

# Effect on Environmental, Social and Governance (ESG) Criteria on the Firm Profitability of Listed Companies in Malaysia

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*Abstract:* - This paper analyzes the effect of ESG criteria on the firm profitability among Malaysian listed firms. Firm-specific variables such as firm size, revenue growth, and leverage were also included in the analysis. A total of 42 companies from Bursa Malaysia are selected from Bloomberg's database that has complete ESG scores data from 2011-2021. Firm profitability was measured using ROA and ROE. Using panel data analysis, this study found that ESG scores have a significant positive influence on firm profitability. Meanwhile, Social Score individually has a significant negative impact on firm profitability. Individual Environment and Governance scores do not have a significant relationship with firm profitability. Leverage and firm size significantly negatively affect firm profitability.

*Key-Words:* - Environmental, Governance and Social (ESG), firm profitability, ROA, ROE, firm size, leverage

## 1 Introduction

As corporations nowadays are pressured by the competitive environment, the combination of ESG criteria can assist in strengthening the firm profitability. Supported by, [1], indicates that corporates should have a strategic plan on ESG for their future used to avoid zero value gain. The study, [2], stated that many previous scholars, practitioners, and policymakers have been involved in a discussion about the need for a global transition to create new opportunities to advance the ESG systems. Additionally, ESG has so many advances that it has become a concern to the public, investors, and stakeholders in many countries including Malaysia. ESG initiative has drastically increased, and many corporations aim to apply ESG criteria.

Furthermore, [3], stated that the Malaysian government has steadily encouraged corporates to enhance their overall standard of life such as exercising Corporate Social Responsibility (CSR), particularly in improving the quality of living to minimize the risks of pollution and be more concerned about the environment. Thus, this research aims to study the effect of ESG Criteria on the firm profitability in Malaysia.

Environmental criteria, which are included in ESG, are mainly focused on evaluating and mitigating risks that may result in environmental degradation, such as avoiding pollution that

contributes to climate change or utilizing animal experimentation. According to, [4], Malaysia is confronted with environmental health issues as a consequence of industrial emissions that contribute to pollution, climate change, and ozone depletion. Added by, [5], Malaysia's ecology is deteriorating. According to 2017 statistics from the Department of the Environment (DOE), 219 (46 percent) of 477 rivers surveyed were deemed to be clean, 207 (43 percent) to be mildly contaminated, and 51 (11 percent) to be polluted, a little rise from 2011 levels. The study, [6], noted that in June 2019, approximately 2000 individuals and 111 schools were forced to shut down owing to water contamination in the Pasir Gudang River in Sungai Kim. As a result, the report recommends that corporations in Malaysia embrace Corporate Environmental Responsibility (CER). Given that environmental health has become a critical concern, organizations need to make more effort to mitigate environmental hazards in their operations.

Effective social criteria include safeguarding human rights, promoting equity, and managing relationships among workers, suppliers, and consumers. On the other hand, without a suitable structure, preserving social standards may be difficult. The study, [7], asserts that corporations that adhere to ESG criteria demonstrate excellent governance, a greater concern for the environment and sustainable development, increased earnings,

and may have lower-cost funds. According to, [8], corporate social responsibility (CSR) activities tend to increase the firm cost thus leading to an economic disadvantage position. Supported by, [9], indicated that ESG criteria procedures were seen as a cost, and it surpassed the legal minimum requirements. Nevertheless, past researchers have also encouraged the value-enhancing theory that CSR and ESG activities do enhance firm performance. Earlier evidence focused more on ESG criteria only on firm performance. The study, [10], discovered that the current status of ESG criteria standards and the ESG effects in emerging countries have not been well examined.

Meanwhile, corporations that adhere to a strict governance standard would prioritize the fair treatment of shareholders' rights, the disclosure of corporate information, and the avoidance of conflicts of interest in the selection of board members. Thus, effective ESG standards have advanced to the point that they have become a source of concern for the public, investors, and stakeholders. Following that, implementing governance criteria may assist corporations in having control over internal management functions such as shareholder rights. Engaging in governance yields benefits in terms of human capital, resources, and firm value.

