RESEARCH ARTICLE

The Role of Gender and Ethnic Diversity on the Performance of Malaysian Private Companies

Rayenda Khresna Brahmana, Mohd Waliuddin Mohd Razali, and Hui Wei You Universiti Malaysia Sarawak, Malaysia brkhresna@unimas.my

Abstract: This study examines the effect of gender diversity and board diversity on Malaysian firm performance. This study is different from other studies because instead of using publicly listed companies, it uses 3,735 private companies over 2009–2014. We find that gender has no significant effect on the firm performance but firm's characteristics such as firm age, firm's size, liquidity, and leverage have significant effects on the firm performance. Our research further indicates that ethnic diversity in the board of directors may give better performance to companies. This research implies two important findings for the policy makers. First, the encouragement of gender equality to private companies by policy maker may fail as it does not have any impact. Second, policy maker should not consider ethnic diversity in the board as part of policy because it may reduce the firm performance.

Keywords: Gender, Ethnic, Board Diversity, Firm Performance, Private Companies

JEL: G38, J15, J16, M14

Ethnic and gender composition in the board directors has been an interesting corporate governance issue faced by the stakeholders. This issue has taken on a high public profile as a result of media pressure or NGO statements or even governmental policies. For example, there is the Interfaith Center on Corporate Responsibility (ICCR) which is actively involved in proposing equality of gender and ethnicity in the board room. There is also Teachers Insurance and Annuity Association=College Retirement Equities Fund (TIAA-CREF) which established a policy statement regarding the composition of boardroom. The organization forces corporate world to have a board that reflect diversity of experience, gender, and ethnicity.

In Malaysia, TalenCorp and PricewaterhouseCoopers (PwC) Malaysia engaged in promoting diversity of gender, ethnicity, and age at the leadership and top management levels. This matter is even brought up by Malaysian Prime Minister in their economic plan that there should be an equality of gender and ethnicity in the board room.

Many companies also take this board diversity as an important issue. For example, Apple Corp just announced that their 2015 hiring system has caught diverse people in terms of ethnicity and also gender. There is also Sun Oil's CEO, Robert Campbell who said that addressing gender and ethnic diversity may bring new perspective to the company's going concern.

Richard Branson, CEO of Virgin Group, bluntly stated that it is needed to have equal right and diverse board in company. In Malaysia, IHH Healthcare Limited openly stated that it is important to have diversity of workforce, including in the boardroom.

However, there is no general consensus on how gender and ethnic diversity in the board may improve the firm's performance. Adams and Ferreira (2009) studied 1,500 companies at United States from 1996–2003 and found female directors have significant impact on corporate performance of firms with weak shareholders right. There is also the study of Brahmana and Chen (2016) who found the positive and significant link between women in the board and firm performance.

On the other hand, Shrader, Blackburn, and Iles (1997) investigated the relationship between the percentage of female board members and two accounting measures of financial value and found a significant negative relationship between the percentage of women in the board and firm value in some tests. Zahra and Stanton (1988) used canonical analysis to test the relationship between the percentage of ethnic minority directors and several accounting measures of financial value (e.g. ROE and EPS) and found no statistically significant relationship. There is also MacAvoy and Millstein (1999) who concluded that the mixed results have followed from concentrating on periods when boards were largely irrelevant and using unreliable proxies for board independence. These findings show that there is no consensus regarding women in the board and firm performance, especially within the context of publicly listed companies.

The relationship between board diversity and firm's performance continues to be heavily studied amid the conflicting empirical evidence and theoretical disagreement documented in the corporate governance literature. Thus far, most of the existing literature is based on the advance market, and little is known about the board diversity performance from developing markets. Furthermore, much research was conducted extensively on publicly listed companies. It is very rare to find a research investigating the role of board diversity on private companies. Comparatively, public companies and private companies could offer a different snapshot of the relationship between board diversity and firm performance. In other words, the relative benefits and costs for publicly listed firms may

not necessarily be at the same magnitude with private companies. Building on these theoretical assumptions, this research aims to empirically examine the role of gender diversity and ethnic diversity on private companies' performance in a developing country like Malaysia.

Unlike public listed companies or state-owned companies, private companies are seldom investigated in prior research. This is surprising considering the role of private companies to country economy. Studies such as Frydman, Gray, Hessel, and Rapaczynski (1999) and McCahery and Vermeulen (2010) have shown that private companies are one of the economy pillars for a country to boost the economic growth or reduce poverty.

Malaysia is no exception for this matter. Malaysia Department of Statistics reported in 2014 that there are more than 40,000 companies established in Malaysia every year. Interestingly, these private companies trading contributed up to 135% of GDP for trading in 2014. Meanwhile, 26% of services in Malaysia were from private companies' contribution. This is not to mention that more than 60% of Malaysia employment and middle class wealth are delivered by the private companies. Yet, a research empirically investigating the determinants of Malaysian private companies' performance in corporate governance perspective can rarely be found.

