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The Impact of Environmental, Social, Governance (ESG) Disclosure on Financial Performance of Listed Healthcare Companies in Bursa Malaysia: A Panel Data Study

Chua I-Vern Sharon
International Medical University
00000037524@student.imu.edu.my

Zukarnain Zakaria
International Medical University
ZukarnainZakaria@imu.edu.my (Corresponding Author)

Vijayesvaran Arumugam
International Medical University
Vijayesvaran@imu.edu.my

Mohd Roslan Ismail
International Medical University
MohdRoslan@imu.edu.my

ABSTRACT
There is increasing concern among policymakers globally towards business practices that could contribute to the climate change risk. Business's operation focuses on profit are often performed at the expense of environmental preservation. Subsequently, on top of financial indicators, sustainability initiative has become one of the non-financial indicators used in evaluating the firm's performance. Thus, the objective of this paper is to examine the impact of ESG disclosure on the financial performance of listed companies in the healthcare industry in Bursa Malaysia. Specifically, this paper investigates the impact of an individual component of ESG on the companies' financial performance measured using ROE and Tobin Q. Random effects model of panel data spanning from 2016 to 2022 gathered from 15 healthcare-listed companies in Bursa Malaysia have been in the estimation. The results showed that overall ESG disclosure is positively associated with the firm's ROE and market performance Tobin Q, but the relationship is only significant in the case of ROE. For individual ESG subcomponents, this paper found that environmental commitment is negatively and significantly associated with ROE, while for other components, social and governance, both are not significantly associated with ROE or Tobin Q. In conclusion, this study finds support that ESG as an aggregate can affect the financial performance of healthcare-related companies, but not the individual component of ESG. Therefore, ESG investments should be equally distributed amongst each pillar to produce a significant on the financial performance of the company.

Keywords: ESG, Sustainability, Financial Performance, Healthcare, Malaysia

1.0 Introduction

Recently, sustainability has become one of the non-financial indicators used in evaluating the firm's performance. This is because the firm's involvement in environmental, social, and governance (ESG) initiatives represents the company's commitment towards sustainable development. In line with this, many business operations globally have started to impart ESG reporting as part of their objectives and as one of the key performance indicators; to evaluate performance and manage change to make their processes more sustainable and by the values of their stakeholders. Aligning with Sustainable Development Goals (SDG), ESG is a set of principles that are adopted by firms to achieve a sustainable future.

Corporate Social Responsibility (CSR) consists of three main pillars: Environment, Social, and Governance (Alkaraan, et al., 2022). The terms ESG and CSR have been used interchangeably but most of the reporting standards use the key pillars of ESG to measure sustainability as the non-financial performance of business operations (Lee and Isa. 2022). Studies showed that firms that incorporate the practice of ESG into their business demonstrated less volatility in their earnings and had a better access to cheaper funds (Constantinescu, 2021). Therefore, many companies have vigorously integrated corporate sustainability initiatives into their business operation's practices and strategies (Nollet et al., 2016).

The firm's business operation that focuses on profit often were performed at the expense of environmental preservation (Mark and Marc, 2022). With increasing concern about sustainability issue, the organisation's involvements in ESG have become an interest of investors. Socially responsible investors normally incorporate environmental, social and governance factors into their investment considerations, on top of the business's long-term projection and market stability (Li et al., 2021). Most firms are aware that ESG practice not only will add value to their reputation but also would ensure the sustainability of their supply chain, hence customer satisfaction. In addition, the commitment towards ESG could also ensure firm's business operation stay competitive through product differentiation (Trisnowati et al., 2022).

There has been a significant advancement in the standardization and quantifying measures for firms' performance in ESG such as the Sustainability Accounting Standard Board (SASB) and Global Reporting Index (GRI). However, there is no gold standard measure to evaluate ESG performance across firms globally. Various third-party proprietors use guidelines from various sustainability organization which has been incorporated into the firm own methodology in calculating scoring for the ESG performance as well as for the individual component of the ESG. These proprietors sometimes known as rating agencies are reputably known as Morgan Stanley Capital International (MSCI), Bloomberg, Refinitiv and many others (Eng et al., 2021). At its infancy stage, corporate social responsibility in Malaysia begins with the mandatory reporting of ESG practices for all firms listed in Bursa Malaysia. The inclusion of advancing sustainability and commitment to carbon carbon-neutral nation has been highlighted in the 12th Malaysia Plan (Lee and Isa, 2022). A guideline was also developed for the listed companies on how to present the information on ESG-related practices and the sustainability framework in their annual report effective from 2016 (Securities Commission Malaysia, 2023). Under the Malaysia Code of Corporate Governance 2021 issued by the Malaysia Securities Commission, there is also a framework related to corporate governance reporting. As such, there are proper guidelines available for firms in Malaysia to publish information related to ESG practices.

