Effect of Gender Diversity on the Association between Corporate Sustainability Practices and Financial Performance of Firms: Evidence from Malaysia

Mohammad Shahansha Molla
Head and Associate Professor, Department of Business Administration, Leading University, Sylhet, Bangladesh
Email*: shahansha06@yahoo.com*

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Research Article

Abstract

Purpose: *The objective of this research is to examine the effect of corporate sustainability practices (CSP) on financial performance (FP) as well as the moderating effect of gender diversity (GENDIV) in the board on the relationship between CSP and FP of firms in Malaysia.*

Methods: *The sample of the study is 312 firm-year observations from 2015 to 2017 of 104 firms listed in Bursa Malaysia. The theoretical framework of the study is underpinned by the Stakeholder theory and the Agency theory. To test the hypotheses, with the help of STATA software, the panel corrected standard errors (PCSE) estimator model and the hierarchical moderated multiple regression model have been used.*

Results*: The findings of the study reveal that CSP significantly and positively affects the FP of firms. The empirical results also show that gender diversity in boards significantly moderates the relationship between CSP and FP of Firms in Malaysia.*

Implications: *Based on the empirical findings, the study recommends that the policymakers and regulatory bodies should follow up the mandatory corporate sustainability practices of the firms as well as revise the codes of corporate governance regarding gender diversity of the boards to ensure their long-term sustainability as well as to reduce the risk of financial distress, or bankruptcies in the future.*

Keywords: Corporate Sustainability Practices; Financial Performance; Gender Diversity; Stakeholder Theory; Agency Theory; Malaysia.

1. Introduction

Corporate sustainability practices (CSP) is the latest concept of corporate social responsibility (CSR), or sustainable development (Christofi, Christofi, & Sisaye, 2012; Molla, Hasan, Miraz, Azim, & Hossain, 2021; Provasi & Harasheh, 2021). It refers to the ability of a corporation to contribute to economic, environmental, and social improvement (Commission of the European

Communities, 2001; Mohammad & Wasiuzzaman, 2021). It is an ethical concept that safeguards the environment, ensures the proper utilization of resources, and changes the direction of investments (Molla, Ibrahim, & Ishak, 2019). Presently, it is opined that the future success and survival of businesses depend on CSP rather than just the financial performance of firms (Molla et al., 2021; Wang, Wilson, & Li, 2021). Moreover, CSP is also a focal issue to the firms for attaining competitive advantage globally (Hussain, Rigoni, & Orij, 2018). Bursa Malaysia is trying uninterruptedly to increase the CSP in its listed firms since 2007. Regrettably, it is observed that the sustainability activities of Malaysian firms are still low and the firms are not encouraged to enhance their CSP up to the mark (Ajibike, Adeleke, Mohamad, Bamgbade, & Moshood, 2021).

Furthermore, it is very common that comparatively the giant corporations in developed countries are more engaged in CSP than firms in developing countries(Mohammad & Wasiuzzaman, 2021). It is in fact that CSP increases the expenses which reduces the profitability of a firm. It is observed that usually firms in developing countries are involved within CSP due to regulatory restrain or for enhancing their goodwill or ultimately to increase their sales volume or revenue(Orazalin & Baydauletov, 2020). Still, it is not clear the impact of CSP on the financial performance of firms (Nuber, Velte, & Hörisch, 2020; Rivera, Muñoz, & Moneva, 2017). The academic researchers investigated the relationship between corporate sustainability practices and the financial performance of firms previously but the results are still inconclusive to date (Molla, Ibrahim, & Ishak, 2019; Nguyen, Elmagrhi, Ntim, & Wu, 2021; Rivera, Muñoz, & Moneva, 2017). They also suggested doing further research in this regard to develop a richer understanding of the impact of sustainability activities on the financial performance of firms. Also, there are not enough studies have been conducted on the relationship between CSP and the financial performance of firms in developing country especially in Malaysia (Mohammad & Wasiuzzaman, 2021; Molla et al., 2021). The stakeholder theory (Freeman, 1984) also supports the notion that when a firm is engaged in corporate sustainability practices, the board can make better decisions to enhance financial performance. Therefore, to fill the research gap, this study extends a pioneering attempt by measuring the corporate sustainability practices and their effect on the financial performance of firms.