Malaysia also offers unique characteristics in terms of boardroom. The Malaysian population consists of three major ethnic groups which are Malays, Chinese, and Indians. In 2010, Malays make up 67.4%, Chinese were 24.6%, and Indians were 7.3% of the population. The national economic plan pursues that more Malays should participate in Malaysian companies. The objective is straightforward: equality. Yet, by far, this ethnic diversity in the board is not as the Malaysian government expected.

Additionally, the participation of women in companies is still low in Malaysia. Table 1 shows that only 6% of board members in financial institution are women, and only around 8% participated as directors on 100 largest domestic companies. Considering previous research such as those of Smith, Smith, and Verner (2006) and Adams and Ferreira (2009), where women participation in the board of directors may lead to better performance, it is interesting to investigate further the role of gender diversity on private companies' performance.

Table 1.	Indicators of	of Female	Board	Membership	in Malaysia

Type of corporate entity	Percentage of women in the board
Financial institutions	6
Insurance firms	7
100 largest domestic companies	7.8
Companies listed on Bursa Malaysia	7.6
Government-linked companies (GLC)	8.8

Source: Azmi and Barrett (2014).

Our first objective is to investigate the impact of gender diversity on the performance of Malaysian private companies. Our second objective is to test whether ethnic diversity in the boardroom affects the performance of companies. Third, we aim to investigate the determinant of private company's performance from the view of firm's characteristics.

In a nutshell, this research replicates prior method of board diversity performance in publicly listed companies. But we have to modify it to a new empirical context and modify the measurement due to limited data disclosure of private companies. We also follow previously established studies by controlling the firm's characteristics in the estimation model. Note that this research focuses on three aspects: gender diversity, ethnic diversity, and the performance of private companies. Gaining a better understanding of private companies and their opportunities to induce their performance becomes critical to researchers and the government. Furthermore, the board diversity characteristic in Malaysia may offer a different perspective to academia. Without the performance of private companies, Malaysian may face high turbulence.

This study's contribution is threefold. First, our research may give a new insight about private company's performance in developing country such as Malaysia. Second, we add to the literature by extending the understanding of this research area of private companies. Lastly, we document the empirical findings of board diversity effects on private company's performance in Malaysia.

The rest of this research is outlined as follows: Section 2 reviews the prior literature in this topic. Section 3 describes the methodology that are used in testing the relationship. Section 4 describes the empirical results and discusses the significance of the results. Lastly, section 5 concludes the research.

Literature Review

Despite the abundance of literature on the board diversity–performance link, there is little agreement on whether the board diversity has a positive, negative, or no relationship with firm performance. Those findings were also mostly conducted in developed countries such as the US or European countries, and only later extended to some emerging countries. Interestingly, based on our knowledge, there is little evidence on the relationship between board diversity and performance in the context of private companies. Due to the rare findings of private companies, we review the findings on publicly listed companies.

The lack of board diversity can be explained through socio-anthropological aspect. For example, Singh (2007) conceptualized the identities of women and built a framework to explain the position of women in male-dominated world. The framework showed that feminism may fail because women are generalized as second class in economic development. Singh argued that having diverse gender in the board and also various ethnic minorities are often cited as being valuable for voicing different concerns than those of traditional directors and reflecting the constituencies the company needs to address.

The significance of board diversity was investigated extensively to prove whether it is true that board diversity plays significant role on firm performance. These empirical findings, to date, do not have consensus. For instance, Carter, Simkins, and Simpson (2003), Adams and Ferreira (2009), and Carter, D'Souza, Simkins, and Simpson (2010) found that there is positive relationship between females in board of directors and firm performance. However, Farrell and Hersch (2005), and Marinova, Plantenga, and Remery (2016) found that there is no significant association between percentage of female in the board

of directors and firm performance. Gavious, Segev, and Yosef (2012) found that there is negative relationship between female in the board and firm performance in the high-technologic firms. Bathula (2008) found a positive and significant relationship between gender diversity and firm performance in New Zealand.

Adams and Ferreira (2009) stated that women in the board attend board meetings more regularly than men, and are good in monitoring firm's performance. This may lead to a better firm's performance. Meanwhile, Erhardt, Segev, and Yosef (2003) used 127 United States large companies from year 1993 to 1998, and found that higher percentage of women in the board is associated with superior financial performance. Similarly, Carter et al. (2003) also concluded that greater board diversity bring benefit to the firm. Women directors have more tendencies to inquiry about firm's performance that male directors would not ask. In addition, Dezsö and Ross (2012) argued that women directors bring social diversity benefit and information to management that enhance managerial task performance, therefore increasing the financial performance. They also found that women in the board increased the firm performance but only for firms that are focused on innovation. Yet, there are also empirical findings showing that gender diversity has no relationship or negative relationship to firm's performance (Rose, 2007; Van der Walt & Ingley, 2003).