Ethical and responsible social responsibility has become a growing concern among Malaysian investors puts pressure on the firms to comply with the ESG requirements. Related to this, the

FTSE Good Bursa Index introduced in 2014 by Bursa Malaysia is used to measure the performance of ESG practices in firms aligning with the global ESG framework. Meanwhile, the Sustainable and Responsible Investment Sukuk by the Securities Commission of Malaysia and Good Bursa Malaysia Shariah (F4GBMS) Index encourages responsible investment and sustainable financing. In addition, the recent announcement of Budget 2023 also includes an ESG initiative to incentivize firms that participate in the various green projects (BusinessToday, 2023).

As per regulatory requirements, the Malaysia government announced MCCG 2012 with some alterations of Malaysia Code of Corporate Governance (MCCG) 2007 to improve economic sustainability and good governance of Malaysia public listed companies. The regulation emphasizes transparency on financial and non-financial performance disclosures to stakeholders, shareholders, and potential investors. Specifically, MCCG 2012 emphasizes the focus on ESG reporting. Each component of ESG has a different level of engagement provided that incorporates sustainability strategies directed at ESG practices and disclosure is with reference to the recommended GRI reporting framework.

No doubt that financial performance is crucial for a firm's survival in the competitive market. However, non-financial performance and evaluated through ESG practice is equally essential. Regarding this, various studies have been conducted focusing on the ESG activities of firms listed in various markets and their impact on their financial performance. The available studies were focused on a diverse sector of publicly listed firms and various performance measures such as economic value-added, market-based financial performance and accounting-based financial performance. For example, a study by Lee and Isa (2022) found a positive correlation between ESG practices and the financial performance of Shariah-compliant firms. The study by Christopher et al. (2021) also discovered a positive and significant relationship between ESG and financial performance measured by the Return of Asset (ROA). However, as far as we can ascertain, there is no systematic study was conducted focusing on healthcare companies listed in Bursa Malaysia Therefore, the objective of this paper is to examine the impact of ESG disclosure on the financial performance of listed healthcare companies in Bursa Malaysia. Specifically, this paper examines the impact of an individual component of ESG, which is Environmental (ENV), Social (SOC) and Governance (GOV) commitment on the financial performance of healthcare companies listed on Bursa Malaysia using a panel data approach.

2.0 Literature Review

In general, sustainability is defined as "the development that meets the needs of the present, without compromising the ability of future generations to meet their own needs" (United Nations, 2015). Sustainable development would safeguard and preserve environment from global economic growth. Recently, the focus of sustainable development has extended to not just environmental preservation but also to meet societal needs through the promotion of personal well-being, inclusivity, and equal opportunities. In contrast, an unsustainable development will lead to development that not fully consider a wider array of impacts such as large-scale financial crisis caused by irresponsible monetary policy or global climate change due to high dependency on fossil fuels.

Sustainability is developing a different approach in investment which not just considers financial figures but also the positive effect on the environment and society. This approach is identified as socially responsible investment, ethical investment, green investing, and ESG score. The ESG concept is built on the ongoing commitment to incorporate social responsibility as an important element of firm's overall performance. This is in line with a study by Maqbool

and Zameer (2018) which found CSR has a positive impact on the financial performance of a sample of 28 Indian commercial banks. Meanwhile, a study by Nollet et al. (2026) on the relationship between Corporate Social Performance (CSP) and Corporate Financial Performance (CFP) discovered that financial return from CSP integration can be observed in the long run.

Many studies were conducted that examined the impact of ESG on financial performance. However, the results from these studies are inconsistent, showing positive, negative, and insignificant relationships between these two variables. For instance, focusing on healthcare firms, Agrawal et al. (2023) found a significant positive relationship between ESG and Financial Performance (FP) fora sample of 33 pharmaceutical companies. Study by López-Toro et al. (2023) also found investment in ESG was a profitable strategy as it increases the profits and market value of multinational pharmaceutical companies. A study that conducted on 30 Listed Pharmaceutical companies in the Nasdaq US Smart Pharmaceuticals Index discovered a positive relationship between ESG indicators, and the financial ratios measured through return on equity (ROA), return on assets (ROE), and Tobin's Q.

