

Board Diversity and Performance: Evidence from the Acquiring Companies in Malaysia

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Abstract

Purpose: The purpose of the study is to examine the association between board diversity and performance of acquiring companies. The acquiring companies were chosen among the companies that have successfully merged and used as sample of this study.

Design/methodology/approach: The variables of board diversity used in this study are women director, independent director education, foreign directors and multiple directors. A sample of 30 acquiring companies from industrial sector is used and data were collected over a period of eight years from 2009 to 2016. The independent variables were women director, proportion of independent director education degree and below, proportion of independent director education masters and above, proportion of foreign director, and proportion of multiple directorships. Meanwhile, firm performance was proxied by return on assets (ROA). This study used panel data analysis to analyze the relationship between the board diversity and performance of acquiring companies.

Findings: The study was significantly reveals that the proportion of independent director education degree and below has negative relationship to ROA. Interestingly, the study also found that the proportion of foreign director was positive and significant against performance indicating that the diversity of top managers and directors in areas of nationality and education can impact firm performance. Therefore, the results strongly agree that foreign board members can add valuable and diverse expertise to board effectiveness as a result of their different backgrounds that local members do not possess.

Originality/value: The originality of this study is by manually selecting and checking the successful of acquiring companies in Merger and Acquisition (M&A) activities in Malaysia as a sample of the study from 2009 and 2016.

Keywords: board diversity, women director, acquiring company, foreign director, multiple directorship



Introduction

In Malaysia, board diversity has become a major issue in successful acquiring companies. Board diversity refers to board directors are being diverse in terms of age, gender, nationality, educational background, experience, multi-directorships and many more. In this study, the research will be focus on gender, foreign nationality, educational background and multi-directorships diversity issues in the boardrooms.

In recent years, the Securities Commissions (SC) reported that there are only seven large companies of the top 100 acquiring companies on Bursa Malaysia with all-male board in the year of 2018 such as Fraser & Neave Holdings Bhd, Genting Plantations Bhd, Genting Malaysia Bhd, UOA Development Bhd, Affin Holdings Bhd, Alliance Bank Bhd, and Batu Kawan Bhd, (Sidhu & Koshy, 2018). In addition, the Malaysian Code on Corporate Governance (MCCG) has a decision on boards member with at least have female for coming years. Major public listed companies expected to have at least 30% women directors on their board by the year 2020 according to the government. In interviewing with Tan Sri Zarina, she had mentioned there are many research have been done related to gender diversity on board and leadership level to have a better performance. In fact, she said it was an increasing trend from 2015 with only 14% to 25.8% in 2021 among top 100 PLCs showing the significant increase by 82% (Bernama, 2021).

This study also focuses on the existence or lack of board diversity in the factor of board nationality and identifies any significant difference between companies with foreign directors and those without foreign directors. This factor revealed between companies with or without foreign directors may inform the stakeholders on companies' characteristic that practiced board diversity. This information is useful for the stakeholders to evaluate the impact of foreign directors on companies' financial performance.

Educational background diversity also brings different priorities on companies' objectives into decision-making and board discussion. Directors with different educational background could bring different perspectives on whether the ultimate company goal is to maximize shareholders' interest or broader shareholders' interest. As reported that most of the directors earned their graduate in Degree (HONS) followed by Masters and less directors earned PhD from overseas and local universities. It is known that, directors with lack of education are not qualified to be in director position as they require higher education and knowledge to oversight the company's financial performance.

Multi directorship enables the directors to connect with other directors and firms through networks, skills and market information that enhance the company's growth. A company that has directors with multiple directorships usually benefit from their broad experience and superior capabilities. It is common in Malaysian companies have multiple directorships and a director can have five directorships. Furthermore, Jiraporn, Davidson, DaDalt and Ning (2009) studies the relationship between multiple directorships and directors' absence on the board and audit committee meetings. The results show that outside directorships lead to the likelihood of absence in meetings. Meanwhile, Kamardin and Haron (2014) show that multiple directorships are negative and significantly related to the strategic roles performed by directors. Therefore, to be effective in director's strategic roles, directors can only have less multiple directorships.