It is noteworthy that it is rare to find a relationship between women in the board and performance in developing market context. So far, Abdullah, Ismail, and Nachum's (2013) study is one of the limited works in this area. They found a positive and significant relationship between the female directors and Malaysian firms' accounting performance as measured by ROA. They attributed this to women's distinctive managerial style. There is also Brahmana and Chen (2016) who tested the role of women in the board in Malaysian listed companies. They found that the higher number of women in the board, the better are the performance of the firms. This implies that women in the board plays a significant role on Malaysian firm performance. Hence, we hypothesize that there is significant role of women in the board and firm performance.

In terms of board diversity, most of the empirical literature tend to focus on one particular aspect of the board diversity, most commonly and most generally is the incidence of women in the board (e.g. Burgess & Tharenou, 2002; Daily & Dalton, 2003; Harrigan, 1981). For the board diversity (race diversity), Cox and Blake (1991) and Robinson and Dechant (1997) have the seminal papers in this research topic. Those papers provided good summaries of the conceptual case for board diversity in the corporate world. The postulation of those papers is that board diversity may give a long term and short financial value in several ways; one of it is the good vibe of the working place.

The empirical findings are documented by Carter et al. (2003). They examined the relationship between board diversity and firm value for Fortune 1000 firms. Board diversity is defined as the percentage of women, African Americans, Asians, and Hispanics in the board of directors. They surmised a positive relationship between board diversity and firm performance. They also found that the proportion of women and minorities in the boards increases with firm size and board size. but decreases as the number of insiders increases. There is also the study of Keys, Ellis, Newsome, and Friday (2002) who compared Fortune listed firm and tested the diversity role on the performance. They also found that the more diverse a company, the better is the performance. Therefore, we hypothesize that there is a significant relationship between board diversity and firm performance.

Methodology

Estimation Model

There are four models in this research: Baseline Model, Gender Model, Ethnic Model, and Full Model. The estimation model follows the generally accepted model of performance in finance literature (see Rose, 2007; Lückerath-Rovers, 2013; and Dwyer, Richard, & Chadwick, 2003), where it takes returns on assets (ROA) as the proxy of performance. Note that we choose ROA because of three reasons. First, ROA is so far the most accepted measurement of performance because it measures the profitability of companies. Second, the scope of study is private companies. This means there will be no market value which is important to calculate other performance measurements such as replacement cost and Tobin's Q. Lastly, studies have shown that private companies rely more on asset to induce their going concern

issue, hence, calculating the ratio of net income to total assets is more suitable to private companies' case.

In the performance model, it usually has several control variables to make the estimation model more robust. This baseline model consists of age, size, liquidity, and leverage. It is noteworthy that two other commonly used in performance model—growth opportunity and market sensitivity—cannot be used due to the limitation of data. Those two variables need capital expenditure and market value, where it is not provided in private companies.

The control variables such as age, size, liquidity, and leverage are conceptualized based on prior studies in corporate finance. For instance, Fauver, Houston, and Naranjo (2002) used size to control the estimation of diversification performance. They used the logarithm of total assets as the measurement. There are also the studies of Carter et al. (2003) and Brahmana and Chen (2016) which used age and size to control the model of women on the board–performance link. In terms of leverage, we follow the measure of Miller and Rock (1985) and Cho and Pucik (2005). They used debt ratio as the measurement of leverage. Meanwhile, this research follows Hitt and Brynjolfsson (1996) in measuring liquidity, which is the ratio of current assets to current liabilities.

Therefore, we build the mathematical function of firm performance based on those prior research papers. The function is as follows:

To estimate the model empirically, we pooled all the sample firms and estimate the following regression model:

$$ROA_{i,t} = \beta_0 + \beta_1 AGE_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 LIQUID_{i,t} + \beta_4 DEBT_{i,t} + \varepsilon_i$$
(1)

The symbols i and t are the firm and time dimensions of the data; ROA has been defined in the previous section, that is, the ratio of net income to total assets. AGE is used to represent the firm's age, where it is calculated by using the logarithmic function of the establishing years of the firms. The SIZE denotes the firm's size, which is the logarithmic function of firm's total assets. LIQUID acts as the measure of liquidity,

and ratio of current assets to current debt is taken as the proxy for the firm's liquidity. DEBT means the leverage of the firm's, and ratio of total debt to total assets is employed as the proxy.