Furthermore, Orazalin and Baydauletov (2020) and Nuber et al. (2020) argued that the variation in results between the relationship between CSP and FP was due to other strategic or contextual factors. Accordingly, it was assumed that a gender diversity of board is a possible factor as previous studies showed that board diversity of board also influenced the financial performance of firms (Provasi & Harasheh, 2021; Yahya, Manan, Khan, & Hashmi, 2021). The agency theory also postulates that gender diversity in the board enhances the independence of the board (Jensen & Meckling, 1976). This helps in the enhancement of the strength of board monitoring and is supportive for the decision making process of the board which ultimately reduces the agency costs and increases the firm's financial performance (Hasan, Rahman, Sumi, Chowdhury, & Miraz, 2020; Ramly, Chan, Mustapha, & Sapiei, 2017). In addition, research regarding the impact of CSP and gender diversity on FP of firms was also often treated separately with less attention paid to the interaction of both areas(Vacca, Iazzi, Vrontis, & Fait,

2020). Therefore, this study also wants to examine the moderating effect of gender diversity in the board on the association between corporate sustainability practices and the financial performance of firms in the context of Malaysia.

2. Literature Review and Hypothesis Development

2.1. Corporate Sustainability Practices and Financial Performance.

Usually, corporate sustainability practices mean the use of present resources for living without spoiling the economic, environmental, and social necessities of future generations (Molla, Ibrahim, & Ishak, 2019; Ong, Soh, Teh, & Ng, 2016). The concept 'sustainability' in the literature is widely used after the definition given by the former prime minister of Norway Mr. Harlem Brundtland. He defines sustainability as "meeting the needs of the present without compromising the ability of future generations to meet their own needs"(World Commission on Environment and Development, 1987, p. 43).

In 2013, the United Nations Global Compact Accenture surveyed more than 1,000 top executives from 27 industries across 103 countries to assess the past, present, and future of sustainable business. The study found that more than 93% of CEOs consider CSP is more important than profitability for the long-term survival of their enterprises (Molla et al., 2021). Margolis and Walsh (2003) also recommended considering CSP besides profit maximization of the firm for minimizing corporate scandals and long-term survival. A mentionable number of previous studies found that the CSP of a firm increases the FP of firms (Margolis, Elfenbein, & Walsh, 2007; Uyar, Kilic, Koseoglu, Kuzey, & Karaman, 2020; Wang, Dou, & Jia, 2016). Moreover, Lins, Servaes, and Tamayo (2017) find that in the tenure of the financial crisis in 2008, 4% to 7% higher returns were achieved by those firms who had a high level of CSP comparatively to low level of CSP of firms. A higher level of CSP also brings a higher level of sales volume, higher growth rate, and a higher level of FP of firms.

The proper practices of corporate sustainability practices of a firm also enhance its financial performance over time (Lins, Servaes, & Tamayo, 2017; Rivera et al., 2017). Corporate sustainability practices enhance goodwill that eventually influences financial performance favorably. Usually, customers of corporate sustainability practices-oriented firms are willing to pay the premium price for the product of that firm (Hasan, Kobeissi, Liu, & Wang, 2018). Firms that have corporate sustainability practices can attract and retain qualified and dedicated employees which in turn enhances their financial performance (Baron, 2008; Rowley & Berman, 2000).

The Stakeholder theory (Freeman, 1984) also states that firms should pay more attention to their stakeholders in addition to profit maximization goals. A stakeholder refers to a person or a group of people who influences or might be influenced by the company or its activities namely employees, investors, local communities, customers, suppliers, etc.(Donaldson & Preston, 1995; Freeman, 1984). Furthermore, balanced economic, environmental and social engagements may help the firm in reducing its cost of capital and the high price of its products (Porter & Van der Linde, 1995). Consequently, it may make the firm more profitable as compared to the firms with

fewer sustainability practices at the same pattern of systematic risks (Charlo, Moya, & Muñoz, 2015). Therefore, the following hypothesis is posited:

H_1: Corporate sustainability practices positively influence financial performance.

2.2. Moderating effect of Gender Diversity on the Association between Corporate Sustainability Practices and Financial Performance.

Gender diversity implies that when the board of directors (BOD) is comprised by both male and female directors. Several theoretical arguments exist regarding the relationship between the presence of women on the board of directors and financial performance (Hasan, Molla, & Khan, 2019; Kılıç & Kuzey, 2016; Molla, Miraz, & Habib, 2016). Female directors are risk-averse and more detail-focused than male directors(Yarram & Adapa, 2021). Comprising both male and female directors on a board can place the firm in a better position to evaluate the risks and return related to decisions such as business expansion, investment in new projects, or business diversity. The presence of female members on the board of directors increases economic outcomes, higher sustainability activities, and pays more dividends to the shareholders (Yahya et al., 2021). Female directors help to establish a higher level of corporate governance practices in an organization (Hasan & Rahman, 2020).