In a nutshell, the contextual factors in board diversity have issues and shortcomings in the acquiring companies in Malaysia which make us to do some research more on this topic in order to have a better understanding and suggestion to combat with the issues. These researches will help the successful acquiring companies to have board diversification in a better position to enhance the financial performance. Therefore, the purpose of this study is to examine the relationship between the board diversity (women directors, independent directors' education, foreign directors, and multiple directors) and performance of the acquiring companies in Malaysia.

Literature Review

According to Fama and Jensen (1983), the agency problem appeared due to the separation of ownership and organization's control. However, most developed countries have well-structured ownership dispersion; same goes to Malaysia, where ownership and organizational control are separated. When the manager fails to perform their duties in the best interests of the shareholders, the objectives may be contrary to the primary interest. Thus, the Board of Directors' role is to control and monitor the top management team's behaviour and to ensure that they act in the best interests of the shareholders (Hillman & Dalziel, 2003; Zhang, 2012).

The board role is to perform their function effectively. Independent directors (IDs) can be an effective corporate governance mechanism in selecting, monitoring and supervising the top management teams in a firm (Fama & Jensen, 1983). Furthermore, IDs can improve corporate performance by impartially supervising business operations, assisting companies in resolving principal-agent issues, and controlling agency costs (Fama, 1980). Furthermore, IDs can aid in the reduction of conflicts of interest while also improving firm performance (Fama & Jensen, 1983). According to empirical data from a recent study in the United States, IDs have a positive influence on the firm's performance (Reguera-Alvarado & Bravo, 2017). Another finding in emerging countries is that IDs in state-owned enterprises are positively correlated with corporate performance.

Based on the theory, one issue that can be raised is the impact of board composition on firm performance. From an agency perspective, the issue of board composition suggests that women directors are positively correlated to financial performance, despite the fact that board composition in Turkish companies was male-dominated (Klç & Kuzey, 2016). Along with that, Low, Roberts and Whiting (2015) also find the same result while increasing number of women directors contributed to positive impact on firm performance. Hence, diverse board is an effective way to overcome the agency problem between the shareholder and the management.

Although agency theory is the main theory used in the research on board of directors (Dalton, Hitt, Certo, & Dalton, 2007), prior research found that other than agency theory, Resources Dependency Theory (RDT) was supported more often than other board perspectives theory. Moreover, RDT claimed that boards enable firms to minimize dependence or gain resources. Therefore, even the RDT is less commonly used on board's study than the agency theory; the evidence suggested, it is more successful lens for understanding the boards (Zahra & Pearce, 1989).

Synergy theory is concerned with the synergetic gain that comes from the operational, managerial, and financial synergy of a company's merger and acquisition (M&A) activities. The combination of the companies possibly generates the economics of scale and scope. Economic of scale occurs either from the huge scale of operation, by holding inventories or



specialisation. While economic of scope occurs when a company manufactured related goods at lower cost (Leepsa & Mishra, 2016).

According to Ogada, Achoki and Njuguna (2016), synergy theory utilize different classes of resources to create the value. The resources can be come from many perspectives and it also can come from tangible (capital and building) or intangible (skill and competencies) assets. As mention by Coase (1937), M&A can generate synergy because it brings together technology that aids in lowering transaction and production costs. While, Bradley, Desai and Kim (1983) state that synergy occurs due to economy of scale, effectiveness of the management, improvement in techniques of production and the involvement of the management teams of acquiring companies in the management teams of target companies.

M&A can increase efficiency by leveraging specialised skills, sharing expensive technologies, lowering transaction costs, reallocating existing expenses, and eliminating resources that are no longer needed. Because firms have different strengths, weaknesses, and efficiency levels, this theory will explain the excess benefits that companies gain from M&A activities. This theory can be divided into two categories: managerial efficiency theory and managerial inefficiency theory (Leepsa & Mishra, 2016).

Managerial efficiency theory can also be known as differential efficiency theory which it is the basis of horizontal mergers. The horizontal mergers mean the business activity is in the same line of industry. From these differentials, the acquiring company will utilise the target company that have inefficient in it managerial resources so that both of the company can gain the benefits (Wolfe, Stressman, & Manfredo, 2011).