Besides that, Malaysia's government is also concerned with social and governance and contributes many efforts in making sure corporates in Malaysia practice and improve it. Therefore, it is precisely that this study aims to study the effect of ESG criteria to improve firm profitability in Malaysia. Additionally, firm-specific factors such as leverage, firm size, and revenue growth were also included to strengthen the aim of this study. Hence, the outcomes of this study will be useful for the government to reduce the cost in the future and further implement policies that would improve firm profitability in Malaysia.

## 2 Literature Review

### 2.1 ESG Scores

Research on ESG practice has grown remarkably in recent years. Corporations might face bad performance by neglecting the ESG criteria. Practicing ESG has become one way that the government reinforced to show concern towards the community and universe. As a result, applying ESG practices in the operations can escalate the corporation's image. The history of corporate responsibility practice was ongoing way earlier.

However, ESG criteria were developed in early 2004 in response to a request by Kofi Annan, United Nations secretary-general, [11]. In 2010, the United Nations Environment Programme Finance Initiative (UNEPFI) and the World Business Council for Sustainable Development (WBCSD) encouraged corporations to include ESG elements in their decision-making to reduce risks. Moreover, the Malaysian Code on Corporate Governance (MCCG) statement in 2012 has promoted sustainability and advised corporates to disclose ESG in its annual report, [12]. Moreover, the Securities Commission Malaysia (SCM) has developed the Sustainable Responsible Investment (SRI) Sukuk Framework to encourage responsible finance and investment. Numerous organizations define ESG and SRI differently, but the main goal is to include ESG criteria in investing decisions. Apart from that, the United Nations also recommends that corporations disclose ESG practices by 2030, [13].

Using data from firms in Germany, [14], found that ESG has a positive effect on firm profitability. The author also found that governance has a significant effect on financial performance. Similar findings were also noted by [15], who explored the association between ESG performance and energy market financial indicators. Using energy sector China firms, they found that higher ESG performance may have an impact on enhancing their financial performance.

On the contrary, a study by, [3], found that the relationship between ESG practices and firm profitability is negative. The study, [16], investigated more than 1000 papers published between the year 2015 and year 2020 focusing on the link between ESG and firm financial performance. The paper found that 58% of the papers showed a positive relationship between ESG and financial performance, 8% showed a negative relationship, 13% showed no relationship, and 21% showed mixed results. They concluded that, while the majority of the study showed positive results, the outcome indicates ongoing disagreement on the matter.

The study, [17], investigated the impact of Environment, Social, and Governance (ESG) on firm profitability. The findings showed that ESG combined score, Environment score, Social score, and Governance score have significant positive relationships with company profitability. These findings suggest that investing in high ESG performance guarantees financial return in terms of profitability.

From above, it is shown that the outcome of previous research on the study of whether ESG criteria would improve firm profitability significantly. However, due to the discrepancies between the findings and those of the previous study, the conclusions on whether ESG criteria improve firm profitability cannot be drawn.

## 2.2 Leverage

Two main theories commonly relate to capital structures: trade-off theory (TOT) and Pecking order theory (POT). According to, [18], in terms of opting for the capital structure, both approaches point in inverse ways. There were many previous studies done on these two theories. However, the results have shown inconsistency. TOT states that tax benefits of debt are balanced against bankruptcy costs to determine the firm leverage. On the other hand, POT argued that firms prefer to choose financing sources in sequential order. Leverage is a method that firms use to maximize the corporation's funds and value involving debt and the possibility of insolvency risk and bankruptcy. The risks are due to the obligations to pay the debts and interest to the debt providers. However, it is said that the more the risks taken by businesses, the greater the future returns. Therefore, there are plenty of corporations that have applied this method to expand their corporations. There are two main types of leverage. The first primary type is financial leverage, a sum of debt that the company owes to fund the corporation's operations. Meanwhile, the second primary type is operating leverage which is a method that assists corporations in managing their expenses, estimating the corporate breakeven point, and assisting in the determination of selling prices to avoid risks on returns.

Many previous researchers have proved the impact of leverage on corporate performance. The authors in, [19], [20], studies have shown that greater leverage leads the corporation to higher performance. Greater leverage can quickly implement financial measures, and great investment, and high collateral assets would assist the leveraged corporations to lessen the chances of bankruptcy, [21]. A study by, [22], suggested that leverage is one of the external factors that decision-makers had used to reduce expenses. Low expenses would lead to greater productivity of the corporations. Moreover, [23], found a positive correlation between leverage and financial performance in Malaysia. Added to the study, using more debt and a lesser equity capital ratio would improve the financial performance. Thus, firms can

use investing in fixed assets to improve the shareholder's value which also can be used as collateral to the leverage, and through increased leverage, it can boost the financial performance.

