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Effect of Board Diversity on Firm Performance: Evidence from Malaysian non-Financial Listed Companies

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Abstract:

The purpose of this paper is to investigate the impact of board diversity on firms' performance for non-financial companies.

The paper statistically calculates the relationship between board diversity and performance for the period 2017-2020 using the perspectives of different theories and data collected on board composition in the 100 largest non-financial companies listed on Bursa Malaysia.

The results showed that gender diversity was significantly and positively associated with Tobins'Q and ROA. BD_QUAL also had a strong negative correlation with Tobins'Q and ROA. The results also showed that AGE_CEO was significantly and positively associated with Tobins'Q and was not significantly associated with ROA.

Keywords: Firm performance; Board diversity; Gender diversity; Education board members; CEO age.

(JEL) Classification: J16، M14.

1. Introduction:

The documentation of corporate scandals involving well-known US companies like Enron, Tyco, and WorldCom has sparked a contentious discussion about corporate governance. Many criticisms have been made about the Board of Directors negligence in exercising careful oversight over management decisions (Al-Matari et al. 2012).

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Later, the impact of the 1997 Asian financial crisis and the current 2008 global financial crisis highlighted the necessity of best governance practices to enhance firm performance over the long term (Mohamad Mokhtar et al. 2009). Consequently, an emerging trend in the workplace to support good corporate governance is the increasing diversity in board composition (Al-Matari et al. 2012; Ararat et al. 2015; Ciftci et al. 2019).

The majority of earlier research on board diversity and company performance focused on developed economies (Rutledge et al. 2016). Recent studies (Adams & Ferreira 2009; Darmadi 2010) that concentrate on developing nations highlight a variety of issues, including women's participation in the board, government ownership, and external boards.

1.1. Research Problematic

Due to numerous board demographic factors, including race, religion, culture, gender, and a variety of other factors, studies on businesses in Malaysia show conflicting results between board diversity and firm performance (Alazzani, Hassanein & Aljanadi 2017; Abdullah 2014; Abdul Wahab, Pitchay & Ali 2015; Bliss, Muniandy & Abdul Majid 2007; Ismail, & Nachum 2013). The results are mixed as a result of many factors including various nations, the period of the studies, and methodological approaches. The problem of this study:

What is the impact of the diversity of the board of directors on the corporate performance of the non-financial companies listed on the Malaysia Stock Exchange?

The following questions related to corporate governance mechanisms are addressed to understand the impact of corporate governance on company performance:

1- Does the gender diversity of board members affect the performance of non-financial companies listed in Malaysia?

2- Does the age of the CEO affect the performance of non-financial companies listed in Malaysia?

3- Does the education of board members affect the performance of non-financial companies listed in Malaysia?

1.2. Research Aims

In general, the aim of this paper is to investigate the impact of board diversity on corporate performance for non-financial firms.

This study aims to determine how gender diversity and the education of board members affect company performance, in addition to examining the relationship between the success of the performance of non-financial companies in Malaysia with the age of the CEO.

1.3. The Importance of the Research:

The fact that this study focuses on a developing economy, which has distinct economic, legal, and cultural contexts from those of Western economies, where the majority of earlier studies have been undertaken, this study adds to the body of knowledge on corporate governance.

1.4. Search Plan

The rest of this article is organized as follows. Section 1 examines the research introduction, including a literature review of previous research on the impact of board diversity on company performance, the research problem and sub-questions, as well as research objectives, and a study plan. We touch on theories relevant to the study, and formulate hypotheses in Section 2. Section 3 follows, in which how the study data and methodology are used are explained. Experimental results are presented in Section 4 along with a discussion, and concluding remarks are presented in Section 5.

2. Literature review

2.1 Theoretical/Academic Implications

The results of the search show a diverse range of ideas from many academic fields that are being used to create, develop, and improve theorizing about board diversity and the associated meanings, mechanisms, and processes.