Kennedy and Kray (2014) and Wang et al. (2021) found differences in moral behavior between female and male directors. Hillman (2015) observed that female directors are more ethical and influential in the decision-making process than male directors. Moreover, female directors take more time in decision-making such that they can consider both the positive and negative future impacts of their decision(Wang et al., 2021). Thus, decisions made by both male and female directors are more moral than decisions made by male directors only. A neuroscience specialist shows that females use both sides of their brain in making any decision whereas men use only one side of their brain. This shows that female directors consider all aspects of their stakeholders' interests (Wang et al., 2021). On the contrary, male directors generally make decisions very quickly by considering only costs and profit without considering other matters related to the decision-making (Azmi & Barrett, 2014).

In another study, female directors were reported to play an active role in the board room as compared to male directors (Virtanen, 2012). Female directors were always interested to ask many questions, show mutual understanding, and try to ensure ethical standards (Pan & Sparks, 2012). Pathan and Faff (2013) revealed that females make more preparation before attending any meeting. Adams and Ferreira (2009) found that female directors attended a greater number of board meetings than men directors. Thus, appointing female directors on the board is expected to improve the sincerity and dedication of board members to the firm which will help to increase its financial performance (Wang, 2020).

A firm needs to earn profit to survive in the competitive business market. Adding corporate sustainability practices into the business needs a large number of expenditures that may reduce the profitability of a firm. However, a good number of studies in the field of corporate sustainability practices have attempted to find the answer to whether corporate sustainability practices increase or decrease the profitability of a firm (Goyal & Rahman, 2014). The

relationship between corporate sustainability practices and financial performance has been analyzed by various scholars with different results. Findings were either positive, negative, or neutral (Mwangi & Jerotich, 2013; Rivera et al., 2017). Thus, the relationship between corporate sustainability practices and financial performance is inconclusive and debatable.

Raza, Ilyas, Rauf, and Qamar (2012) conducted a meta-analysis on the literature regarding the relationship between corporate sustainability practices and financial performance for the period of 1972-2012. Among the 76 studies, 48 studies showed a positive relationship, 4 studies showed a mixed relationship, 8 studies showed a negative relationship and 16 studies showed no relationship between corporate sustainability practices and financial performance. As the relationship between the two variables is not conclusive to date, the concerned parties might be benefitted from the investigation of critical influences of the interaction on this relationship. Thus, whether the presence of both male and female directors in BOD moderates the relationship between CSP and FP of firms needs an empirical study. Consequently, the following hypothesis is posited:

H_2: Gender diversity moderates the relationship between corporate sustainability practices and the financial performance of firms.

3. Research Framework

The research framework constructed for this study is portrayed in Figure 1. The framework comprises corporate sustainability practices as the explanatory variable, the financial performance of the firm is the outcome variable and gender diversity is the moderating variable. To avoid biases in results, this study also uses board size, firm size, and leverage as control variables because their effects have been found in the literature on corporate sustainability practices, gender diversity, and the financial performance of firms.

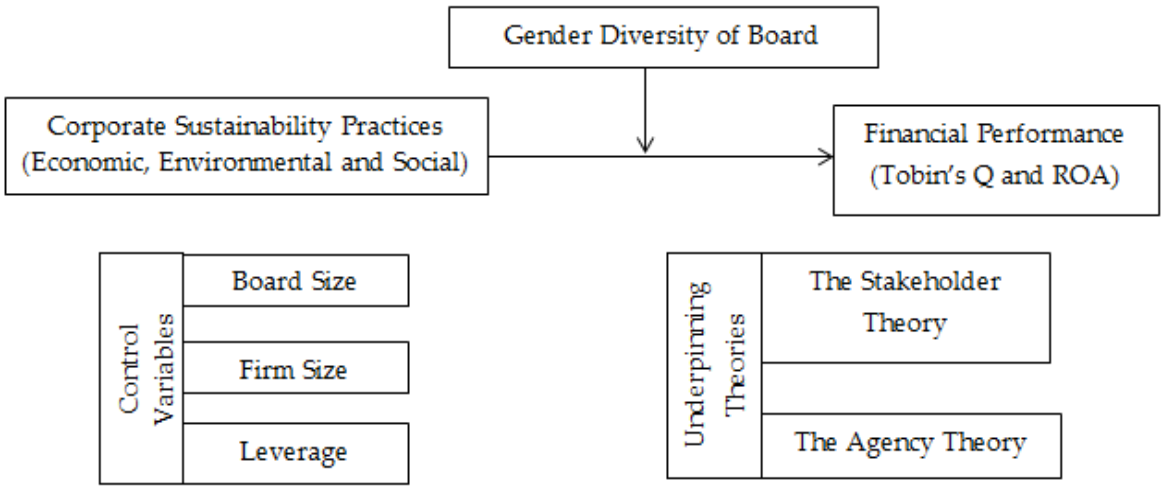

Fig. 1: The Research Framework

4. Materials and Methods

4.1.Population and Sample

The population of this study is the listed firms on *Bursa Malaysia* with a total of 805 firms as of 31st December 2016. From the 805 public listed firms on *Bursa Malaysia*, this study narrows