According to the previous section, it is important to investigate the role of board diversity on private company's performance. Hence, we introduce two variables which are gender diversity (GENDER) and ethnic diversity (ETHNIC). The function is as follows:

$$Performance = f(gender, ethnic, age, size, age, size, liquidity, debt)$$
 (2)

Therefore, the estimation model is as follow:

$$ROA_{i,t} = \beta_0 + \beta_1 GENDER_{i,t} + \beta_2 ETHNIC_{i,t} + \beta_3 AGE_{i,t}$$

$$+ \beta_1 GENDER_{i,t} + \beta_2 ETHNIC_{i,t} + \beta_3 AGE_{i,t} + \beta_4 SIZE_{i,t}$$

$$+ \beta_5 LIQUID_{i,t} + \beta_6 DEBT_{i,t} + \varepsilon_{i,t}$$
(3)

Gender is measured by the percentage of women on board divided by the total number of directors sitting on the board. The corporate governance studies that used percentage of women on board to represent the board gender diversity were Rose (2007) and Erhardt et al. (2003). Meanwhile, ethnic diversity is measured by the number of Malays on boardroom. This follows the prior research of Carter et al. (2010) and Brammer, Millington, and Pavelin (2007).

Data and Sample

This study focuses on the private firms' performance in Malaysia. Data is collected through Syarikat Suruhanjaya Malaysia (SSM). The sample which was examined contains 3,735 private companies. The time period that is examined in this study is 2010–2014. Note that we run the diagnostic test before employing the panel model. The model runs the normality test, ViF test of multicollinearity, Wooldridge test of serial correlation, Wald Test of heteroscedasticity, Breusch Pagan LM test of panel regression, and Hausman Test. We found that the model has issue on heteroscedasticity by using the second method, which is controlling the standard error. This is done in STATA

by using white-test robust White standard errors. The Breusch Pagan LM and Hausman test showed that we have to run our data in Fixed Effect model.

Estimation Result and Discussion

This research aims to investigate the gender and ethnic diversity among Malaysia private companies. This section covers empirical results of this study including descriptive results of all data collected, findings, and discussion. This section starts with interpretation and analysis of the empirical results from 3,735 Malaysian private companies. The descriptive results show the statistics regarding maximum, minimum, mean, and standard deviation of the sample data set. This is followed by findings and discussions.

Descriptive Results

Table 3. Board-Level Ethnic and Gender Diversity (3,735 firms)

	Female	Male
Malays	10.58%	15.04%
Non-Malays	89.42%	84.96%

Table 3 shows the Board-level ethnic and gender diversity for 3,735 private companies in Malaysia. The female Malays represent 10.58%, therefore Non-Malay females reache 89.42%. The male Malays constitute 15.04%. However, Non-Malay males are 84.96%.

Table 4 represents the result of descriptive analysis for independent variables (ethnic diversity, assets, debt, and revenue) for the research. The summary statistics shown in Table 4 reveals the minimum value,

mean, maximum value, and standard deviation of the independent variables. All determinants variables are represented in ratio.

Baseline Model (Model 1)

Based on the GLS regression results shown in Table 5, the baseline model for this study can be written as following:

$$ROA = -0.331 + 0.102 Age - 0.487 Debt + 0.293 Liquidity - 0.358 Size$$

Table 5 shows the result of the multiple regression analysis. The findings for firm age show a positive significant relationship with company performance when measured with ROA. This positive relationship means that a longer activities history increases the return on asset as a result of decreased expenses. This result is in line with the findings of Loderer and Waelchli (2010) that showed a significant relation between firm age and firm performance.

The debt also shows negative association with firm's performance. This means that the more debt the firm has taken, the lesser is the firm performance. It is consistent with Fosberg and Ghosh (2006), Zeitun and Tian (2007), and Črnigoj and Mramor (2009) wherein they found statistical significance and negative association between debt and corporate performance.

Liquidity has a positive significant relationship with company performance. It has a coefficient value of 0.293 and significant at 1% level. This result is consistent with Lee, Hooy, and Hooy (2012), and Almazari (2014) that also found a positive relationship between liquidity and firm performance. This implied that the firms are able to transform the obligation into operational assets, and this short term leveraging increases the performance of companies.