2.1.1 Agency Theory

The board of directors also plays a key role in overseeing and reining in managers and resolving agency issues (Arslan et al., 2010). increase (Reguera-Alvarado et al., 2015) One of the key ideas to explain the beneficial effects of board gender diversity on corporate performance is agency theory.

Gender diversity is one of the most crucial corporate governance strategies for businesses from the perspective of agency theory (Gallego-Alvarez et al., 2010). As a result, having a gender-diverse board can help to cut the expenditures associated with agency issues (Reguera-Alvarado et al., 2015).

2.1.2 Theory of resource dependence

Organizations often function in an open system and must exchange and acquire resources to live, which leads to a dependency between businesses and outside entities (Pfeffer and Salancik, 1978).

To solve environmental dependencies, the resource dependence theory suggests that boards of directors connect their firms with other external organizations (Pfeffer and Salancik, 1978). In this setting, board diversity broadens the companies' networks, links, and channels of communication. (Hillman et al., 2000) increases the potential for financial access and enhances interactions with customers and competition (Reguera-Alvarado et al., 2015).

2.2. Demographic diversity approaches

Diversity is said to promote board independence because individuals from varied racial, ethnic, or cultural backgrounds may support a board that is more activist. However, it is also said that diversity decreases board effectiveness because diverse board members may become marginalized (Carter et al., 2003).

Concerns about enhancing board effectiveness have grown as a result of recent financial scandals, the high failure rate of businesses, and the 2008 financial crisis (Reguera-Alvarado et al., 2015). Because of this, a variety of research has taken a pluralistic stance, allowing leeway for the ideas presented below:

2.2.1 Gender diversity

One of the most crucial governance challenges is board gender diversity, which is also seen as a crucial component of sound corporate governance (Gallego-lvarez et al., 2010).

Concerns over ethics and the economy have dominated discussions about the gender composition of boards (Campbell and Mnguez-Vera, 2008) The ethical viewpoint contends that the underrepresentation of women in boardrooms constitutes discrimination.

As a result of the women's rights movement, more women are now in the workforce than ever before (Ali, Kulik, and Metz, 2011). This raises the question of how gender diversity inside a particular company influences its results. Recent research has often used one of two primary strategies. One contends that investors' and other external stakeholders' opinions of a company's worth may be impacted

by gender diversity as a signal to such parties (Dobbin and Jung 2011; Lee and James 2007; Smith and Gaughan 2016).

Numerous studies contend that gender diversity has a number of benefits for the reasons listed below. First, female board members are more likely to have cognitive tendencies emphasizing group harmony (Hurst et al., 1989), and the ability to efficiently disseminate knowledge (Earley and Mosakowski, 2000). Second, in contrast to male board members, female board members must overcome a variety of obstacles before serving on a board of directors. This causes them to develop differentiated human capital to deal with operational issues and provide helpful external resources that are acquired through prior experiences (Rose, 2007).

According to the agency theory, female directors, who are a relatively new group distinct from conventional male directors, may strengthen board independence and efficiently oversee management groups, reducing agency expenses (Song, H. J., et Al. 2020).

Contrarily, similar to general arguments on the costs of board diversity, experts contend that a higher level of gender diversity in a boardroom may intensify disagreements and cause delays in making strategic decisions[1] (Richard et al., 2003).

Accordingly, this study, which is based on the theoretical evidence for the benefits of gender diversity on boards, hypothesizes that these benefits outweigh the costs in non-financial industries, which will improve firm performance as follows:

H1: There is a positive relationship between the gender diversity of directors and firm performance of non-financial companies listed in Malaysia.

2.2.2 Education of board members

The competence of the managers to handle the resources given to them appears to be a key concern in contemporary organizations when the owners and managers are separated (Berle and Means, 1932).