In contrast, a study by Smith et al. (2007) on environmental disclosure and performance reporting in Malaysia for 40 companies that issued Corporate Environmental Responsibility (CER) report in 2002 resulted in environmental disclosure is negatively associated with company financial performance. A significant inverse relationship between disclosure score and return on assets was also observed, suggesting that environmental disclosure in Malaysia has different priorities from disclosures elsewhere.

Meanwhile, Constantinescu (2021) found that there is no significant association between sustainability disclosure and firms' value measured by market value for the healthcare sector. Study performed by Atan et al. (2016) for a comparative study between Bursa Malaysia and NASDAQ OMX Copenhagen, also found no association between ESG disclosure level and firm's financial performance. Finally, a cross-country study by Lopez-De Silanes and McCahery (2019) on ESG Performance and Disclosure discovered that ESG scores have little or no impact on risk-adjusted financial performance.

3.0 Methodology

3.1 Data and Source of Data

This study used annual panel data spanning from year 2016 to 2022 that gathered from 15 healthcare companies listed in the Bursa Malaysia. With a total of eight observations per company, the total of 100 observations have been used in the final estimation. The number of healthcare companies used as a sample size for this study is subject to the availability of ESG data. Some of the healthcare companies were found not disclosed their ESG practice in any official publication during the study period. There are 13 sectorial indexes with 757 companies listed on Bursa Malaysia. In the healthcare index, there are 18 listed healthcare companies consisting of healthcare service providers, manufacturing industry and distributor. The definition of healthcare companies is according to the industry classification by the Bursa Malaysia.

The financial data of the companies involved in this study were gathered from the companies' annual report that obtained from the companies' official website. Since firm's sustainability disclosure may be reported in the company's annual report or by a separate entity of sustainability report, the sustainability data have been gathered from two main sources: firm's

sustainability disclosure as the primary source, and proprietary ESG data from financial databases, specifically from the Bloomberg Terminal.

It is recognized that ESG presents itself as a qualitative information. This study converts the qualitative ESG into quantitative measurement through the formation of ESG disclosure scoring based on Bloomberg scoring methodology. In general, the ESG score is the combined of score from the three pillars: environmental, social, and governance sustainability initiatives. The score is calculated using an equal weighted for environmental, social, and governance performance. Each topic in the respective pillar is also equally weighted. Across healthcare firms, a consistent list of topics or issues, data fields and weights were applied. Topics and data fields are selected based on industry agnostic framework such as Global Reporting Initiative (GRI), Investor Stewardship Group (ISG). Like Khoury et al. (2022), one year lag was chosen as it is believed that the impact of ESG integration into business operation does not occur instantaneously. Hence, it can be summarized as financial performance from year t+1 will correspond with ESG score from year t.

3.2 Variables

The variable of interest of this study is ESG disclosure score and its individual components; Environmental (ENV), Social (SOC) and Governance (GOV) and financial performance which measured by Return of Equity (ROE) and Tobin Q. ROE is calculated by dividing net income with shareholder's equity. ROE is considered a gauge of a corporation's profitability and how efficient it is in generating profits. Meanwhile, Tobin's Q is equal to the market value of the company divided by its assets' replacement cost. The Q ratio expresses' the relationship between market valuation and intrinsic value. In other words, the ratio estimates whether a given business is overvalued or undervalued. In addition, two control variables were also included in the regression, firm size and firm age.

3.3 Regression Model and Estimation Strategy

The regression was carried out in two models. The first model is a simple regression model, where each dependent variable (ROE/Tobin Q) was regressed with each independent variable (ENV, SOC and GOV) studied separately. Meanwhile the second estimation is a multiple regression model where the independent variable (ROE/Tobin Q) will be regressed with all independent variables involved in this study together with the control variables. The estimation was carried out using statistical software eView. In the functional form, the regression model can be represented as follows:

$$FPi = f(ENV, SOC, GOV, ESG, FS, FA)$$

Where, FPi is financial performance (ROE or Tobin Q), ENV is environment scores, SOC is social scores, GOV is governance scores, ESG is overall ESG scores, FS is firm’s size, and FA is firm’s age.

This study uses used panel data regression model to analyse the relationship between variables studied. This approach simplifies computational and statistical interference of the combination of cross section data and time series. However, panel data regression must undergo precise estimation modelling step to determine which of the three variation of panel regression models provide the least biased. Three panel regression models that widely used are common effects, random effects, and fixed effects.