Table 4. Descriptive Analysis

Variable	Max	Min	Mean	Std Dev
Malays on Board	1.00	-	0.27	0.37
Age	57.00	2.00	10.83	7.07
Gender	100%	0.00%	43.45%	0.26
Assets	103,266,380,100.00	25,555.00	35,066,815.60	1,692,616,357.02
Debt	27,729,122,000.00	-	12,698,150.87	42,761,297.70
Revenue	18,701,941,000.00	(49,348,989.00)	5,639,196.83	315,106,067.76

	Multiple Regression Estimation Model (ROA Model)				
	Baseline Model	Gender Model	Malays Model	Full Model	
	(Model 1)	(Model 2)	(Model 3)	(Model 4)	
Intercept	-0.331	-0.335	-0.348	-0.314	
	(0.150)	(0.199)	(0.129)	(0.201)	
Gender		-0.022		-0.05	
		(0.857)		(0.690)	
Race			-0.251***	-0.254***	
			(0.004)	(0.004)	
Age	0.102*	0.101*	0.092*	0.091	
	(0.069)	(0.070)	(0.099)	(0.102)	
Debt	-0.487***	-0.487***	-0.486***	-0.487***	
	(0.000)	(0.000)	(0.000)	(0.000)	
Liquidity	0.293***	0.293***	0.297***	0.297***	
	(0.000)	(0.000)	(0.000)	(0.000)	
Size	-0.358***	-0.359***	-0.341***	-0.342***	
	(0.000)	(0.000)	(0.000)	(0.000)	
Observation	18,675	18,675	18,675	18,675	
R2	0.197	0.197	0.200	0.219	
Adjusted R2	0.195	0.194	0.198	0.208	

Table 5. Baseline Model, Gender Model, Ethnic Model, and Full Model

52.213***

(0.000)

For the baseline model, Gender model, Malays model and Full model regression. The level of significance are denoted using the asterisk symbol with *, **, and *** which are equivalent to 10%, 5%, and 1% level of significance respectively. The figures stated represent the coefficient values of the variables. On the other hand, the values in the parentheses stand for the values of the p-value.

41.756***

(0.000)

The findings for the Size indicate a negative significant relationship with firm performance. The implication of the negative relationship between firm sizes is that firms cannot improve their financial performance because it would increase financial commitment on the part of the company, and reach the diminishing point of company's performance. Therefore, firm size has negative significant relationship with company performance. This finding is consistent with Lee et al. (2012) and Rodriguez-Fernández (2015) who discovered that there is a negative relationship between firm size and financial performance.

F-Statistics

Examining the model, the proportion of variation of the variables in predicting ROA is good enough, where the adjusted R- square is .195, which explains the explanatory firm characteristics on company

performance. The statistical analysis also indicates that the model is significant as evidence by F statistics of 52.213 at p < 0.01 for ROA.

36.322***

(0.000)

Gender Model (Model 2)

43.573***

(0.000)

Based on the panel regression results shown in Table 5 about the estimated gender model, this study can be written as following:

$$ROA = -0.315 + 0.101Age - 0.487Debt + 0.293Liquidity - 0.359Size - 0.022Gender$$

There is a negative but no significant relationship between the gender and the firm performance. The negative sign of 0.022 indicates an inverse relationship

between gender diversity and firm performance. It also shows the magnitude of gender diversity on firm performance, which is small as the coefficient value is only -0.022. Yet, this gender diversity would not cause any significant effect on firm performance. This finding is consistent with Gavious et al. (2012).

The coefficient values for the all firm characteristic variables in Model 2 are about the same with Model 1. Age is found to have significant contribution to firm performance at 10% significance level. Meanwhile, debt, liquidity, and size have significant contribution to firm's performance at 1% significance level. The coefficient values are -0.487, 0.293, and -0.359 for debt, liquidity, and size, respectively. The addition of gender diversity into the baseline model only slightly decreases the coefficient values of the variables in baseline model.

Examining the model, the proportion of variation of the variables and adjusted R-square in predicting ROA in Gender model is the same as Baseline model which explains the explanatory firm characteristics on company performance. The statistical analysis also indicates that the model is significant as evidenced by F statistics of 41.756 at p < 0.01 for ROA.

Ethnic Diversity Model (Model 3)

Based on the GLS regression results shown in Table 5 about the estimated ethnic model for this study can be written as following:

$$ROA = -0.348 + 0.092 Age - 0.486 Debt + 0.297 Liquidity - 0.341 Size - 0.251 Ethnic$$

The model shows that ethnic diversity has negative effect on firm's performance where the coefficient value is -0.251. This ethnic diversity also has a significant contribution to firm performance at 1% significance level. This means that the more diverse the boardroom in private companies, the lesser is the firm performance. This is also in line with the finding of Miliken and Martins (1996), Townsend and Scott (2001), and Umans, Collin, and Tagesson (2008) where race has negative effects on individual and group outcomes in certain instances. They found that differences in team member's attitudes and values cause the negative effect between ethnic diversity and firm performance.

The firm's characteristics variables share the same conclusion with the results of Model 1 and Model 2.

Those variables have significant contribution to firm performance. Adding ethnic variable (proxy by number of Malays on board) into the baseline model only slightly increases or decreases the coefficient values of the variables in baseline model. The coefficient values are 0.092, -0.486, 0.297, and -0.341 for age, debt, liquidity, and size, respectively.