down to 104 firms based on market capitalization for the years 2015, 2016, and 2017. Thus, the total number of firm-year observations is 312. In addition to the requirement of *Bursa Malaysia* Sustainability Reporting Guide-2015, there are other reasons for selecting large companies. As large companies are more visible to the public, they would carry out more activities that have a greater impact on society(Mohammad & Wasiuzzaman, 2021; Nguyen et al., 2021).

4.2. Sample Characteristics

The sample used in this study comprised 104 firms from ten sectors listed on *Bursa Malaysia.* Firms whose market capitalization is above RM2 billion have been selected. Table 1 shows that the sample comprised of five firms from Construction (4.81%), 15 firms from Consumer Products (14.42%), 25 firms from Industrial Products (11.54%), one firm from Hotels (0.96%), six firms from REITs (05.77%), 11 firms from Plantation (10.58%), 11 firms from Properties (10.58%), three firms from Technology (2.88%), 36 firms from Trading (34.62%), and four firms from Infrastructure (3.84%).

Table 1*:* Distribution of Sample Firms by Industry

SL No.	Type of Industry	Number of Firms	Percentage	Cumulative percentage
1	Construction	5	4.81	4.81
2	Consumer Products	15	14.42	19.23
3	Industrial Products	12	11.54	30.77
4	Hotel	1	0.96	31.73
5	REITs	6	05.77	37.5
6	Plantations	11	10.58	48.08
7	Property	11	10.58	58.66
8	Technology	3	02.88	61.54
9	Trading/Services	36	34.62	96.16
10	Infrastructure	4	03.84	100
Total		104	100.00	

4.3. Model Specifications and Variable Names

To examine the relationship between CSP and FP of firms and the moderating effect of gender diversity on the above relationship the following analytical models have been specified, with variable code names and descriptions.

When FP is measured by Tobin's Q (TQ)

$$TQ_{it} = \alpha + \beta_1 CSP_{it} + \beta_2 BRDSIZE_{it} + \beta_3 FRMSIZE_{it} + \beta_4 LEVRGE_{it} + \varepsilon_{it} \quad \text{---------- (i)}$$

Following Baron and Kenny (1986) and Hair, Black, Babin, and Anderson (2010) the subsequent hierarchical moderated multiple regression model was developed to test for the moderation effect of gender diversity between CSP and FP.

$$TQ_{it} = \alpha + \beta_1 CSP_{it} + \beta_2 BRDSIZE_{it} + \beta_3 FRMSIZE_{it} + \beta_4 LEVRGE_{it} + \beta_5 GENDIV_{it} + \varepsilon_{it} \quad \text{------- (ii)}$$

$$TQ_{it} = \alpha + \beta_1 CSP_{it} + \beta_2 BRDSIZE_{it} + \beta_3 FRMSIZE_{it} + \beta_4 LEVRGE_{it} + \beta_5 GENDIV_{it} + \beta_6 GENDIV^{*}CSP_{it} + \varepsilon_{it} \quad \text{----------(iii)}$$

When FP is measured by Return on Assets (ROA)

$$ROA_{it} = \alpha + \beta_1 CSP_{it} + \beta_2 BRDSIZE_{it} + \beta_3 FRMSIZE_{it} + \beta_4 LEVRGE_{it} + \varepsilon_{it} \quad \text{---------- (iv)}$$

Also, **a** hierarchical moderated multiple regression model was developed to test for the moderation effect of gender diversity between CSP and FP.

$$ROA_{it} = \alpha + \beta_1 CSP_{it} + \beta_2 BRDSIZE_{it} + \beta_3 FRMSIZE_{it} + \beta_4 LEVRGE_{it} + \beta_5 GENDIV_{it} + \varepsilon_{it} \quad \textbf{-- (v)}$$

$$ROA_{it} = \alpha + \beta_1 CSP_{it} + \beta_2 BRDSIZE_{it} + \beta_3 FRMSIZE_{it} + \beta_4 LEVRGE_{it} + \beta_5 GENDIV_{it} + \beta_6 GENDIV*CSP_{it} + \varepsilon_{it} \quad \textbf{---------- (vi)}$$