A skilled CEO with a higher educational background adds value to the company's human capital (Amran, N. A.,2014). A higher educational background, such as a post-graduate degree, will increase the value of an individual's human capital (Phan & Hoon, 1995), or as having a higher cognitive ability, higher capacity for decision making, higher tolerance for ambiguity, and propensity or

receptivity to innovation, which will equip them with an effective solution to a complex decision-making task (Bantel & Jackson 1989).
Higher-educated top managers exhibit increased cognitive complexity and less conservatism in the information processing for the decision-making process, according to Hitt and Tyler (1991).

Based on the arguments, it is hypothesized that:
H2: There is a positive relationship between the education of directors and the performance of non-financial companies listed in Malaysia.

2.2.3 Chief Executive Officier Age/Chairman age and firm performance

Age diversity within a company can be used as a proxy for risk-taking behaviors and level of expertise, according to Herrmann and Datta (2005).
On the other hand, senior executive managers and board members have more work experience, management expertise, and a greater awareness of a variety of market situations than younger ones, which may lead to appropriate decision-making and initiatives (Reed and Defillippi, 1990).

Older executives also tend to be more risk-averse than younger executives, according to Brockmann and Simmonds (1997), who make the case that managerial success is positively connected with age (Carlsson & Karlsson, 1970).

Additionally, Louis T.W. Cheng et al. (2010) found that young employees are less likely to be interested in career stability and are less likely to be prepared to accept their current circumstances.

Consequently, youthful managers and board members are more likely to take chances with strategic changes since they anticipate seeing a rapid rise in business performance (Wiersema and Bantel, 1992).

An amalgam of young and old board members obtained by age diversity may therefore generate synergistic effects by actively collaborating while complementing each other's weaknesses. This is because the different strengths and weaknesses of each group on the board present separate implications in decision-making and strategic implementations (Song, H. J., et al, 2020).

A person must be at least 70 years old to be appointed as a director of a public company or a subsidiary of a public company, according to Malaysia's Companies Act of 1965. The CEOs of publicly traded firms must step down at least once every three years, but they are eligible for reelection (Amran, N. A.,2014). Based on the arguments, it is hypothesized that:

H3: There is a positive correlation between the performance of non-financial companies in Malaysia with an older Chairman /CEO performing better than a younger Chairman/CEO.

3. Research design

3.1 Sample data

The biggest obstacle in starting this study on the diversity of directors on Malaysian company boards was gathering the requisite data.

The study excludes the financial sector because the firms in this sector are governed by a different set of rules and regulations and that will make them incomparable to firms in other sectors (Abed, Al-Attar, & Suwaidan, 2012). Companies with missing data, either on DataStream or in annual reports, were also omitted, Furthermore, enterprises with fewer than four years of data observations per sample were eliminated.

Secondary data using annual reports, directors' files, and the Thomson database were used to study the corporate performance of non-financial companies listed on Bursa Malaysia from 2017-2020.

2017 was chosen because it is the year in which the MCCG review was reviewed. It is expected that the selection of the top 100 companies as a sample in this study will give a clear and comprehensive result. Because they are required to disclose compliance with the Corporate Governance Code in their financial reports, these organizations are assumed to have strict corporate governance standards.

3.2 Measurement

Dependent variables are quantified using two distinct components, one connected to the market-based performance measure of market ratio (Tobin's Q) and the other to the accounting-based performance measure of return on assets (ROA).

The independent variables in this analysis are Gender diversity, Chief Executive officer/Chairman age, and Education of board members.
Control factors include firm size, firm age, and leverage. The measurements of the dependent, independent, and covariate variables are shown in the table below:

Table (01): Measurement of variables

Name of Variable	Acronym	Measurement
Tobin's Q	Tobin's Q	the ratio of the market capitalization plus total debt divided by total asset of the

		company.
Return on Asset	ROA	Net income divided by book value of total assets.
Gender diversity	B_Gnd	Percentage of women directors to total directors
Education of board members	B_Edct	A percentage of the members of the Board of Directors who hold a bachelor's degree or above in accounting and/or finance (finance) is divided by the Board of Directors.
Chief Executive Officier/Chairman age	CEO/Ch_Age	Age the Chairman/Chief Executive Officer
Firm Size	F_SIZE	The logarithm of total assets
Firm Age	F_AGE	The number of years since the establishment of the company.
Leverage	LEV	Total debt to total assets