Firm Performance for Acquiring Companies

Firm performance refers to the outcome of the companies operation. The outcome is not only depending on the efficiency of the companies itself but also on the market where it operates. There are different financial measurements to measure firm performance. Specifically, firm performance can be measured by cumulative abnormal returns (CARs), Return on Assets (ROA), Return on Equity (ROE), Tobin's Q, Earning Per Share (EPS), Profit Margin (PM), Dividend Yield (DY), Price-Earnings Ratio (PE), Return on Sales (ROS), Expense to Assets (ETA), Operating Cash Flow (OCF), Cost of Capital (COC), Market Value Added (MVA), Operating Profit (OP), Return on Investment (ROI), Market to book value (MTBV), market capitalization, Sales growth and Return on Fixed Assets. However, most of previous study commonly used cumulative abnormal return to measure the performance of M&A companies. While, other companies performance measured by return on assets, return on equity, sales growth, cash flow, earning per share, stock prices and Tobin's q (Al-Matari, Al-Swidi, & Fadzil, 2014).

Moreover, there are two approaches to measure firm performance, which is financial accounting based measure and market based measured. Accounting based measure generally consider as effective indicators to measure company's profitability. Some of the accounting based measure indicator such as ROA, ROE, ROS, ROI and OP. While, market based measure is reflect on the expectation of shareholders concerning the firm future performance. it can be measured by Tobin's Q, MVA, MTBV, CAR and DY (Al-Matari et al., 2014).

Even though most of the previous study used cumulative abnormal return to measure the performance of acquiring companies, this study will employ return on assets (ROA) only as



proxy to measure firm performance. It is because the data of the study employed starting from three years after the completion or successful M&A deal not on the announcement date of M&A deal. In addition, this study is not focusing on the market reaction but the investigation is to investigate whether board diversity can enhance the performance of acquiring companies after the deal.

Hypothesis Development

This study will develop a set of hypotheses based on the relationship between board diversity variables and firm performance of acquiring companies.

(a) Women Directors (Women Dir)

According to the empirical findings, the influence of women directors on firm performance contributed mixed result. There are studies about women directors on firm performance in M&A companies. Both of the studies show the appearance of women on the board bring benefits to the firm performance. According to Chen et al. (2016), the more number of women on the board may lead to the more comprehensive decision-making at the board level in the companies. Hence, women directors can play their role in M&A companies.

Other studies of women directors and firm performance in other companies encountered mixed results. Some studies shows the appearance of women on the board cannot increase the performance of the companies (Boubaker, Dang, & Nguyen, 2014; Darmadi, 2012; Julizaerma & Sori, 2012). Furthermore, Carter et al. (2010) discover that women directors have no relationship with firm performance, whereas Low et al. (2015) discover mixed results that show a positive relationship at first but then a negative relationship. It is determined by the attitude of society toward women. Particularly when society's' attitude toward women is negative. Some studies, however, show a positive impact on firm performance (Conyon and He, 2017; Klç and Kuzey, 2016; Liu, Miletkov, Wei, and Yang, 2014; Lückerath-Rovers, 2013; Sabatier, 2015).

Nevertheless, the presence of women on the board still contributes to a diverse board environment, which in general diversity may improve firm value and performance due to the difference insight and perspectives that women have can be beneficial for the companies if they can utilise it. Hence, this argument leads to the following hypothesis:

H1: Women director is significantly related to firm performance in acquiring companies.

(b) Independent Directors' Education (IDs_edu)

The relationship between independent directors' education and firm performance yielded mixed results as well. Based on Wang, Jin and Yang (2016) also find the same result which is the diversification of independent director's (ID) background in SOEs was positively correlated with corporate performance. Kuo, Wang and Yeh (2018) find the education level among directors was significant and give positive relationship toward Research and Development (R&D) investment. Kagzi and Guha (2018) use GMM regression analysis in the study also found the same result.

However, there were some studies found that the present of independent directors' education decrease the performance of the companies. Volonté and Gantenbein (2016) study specified education directors into financial known-how which is a directors who have finance or business background. According to the findings of the study, financial know-how is



negatively related to firm performance. Tarus and Aime (2014) investigate the effect of board demographic diversity on firm strategic change, and the findings show that education diversity on corporate boards tends to reduce the company's strategic change.