The proportion of variation of the variables and adjusted R-square in predicting ROA in Ethnic model is not much different with Baseline model, and this means that the explanation of firm characteristics on company performance is good enough. The statistical analysis also indicates that the model is significant as evidenced by F statistics of 43.573 at p < 0.01 for ROA.

Full Model (Model 4)

Model 4 is the full model and also the main model of this research. Our panel GLS regression estimates the full model as follow:

$$ROA = -0.314 + 0.091Age - 0.487Debt$$

 $+0.297Liquidity - 0.342Size$
 $-0.050Gender - 0.254Ethnic$

Overall, the results have similar conclusion with other models. For instance, the firm's characteristics still have significant effects on firm performance. Age, debt, liquidity, and size have coefficient values of 0.091, -0.487, 0.297, and -0.342 respectively. The gender diversity again shows no significant contribution on firm performance. The coefficient value gender diversity is 0.05 which doubled compared to the result of Model 2. Meanwhile, ethnic diversity has significant contribution on firm performance. It is significant at 1% level with coefficient value of -0.254. This result is in line with Model 3 result.

In sum, Model 4 implies three important findings. First, age and liquidity are the main drivers of private company's performance. The longer the establishment of private companies, the better is their firm performance. The same goes with liquidity. Private firm that has efficient short run asset and short run debt management may induce their performance. Meanwhile, debt and size are discounted factors for private company's performance. The higher the debt, private companies may face lower performance. Size also gives the same effect like debt. There is no warranty if bigger private companies may earn better

performance. This may be due to the optimal return in business life cycle.

In terms of board diversity, gender diversity may not lead to firm performance. Adding or reducing number of women on board will not give any impact to private companies in Malaysia. Meanwhile, ethnic diversity shows inverse relationship implying that the more diverse the boardroom, the lesser is the firm performance. The explanation may be due to most private companies are family firms. Having a "stranger" on the board will give more havoc instead of better management. Therefore, higher diversity in the boardroom will reduce the performance.

Robustness Test: Diversified Board with Categorical Treatment

We further investigate the role of board diversity by treating it as categorical data. Previously, board diversity is measured by a continuous data of percentage number of Malay on the board. For robustness reason, we treat the data differently by a board diversified company or not. We give 1 if the board consists of more than one race, and 0 otherwise. Table 6 depicts the results.

First, the R-square is only 0.067, meaning that the model has lower R2 compared to the earlier model. Yet, the model is fit and robust enough as the F test shows the significant results at 1% level.

Meanwhile, the control variables have the same conclusion, where all of it has significant contribution to firm's performance. For instance, age of firm significantly affects the coefficient value of 0.017 and significant at 10% level. The leverage of the firm contributes -0.049 and significant at 5% level. Liquidity has significant effects on firm performance with the coefficient value of 0.093 and significant at 1% level. Lastly, the size of the firm significantly influences the firm performance with the magnitude of -0.134 at 5% level. This means that the results shown in Table 6 conclude the same findings in Table 5.

Table 6 depicts the same conclusion for gender and board diversity variable. It shows that the women-on-board still does not have any significant effect on firm performance. The coefficient value sign is the same with the results in Table 5 which is negative. This strengthens our earlier conclusion that there is no significant effect of number of women in the board on the private company's performance.

Table 6. Robustness Check

k k
k
k
k
k
*

The level of significance are denoted using the asterisk symbol with *, **, and *** which are equivalent to 10%, 5%, and 1% level of significance respectively. The figures stated represent the coefficient values of the variables. On the other hand, the values in the parentheses stand for the values of the p-value.

Further, the robustness check shows that board diversity still has negative impact on private company's performance. The coefficient value is -0.013 and it is significant at 1% level. The result tells us that having diverse board might reduce the performance of private companies, which is the same conclusion with Table 5.

Conclusion

Our study addresses the phenomenon of recentyear surge in the board diversity efforts engaged by Malaysian government for the firms. Our study is mainly motivated by the lack of attention given to the link between board diversity and performance, specifically for the private companies. Furthermore, literature rarely investigates these deserving emerging countries despite the steady growth of board diversity

taken by firms from their countries. This paper by all means lays the foundations for any further research in this topic on private companies, especially with developing countries context.

This paper follows and then adopts the seminal papers in performance of board diversity topic which are: Goodstein, Gautam, and Boeker (1994) and Brammer et al. (2007). The model is modified by following the previous papers of Erhardt et al. (2003), Alesina and La Fereara (2005), Campbell and Minguez-Vera (2008), Fracoeur et al (2008) that modified those two mentioned papers too. This study shows that gender has no significant relationship with firm performance; yet, board ethnic diversity has significant effect on performance. Our results bring implications about certain conceptualized frameworks and empirical evidence found in the listed companies, which may not necessarily apply to the private companies within the context of this research area. Furthermore, results in developed countries may also not necessarily give the same conclusion with the developing countries such as Malaysia. Another contributing aspect of our study is that we used panel data approach that allows for assessing changes in board diversity over time albeit no significant changes in both the diversity levels over time, and thus giving more reliable estimates.