Where:

TQ = Tobin's Q (Market-based financial performance measure)
ROA = Return on Assets (Accounting based financial performance measure)
CSP = Corporate sustainability practices (measured by content analysis)
GENDIV = Gender diversity (measured by Blau Index)
BRDSIZE = Board size (measured by the total number of board members)
FRMSIZE = Firm size (measured by the natural log of total assets)
LEVRGE = Leverage (measured by total debt divided by total assets)
α = Constant
β = Regression coefficient
ε = Error
i = Observation
t = Year of observation

5. Data Analysis and Results

5.1 Descriptive Analysis

Table 2 shows the descriptive statistics of the dependent variables, the independent variable, the control variables, and the moderating variable used in the study. The dependent variables are Tobin's Q and ROA, while the independent variable is Corporate sustainability practices (CSP) Gender diversity (GENDIV) is the moderating variable, while board size (BRDSIZE), firm size (FRMSIZE), and leverage (LEVRGE) are the control variables. Firm performance, as measured by Tobin's Q, varied from as low as 0.21 to a maximum of 13.87 with a mean of 1.90. The mean is similar to those reported by Abdullah and Ismail (2013) among the top 100 non-financial listed firms on *Bursa Malaysia* in 2007, and Hassan, Marimuthu, and Johl (2015) examined 60 top non-financial listed firms on *Bursa Malaysia* for the period 2009-2013. Firm performance is also measured by ROA varies between -0.13 to 1.05. The mean of ROA is 0.11. The mean score, minimum and maximum values are similar to the study of (Abdullah & Ismail, 2013) which indicates that the financial performance of Malaysian listed firms is found as same in 2015 to 2017 compared to 2007. Table 2 also shows the descriptive statistics of corporate sustainability practices. The mean score, minimum and maximum values are 164.9583, 0.00, and 1098 respectively. Results showed that some firms had no corporate sustainability practices, while some have a high level of corporate sustainability practices as disclosed in their annual reports.

Table 2 also shows that the mean, minimum and maximum values for the moderating variable, gender diversity are 0.2358, 0.00, and 0.4938 respectively. Based on the Blau index (Blau, 1977) the range of minimum to maximum is 0.00 to 0.50 for the gender diversity of a firm. The result of this study indicates that gender diversity is very low among firms in Malaysia. In addition,

there was a great variation in gender diversity among the firms when there is no gender diversity (GENDIV = 0) and high gender diversity (GENDIV = 0.4938).

Table 2: Descriptive Statistics

Variable	N	Mean	Std. Dev.	Min	Max
TQ	312	1.897137	2.026713	.210847	13.86997
ROA	312	.1069145	.1181155	-.1299398	1.054212
CSP	312	164.9583	157.7669	0	1098
GENDIV	312	.2357815	.1520956	0	.4938272
BRDSIZE	312	9.057692	2.116359	5	17
FRMSIZE	312	6.779786	.5611783	5.276889	8.158992
LEVRGE	312	.2537843	.1663284	0	.6850594

5.2. Test of Multicollinearity

5.2.1. Correlation Matrix

Multicollinearity is the issue of having a high correlation among independent variables, which could inflate the regression results (Pallant, 2007). Table 3 shows the correlation matrix which is one of the tests of Multicollinearity of the data. It is observed from the table that the highest correlation exists between TQ and FRMSIZE, which is 51.58% at 1% level of significance and the lowest correlation is found between ROA and CSP, which is 0.18% but insignificant. According to Hair, Black, Babin, Anderson, and Tatham (2006) and Tabachnick, Fidell, and Ullman (2007), it is suggested that the problem of multicollinearity exists in the data if the correlation between two variables is more than 0.9. As the highest correlation between the variables is less than 0.9, it is found that there is no multicollinearity problem among variables in the model.

Table 3: Correlation Matrix

	TQ	ROA	CSP	GENDIV	BRDSIZE	FRMSIZE	LEVRGE
TQ	1.0000						
ROA	----	1.0000					
CSP	0.0133	0.0018	1.0000				
GENDIV	0.1677***	0.0755	0.0341	1.0000			
BRDSIZE	-0.2105***	-0.2809***	0.1319**	0.2730***	1.0000		
FRMSIZE	-0.5158***	-0.4880***	0.1908***	-0.0498	0.3001***	1.0000	
LEVRGE	-0.2604***	-0.3022***	-0.1058*	-0.0359	0.2537***	0.4536***	1.0000
Significant at ***1%, **5%, *10% level of significance							
TQ = Tobin's Q, ROA= Return on Assets, CSP = corporate sustainability practices, GENDIV = gender diversity, BRDSIZE = board size, FRMSIZE = firm size, LEVRGE = leverage.							