While some studies found the association of independent directors' education on firm performance was insignificant (Jensen & Zajac, 2004). In Indonesia, Darmadi (2013) also finds insignificant result when the study divided the level of education into postgraduate degree, degree from prestigious domestic universities, degree from developed country and degree in finance discipline. In The United State, Khanna, Jones and Boivie (2014) find insignificant after using cross-sectional analysis.

The exchange of knowledge and skill among management and supervisory board members are important. The capabilities and expertise of IDs can help to achieve the monitoring and advising performance (Balsmeier, Buchwald, & Stiebale, 2014). The diversification of IDs background can increase corporate performance. Especially, if the company focus on the IDs professionalism background (Wang et al., 2016). The study assumes that the diversification of IDs could help independent directors to have specific resources and have an impact on the degree of engagement. This may have an impact on how they carry out their responsibilities, as well as the relationship between board independence and firm performance. As a result, in order to construct the best hypothesis for independent director education, the skill and function of the independent director would be clarified. The following hypothesis has been developed:

H2a: Independent directors' education with degree and below is significantly related to firm performance in acquiring companies.

H2b: Independent directors' education with master and above is significantly related to firm performance in acquiring companies.

(c) Foreign Directors

Foreign directors become an important variable in increasing firm performance of acquiring companies. Alabdullah and Ferris (2014) believe that foreign directors can enhance the advising ability of corporate board. Muravyev (2017) discovers the same result, which the proportion of foreign directors is positively related to firm performance. According to the study, an increase in the number of foreign directors is a trend in the evolution of the board of directors. In Malaysia, study by Peck-Ling, Nai-Chiek and Chee-Seong (2016) on the presence of foreign directors on firm performance and the result also shows significant to firm performance.

However, some studies have found that the presence of foreign directors on corporate boards does not improve firm performance. Masulis et al. (2012) discover that foreign independent directors perform significantly worse. This is because, due to their geographical distance from the corporate headquarters, foreign independent directors may be less effective monitors and may incur oversight costs. Du, Jian, and Lai (2017) also find the same results which are foreign directors have negative impact on earning management and they cannot play a better role in enhancing the financial reporting monitoring.

This study assumes that the diversification of foreign directors could help the companies to utilize their role toward increasing companies' performance. Even though, there have studies stated that foreign directors cannot increase the performance of the company due to the



geographical distance and lack of monitoring role, this study believe that foreign directors can bring benefits to the companies because of their capabilities such as advising ability, knowledge of foreign market, business practices and institutions as well as their cross-culture competencies be an extra expertise in their self. This expertise can make them valuable for the acquiring companies. The following hypothesis has been developed for foreign directors:

H3: Foreign Directors is significantly related to firm performance in acquiring companies.

(d) Multiple Directors

Based on the previous review, multiple directors could give positive and negative impact on firm performance of acquiring companies. Haniffa and Hudaib (2006) state that multiple executive directors can help other directors in widening their experience and knowledge of business activities as well as it can be valuable for the companies. In India, the study was done by Sarkar and Sarkar (2009) find non-executive multiple directors is positively correlated with firm value. While executive multiple directors is negatively correlated to firm performance. Omer et al. (2014) investigate multiple directors based on social network theory. The results from the study shows the well-connected outside directors have bigger impact in increasing firm value than well-connected inside directors.

However, Lamb (2017) analyses the relationship between multiple directors and firm performance and the results indicate that is little relationship between multiple directors and firm performance mean that the numbers of multiple directors do not influence firm financial performance. Otherwise, Kamardin, Latif, Mohd, and Adam (2014) investigate the relationship between multiple directors and the monitoring role of the board of directors in Malaysia listed companies. Hence, the result do not support that a high number of multiple directorships affect the monitoring role as well as it cannot increase firm performance.

Furthermore, Hashim and Abdul Rahman (2006) examine the relationship between the presence of interlocked directors on a board and earnings quality. The study believe that the presence of multiple directors can increase earnings per share because they can provide an incentive for diligent monitoring by their knowledge, expertise, skill and stronger incentive to monitor the action of management as well as improve the quality of financial reporting. However, the result appeared non-linear because too many members in a firm with interlocking directorship appeared to deteriorate earning quality.

