The Moderating Effect of Sharia Stock Index Inclusion on the Relationship Between Sustainability Performance and Profitability

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ABSTRACT

This study examines the relationship between sustainability performance and profitability, with a specific focus on the moderating role of inclusion in the Sharia Stock Index. The index's screening criteria are hypothesized to align with sustainability objectives, potentially enhancing firm profitability. The analysis is based on a sample of 75 firms from Indonesia and Malaysia over the period 2018–2022. Using panel data regression, the findings reveal a positive relationship between overall ESG (Environmental, Social, and Governance) scores and profitability. However, no significant relationship is identified between individual ESG pillar scores and profitability. Additionally, the moderating effect of Sharia Stock Index inclusion on the sustainability performance–profitability relationship is not supported by the results. This study contributes to the literature by exploring the interplay between sustainability performance and profitability within the context of Muslim-majority ASEAN countries. It also challenges assumptions regarding the role of Sharia Stock Index inclusion, offering fresh insights for investors and policymakers aiming to balance sustainability objectives with financial performance.

Keywords: Sustainability; Environmental, Social, and Governance (ESG); Sharia stock index; Profitability.

Apakah Indeks Saham Syariah Memoderasi Kinerja Keberanjutan dan Profitabilitas?

ABSTRAK

Penelitian ini menguji hubungan antara kinerja keberlanjutan dan profitabilitas, sekaligus berkontribusi pada literatur dengan mengeksplorasi peran moderasi dari inklusi Indeks Saham Syariah. Proses penyaringan dalam indeks ini diduga memengaruhi keselarasan dengan tujuan keberlanjutan, yang berpotensi meningkatkan profitabilitas. Analisis dilakukan dengan menggunakan sampel 75 perusahaan di Indonesia dan Malaysia selama periode 2018–2022. Hasil regresi data panel menunjukkan adanya hubungan positif antara skor ESG secara keseluruhan dan profitabilitas. Meskipun demikian, penelitian ini tidak menemukan adanya hubungan signifikan antara skor pilar ESG dengan profitabilitas, maupun peran moderasi dari inklusi Indeks Saham Syariah terhadap hubungan antara kinerja keberlanjutan dan profitabilitas. Studi ini berkontribusi pada literatur dengan menyoroti hubungan kinerja keberlanjutan dan profitabilitas di negara-negara ASEAN dengan mayoritas penduduk Muslim. Selain itu, penelitian ini menantang asumsi tentang peran moderasi dari inklusi Indeks Saham Syariah, sekaligus menawarkan perspektif baru bagi investor dan pembuat kebijakan.

Kata Kunci: *Keberlanjutan; Environmental, Social, and Governance (ESG); Indeks saham syariah; Profitabilitas.*

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INTRODUCTION

Maximizing shareholder returns has traditionally been the primary objective of companies. However, growing concerns over environmental and social issues, such as climate change and workers' rights violations, have underscored the adverse impacts of business activities on society and the environment. These impacts span economic, social, and environmental dimensions. Companies adhering strictly to classical economic theories that prioritize shareholder interests are increasingly criticized for neglecting sustainable strategies that address broader stakeholder objectives (Al Hawaj & Buallay, 2022; Hou, 2019).

The rising awareness of sustainability among stakeholders has positioned sustainable practices as a critical consideration for investors (Al-Dmour et al., 2018; Seker & Sengür, 2021). This shift has encouraged companies to integrate sustainability into their business models, aiming to balance financial objectives with non-financial goals (Zaid et al., 2020). Investors and policymakers now demand greater transparency in sustainability initiatives, often assessed using environmental, social, and governance (ESG) indicators. ESG serves as a comprehensive framework for evaluating sustainability performance, encompassing three key pillars: environmental, social, and governance (Indonesia Stock Exchange, 2024). Globally, companies have adopted ESG reporting to demonstrate their impacts on the environment and society.