5.2.2. VIF and Tolerance Value

Calculation of VIF or Tolerance value is another test to detect the Multicollinearity problem of data. Table 4 presents the VIF and Tolerance value of the variables. Hair et al. (2006) note that multicollinearity problems exist when VIF values are above 10 (or the Tolerance value is less than 0.10). As shown in Table 4, there appeared to be no evidence of multicollinearity problem in the model as all variables' VIF are less than 10 and tolerance value is more than 0.10.

Table 4: VIF and Tolerance Value

	TQ as DV		ROA as DV	
Variable	VIF	Tolerance value	VIF	Tolerance value
CSP	1.10	0.905053	1.10	0.905053
GENDIV	1.11	0.903079	1.11	0.903079
BRDSIZE	1.25	0.799137	1.25	0.799137
FRMSIZE	1.42	0.704925	1.42	0.704925
LEVRGE	1.36	0.734033	1.36	0.734033
Mean VIF	1.25	-	1.25	-

5.3. Test for Heteroskedasticity

In a multiple regression model, for analyzing the panel data, the heteroscedasticity problem is a major concern as it can invalidate the efficiency of statistical results(Brooks, 2019; Hair, Anderson, Babin, & Black, 2010). Baltagi (2008) stated that avoiding the heteroscedasticity problem in data provides biased standard errors and inefficient coefficient estimations of data. To detect heteroscedasticity, the formal statistical test Breusch and Pagan (1979) has been used in this study. According to Brooks (2019), the null hypothesis of the Breusch-Pagan test is homoscedasticity; if p-value < 0.05, it is a case of heteroscedasticity. From Table 5, the test reports the value of Chi^2 statistics is 186.69 and 160.31 in the case of TQ and ROA respectively with the corresponding p-value < 0.05. As the null hypothesis is rejected, the heteroscedasticity problem is found in both models.

Table 5: Test of Heteroskedasticity

Breusch-Pagan/ Cook-Weisberg test for heteroskedasticity	
Ho: Constant variance Variables: fitted values of TQ	Ho: Constant variance Variables: fitted values of ROA
chi2(1) = 186.69 Prob > chi2 = 0.0000	chi2(1) = 160.31 Prob > chi2 = 0.0000

5.4. Test for Autocorrelation

Autocorrelation is the issue of error components being correlated across time due to high similarities. The regression model assumes that the error term of units is not correlated and not influenced by other units. Although this is a violation of the ordinary assumption, it is a common issue in a panel or time-series analysis (Wooldridge, 2010). Gujarati and Porter (2009) suggested that the Wooldridge test is most suitable for serial correlation and to detect the first-order autocorrelation in panel data. Usually, an autocorrelation test is applied to identify serial or first-order autocorrelation in panel data. Table 6 shows that in the case of TQ as the dependent variable, the model is found to be not significant at $p > 0.05$ which means that the results are failed to reject the null hypothesis. Accordingly, data of the TQ model has no first-order autocorrelations. On the other hand, while ROA is the dependent variable, the result

rejects the null hypothesis and concluded that the data for the ROA model has first-order autocorrelations. Thus, the presence of the problem has to be corrected.

Table 6: Test for Autocorrelation

Wooldridge test for autocorrelation in panel data(TQ as DV)	Wooldridge test for autocorrelation in panel data(ROA as DV)
H0: no first-order autocorrelation F(1, 103) = 1.996	H0: no first-order autocorrelation F(1, 103) = 23.346
Prob > F = 0.1607	Prob > F = 0.0000

5.5. Hausman Test

According to Gujarati and Porter (2009), the Hausman test is appropriate to select the fixed-effects or random-effects models for the study. Based on the results shown in Table 7, it is found that the random effect model is perfect to analyze the panel data for this study.

Table 7: Hausman Test

TQ as DV	**ROA as DV**
Ho: difference in coefficients not systematic	Ho: difference in coefficients not systematic
chi2(5) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 7.01	chi2(5) = (b-B)'[(V_b-V_B)^(-1)](b-B) = 10.17
Prob>chi2 = 0.2202	Prob>chi2 = 0.0706

5.6. Regression Analysis

From the diagnostic tests, this study finds that the random effect model is more appropriate to run the multiple regressions of this study. However, the potential econometric problems of heteroscedasticity and autocorrelation problems are found in the data. Random effects models with heteroscedasticity and autocorrelation problems cannot be efficiently estimated with OLS.

