

SUSTAINABILITY PERFORMANCE USING ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) SCORES: EVIDENCE FROM PUBLIC LISTED COMPANIES (PLCS) IN MALAYSIA

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Abstract: Malaysia shows the highest sustainability disclosure rate (64.5%) among the five ASEAN countries followed by Singapore (61.7%), Thailand (60%), the Philippines (56.3%) and Indonesia (53.6%). Based on the KPMG's Survey of Corporate Reporting 2017, 97% of top 100 Malaysian PLCs have published their sustainability performance compared to the world average of 72%. This reveals that Malaysian PLCs are concerned on the importance of sustainability reporting and sustainability performance. Therefore, this study aims to assess the sustainability performance in relation to financial performance. This study also examines factors influencing the sustainability performance. A sample of 39 PLCs from ten industries over 2010 to 2018 are chosen in this study. The sustainability performance is measured by ESG score, which is obtained from Thomson Reuters. This study has four independent variables, namely firm size, leverage, profitability and economic performance. Pearson correlation and multiple regression tests are conducted to meet the objectives of study. The findings show that profitability and size of company have positive and significant impact towards the sustainability performance. Also, the sustainability reporting has an influence on the company financial performance. Essentially, this study bridges the knowledge gap of establishing a relationship between sustainability with firm performance considering three pillars of sustainability, namely environmental, social and governance.

Keywords: environmental, governance, PLCs, social, sustainability performance

Introduction

Corporate reporting framework that suggests continual long-term improvement of corporation will be realized by addressing issues on environmental, social considerations and corporate governance (ESG). Globally, listed companies have widely used Global Reporting Initiative (GRI) guidelines as their sustainability reporting standards. GRI standard is developed to report their economic, environmental and social impacts for all companies (Erhirhie & Marcella, 2019). By combining these primary components, corporate sustainability would enhance efficiency, sustainable growth and shareholders' value. It is common practice among companies to disclose their contribution to sustainable development and gain stakeholders' legitimacy.

Rising awareness among PLCs has pushed number of companies to disclose ESG information globally. It is reported that America became the highest region that published sustainability report in 2017 followed by Asia Pacific, Europe, and Middle East and Africa. In Asia Pacific, sustainability reporting rates have stabilized after an 8% increase between 2013 and 2015 and 1% decrease in 2017. Meanwhile, in Middle East & African regions had been continuously declining from 2011 to 2017. Malaysia shows the highest sustainability disclosure rate (64.5%) among the five ASEAN countries followed by Singapore (61.7%), Thailand (60%), the Philippines (56.3%) and Indonesia (53.6%). The growth of sustainability reporting rates had significantly attracted academic studies related to sustainability performance (Loh & Thomas, 2018).

Nearly 97% of Malaysian top 100 PLCs have disclosed their sustainability performance compared to the world average of 72% as reported in the KPMG Survey of Corporate Reporting 2017. However, the reporting rates had declined from 99% in 2015 to 97% in 2017. The report stated that 93% of N100 published information on sustainability in their annual reports and was ranked second highest after India by 5% on global ranking involving 49 countries (Loh & Thomas, 2018). Despite the rising discussion on the corporate sustainability disclosure in Malaysia for the past recent years, Bursa Malaysia launched its Sustainability Framework in October 2015. This framework is mainly aimed to increase the awareness among the PLCs in practicing and committing their business sustainability as well as maintaining the efficiency of capital market management.

Abundant studies (Alsayegh, Abdul Rahman & Hodayoun, 2020; Johari & Komathy, 2019; Atan, Alam, Said & Zamri, 2018; Whetman, 2017; Clark, Feiner & Viehs, 2015) had been conducted to examine the relationship between sustainability reporting and financial performance. A study by Wahyuningrum and Budiharjo (2018), states that sustainability report is essential tool to convey the positive and negative impacts for companies. Previous studies have shown mixed and inconclusive results. Meanwhile, Johari and Komathy (2019) found very weak relationship between sustainability reporting and dividend per share for top 100 Malaysian companies. In response to this, it is doubtful on the relationship between sustainability and financial performance. Only few studies (Chang, Amran, Iranmanesh & Foroughi, 2019; Al-Shaer & Zaman, 2016) had examined the determinants of sustainability performance for Asian countries particularly Malaysia. Yet, it is essential to investigate the factors that contribute to sustainability performance.