The presence of multiple directors on the board still contributes benefit for the companies if they can utilise it. Hence, this argument leads to the following testable hypothesis:

H4: Multiple Directors is significantly related to firm performance in acquiring companies.

Methodology

Population, Sample Size and Sampling Technique

The main purpose of this study is to examine the influence of board diversity towards firm performance among acquiring successful companies in Malaysia for eight years period. Thus, the population of this study is all companies listed in the industrial sector. A sample size of 30 listed acquiring companies have been selected for this study. The rationale for selecting these 30 listed acquiring companies is that they are large companies that contribute to the Malaysian economy. This is because larger firms are more likely to be involved in



complicated dealings and transactions that necessitate more diverse boards with high skill levels, experience, and knowledge (Zainal et al., 2013). Table 1 shows the sampling technique used and the sample size in this study:

Table 1: List of the sample

Sample of Listed Acquiring Companies for Industrial Sector	The period of data collection starting from the successful of M&A (5 years period)
1) Acme Holdings Bhd 2) Analabs Resources BHD 3) CB Industrial Product Holding Bhd 4) Evergreen Fibreboard Bhd 5) Gamuda Bhd 6) IJM Corp Bhd 7) KNM Group Bhd 8) Konsortium Transnasional Bhd 9) LBI Capital Bhd 10) Muhibbah Engineering M Bhd 11) Paramount Corp Bhd 12) Poly Glass Fibre M Bhd 13) Salcon Bhd 14) Subur Tiasa Holdings Bhd 15) Transocean Holdings BHD 16) TSR Capital BHD 17) Wah Seong Corp Bhd 18) WTK Holdings Bhd	2009-2016
 19) Adventa Bhd 20) Cahya Mata Sarawak Bhd 21) Compugates Holdings BHd 22) Dufu Technology Corp Bhd 23) Melati Ehsan Holdings Bhd 24) Mudajaya Group Bhd 25) Subur Tiasa Holdings Bhd 26) Ta Ann Holdings Bhd 27) TSH Resources Bhd 28) Unimech Group Bhd 	2010 - 2017
29) Salcon Bhd30) Top Glove Corp Bhd	2011 - 2018

The annual reports of the 30 listed companies were obtained from the Bursa Malaysia website. The annual reports were taken from 2009 to 2018, and the independent variables of the research were manually collected. The ROA data is calculated to assess the company's performance. In addition, past articles and journals on the specific research topic are studied through in Internet from Google Scholar. It is known that secondary data is time consuming and cost saving compared to primary data to carry out the research.

Variables measurements

The variables of Board diversity used in this study are women director, independent director education, foreign director and multiple directorships. Meanwhile, the dependent variable is only return on assets as a proxy for performance. Table 2 provides a list of study variables and related proxies measurements.



Table 2: The Variables and Measurements of the Study

Variables	Abbreviation	Proxy			
Independent Variables					
Women Director	Women_dir	Proportion of female directors on board			
Independent director education	Id_educati~w	Proportion of Independent Director education Degree and Below			
	Id_educati~e	Proportion of Independent Director Education Master and Above			
Foreign director	Foreign_Dir	Proportion of Foreign Director			
Multiple directorship	Multilpe_dir	Proportion of Multiple Directorship a director has on board			
Dependent variable					
Return on Assets	ROA	the ratio of net income over total assets of a firms			
Control variables					
Firm Size	F_size	Log of total assets			
Firm Leverage	LEV	Total Liabilities\ Total assets (debt ratio)			
Firm Age	F-Age	The number of years since inception			

Method and Model specification

The panel data analysis will be used in this study. Park (2011) defines panel data as longitudinal or cross-sectional time-series data. Panel data provides more data information, greater variability, less collinearity among variables, greater degrees of opportunity, and greater efficiency (Park, 2011). Furthermore, panel data is systematic, and its models are appealing and engaging because it is used to manage heterogeneity and investigate fixed and random effects in longitudinal data (Park, 2011). To determine the best fit model for this data analysis, the pooled ordinary least squares (POLS), Random Effect Model (REM), and Fixed Effect Model (FEM) will be used in this study. Therefore, to select the best panel data regression method to fit the model, several tests need to be conducted; namely Poolability F-Test (POLS vs. FEM), Breusch-Pagan Lagrange Multiplier (BPLM) Test (POLS vs. REM) and Hausman Test to choose between REM or FEM. After running the tests, the best method for each model is POLS. For Poolability Test (POLS vs FEM), F test that all u i=0: F(29, 202) = 1.04Prob > F = 0.4198 (suggesting that POLS preferred over FEM). Meanwhile, for Breush Pahan LM Test (POLS vs REM), Test: Var(u) = 0, chibar2(01) = 0.00, Prob > chibar2 = 1.0000 (suggesting that POLS preferred over REM). Therefore, this study used the POLS model as the best fit model, and the study also has run the robust standard errors for POLS.