Table 8: Multiple Regression Analysis by Using xtpcse(TQ as DV)

VARIABLES	Model 1	Model 2	Model 3
CSP	0.00158***	0.00156***	-0.000270
	(0.000345)	(0.000316)	(0.000526)
BRDSIZE	-0.0692***	-0.123***	-0.114***
	(0.00650)	(0.0135)	(0.0136)
FRMSIZE	-1.881***	-1.805***	-1.839***
	(0.113)	(0.109)	(0.110)
LEVRGE	0.0872	0.221	0.0897
	(0.376)	(0.377)	(0.407)
GENDIV		2.324***	0.867
		(0.236)	(0.559)
GENDIVxCSP			0.00828**
			(0.00339)
Constant	14.99***	14.39***	14.89***
	(0.768)	(0.733)	(0.778)
Observations	312	312	312
R-squared	0.284	0.311	0.320
Number of id	104	104	104
TQ = Tobin's Q,, CSP = corporate sustainability practices, GENDIV = gender diversity, BRDSIZE = board size, FRMSIZE = firm size, LEVRGE = leverage.			

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

To solve the above issues, this study used OLS with heteroscedastic panels corrected standard errors (OLS-PCSE, or xtpcse command in STATA). As the PCSE estimate is robust not only to unit heteroscedasticity but also robust against possible contemporaneous correlation across the units (Bailey & Katz, 2011; Beck & Katz, 1995; Hasan et al., 2019).

The results of the multiple regressions of CSP and FP and the moderating role of GENDIV on the relationship between the above two variables are presented in Tables 8 and 9 respectively. The results of Model 1 in table 8 and 9 shows that there is a positive and significant relationship between corporate sustainability practices and financial performance measured by TQ and ROA, which suggests that when a firm considers the interest of all of its stakeholders by increasing its economic, environmental and social activities, it enhances its financial performance. The result supports hypothesis H1. This result supports the stakeholder theory (Freeman, 1984) and is consistent with studies of Wang and Hsu (2011), Wang (2016), Saleh, Zulkifli, and Muhamad (2011), Ahamed, Almsafir, and Al-Smadi (2014), Taib and Ameer (2012), Razali (2018), and Ong et al. (2016) but is inconsistent with the findings of San (2016).

Table 9: Multiple Regression Analysis by Using xtpcse (ROA as DV)

VARIABLES	Model 4	Model 5	Model 6
CSP	7.40e-05***	7.34e-05***	1.57e-05
	(1.90e-05)	(1.88e-05)	(2.89e-05)
BRDSIZE	-0.00830***	-0.0101***	-0.00980***
	(0.000775)	(0.00136)	(0.00139)
FRMSIZE	-0.0920***	-0.0895***	-0.0905***
	(0.00523)	(0.00470)	(0.00492)
LEVRGE	-0.0397	-0.0353	-0.0394
	(0.0281)	(0.0284)	(0.0285)
GENDIV		0.0765***	0.0306
		(0.0268)	(0.0378)
GENDIVxCSP			0.000261
			(0.000188)
Constant	0.803***	0.784***	0.799***
	(0.0356)	(0.0311)	(0.0324)
Observations	312	312	312
R-squared	0.272	0.281	0.283
Number of id	104	104	104

ROA= Return on Assets, CSP = corporate sustainability practices, GENDIV = gender diversity, BRDSIZE = board size, FRMSIZE = firm size, LEVRGE = leverage.

Standard errors in parentheses

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

To examine the moderating effect of GENDIV on the relationship between CSP and FP of firms the hierarchical moderated multiple regression model has been used. This regression model is more appropriate to evaluate the effect of a moderating variable in a study (Han & Ellis, 2019; Li, Sharp, Bergh, & Vandenberg, 2019; Ruiz-Jiménez, del Mar Fuentes-Fuentes, & Ruiz-Arroyo, 2016; Tran & Pham, 2019). The hierarchical regression result in Table 8 and 9 under Model 3 shows that the interaction term GENDIVxCSP is to be found a positive and statistically significant impact on TQ whereas GENDIVxCSP is to be found positive but statistically insignificant impact on ROA. However, the interaction term GENDIVxCSP has changed the relation between CSP and ROA from significant in Model 1 to insignificant in Model 3.