Source: Developed by Authors 2023

Because we are using panel data, we must consider both the individual represented by the sub-index j and the time point represented by t. Although it is not specified in the models for clarity, the error term e is decomposed into two parts: one that varies between individuals and periods (usually known as the combined effect), and another that is unique to each individual (i.e. the individual effect) and varies among individuals but remains constant over time.

As a result, the model for supervisory directors can be phrased as follows:

Model 1: Tobin's Q = $\beta 0 + \beta 1 *B\_Gnd + \beta 2 *B\_Edct + \beta 3 *CEO/Ch\_Ag + \beta 4*F\_SIZE + \beta 5 *F\_AGE + \beta 6*Lev + \varepsilon$

Model 2: ROA = $\beta 0 + \beta 1 *B\_Gnd + \beta 2 *B\_Edct + \beta 3 *CEO/Ch\_Ag + \beta 4*F\_SIZE + \beta 5 *F\_AGE + \beta 6*Lev + \varepsilon$

4. RESULTS AND DISCUSSION

After following the necessary steps for statistical processing in the STATA program, we reached the following results:

4.1 Descriptive statistics and correlations

We began by performing a descriptive analysis of all variables. Table 2 displays the results for each variable, including the means, medians, standard deviations, quantiles, and maximum and minimum values.
ROA and Tobin's Q are utilized as performance proxies in this article. These metrics reflect accounting and market performance. Such measurements have already been utilized in the literature (Bhagat and Bolton, 2008; Renders et al., 2010; Andreou et al., 2014; Vithessonthi and Tongurai, 2015; Arora and Sharma, 2016; Malik and Makhdoom, 2016, among others).

Table (02): Descriptive Statistics

Variable	Obs	Mean	Sd	Min	Max	Skewness	Kurtosis
Tobin's Q	400	1.8735	2.119011	0	13.36	2.867128	12.3504
ROA	400	7.573825	8.972266	-35.23	46.1	1.072781	7.809803
B-gender	400	.2131	.1265461	0	.57	.2678199	2.696922
B-Edct	400	.3347	.1480107	0	.83	.5182161	3.072042
CEO/Ch-Age	400	57.0075	8.540773	30	79	-.1033796	2.952008
LEV	400	44.95602	302.123	0	5063	14.79114	227.326
F_AG	400	42.41	29.92877	4	192	2.121219	8.878962
F_SIZE	400	6.55035	.706567	5.01	8.26	.1653566	2.235302
WTobin's Q	400	1.757425	1.642138	.4	6.82	1.903443	5.925953
WLEV	400	23.84587	16.81801	0	58.0625	.2036346	2.087864

Note: W winsorise (Tobin's Q and Levrage) at (5 95) percentile to normalise the variables.

Source: Prepared by the two researchers based on the output of STATA 15.0

To deal with the outliers, we employed (Winsorize) for these variables in the first five and ninetieth percentiles of Tobin's Q and Leverage, respectively (Djerfi.A and Chaalal.C.A, 2023).

Let us achieve the values given in this study, as Table (2) shows the skewness and kurtosis results, where the skewness and kurtosis values for all variables were within the permissible limits of skewness 3 and kurtosis 10 as indicated (Kline, 2011). According to Table (2), the average Tobin's Q and ROA for firms are 1.8735 and 7.573825, respectively, with a maximum value of 13.36, 46.1, and a minimum value of 0 and -35.23, and standard deviations of 2.119011 and 8.972266. Furthermore, the average B-gender value is 0.2131, with a maximum weight of 0.57, a minimum weight of 0, and a standard deviation of 0.1265461. Firms' average B-Edct and CEO/Ch-Age are 0.3347 and 57.0075, respectively, with a maximum value of 0.83, a minimum value of 0 and 30, and a standard deviation of 1480107 and 8.540773. Furthermore, LEV has an average