A standard specification for analyzing the panel data is:

$$\begin{aligned} ROA_{it} &= \beta_{oit} + \beta_1 (WomenDirector)_{1it} + \beta_2 Id - Education_{it} + \beta_3 Foeign_Dir_{it} \\ &+ \beta_4 Multiple_dir_{4it} + \beta_5 F_Size_{it} + \beta_6 LEV_{it} + \beta_7 F_age_{it} + \varepsilon_{it} \end{aligned}$$

where:

ROA = return on assets

Women dir = women director

Id Education = Independent director education level



Foreign_Dir = foreign Director Multiple_dir = multiple directorship ε = the error term

Results and Discussions

This section presents the empirical results of the study. The descriptive analysis, correlation analysis and panel data regression results will be presented as follow:

Table 3: Descriptive Statistics for all periods (2009-2018)

Variables	N	Mean	SD	Min	Max
ROA	240	0.0316	0.4022	-3.7809	2.9757
Women_dir	240	0.1071	0.1258	0.0000	0.4000
Id_educati~w	240	0.6336	0.2095	0.0060	1.0000
Id_educati~e	240	0.2783	0.1642	0.0000	0.7500
Foreign Dir	240	0.0505	0.1355	0.0000	0.6667
Multilpe_dir	240	0.6618	0.2468	0.0000	1.0000
F_size	240	8.5259	0.8193	0.8849	9.9916
F_age	240	29.6500	13.3649	6.0000	81.0000
LĒV	240	0.5104	3.0001	0.0002	41.6132
Number of firms	30	30	30	30	30

Note: ROA=Return on Assets; Women_dir=Women Director; Id_educati~w= Proportion of Independent Director education Degree and Below; Id_educati~e = Proportion of Independent Director Education Masters and Above; Foreign_Dir= Proportion of Foreign Director; Multiple_dir= Proportion of Multiple Directorship;; F size=Firm Size; F age=Firm Age; LEV=Debt Ratio.

Table 3 exhibits the descriptive statistics of the dependent and independent variables from the year of 2009 to 2018. The results include the mean (Mean), standard deviation (SD), minimum (Min) and maximum (Max) of selected variables of 30 acquiring companies. The variables are women director, independent director education degree and below, independent director education masters and above, foreign director, multiple directorship, firm size, firm age and leverage for acquiring successful companies.

According to the findings, the mean of return on asset (ROA) is 3.16% (0.0316) with the SD of 0.4022, meanwhile the Min and Max values are -378.09% (-3.7809) and 297.57% (2.9757) respectively. Furthermore, the mean proportion of women director in boardroom is 10.17% (0.1017) showing that there is less women directors on board in the acquiring companies. The Malaysian government, through Bursa Malaysia, has also announced the requirement of the listed firms to have at least 30 percent women representation in boardroom in five-year time that is by 2016 (MCCG, 2012). Next, the mean proportion of independent director education degree and below is 63.36% (0.6336) whereas for masters and above is 27.83% (0.2783). This shows that there are more directors holding degree and below compared to masters and above. Next, the mean proportion for foreign director and multiple directorship are 5.15% (0.0515) and 66.18% (0.6618), respectively indicating that there are less foreign directors and quite a number of directors holding multiple directorships on boardroom in the acquiring companies in Malaysia. Moreover, the mean proportion for firm size, firm age and leverage are (8.5259), (29.6500) and (0.5104) respectively.

Pearson Product-Moment Correlations is used to determine the inter-correlation between all the study variables including women director (Women_dir), independent director education degree and below (Id_educati~w), independent director education masters and above (Id educati~e), foreign director (Foreign dir), multiple directorship (Multiple dir), firm size



(F_size), firm age (F_age) and leverage (LEV). Table 4 below shows the summary of the results.