Accordingly, the results in Model 3 in both table 8 and 9 indicate that GENDIV positively and significantly moderates the relationship between CSP and FP of firms in Malaysia. The result supports hypothesis H2.

6. Discussion

Based on the empirical results of the study, it is observed out that the predictor corporate sustainability practice was found to be significantly positive with the financial performance which appears to suggest that more corporate sustainability practices enhance financial performance. Thus, the result supports Hypothesis H_1. The result implies that when a firm considers the interest of all of its stakeholders by increasing its economic, environmental, and social activities, it enhances its financial performance. The possible explanation for the result could be that corporate sustainability practices of a firm reduces employee turnover, increases employee commitment, enhances customer satisfaction and loyalty, and improves the reputation of the firm.

Moreover, firms that are heavily involved in corporate sustainability practices are considered less risky during inspections carried out by regulators. As such, the firm can reduce the costs of inspection which reduces aggregate costs and increases financial performance. This result supports the stakeholder theory (Freeman, 1984) and is consistent with studies of Wang and Hsu (2011), Wang (2016), Saleh et al. (2011), Ahamed et al. (2014), Taib and Ameer (2012), Razali (2018), and Ong et al. (2016) but is inconsistent with the findings of San (2016).

The result also shows that GENDIV positively and significantly moderates the relationship between CSP and FP of firms which appears to suggest that more gender diversity on the board of directors will CSP increases more FP of firms in Malaysia. Thus this result supports Hypothesis H_2. This result appears to suggest that when the board is formed by the same proportion of male and female directors, financial performance will be higher. The positive result might be due to female directors who have a better attendance record than their male counterparts in board meetings, and women directors are more likely to become members of monitoring committees. This result suggests that gender-diverse boards allocate more effort to monitoring that enhances financial performance (Adams & Ferreira, 2009). Moreover, boards that are comprised of both male and female directors are in a better position to evaluate the risks and returns related to decisions, for example, business expansion, investment in a new project, or business diversification that ultimately reduce the risk and enhance financial performance.

The result of this study is consistent with the findings of Lee-Kuen, Sok-Gee, and Zainudin (2017), Terjesen, Couto, and Francisco (2016), Gordini and Rancati (2017), Reguera-Alvarado, de Fuentes, and Laffarga (2017), Fidanoski, Simeonovski, and Mateska (2014) Campbell and Mínguez-Vera (2008), Nguyen and Faff (2007) Terjesen et al. (2016), Kılıç and Kuzey (2016) Liu, Wei, and Xie (2014), Fidanoski et al. (2014), Julizaerma and Sori (2012), Mahadeo, Soobaroyen, and Hanuman (2012), Isidro and Sobral (2015), Marimuthu and Kolandaisamy (2009) but inconsistent with the study of Abdullah and Ismail (2013), and Hassan et al. (2015). The inconsistent result might be due to the use of different measurements for board diversity, or a

different period of study. However, studies that used the Blau index to measure diversity were mostly found to show a positive relationship between gender diversity and financial performance.

7. Conclusion

This study has examined and analyzed the connection between CSP and FP of firms in Malaysia. It also examines the moderating effect of gender diversity on the relationship between the above two variables. The motivation for studying originates from the shortage of research on the relationship of CSP and FP of firms in a developing country, especially in Malaysia. After analysis of the data, it is found that appointed both male and female directors to the board strongly moderates the relationship between CSP and the FP of the firms in Malaysia. Hopefully, it would provide contributing evidence to explain the mechanisms behind the link between corporate sustainability practices and financial performance.

This study will extend the literature on sustainability and corporate governance in an emerging economy like Malaysia. Policymakers will be encouraged to use the findings of this study for aligning and revising the present policies, legal framework, and code of corporate governance, especially in the Malaysian scenario. The findings have also policy implications that the government and the regulatory bodies should put more emphasis on gender diversifying in the board of firms and following up the mandatory corporate sustainability practices to enhance the financial performance of the firms in Malaysia. This may help the firms to ensure their long-term sustainability as well as to reduce the risk of financial distress, or bankruptcies in the future.

8. Limitations and Directions for Future Research

Although this study makes a definite empirical contribution to the existing literature, some limitations need to be considered in future research. First, this study has focused on only one characteristic, namely, CSP and its impact on the financial performance of the firms. Other factors like different mechanisms of corporate governance like ethnic diversity, multi directorship, CEO duality, government supports, etc., are also important factors that might be considered in future research. Second, Tobin's Q and ROA have been used as a proxy of the financial performance of firms in this study. Future studies may consider the other book value measures like ROE, EPS, EBIT, and some other proxies for measuring the financial performance of the firms.

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