Common Effect model is the simplest panel regression model and easiest to be utilized. The estimation for common effect model can be conducted using OLS methods. However, it does not consider time and individual dimensions, hence behaviour of corporate data is assumed constant over the periods. Fixed effect model assumes constant intercept for each cross section and time. A dummy variable and OLS technique is used to estimate fixed effect model which has a different intercept between individuals. Meanwhile, Random effect model estimate panel data where interference variables maybe interconnected between time and between individuals. The error term of each company accommodates the difference between intercepts. One of the benefits of this model is to eliminate heteroscedasticity. For estimation, it uses the principle of maximum likelihood/ general least square which differs from common effect and fixed effect (Zafar et al., 2022).

To select the most appropriate panel regression model to be used, the Chow test, Hausman test and Test Lagrange Multiplier was conducted. Table 1 provides the results from the respective tests. The Chow Test to determine whether Common Effect or Fixed Effect model is best suited to estimate the panel effect. The result showed that p-value of Chi-square is less than 0.05, indicating that the fixed effect model is more appropriate than common effect model. Meanwhile, result from the Hausman Test results found that the p-value >0.05, hence random effect model is chosen over fixed effect model. Finally, the Lagrangian Multiplier Test was conducted to determine the final model. The test result indicates that random effect model is the most appropriate model. Therefore, in the final estimation, random effect of panel data model was used for both model, ROE and Tobin Q.

Table 1: Tests to determine the suitable panel data model
for Tobin Q and ROE

Test	Dependent Variable	
	Tobin Q	ROE
Chow Test (p-value)	0.0000*	0.0000*
Hausman Test (p-value)	0.7880	0.8146
Langrangian Multiplier Test (p-value)	0.0000*	0.0000*

Note: * significant at 5% levels

4.0 Estimation Results and Findings

The estimation starts with the simple regression of panel data random effect model. In the estimation, the independent variables, ENV, SOC, GOV, and ESG was individually regressed with the dependent variable, financial performance (ROE and Tobin Q). Table 2 presents the result of simple regression model from the estimation for ROE.

The estimation results from the simple regression model presented in Table 2 showed that the coefficient of ENV and GOV were negative, while SOC and ESG were positive. However, none of the coefficients were significant. Meanwhile, the results from multiple regression model between ROE and all independent variables including the control variables found the coefficients for ENV, SOC and GOV are negative. However, only ENV is statistically significant at 10% levels. The ESG disclosure score was found positively and significantly related with ROE, and the parameter is significant at 10% significant levels The estimation results also showed that both coefficients of control variables are positive, but only firm age is significant at 5% levels.

Table 2: Panel data estimation results for ROE as dependent variable using random effect model.

Simple Regression Model			
Independent variable	Coefficient of independent variables	P-value	R2
ENV	-0.007397	0.8386	0.000402
SOC	0.006551	0.9253	0.000086
GOV	-0.150432	0.8122	0.000555
ESG	0.218992	0.3324	0.009171
Multiple Regression Model			
ENV	-0.108574	0.0865**	0.131844
SOC	-0.009249	0.9178	
GOV	-0.834826	0.2678	
ESG	0.718746	0.0905**	
FS	0.234738	0.1325	
FA	1.483328	0.0419*	

Note: * and ** indicate significance at level of 5% and 10% respectively

The first part of Table 3 presents the estimation results from simple regression model for Tobin Q as dependent variable with the individual independent variable showed the coefficient for ENV, SOC and GOV disclosure score are positive, but none of the coefficient is significant. Meanwhile, the results from multiple regression model between Tobin Q and all independent variables including the control variables found the coefficient of ENV is negative, while SOC, GOV and ESG are positive. Similarly, none of the coefficients were statistically significant.

Table 3: Panel data estimation results for Tobin Q as dependent variable using random effect model.