Hence, this study explores the impacts of environmental, social and governance practice disclosure on the financial performance. Essentially, the drivers of sustainability performance

are also investigated in this study. The results are crucial to reveal how sustainability measurement will benefit company's performance and improve percentage rate of sustainability disclosure in Malaysia.

The reminder of the paper is arranged as follows; section 2 reviews the literature related to sustainability and financial performance and section 3 describes data, methodology and hypotheses development. Section 4 discusses the findings and finally, section 5 concludes the results of study.

Literature Review

There are three pillars of sustainability development namely, environmental, social and economic. Sustainability reporting is defined as non-financial information disclosure including issues such as economic, social, environmental and governance (Loh, Thomas & Wang, 2017). It is a published annual report on economic, environmental and social impacts arising from daily activities and known as environmental, social and governance (ESG) reporting. The main purpose of sustainability is to enhance transparency of company's activities. Furthermore, it also assists company to reduce direct cost, boost worker productivity and enhance competitive image of company.

Numerous studies (Gupta A. K. & Gupta N., 2020; Magon, Thomé, Ferrer & Scavarda, 2018; Chang et al., 2019; Clarkson, Fang, Li & Richardson, 2013; Saeidi S., Sofian S., Saeidi P., Saeidi S. & Saeidi S., 2015; Cohen & Wang, 2013) have extensively examined the relationship between sustainability (environmental, social, economic and governance dimension) on financial performance. Gupta A. K. & Gupta N. (2020) investigated the association between environmental sustainability and financial performance for Indian companies. They have identified four dimension namely financial performance, internal business process performance, customer satisfaction and learning growth performance. They found that the effect of sustainability on Indian performance is positive and statistically significant in totality. Magon et al. (2018) also found positive effects of sustainability on performance such as lower costs, better delivery and product quality, enhanced volume and mix flexibility.

In Malaysia, public listed companies have started to disclose sustainability practice in 2007 and implementation among companies still non-consistent. As noted, sustainability reporting is main indicator for financial performance. In relation to this, Johari and Komathy (2019) have investigated the relationship between sustainability reporting and financial performance for top 100 Malaysian public listed companies. The result indicates sustainability reporting had a positive impact on return on asset (ROA) and earning per share (EPS) but had a negative impact on return on equity (ROE). However, there is no or very weak relationship between sustainability reporting and dividend per share (DPS). This illustrates Malaysian public listed companies are not continually reporting though started in 2007.

Several studies (Chang et al., 2019; Al-Shaer & Zaman, 2016; Maliah, Norhayati & Fatma, 2014) have been conducted to examine the factors that affecting sustainability performance. Maliah et al. (2014) revealed positive association between firm size and leverage with quality of environmental reporting. Unfortunately, share ownership and profitability had no significant relationship with environmental reporting. Another study by chang et al. (2019) found that the quality of sustainability report is higher among financial institutions in developed countries.

They also discovered that private owned institutions have higher quality of sustainability reporting in comparison to government owned.

According to Bajic and Yurtoglu (2018), most firm-level covariates capture has significant coefficients. It is consistent with theoretical considerations. Their findings in OLS, random effect and fixed effect specifications show the size is highly significant with negative coefficient. Meanwhile, the leverage is significant with positive coefficient. Other study by Legendre and Coderre (2013), who apply the binary logistic regression, conclude that the adoption of GRI G3 guidelines is influenced by company size, profitability, business culture of a country and industry.

Profitability is one of the factors determine sustainability reporting. Profitable firms try to disseminate sustainability information to gain legitimacy for their activities (Legendre & Coderre, 2013). Kansal, Joshi and Batra (2014) and Lourenço, Branco, Curto & Eugénio (2013) have found a positive relationship between sustainability reporting and profitability. This positive relationship clarified that profitable companies are carefully monitored and closely followed by financial intermediaries (Kuzey & Uyar, 2017).

The relationships between leverage and sustainability reporting activities have also been elaborated in terms of agency theory (Reverte, 2009). According to Jensen and Meckling (1976), highly leveraged firms disseminate more voluntary information and codes of conduct to cut down on agency costs, and consequently, on their capital expenses. Many studies have shown the link between leverage and sustainability reporting (Nazari, Herremans & Warsame, 2015).