value of 44.95602, a maximum weight of 5063, a minimum weight of 0, and a standard deviation of 302.123. Furthermore, F_AG has an average value of 42.41, a maximum weight of 192, a minimum weight of 4, and a standard deviation of 29.92877. Firms' average F_size and WTobin's Q are 6.55035 and 1.757425, respectively, with a maximum weight of 8.26, a minimum value of 5.01, and standard deviations of 0.706567 and 1.642138. Furthermore, WLEV has an average value of 23.84587, a maximum weight of 58.0625, a minimum weight of 0, and a standard deviation of 16.81801.

Table (03): Matrix of correlations

Variables	TobinsQ	ROA	B-gender	B-Edct	CEO/ Ch-Age	F_AG	F_SIZE	LEV
TobinsQ	1.000							
ROA	0.746	1.000						
B-gender	0.182	0.073	1.000					
B-Edct	-0.099	-0.100	0.038	1.000				
CEO/Ch-Age	0.057	-0.006	-0.087	-0.106	1.000			
F_AG	0.042	0.056	-0.005	0.142	-0.054	1.000		
F_SIZE	-0.282	-0.331	0.161	0.064	0.038	0.147	1.000	
LEV	-0.181	-0.220	0.106	-0.002	0.071	0.131	0.417	1.000

Note. Tobin's Q = TobinsQ; ROA =Return on Assets; B_Gnd = Gender diversity; B_Edct= Education of board members; CEO/Ch_Age= Chief Executive Officier/Chairman age; F_SZ = Firm size; F_AGE = Firm age; Lev= Leverage.

Source: Prepared by the two researchers based on the output of STATA 15.0

Table 3 presented the result of the correlation matrix, specifically, correlation coefficients do not have multiline problems. Table 3 also shows that Tobin Q and ROA have a negative relationship with B-Edct, and it is also negative with F_SIZE and the leverage, and ROA with CEO/Ch-Age.

While there is a significant positive relationship between B-gender and F_AGE, CEO/Ch-Age, F_AG, with both ROA and Tobin Q, and Tobin's Q with CEO/Ch-Age.

4.2 Multiple Regression

4.2.1 Multivariate Regression Diagnostic

Table 4 displays the correlations between all of the independent variables utilized in the primary analysis. The correlation coefficients for the independent variable are minimal, indicating that multicollinearity is not a concern in this study. This

was corroborated by the variance inflation factor (VIF) test findings, which show that the highest VIF is 1.25, significantly below the required threshold (Gujarati, 2009).

Table (04): Multicollinearity Test

Model	Collinearity Statistics		Information
	VIF	Tolerance	
F_SIZE	1.25	0.799790	There is no multicollinearity
Levrage	1.23	0.813857	
F_AG	1.05	0.949880	
B_GENDER	1.04	0.961118	
B_Edct	1.04	0.966123	
AGE_CEO	1.03	0.971783	
Mean VIF	1.11		

Source: Prepared by the two researchers based on the output of STATA 15.0

4.2.2 Empirical results

Table (05): Efficiency and fit tests of models

Model	Tobin's Q	ROA
Test	Values	Values
Prob >F (Fisher)	0.0016	0.0000
Breusch and Pagan LM test	0.0000	0.0000
Hausman test	0.0002	0.0000
Modified Wald Heteroskedasticity	0.0002	0.0000
Wooldridge Autocorrelation	0.0000	0.0005
Pesaran's cross sectional independence	0.0001	0.0000
Number of ob	400	400
R-squared	0.1676	0.1602