Apart from that, the findings of, [24], [25], discovered a significant link between leverage and firm performance. Furthermore, [26], stated that corporates must make leverage decision making. Meanwhile, [27], suggested that a good mix of debt and equity will assist firms to have a long-run profit.

On the contrary, research by, [28], examined the relationship between leverage and financial distress has shown a positive result which indicates that firms with debts may have greater risks of financial difficulty. The study, [29], stated that higher leverage minimizes firm performance due to complications in raising the equity. Furthermore, corporations that have high leverage increase the corporation risk level, [30]. Further, [31], discovered varied and contradictory empirical evidence on the impact of leverage. The study, [32], found no evidence between growth prospects and leverage in Malaysia. Equally important, [33], stated that most of the studies ignore optimum leverage in emerging countries, resulting in few studies on the context of emerging economies and placing them in a nascent stage. The study, [34], found that approaches to identifying the ideal leverage amount are still unrecognized.

## 2.3 Firm Size

Firm size is used as an independent variable to measure whether it would contribute to improving Malaysia's firm profitability. It should receive more attention from the corporation as it is one of the characteristics that affect corporations in many aspects. Firm size has been categorized as micro, small, medium, and large enterprises. The differences between the sizes can be analyzed based on the manufacturing and services. For micro, the sales turnover is less than RM300,000 or hired below five employees for both manufacturing and services and other sectors. For small, the sales turnover is between RM300,000 to RM15 million or hired 5 to 75 employees for the manufacturing sector, and sales turnover is between RM 300,000 to RM3 million or hired 5 to 30 employees for services and other sectors. For medium, the sales turnover is between RM15 million to RM 50 million or employed 75 to 200 employees for the manufacturing industry and sales turnover is between RM3 million to RM20 million or hired 30

to 75 employees. Hence, any higher than the above numbers are considered larger firms.

The study, [35], stated that firm size has an impact on corporate financial performance. Besides that, [36], stated that firm size positively affects sustainability reporting. Supported by, [37], concluded that firm size influenced the corporate sustainable growth rate. The study, [38], indicated that sustainability reporting allows corporations to present clear statements of risks and opportunities. The study, [39], indicated that larger firms have bigger advantages in growing businesses. Thus, firm size affects sustainable growth and affects the profitability level of a corporation. A prior study by, [40], showed that profitability becomes the main concern in Malaysia because it involves other related parties' concerns and firm size characteristics can impact profitability. Consistent with prior findings, [41], found that firm size can give outcomes to cost of capital, which impacts investment decisions.

The study, [42], revealed that larger firms have a lower risk of bankruptcy than small-medium firms. Larger firms are commonly known to have privileges such as diverse conducts to generate revenues, economies of scale, and the ability to invest more in marketing, which leads to lower bankruptcy risks for the corporation. The study, [43], found that larger firms have more advantages in having adequate resources and better in applying green supply chain management practices, which leads to advanced performance. Moreover, larger firms can present their products faster due to brand recognition. It is also known that it can attract customers faster than small and medium-sized firms due to customer loyalty. Other than that, having more extensive data guarantees that the data is converted into useful information for the business and would lead to better efficient decision-making, [44]. Moreover, larger firms have more data, which may give an advantage for the larger firms to have the best image in front of the investors. Supported by, [41], indicated that larger firms are involved more in economic activity, have longer firm histories, and have bigger data. Added in the study, stated that larger firms could grow rapidly due to the ability of investors to process the big data. In line with the previous study, [45], predicted that larger firms are more influential in the market, and, [46], stated that it could speed corporate growth due to the performance.