Table 4: The Pearson's Correlation Coefficients of the Study Variables

	ROA	women_dir	id_educati~ w	id_educati~e	foreign_dir	multilpe_di r	F_size	f_age	lev 1
ROA	1								
women dir	-0.0258	1							
id_educati~w	-0.0964	0.1339**	1						
id_educati~e	0.0472	-0.2414***	0.1222*	1					
foreign dir	0.0131	-0.1114*	0.3157***	-0.1939***	1				
multilpe_dir	0.0421	-0.2067***	0.0672	0.1547**	-0.1141*	1			
F_size	0.1432**	-0.0176	0.0925	0.1874***	0.0594	0.1515**	1		
f_age	-0.0003	-0.1888***	-0.4567***	-0.0206	0.0688	-0.0993	0.1036	1	
Lev	-0.0312	-0.0707	-0.0336	0.0648	-0.0401	0.0566	-0.1573**	0.041	1

*** p<0.01, ** p<0.05, * p<0.1

Note: ROA=Return on Assets; Women_dir=Women Director; Id_educati~w= Proportion of Independent Director education Degree and Below; Id_educati~e = Proportion of Independent Director Education Masters and Above; Foreign_Dir= Proportion of Foreign Director; Multiple_dir= Proportion of Multiple Directorship;; F size=Firm Size; F age=Firm Age; LEV=Debt Ratio.

From the result Table 4, firm size (F_size) and return on asset (ROA) are positively correlated at 14.32% (0.1432) at 5% significant level. Next, independent director education degree and below (Id educati~w) and women director (Women dir) are positively correlated at 13.39% (0.1339) at significant level of 0.05. Meanwhile, independent director education masters and above (id educati~e), foreign director (foreign dir), and multiple director are significant but negatively correlated to women director (women dir) Next, independent director education degree and below (id educati~w) and independent director education masters and above (id educati~e) are correlated at 12.22% (0.1222) at significant level of 0.1. Next, independent director education degree and below (id educati~w) and foreign director (foreign dir) are correlated at 31.57% (0.3157) at significant level of 0.01. Furthermore, independent director education masters and above (id educati~e) and foreign director (foreign dir) are significantly correlated at -19.39% (-0.1939) at 1% level. Foreign director (foreign dir) and multiple director (multiple dir) are also significant but negatively correlated at -11.41% (-0.1141). In conclusion, the correlation among these independent variables shows that these variables are still independent yet correlated but not really high coefficient which it is still acceptable level of coefficient of 0.80.

Table 4.3: Regression Analysis Results by using ROA as Dependent Variable

Variables	POLS	POLS with Robust
		Standard Errors
Women dir	0.0376	0.0376
_	(0.2292)	(0.2959)
Id educati~w	-0.3792**	-0.3792***
_	(0.1583)	(0.1179)
Id_educati~e	0.1409	0.1409
	(0.1766)	(0.1430)
Foreign_dir	0.2635	0.2635*
	(0.2236)	(0.1385)
Multilpe dir	0.0427	0.0427
	(0.1116)	(0.1722)
F_size	0.0741**	0.0741
	(0.0337)	(0.0443)
F_age	-0.0032	-0.0032*
_ &	(0.0023)	(0.0018)



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LEV	-0.0014	-0.0014	
Constant	(0.0088) -0.3496	(0.0073) -0.3496	
	(0.2925)	(0.2831)	
Observations	240	240	
R-squared	0.0457	0.0457	

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

The findings reveal the positive (negative) relationships between proportion of women director (women_dir) and ROA by using Pooled Ordinary Least Square (POLS) and POLS with robust standard errors but all are insignificant and HI is not supported. The hypothesis H1 is inconsistent with the previous studies where the women director is positively related to firm performance in acquiring companies. In addition, the claims of Bilimoria and Wheeler (2000), Mattis (2000) and Selby (2000) appear to be plausible in that women directors may be better reflecting the diversity of the firm's customer base and labour pool, and thereby may be enhancing firm performance.