Simple Regression Model			
Independent Variable	Coefficient	P-value	R2
ENV	0.012732	0.8661	0.000295
SOC	0.220861	0.1210	0.024550
GOV	1.080397	0.4296	0.006510
ESG	0.308451	0.5194	0.004307
Multiple Regression Model			
Independent variables	Coefficient	P-value	R2
ENV	-0.107706	0.4030	0.042507
SOC	0.291932	0.1120	
GOV	0.319161	0.8464	
ESG	0.279793	0.7472	
FS	0.552983	0.7463	
FA	-0.293319	0.5274	

5.0 Discussion and Conclusion

The findings from simple regression analysis showed there is a negative relationship between environmental disclosure (ENV) and financial performance of healthcare companies, but the relationship is not significant. The negative relationship, however, is significant in the multiple regression which included all independent variables and the control variables studied. The insignificant relationship also discovered in the simple regression estimation between environment disclosure and Tobin Q. However, the coefficient of the relationship is positive. In contrast, the estimation from the multiple regression model resulted in a negative coefficient but statistically insignificant. Hence, it can be concluded that commitment towards environmental initiative produced a mixed results toward financial performance of healthcare companies listed in Bursa Malaysia.

The finding is consistent with a study by Alareeni and Hamdan (2020) on US S&P 500-listed firms. Using panel regression analysis, they found ESG environmental component disclosure is negatively associated with ROE but positively related to Tobin Q. Another study conducted by Chiong (2010) also found a negative association between environmental component and financial performance that measured by ROE. Other evidence conducted by Elyased and Paton (2005) demonstrated weak relationship between environmental disclosure and financial performance measure by Tobin Q.

This study found social disclosure score (SOC) has a positive and insignificant relationship with ROE. The nature of the relationship differs when multiple regression analysis was performed with all independent variables including the control variables. The relationship became negative but statistically insignificant. Social disclosure score also has an insignificant positive relationship with Tobin Q. The findings failed to find support that social initiative of social initiative of CSR contributes to the financial performance of healthcare companies Malaysia. The conclusion drawn for this study is in line with the finding from Lee and Isa (2022) on (ESG) which found a positive relationship with ROE and Tobin Q, but only significant in the case of Tobin Q.

Regarding the impact of Governance (GOV) component of CSR on ROE, the finding from simple regression model showed the impact is negative but not significant. The impact of governance on Tobin Q is also insignificant, although the relationship is positive. The similar result was also found in the multiple regression model. Hence, it can be concluded that there is no significant relationship between Governance initiative of CSR and financial performance of healthcare companies in Malaysia. As for comparison, study performed by Alareeni and Hamdan (2020) provided same evidence where governance component of CSR is negatively related with ROE but positively related to Tobin Q.

Result from simple regression analysis showed that ESG disclosure score has an insignificant positive relationship with ROE as well as with Tobin Q. However, in the multiple regression model, the relationship between ESG disclosure scoring and ROE is positive and significant. Therefore, it can be concluded that ESG disclosure does significantly influence the financial performance of healthcare companies. Study performed by Lee and Isa (2022) on ESG practices and financial performance of Shariah-compliant companies in Malaysia also found a positive and significant relationship between ESG and both measures of financial performance, ROE and Tobin Q.

The objective of this study is to examine the impact of ESG disclosure on the financial performance of listed healthcare companies in Bursa Malaysia. The study did find little support that overall ESG disclosure does have significant impact on the company's financial performance. However, the findings from this study postulated that individual component of ESG is not able to produce a significant impact on the financial performance of the company. Only when all these components are combined, a significant impact of ESG on the financial performance was detected. This implies that if company want to integrate ESG into the business operation, focusing on only either one component of ESG will not give significant impact on the financial return. Only by integrating all components of ESG and concentrating on maximizing the potential of each individual component of ESG would result in a significant impact.

Malaysia is a developing country with the level of awareness to ESG is still at infancy stage. Therefore, financial constraint, uncertainty of its impact and limited knowledge, have become an obstacle for most business proprietor. The transition to low carbon business model requires investment hence support from the government in the form such as tax incentive, financial support, training, and opportunities. Since adoption of ESG is mandatory for industry in bio product such as palm oil and forestry, thus the adoption rate for ESG tends to be higher for this set of industry. For Malaysian healthcare industry, however, there is no standards per se around ESG adoption, hence it is often overlooked by investors that demand to be ESG compliant.

In conclusion, business operators should be encouraged to integrate the ESG's practices into their business operation to ensure the survivability of business, and more importantly to meet community wishes for the sustainable development. For this, a more standardised ESG framework and comprehensive ESG disclosure should be included in the company's annual reports so that a better assessment can be carried out on their ESG practice performance. This would help the stakeholders to make an informed decision in evaluating the company's ESG compliant. Finally, the ESG investments should be well equally distributed amongst each pillar of ESG in order to produce a significant on the financial performance of the company.

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