Data, Methodology and Hypotheses Development

Initially, there are 1025 public listed companies (PLCs) in Bursa Malaysia. As shown in Table 1, only 61 PLCs are found to have ESG score in Thomson Reuter's database. The information of ESG disclosure was retrieved from the Thomson Environmental, Social and Governance Database in Eikon Datastream. However, PLCs with missing data are excluded from the original sample data resulting in 39 PLCs as final sample in this study. The selection of 39 PLCs represents various sectors covering a 9-year annual panel data spanning the period from 2010 to 2018. Table 1 is presented as below:

Table 1: Distribution of Sample according to Sectors in Malaysia from 2010 to 2018

Sector	Total PLCs	PLCs with ESG Score
Energy	36	5
Technology	109	1
Basic materials	139	3
Industrial	246	10
Consumer products	281	18
Financial	155	13
Healthcare	27	3
Telecommunication services	17	4
Utilities	15	4
Total	1025	61

Table 2 presents the sample distribution of 39 PLCs with ESG score across industries based on Thomson Reuter Eikon Datastream. As depicted in Table 2, consumer products and financial are the largest representative sectors totalling 28.21%, respectively of the sample data. Other primary sectors represented include industrial (20.52%), telecommunication services (10.25%) and utilities (10.25%). Energy sector is the smallest representation with less than 5%.

The ESG score in Thomson Reuter's database originates from company's annual reports, sustainability or CSR reports, press release and company's websites. The weighted ESG disclosure score is ranged from the lowest disclosure level, indicated by '0.10' (companies that have minimum disclosure of ESG data) to the highest disclosure level of '100'.

Table 2: Sector Classification of Malaysian PLCs from 2010 to 2018

Sector	ESG Score	Observation	% of observation
Energy	5	1	2.56
Technology	1	0	0.00
Basic materials	3	0	0.00
Industrial	10	8	20.52
Consumer Products	18	11	28.21
Financial	13	11	28.21
Healthcare	3	0	0.00
Telecommunication services	4	4	10.25
Utilities	4	4	10.25
Total	61	39	100.00

This current study is guided by two main objectives, namely (i) assessing the sustainability performance in relation to the financial performance of PLCs in Malaysia, and (ii) identifying the factors that influence the sustainability performance of the PLCs. To achieve the first objective, we apply the Pearson's correlation test.

The reason we choose return on asset (ROA) as the dependent variable (DV) is that we wish to assess financial performance from the companies' management perspective. From the test results, we expect the sustainability performance as measured by ESG and financial performance (ROA) will have strong or high association that will be evidenced based on correlation coefficient value (r) that ranges from -1 to +1. In addition, we expect the correlational relationship between the variables will be statistically significant by looking at the p -value based on the 5% significance level. Hence, this study hypothesizes that;

H1: ESG has strong and significant correlation with ROA

For the second objective of study, we apply the test of ordinary least square (OLS), namely multiple linear regressions. OLS is the most common estimation method for linear models. To achieve this objective, we run OLS between sustainability performances as the dependent variable (DV) with the five selected independent variables (IV), which are summarized in Table 3 below. The selection of five variables is similar to several studies (Chang et al. 2019; Al Shaer & Zaman, 2016; Maliah et al. 2014).

Further, this study also performs the Hausman test to identify the best estimate between fixed effect model (FEM) and random effect model (REM). The linear equation model for the Hausman test is stated as follows:

$$y_{it} = \alpha_i + b_t \quad (1)$$

‘ α ’ is the constant that represents the slope and b represents the beta coefficient. FEM is a model that fits a study, which the common effect size is constant or specifically meant for the samples selected and not to generalize to other samples or population whilst the REM’s common effect size varies (Kreft & De Leeuw, 1998). The FEM is estimated using the ordinary least squares (OLS) or more generally using the maximum likelihood whilst the REM is estimated with shrinkage linear unbiased prediction (Robinson, 1991; Snijders & Bosker, 1999).

Table 3: Description of Variables

Variables	Proxy	Abbreviation
Sustainability performance	Environmental, social and governance score	ESG
Economic performance	Return on equity	ROE
Profitability	Return on assets	ROA
Age of company	Number of years established	AGE
Size of company	Log of total asset (TA)	LSIZ
Leverage	Debt ratio as total debt/TA	LEV

The relationship between the DV and IVs can be explained by the following model or equation:

$$ESG = \alpha + \beta ECO + \beta PRO + \beta AGE + \beta SIZ + \beta LEV + \varepsilon \quad (2)$$

Therefore, this study formulates the following hypotheses to test if the five IVs mentioned earlier have significant influences on the sustainability performance.