Interestingly, proportion of independent director education degree and below is found to be negative and significant at 1 percent level for both POLS and POLS with robust and support H2a. This can be explained that higher proportion of independent director with education degree and below reduces the performance of the acquiring companies. This findings is inconsistent with Wang et al., (2016) and Balsmeier et al. (2014). Furthermore, Bantel's findings also demonstrates that greater education and functional background diversity on top management teams led to better strategic decision-making. However, there is a positive relationships between independent director education masters and above with ROA but insignificant and H2b is not supported.

Furthermore, foreign director is found to be positively and significant related to firm performance in acquiring companies for only POLS with robust standard errors at 10%. Therefore, a foreign director may bring not only valuable skill, different perspectives and knowledge to share, but also share different values, norms and understanding which may consequently increase the quality of strategic decision making and promote a better firm's performance. However, the finding finds that multiple directors is positively related to firm performance in acquiring companies but insignificant. Thus, H3 and H4 are not supported.

Conclusion

The purpose of this study is to investigate the board diversity and performance of acquiring companies from a period of 2009 until 2016 for 30 selected of acquiring companies from industrial sector. This study was found that Pooled Ordinary Least Square (POLS) and POLS with robust standard errors are the best fit model to explain the results. In this study, it was significantly reveals that the proportion of independent director education degree and below has negative and significant to ROA. However, this results are contradicting with the findings of Bantel (1993) that postulates greater education and functional background diversity on top management teams led to better strategic decision-making. Bantel (1993) also suggests that both educational level and cognitive diversity were associated with positive effects on organisational performance.

Interestingly, the study also found that the proportion of foreign director as one of the board diversity variables was significant against performance. This study in line with Miller and Del Carmen Triana (2009), they argue that the diversity of top managers and directors in



areas such as their nationality and education can impact organisational outcomes such as firm performance. Therefore, the results is also consistent with Estelyiova and Nisar (2012) and resource dependence theory, which argues that foreign board members can add valuable and diverse expertise to board effectiveness as a result of their different backgrounds that local members do not possess.

Implications of the Study

The study's main implication is the importance of education among directors for better firm performance which include higher return on assets. The independent director education tested in this study is divided into two categories: degree and below and masters and above. Many directors have a bachelor's degree or less, as opposed to a master's degree or higher. Directors must have more education for better strategic decision-making for a better company's performance, according to Bantel (1993), where education and functional background diversity in top management teams led to better strategic decision-making. Therefore, from the practical perspectives especially the management of the companies itself, they have to emphasize more on the minimum education background to acquire at least degree with experience to be elected as an independent directors without looking at the family matters relationship such as nepotism. Next, this study will encourage more researchers to do an analysis in this field of study to reduce gap in advancement of knowledge for their academic purposes. The research should emphasize and enrich in other area such as the foreign directors' education that will give impact on the company's performance. For example, foreign directors have diverse expertise and add valuable to board effectiveness due to their different backgrounds that local directors do not possess.

Limitations and Suggestions for Future Research

There are a few limitations in this study. The first limitation is on the sectors the companies are selected from. This study has limited scope from different sectors such as manufacturing, construction, consumer, property, trading and services excluding utility and financial institutions in Malaysia. This study has used only industrial sector without taking into consideration other sectors locally and as well as global companies to evaluate their performance on board diversity. In addition, this study period is limited to 8 years which from 2009 to 2018 without any time laps to evaluate the company's performance on board diversity. Having time laps before evaluating on the following years company performance would make the study more accurate and reliable.

Initially, the data collection period should be extended as acquiring firms in Malaysia have past records to get more holistic views of the research. By having the extended period, the data results will be more accurate as the performance of firm could be evaluated better on board diversity. For example, in order to evaluate a firm's performance, it needs at least 3 years of time lap to see the results before evaluating on another year. Moreover, it is recommended to have a larger sample size to get more accurate data and reduce errors. This is crucial because it can enhance the research quality and save time consuming and give a more accurate on the study. In this study, 30 acquiring companies were taken from Bursa Malaysia as sample but the analysis of this study could be better off if large sample size is taken. Lastly, the research should be carried out time to time basis as to evaluate the firm's performance trend on board diversity. This could be evidence to firms to have board diversity in order for them to have better performance. Therefore, this study should not be stopped but must be carried out continuously every year.



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