Despite the advantages of a larger firm, SMEs have played a vital role in Malaysia. According to Malaysia Prime Minister Tan Sri Dato' Haji Muhyiddin bin Md. Yasin, in the annual report of SME Insight 2019, SMEs have formed 98.5% of business establishments and accounted for 38.9% of the Gross Domestic Product (GDP). Additionally, SMEs benefited from unemployment issues as they employ 7.3 million people. Through SMEs, the surplus of the workforce employees from the larger firms can reinstate employment, [47]. The government has shown support by introducing many alternatives and assisting the SMEs in Malaysia. PRIHATIN Economic Stimulus Package and PENJANA Recovery Plans are the initiatives introduced by the Malaysian government to assist SMEs during the COVID-19 pandemic that has landed and caused damages in 2020. The 2021 budget report stated that the Malaysian government had invested RM38.7 billion to advance and raise the SMEs in Malaysia.

### 3 Methods

The firms that are used in this study are the corporates listed in Bursa Malaysia. 551 listed companies were extracted from Bursa Malaysia for the period 2011-2021, however, only 74 were discovered on the Bloomberg website and only 45 companies have complete data. Since the study only focused on construction, consumer products, energy, finance services, healthcare, industrial products, plantation, property, telecommunication, and utilities industries, only 42 firms' data were used in this study. Secondary data analysis was used in this research. Firm profitability, leverage, firm size, and revenue growth are calculated using financial statements obtained from Bursa Malaysia. ESG scores were extracted from the Bloomberg database. In this research, the pooled least squares, fixed, and random effect methods are utilized to assess whether ESG, E, S, and G scores separately and whether firm-specific factors impact firm profitability. The Gretl software was used.

#### 3.1 Firm Profitability

Increasingly, ROA/ROE approaches are utilized to investigate the relationship between independent factors and company performance. The study, [48], found that ESG disclosure affects ROA and ROE indicators of corporate performance.

$$\text{ROA} = \text{Net income} / \text{Average total assets}$$

$$\text{ROE} = \text{Net income} / \text{Average total equity}$$

Thus, the ROA and ROE methods are applied using the following formula.

## 4 Data Analysis

This study conducted the F test, Breusch- Pagan and Hausman test to identify which regression is the most appropriate. The result for both ROA and ROE showed that fixed effect regression is the most appropriate. Thus, this research will focus on fixed-effect regression to explain the results.

### 4.1 The Impact of ESG, E, S, and G Scores and Firm-specific Variables on ROA

Based on the result in Table 1, ESG scores have a significant positive influence on firm profitability (ROA). Leverage and firm size have shown a significant negative influence on ROA meanwhile revenue growth was found to be insignificant.

Table 1. Fixed-effects (ROA and ESG) using 386 observations

Included 42 cross-sectional units  
Time-series length: minimum 6, maximum 11  
Dependent variable: ROA  
Robust (HAC) standard errors

	Coefficient	Std. Error	t-ratio	p-value
const	218.967	64.6498	3.387	0.0016 ***
LEV	-2.47046	1.17506	-2.102	0.0417 **
SIZE	-21.7936	6.47093	-3.368	0.0017 ***
REV	-0.0256381	0.0561313	-0.4568	0.6503
ESG	0.137416	0.0585921	2.345	0.0239 **

Mean dependent var	0.379206	S.D. dependent var	5.933897
Sum squared resid	5926.115	S.E. of regression	4.174895
LSDV R-squared	0.562851	Within R-squared	0.516323
Log-likelihood	-1074.849	Akaike criterion	2241.697
Schwarz criterion	2423.666	Hannan-Quinn	2313.859
rho	-0.237925	Durbin-Watson	1.867526

Joint test on named regressors -  
Test statistic:  $F(4, 41) = 6.59116$   
with p-value =  $P(F(4, 41) > 6.59116) = 0.000342429$

Based on the result in Table 2, E, S, and G scores and revenue were found to be insignificant toward the firm profitability (ROA). Leverage and firm size have shown a significant negative influence on ROA.

