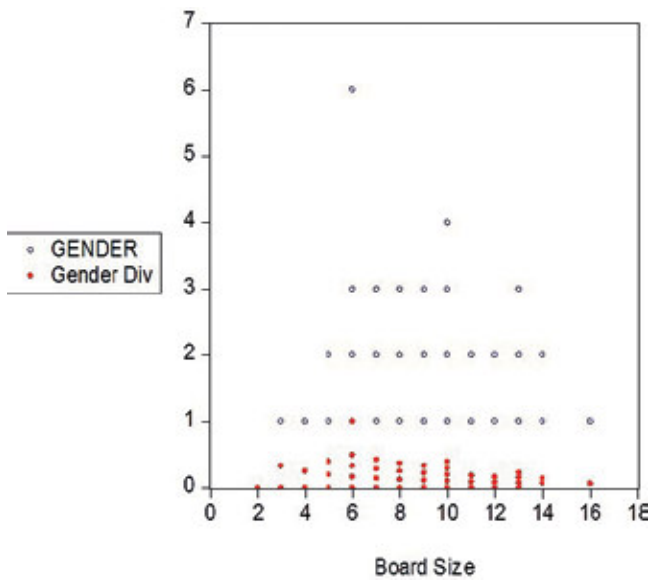


Figure 9. Scatter Diagram between Gender Diversity, Gender (Number of Females) and Board Size

The line graph Fig. 10 presents line graphs of board size, gender size and gender diversity. As the gender diversity fluctuates, board size also constantly fluctuates with some spikes. Fig. 10 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.

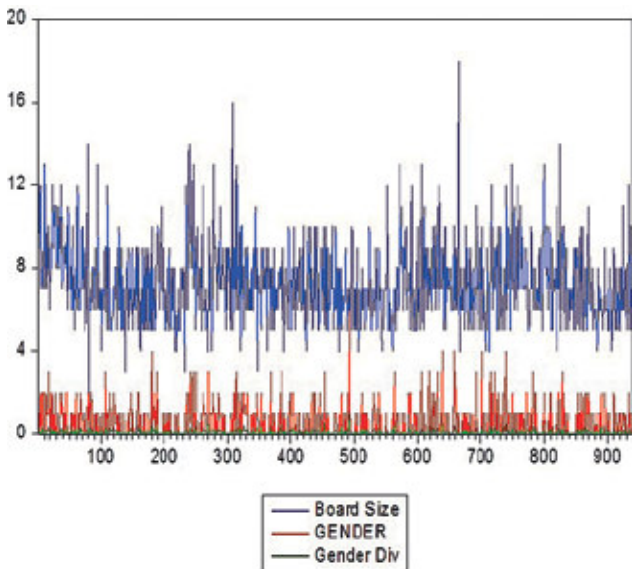


Figure 10. Graphical Expression of Gender (Number of Females), Board Size and Gender Diversity

D. Correlations Test

TABLE III 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 firm performance.

Table III. Correlation Results

Variables	1	2	3
1. Market Cap.	1	.433**	.083*
2. Board Size		1	.034
3. Gender Div.			1

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

E. One- Way ANOVA

Below TABLE IV 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-value (0.162) at 0.05. This signifies that there is no sectoral influence on market performance in the presence of the gender effect.

Table IV. One Way Anova: Gender Diversity Among Sectors

Source	DF	SS	MS	F	P
Category	2	0.0446	0.0223	1.82	0.162
Error	561	6.8616	0.0122		
Total	563	6.9062			

*S = 0.1106 R-Sq = 0.65% R-Sq (adj) = 0.29%, Individual 95% CIs

F. *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 below.

$$\text{Firm Performance- Market Cap. (Y)} = \alpha + \beta_{\text{Gender Div}} + \epsilon$$

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

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

LIMITATIONS

This paper only focuses on gender diversity (women participation) and large listed companies. In addition, this paper 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 per cent of the total market capitalization.

CONCLUSIONS AND RECOMMENDATIONS

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 be 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.

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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