However, all our findings need to be validated by further research on other developing countries in order to verify some facts about certain common characteristics embedded in developing countries as compared to developed countries.

The focus of this study has been to examine performance of gender diversity and ethnic diversity on Malaysian private companies. Based on some common characteristics for emerging markets, particularly for the East Asian countries, a few extensions can be further built upon this analysis. Firstly, more in-depth insights can be gained through an examination of the role of ownership on the link between board diversity and firm performance. Secondly, some internal corporate governance attributes such as board structure, roles of family, and board duality can be interesting extension of study for this analysis.

Acknowledgment

This research gratefully acknowledges the support from Universiti Malaysia Sarawak via the Small Grant Scheme no. F01(S152)/1133/2014(17).

References

- Abdullah, S. N., Ismail, K. N. I., & Nachum, L. (2013). Women on boards of Malaysian firms: Impact on market and accounting performance. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2145007
- 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.
- Alesina, A., & La Ferrara, E. (2005). Ethnic diversity and economic performance. *Journal of Economic Literature*, 43(3), 762–800.
- Almazari, A. A. (2014). Impact of internal factors on bank profitability: Comparative study between Saudi Arabia and Jordan. *Journal of Applied Finance and Banking*, *4*(1), 125–140
- Azmi, I. A. G., & Barrett, M. A. (2014). Women on boards and firm performance in Malaysia: Preparing to open the black box. *International Proceedings of Economics Development and Research*, 76, 51–55.
- Bathula, H. (2008). Board characteristics and firm performance: Evidence from New Zealand (Unpublished doctoral dissertation). Auckland University of Technology, New Zealand.
- Brahmana, R., & Chen, S. N. (2016). The role of women directors for Malaysian firms' performance. In Mahtab, N., Parker, S., Kabir, F., Haque, T., Sabur, A., and Sowad, A.S.M (Eds.), *Revealing gender equalities and perceptions in South Asian countries through discourse analysis* (pp. 121–136). Hershey, PA: IGI Global.
- Brammer, S., Millington, A., & Pavelin, S. (2007). Gender and ethnic diversity among UK corporate boards. *Corporate Governance: An International Review*, *15*(2), 393–403.
- Burgess, Z., & Tharenou, P. (2002). Women Board Directors: Characteristics of the few. *Journal of Business Ethics*, *37*, 39–49.
- Campbell, K., & Mínguez-Vera, A. (2008). Gender diversity in the boardroom and firm financial performance. *Journal of Business Ethics*, 83(3), 435–451.
- Carter, D. A., Simkins, B. J., & Simpson, W. G. (2003). Corporate governance, board diversity & firm value. *The Financial Review*, *38*, 33–53.
- Carter, D. A., D'Souza, F., Simkins, B. J., & Simpson, W. G. (2010). The gender and ethnic diversity of US boards and board committees and firm financial performance. *Corporate Governance: An International Review, 18*(5), 396–414.
- Cho, H. J., & Pucik, V. (2005). Relationship between innovativeness, quality, growth, profitability, and market value. *Strategic Management Journal*, 26, 555–575.

- Cox, T. H., & Blake, S. (1991). Managing cultural diversity: Implications for organizational competitiveness. *The Executive*, 5(3), 45–56.
- Črnigoj, M., & Mramor, D. (2009). Determinants of capital structure in emerging European economies: Evidence from Slovenian firms. *Emerging Markets Finance and Trade*, 45(1), 72–89.
- Daily, C. M., & Dalton, D. R. (2003). Women in the boardroom: A business imperative. *Journal of Business Strategy*, 24(5), 8–10.
- Dezsö, C. L., & Ross, D. G. (2012). Does female representation in top management improve firm performance? A panel data investigation. *Strategic Management Journal*, 33(9), 1072–1089.
- Dwyer, S., Richard, O. C., & Chadwick, K. (2003). Gender diversity in management and firm performance: The influence of growth orientation and organizational culture. *Journal of Business Research*, 56(12), 1009– 1019.
- 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.
- Farrell, K. A., & Hersch, P. L. (2005). Additions to corporate boards: The effect of gender. *Journal of Corporate Finance*, 11,85–106.
- Fauver, L., Houston, J. F., & Naranjo, A. (2002). Cross-country evidence on the value of corporate industrial and international diversification. *Journal of Corporate Finance*, 10(5), 1–32.
- Fosberg, R. H., & Ghosh, A. (2006). Profitability and capital structure of Amex and NYSE Firms. *Journal of Business & Economics Research*, 11, 57–64.
- Francoeur, C., Labelle, R., & Sinclair-Desgagné, B. (2008). Gender diversity in corporate governance and top management. *Journal of Business Ethics*, 81(1), 83–95
- Frydman, R., Gray, C., Hessel, M., & Rapaczynski, A. (1999). When does privatization work? The impact of private ownership on corporate performance in the transition economies. *Quarterly Journal of Economics*, 114, 1153–1191.
- Gavious, I., Segev, E., & Yosef, R. (2012). Female directors and earnings management in high-technology firms. *Pacific Accounting Review*, 24(1), 4–32.
- Goodstein, J., Gautam, K., & Boeker, W. (1994). The effects of board size and diversity on strategic change. *Strategic Management Journal*, *15*(3), 241–250.
- Harrigan, K. R. (1981). Numbers and positions of omen Elected to Corporate Boards. *Academy of Management Journal*, 24, 619–625.
- Hitt, L. M. & Brynjolfsson, E. (1996). Productivity, Business Profitability, and Consumer Surplus: Three different measures of information technology value. *Information Technology Value*, 20, 121–142.