Table 2. Fixed-effects (ROA and E, S, G) using 386 observations

Included 42 cross-sectional units  
Time-series length: minimum 6, maximum 11  
Dependent variable: ROA  
Robust (HAC) standard errors

	Coefficient	Std. Error	t-ratio	p-value
const	219.438	64.4855	3.403	0.0015 ***
LEV	-2.47800	1.17545	-2.108	0.0412 **
SIZE	-21.8089	6.47190	-3.370	0.0016 ***
REV	-0.0251449	0.0547151	-0.4596	0.6483
E	0.0496177	0.0326171	1.521	0.1359
S	0.0421734	0.0461224	0.9144	0.3659
G	0.0423137	0.0533742	0.7928	0.4325

Mean dependent var	0.379206	S.D. dependent var	5.933897
Sum squared resid	5924.561	S.E. of regression	4.186680
LSDV R-squared	0.562966	Within R-squared	0.516450
Log-likelihood	-1074.798	Akaike criterion	2245.596
Schwarz criterion	2435.476	Hannan-Quinn	2320.896
rho	-0.238253	Durbin-Watson	1.868617

Joint test on named regressors -  
Test statistic:  $F(6, 41) = 4.75168$   
with p-value =  $P(F(6, 41) > 4.75168) = 0.000927629$

### 4.2 The Impact of ESG, E, S, and G Scores and Firm-specific Variables on ROE

Based on the result in Table 3, ESG scores, leverage, firm size, and revenue growth had insignificant influence on firm profitability (ROE).

Table 3. Fixed-effects (ROE and ESG) using 386 observations

Included 42 cross-sectional units  
Time-series length: minimum 6, maximum 11  
Dependent variable: ROE  
Robust (HAC) standard errors

	Coefficient	Std. Error	t-ratio	p-value
const	-0.497098	0.842581	-0.5900	0.5584
LEV	-0.00050614	0.0148627	-0.03405	0.9730
SIZE	0.0748481	0.0804135	0.9308	0.3574
REV	-0.00583547	0.00529168	-1.103	0.2766
ESG	-0.00151661	0.00128059	-1.184	0.2431

Mean dependent var	0.203066	S.D. dependent var	0.487486
Sum squared resid	19.47528	S.E. of regression	0.239333
LSDV R-squared	0.787138	Within R-squared	0.005515
Log-likelihood	28.72115	Akaike criterion	34.55770
Schwarz criterion	216.5262	Hannan-Quinn	106.7199
rho	-0.120184	Durbin-Watson	1.683748

Based on the result in Table 4, E, G scores, leverage, firm size, and revenue growth had insignificant influence on firm profitability (ROE). However, social, S scores have a significant negative influence on firm profitability (ROE).

Table 4. Fixed-effects (ROE and E, S, G) using 386 observations

Included 42 cross-sectional units  
Time-series length: minimum 6, maximum 11  
Dependent variable: ROE  
Robust (HAC) standard errors

	Coefficient	Std. Error	t-ratio	p-value
const	-0.388010	0.815456	-0.4758	0.6367
LEV	-0.00670226	0.0158246	-0.4235	0.6741
SIZE	0.0653164	0.0773989	0.8439	0.4036
REV	-0.00551102	0.00553442	-0.9958	0.3252
E	0.00194863	0.00147676	1.320	0.1943
S	-0.00373085	0.00213857	-1.745	0.0886 *
G	-0.000202114	0.00205773	-0.09822	0.9222

Mean dependent var	0.203066	S.D. dependent var	0.487486
Sum squared resid	19.30293	S.E. of regression	0.238975
LSDV R-squared	0.789022	Within R-squared	0.014316
Log-likelihood	30.43673	Akaike criterion	35.12654
Schwarz criterion	225.0067	Hannan-Quinn	110.4262
rho	-0.132716	Durbin-Watson	1.696530

## 5 Conclusions

Both ROE and ROE methods are increasingly being used to analyze the link between ESG and firm profitability. Measurement of a firm's performance among others to highlight its significant benefit is still in substantial doubt about the role of ESG in shaping the firm profitability. This study has examined whether the ESG criteria influence firm profitability.

Based on the result of this study, ESG scores have significantly positively affected firm profitability. When the ESG scores are higher, firms' profit is also higher. This is in contrast to the findings by, [3], [49]. Social scores were also found to be significantly negatively affecting firm profitability. An inverse relationship is noted between social scores and firm profitability. On the other hand, Environmental and Governance scores do not significantly impact firm profitability.

Leverage and firm size significantly negatively affect firm profitability. As leverage becomes lower, firm profitability becomes higher. Evidence also shows that smaller firms are more profitable.

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The authors equally contributed to the present research, at all stages from the formulation of the problem to the final findings and solution.

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### **Conflict of Interest**

The authors have no conflicts of interest to declare.

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