- H2: Economic performance has significant influence on the sustainability performance*
- H3: Profitability of company has significant influence on the sustainability performance*
- H4: Age of company has significant influence on the sustainability performance.*
- H5: Size of company has significant influence on the sustainability performance*
- H6: Leverage of company has significant influence on the sustainability performance*

Findings and Discussion

Descriptive Statistics and Correlation Analysis

Table 4 illustrates the results of descriptive statistics of all variables used for 351 firm-year observations in our sample for 2010 to 2018. The equally weighted overall score for ESG ranges between 0 and 100 with higher scores indicating more desirable sustainability performance. Following to Alsayegh et al. (2020), and Bajic and Yurtoglu (2018), these studies have interpreted the sustainability performance as measured by the ESG score based on median

score. The median score for sustainability performance was divided into three level; above, below or equal to 5 and classified into three discrete categories; outperformance (O), underperformance (U) and neutral (N), respectively.

As shown in Table 4, the ESG disclosure score has mean value of 41.79 and ranges from 1.77 to 84.65 suggesting panel data variation in ESG disclosure effort for Malaysian PLCs in our sample. The median score for ESG is 41.13 indicating that Malaysian PLCs are classified as underperformance (U) for sustainability. This result is in line with Alsayegh et al. (2020) with a median score for EES performance below 50% for Asia.

Referring to Table 4, it shows that ROE has the highest value of 369.91% and the lowest value of -58.40%. This reveals the economic performance had fluctuated during the sample period particularly after sub-prime crisis 2009. In addition, the median for ROE is higher than ROA with value of 21.38% and 6.71%, respectively. Similarly, the financial performance measured by ROA had also fluctuated with a range between -35.87% to 73% for post sub-prime crisis period.

Table 4: Descriptive Statistics

	ESG	LEV	LSIZ	ROA	ROE	AGE
Mean	41.79028	2.830570	7.398644	6.717407	21.38271	47.12821
Median	41.13000	0.900000	7.325238	4.360000	11.55000	41.00000
Maximum	84.65000	18.48000	8.906869	73.07000	369.9100	113.0000
Minimum	1.770000	0.000000	6.018931	-35.87000	-58.40000	2.000000
Std. Dev.	18.12703	3.949232	0.643440	10.39994	45.36436	28.59766
Skewness	-0.060513	1.564197	0.113315	3.209313	4.918692	1.004383
Kurtosis	2.245987	4.092810	2.669754	17.75610	29.86822	2.971215
Jarque-Bera	8.529052	160.5984	2.346204	3787.015	11973.13	59.02604
Probability	0.014059	0.000000	0.309406	0.000000	0.000000	0.000000
Sum	14668.39	993.5300	2596.924	2357.810	7505.330	16542.00
Sum Sq. Dev.	115006.2	5458.753	144.9052	37855.55	720273.8	286239.2
Observations	351	351	351	351	351	351

Table 5 depicts the Pearson's pairwise correlation coefficients between all of the variables used in our model. It shows that ESG is positively and weak correlated with ROA, implying that sustainability performance has weak and significant relationship with the financial performance. The coefficient between ESG and ROA is 0.1678 at 99% significance level. Furthermore, the results do not establish a strong correlation among all explanatory variables except for ROE and ROA with coefficient of 0.793. Table 5 also reports that all variables do not suffer any multi-collinearity in our regression model.

Table 5: Pearson Correlation Analysis

Correlation t-Statistic Probability	ESG	LEV	LSIZ	ROA	ROE	AGE
ESG	1.000000 ----- -----					
LEV	0.096622 1.813536 0.0706*	1.000000 ----- -----				
LSIZ	0.084885 1.591529 0.1124	0.689279 17.77343 0.0000***	1.000000 ----- -----			
ROA	0.167837 3.180579 0.0016***	-0.245709 -4.735400 0.0000***	-0.525697 -11.54480 0.0000***	1.000000 ----- -----		
ROE	0.229888 4.412847 0.0000***	-0.007937 -0.148285 0.8822	-0.332814 -6.593352 0.0000***	0.793819 24.38484 0.0000***	1.000000 ----- -----	
AGE	0.038137 0.712978 0.4763	0.188556 3.586857 0.0004***	0.163207 3.090400 0.0022***	0.132426 2.495905 0.0130**	0.012395 0.231570 0.8170	1.000000 ----- -----

*, **, *** indicate the correlation is significant at the 0.1, 0.05 and 0.01 levels, respectively (two tailed)

Results of Regression Analysis

Table 6 reports the result of panel data regression to estimate the relationship among the dependent variable (ESG disclosure), the explanatory variables and the control variables (size and leverage). The Hausman test is conducted to determine the suitability of model to be used, either the fixed-effect model (FEM) or random-effect model (REM).