- Keys, P. Y., Ellis, K. M., Newsome, P. T., & Friday, S. (2002). Shareholder benefits of diversity. *Journal of Accounting and Economics*, *33*, 375–400.
- Lee, K. T., Hooy, C. W., & Hooy, G. K. (2012). The value impact of international and industrial diversifications on public-listed firms in Malaysia. *Emerging Markets Review*, *13*(3), 366–380.
- Loderer, C. F., & Waelchli, U. (2010). Firm age and performance. Retrieved from https://papers.ssrn.com/sol3/Papers.cfm?abstract id=1342248
- Lückerath-Rovers, M. (2013). Women on boards and firm performance. *Journal of Management & Governance*, 17(2), 491–509.
- MacAvoy, P. W., & Millstein, I. M. (1999). The active board of directors and its effect on the performance of the large publicly traded corporation. *Journal of Applied Corporate Finance*, 11(4), 8–20.
- Marinova, J., Plantenga, J., & Remery, C. (2016). Gender diversity and firm performance: evidence from Dutch and Danish boardrooms. *The International Journal of Human Resource Management*, 27(15), 1777–1790.
- McCahery, J. A., & Vermeulen, E. P. (2010). Corporate governance of non-listed companies. Oxford University Press.
- Miller, M. H., & Rock, K. (1985). Dividend policy under asymmetric information. *Journal of Finance*, 40(4), 1031–1051.
- Milliken, F. J., & Martins, L. L. (1996). Searching for common threads: Understanding the multiple effects of diversity in organizational groups. Academy of Management Review, 21(2), 402–433.
- Robinson, G., & Dechant, K. (1997). Building a business case for diversity. *The Academy of Management Executive*, 11(3), 21–31.
- Rodriguez-Fernandez, M. (2015). Company financial performance: Does board size matter? Case of the EUROSTOXX50 index. *Cuadernos de Gestión*, 15(2), 15–38.
- Rose, C. (2007). Does female board representation influence firm performance? The Danish evidence. *Corporate Governance: An International Review*, 15(2), 404–413.
- Shrader, C. B., Blackburn, V. B., & Iles, P. (1997). Women in management and firm financial performance: An exploratory study. *Journal of Managerial Issues*, 9(3), 355–372.
- Singh, S. (2007). Deconstructing 'gender and development' for 'identities of women'. *International Journal of Social Welfare*, 16(2), 100–109.
- Smith, N., Smith, V., & Verner, M. (2006). Do women in top management affect firm performance? A panel study of 2,500 Danish firms. *International Journal of Productivity and Performance Management*, 55(7), 569–593.

Townsend, A. M., & Scott, K. D. (2001). Team racial composition, member attitudes, and performance: A field study. *Industrial Relations*, 40, 317–337.

- Umans, T., Collin, S., & Tagesson, T. (2008). Ethnic and gender diversity, process and performance in groups of business students in Sweden. *Intercultural Education*, 19, 243–254.
- van der Walt, N., & Ingley, C. (2003). Board dynamics and the influence of professional background, gender and ethnic diversity of directors. *Corporate Governance: An International Review, 11*, 218–234.
- Zahra, S. A., & Stanton, W. W. (1988). The implications of board of director's composition for corporate strategy and performance. *International Journal of Management*, *5*(2), 229–236.
- Zeitun, R., & Tian, G. G. (2007). Capital structure and corporate performance: Evidence from Jordan. *Australasian Accounting, Business and Finance Journal, 1*(4). Retrieved from: http://ro.uow.edu.au/aabfj/vol1/iss4/3