Source: Prepared by the two researchers based on the output of STATA 15.0

The Breusch-Pagan/Cook-Weisberg test rejects the null hypothesis that the variance of the error conditions is free from the covariance problem (X2 = 130.76, p-value = 0.0000 for Tobin's Q model and X2 = 96.40, p-value = 0.0000 for the ROA model). In addition, the Wooldridge test rejects the null hypothesis that there is no first-order automatic correlation (F = 14.596, p-value = 0.0002 for Tobin's Q model and F = 12.914, p-value = 0.0005 for the ROA model). To control for the problem of covariate elasticity, autocorrelation, and cross-sectional dependence, we used ordinary least squares (OLS) with Regression with Driscoll-Kraay standard errors (Djerfi.A and Chaalal.C.A, 2023).

Table (06): Main Regressions Results (Driscoll-Kraay) for Model 1 (Dependent variable = TobinsQ)

Drisc/Kraay

TobinsQ	Coef.	Std.Err.	T	P>t	[95%Conf.	Interval]
B_GENDER	3.280	0.209	15.710	0.000***	2.865	3.694
B_Edct	-1.078	0.242	-4.450	0.000***	-1.558	-0.597
AGE_CEO	0.018	0.003	5.850	0.000***	0.012	0.024
F_AG	0.007	0.001	8.050	0.000***	0.005	0.008
F_SIZE	-0.678	0.098	-6.910	0.000***	-0.873	-0.484
Levrage	-0.011	0.003	-3.190	0.002***	-0.017	-0.004
_cons	4.814	0.404	11.910	0.000***	4.012	5.616

Notes: The definitions of the variables are in Section 3.1. t-statistics are based on Driscoll/Kraay.*** ,** and * represent statistically significant at the p < 1%, 5%, and 10% levels, respectively.

Source: Prepared by the two researchers based on the output of STATA 15.0

Table (07): Main Regressions Results (Driscoll-Kraay) for Model 2 (Dependent variable = ROA)

Drisc/Kraay

ROA	Coef.	Std.Err.	T	P>t	[95%Conf.	Interval]
B_GENDER	10.164	2.234	4.550	0.000***	5.731	14.596
B_Edct	-6.195	1.441	-4.300	0.000***	-9.053	-3.337
AGE_CEO	0.025	0.017	1.450	0.151	-0.009	0.059
F_AG	0.041	0.008	5.020	0.000***	0.025	0.057
F_SIZE	-4.027	0.302	-13.360	0.000***	-4.625	-3.429
Levrage	-0.066	0.006	-10.870	0.000***	-0.078	-0.054
_cons	32.272	3.284	9.830	0.000***	25.755	38.789

Notes: The definitions of the variables are in Section 3.1. t-statistics are based on Driscoll/Kraay.*** ,** and * represent statistically significant at the p < 1%, 5%, and 10% levels, respectively.

Source: Prepared by the two researchers based on the output of STATA 15.0

The beta coefficient of the variable B_GENDER (3.280) was statistically significant at the level of 0.01 (p < 0.0l), (TobinsQ: β = 3.280, P = 0.000), This agrees with: Li, Haishan, and Peng Chen, 2018; Sabatier, 2015).
From the standpoint of agency theory, gender diversity is one of the most important corporate governance measures for organizations in this setting (Gallego-Alvarez et al., 2010), Gender-diverse boards serve as a better check in this situation since a wider range of opinions can increase board independence (Reguera-Alvarado et al., 2015).

The resource dependence theory advises that boards of directors link their companies with other external organizations to address environmental dependencies (Pfeffer and Salancik, 1978). In this situation, board diversity boosts the possibilities for financial access, improves contacts with clients and rival businesses, and broadens the companies' networks, links, and channels of communication (Hillman et al., 2000).

Contrarily, experts argue that a higher level of gender diversity in a boardroom may exacerbate conflicts and cause delays in reaching strategic choices, comparable to broader arguments on the costs of board diversity (Richard et al., 2003).
B_Edct results indicate a significant negative impact on firm performance (Tobin's Q: β = -1.078, P = 0.000; ROA: β = -6.195, P = 0.000), and the results are consistent with the study of Puat Nelson and Devi (2013). The fact that the members with accounting and financial knowledge are busy and lack the time to adequately carry out the tasks of the board of directors may be the cause of the conflict between this finding and the assumptions.