The results exhibit profitability in Malaysia sample firms are statistically significant in influencing the sustainability performance. The ESG score capture highly significant coefficients of 0.4607 at 99% significant level with adjusted R-square values of 19.69%. This finding provides evidence there is a significant positive relationship between profitability and sustainability performance, confirming the third hypothesis (H3). It indicates that profitable companies voluntarily practice the environmental, social and governance disclosure and eventually enhance sustainability performance. It is consistent to Kuzey and Uyar (2017) and Legendre and Coderre (2013), who found positive relationship between sustainability reporting and profitability. In addition, the findings also support Al-Dhaimesh and Al Zobi, (2019); Maqbool and Zameer, (2018); and Shakil, Mahmood, Tasnia & Munim (2019), who examined

the effect of environmental, social and governance performance on the financial performance of banks.

In regards to our control variables, size as measured by natural logarithm of company's total assets was found to have positive and significant relationship with sustainability performance. A larger company tends to have more economies of scale, enhanced efficiency and high compliance with social norms, which lead to better sustainability performance. Table 6 reports the coefficient for size is 4.951 at 95% significance level. However, all the three variables, namely economic performance, age and leverage do not significantly influence the sustainability performance.

Table 6: The Regression between Explanatory Variable and Sustainability Performance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.500319	16.08579	0.155436	0.8766
LEV	0.352642	0.334440	1.054427	0.2924
LSIZ	4.951273	2.223993	2.226299	0.0267
ROA	0.460728	0.168182	2.739461	0.0065
ROE	0.038454	0.034974	1.099493	0.2723
AGE	-0.047913	0.033283	-1.439575	0.1509
Effects Specification				
Period fixed (dummy variables)				
Root MSE	15.91673	R-squared		0.226797
Mean dependent var	41.79028	Adjusted R-squared		0.196971
S.D. dependent var	18.12703	S.E. of regression		16.24398
Akaike info criterion	8.452390	Sum squared resid		88923.12
Schwarz criterion	8.606382	Log likelihood		-1469.395
Hannan-Quinn criter.	8.513678	F-statistic		7.603813
Durbin-Watson stat	0.217878	Prob(F-statistic)		0.000000

Table 7 reports the result of Hausman test. The result shows that the null hypothesis is rejected implying the REM is not appropriate. This means that FEM is appropriate in this study.

Table 7: Result of Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Period random	60.026691	5	0.0000

**** WARNING:** estimated period random effects variance is zero.

Period random effects test comparisons:

Variable	Fixed Random	Var(Diff.)	Prob.
LEV	0.352642-0.207110	0.006146	0.0000
LSIZ	4.9512737.099537	0.132811	0.0000
ROA	0.4607280.197701	0.001218	0.0000
ROE	0.0384540.089313	0.000049	0.0000
AGE	-0.047913-0.007781	0.000027	0.0000

Conclusion

This study aims to examine relationship between sustainability from dimension of environmental, social and governance and company financial performance. The empirical results show that sustainability performance (ESG) has weak and significant relationship with the financial performance (ROA). It is consistent to Johari and Komathy (2019), who found sustainability reporting, had a positive impact on ROA. Whereas, it is in contrast to Atan et al. (2018), who found no significant relationship between factors of ESG and firm profitability (ROE).

For the determinants, profitability as measured by ROA has positively and significantly influenced the sustainability performance (ESG). More profitable companies are willing to disclose the environmental and social activities and exercise good governance, which eventually enhances sustainability performance. It is supported by stakeholders' theory for companies to provide ESG disclosure. Disclosure of ESG would reduce information asymmetry and avoid adverse selection resulting in better quality company information than various stakeholders. Furthermore, size as control variable has positive relationship with ESG disclosure (Alsayegh et al., 2020 and Maliah et al. 2014).

Companies that integrate ESG in their policies and operating practices would gain better financial performance. It occurs because disclosure of ESG would benefit companies in becoming more efficient and competitive, reducing operating costs and financial risk, increasing corporate reputation and consumer trust. For investors, this study would encourage them to foster responsible investment in Malaysian PLCs in line with the launch of Bursa Malaysia's Sustainability Framework 2015. Future research may examine the relationship of environmental reporting and social reporting towards corporate sustainability performance.

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