The AGE_CEO variables beta coefficient was positive and statistically significant at the level of 0.01 (p < 0.0l), (Tobin's Q: β = 0.018, P = 0.000), This agrees with (Reed and Defillippi, 1990). Senior executive managers and board members, according to Reed and Defillippi (1992), have more work experience, management competence, and awareness of a wider range of market circumstances than younger counterparts, which may result in suitable decision-making and initiatives. also found that the beta coefficient of the variable AGE_CEO was not statistically significant in ROA, where: (ROA: β = 0.025, P = 0.151), where found no strong evidence for the relationship between Chief Executive Officier/Chairman age and firm performance. On the other hand, regarding an insignificant effect of age diversity, the roles of age in the board

room may be ambiguous. In other words, Chief Executive Officier/Chairman inclinations and acts relying on age show unclear distinctions.

Regarding the control variables, the F_AG variable's beta coefficient was positive and statistically significant (TobinsQ:β= 0.007, P = 0.000; ROA: β= 0.041, P = 0.000).

F_SIZE has a significant negative effect on firm performance (TobinsQ:β= -0.678, P = 0.000; ROA: β= -4.027, P = 0.000). This is consistent with the study Djerfi. A and Chaalal.C.A (2023) which found a negative relationship between F_SIZE and return on assets. Similarly, the leverage coefficient reveals a significant negative effect between leverage and company performance TobinsQ (β =-0.011, P = 0.002); ROA (β1 = -0.066, P = 0.000).

5. Conclusion

In this study, the diversity of the board of directors is explored to the performance of the 100 largest non-financial companies listed on Bursa Malaysia between 2017 and 2020.

The current study's findings provide a fundamental knowledge of the connection between board diversity and firm performance among the finest non-financial companies listed on Bursa Malaysia's main market.

This study's main goal is to determine how gender diversity impacts the firm's performance. "There is a positive association between the gender diversity of directors and firm's performance of non-financial companies listed in Malaysia," the study reads.

Gender diversity exhibits a strong positive link with Tobin's Q and ROA in this study.

The notion that there is a favorable association between director education and the performance of non-financial companies listed in Malaysia served as the foundation for the second objective's accomplishment.

This study demonstrates a significant inverse link between Tobin's Q and ROA and the education of directors.

The third objective was accomplished based on the claim that there is a correlation between non-financial company success in Malaysia and an older chairman/CEO performing better than a younger chairman/CEO. Tobin's Q and ROA were significantly and non-significantly positively correlated with the third aim.

Future studies based on interests may benefit from this research, which also suggests some ways to get around some of its drawbacks.

The following recommendations were highlighted:

- The non-financial sector of companies listed on Bursa Malaysia constitutes the sole segment of the samples used in this study.
- Bursa Malaysia has a variety of industries, as a result, the outcome can be different from the outcome in a different Malaysian industry.
-Time series data should be gathered over a longer period to produce a more precise and convincing conclusion.
- To ensure a diverse pool of applicants, businesses should go outside their current networks and conventional sources of board candidates.
- The hiring procedure should be created to promote equality of opportunity and remove impediments to diversity.
- Giving diverse board members training and support can help them succeed. After diverse people are appointed to the board, businesses should give them this support.
- Assess the results of diversity initiatives: Organizations should routinely evaluate the results of their diversity initiatives and adjust as necessary to make sure they are successfully promoting diversity and inclusion on the board of directors.

6. Citations :

[1] Research limitations/implications – The authors are only using a few characteristics of the board, but board diversity is a very broad concept. To better understand the effect of boards on a company's performance, less conventional approaches may be required that don't rely on existing archive records.

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