The increasing prevalence of issues such as climate change, ethical business practices, and global welfare has heightened the importance of ESG considerations for investors, regulators, and other stakeholders. Consequently, ESG factors have become central to corporate strategies and a critical determinant in global investment decision-making. Companies that adopt sustainable practices often gain greater market recognition, enhancing their long-term viability. By addressing diverse stakeholder interests, these companies can achieve improved profitability and business sustainability (García-Amate et al., 2023; Hasan et al., 2022; Jan et al., 2019; Maji & Lohia, 2023; Tamayo-Torres et al., 2019; Zyadat, 2017).

Alongside the rise in sustainability research, there is growing interest in companies adhering to Sharia principles, particularly in Muslim-majority countries (Lee & Isa, 2023). With an increasing number of devout Muslim investors, Sharia-compliant investments have gained popularity. These investors seek to ensure their investments align with Islamic principles (Gati et al., 2020; Harjito et al., 2021). However, fully Sharia-compliant companies remain rare, as many businesses involve practices such as usury (riba). To address this, modern Sharia scholars have developed guidelines to classify halal (lawful) and haram (unlawful) stocks for investment (Saiti & Ahmad, 2017). Sharia stock indexes adopt these guidelines by excluding companies engaged in prohibited activities, such as gambling, interest-based financial services, and the production of non-halal goods. Companies with excessive interest-based financial ratios are also excluded, making these indexes a key resource for Muslim investors.

Research has highlighted a relationship between sustainability principles and Sharia stock screening criteria. Sustainability reporting often includes norm-based elements, such as restrictions on alcohol, tobacco, and gambling, which align with Sharia principles (Lee & Isa, 2023). However, some scholars argue that current Sharia screening practices do not fully align with Islamic principles, as certain

thresholds for non-compliance, particularly regarding interest-based debt and non-halal income, are still permitted. It has been suggested that these thresholds should be progressively lowered to achieve complete exclusion of non-halal income and interest-based debt. Additionally, incorporating screening measures that prioritize socially responsible investments could further align Sharia-compliant stocks with ethical practices (Malik et al., 2024).

Despite growing interest, research exploring the Sharia stock index as a moderating variable in the relationship between sustainability performance and profitability remains limited. Prior studies have reported mixed findings. Erragragui and Revelli (2016) found no significant relationship between these factors, while Lee and Isa (2023) suggested that Sharia screening may enhance the positive relationship between sustainability performance and profitability. Given these inconsistencies, further evidence is needed. This study aims to contribute to the literature by investigating the moderating role of Sharia stock index inclusion on the relationship between sustainability performance and profitability in Indonesia and Malaysia.

Numerous studies have explored the relationship between sustainability performance and firm profitability. Jan et al. (2019) identified a positive link between sustainability performance and profitability among Malaysian banks from 2008 to 2017. Similarly, Zyadat (2017) found that sustainability performance positively correlates with earnings per share (EPS) and return on assets (ROA). These findings align with Freeman's (1994) stakeholder theory, which posits that a company's success depends on addressing the needs of all stakeholders who influence or are influenced by the company.

The Resource-Based View (RBV) further explains this relationship, suggesting that a firm's unique resources and capabilities enhance its market competitiveness (Barney, 1991). Sustainability activities can serve as strategic investments that yield distinctive, hard-to-replicate advantages (Zhou et al., 2022). For example, adopting environmentally friendly technologies and sustainable practices can improve operational efficiency and optimize resource utilization, leading to increased profitability (Maji & Lohia, 2023). Moreover, transparent disclosure of sustainability activities strengthens stakeholder relationships, further enhancing profitability (Hasan et al., 2022). Based on these theoretical underpinnings, the following hypothesis is proposed:

H_1: Sustainability performance is positively related to profitability.

Sustainability performance, often measured using ESG pillar scores, has also been linked to profitability in specific dimensions. For instance, environmental practices help companies avoid sanctions, reduce operational risks, and foster a positive corporate image (Tamayo-Torres et al., 2019). In the long term, such practices enhance public trust and stakeholder relationships (García-Amate et al., 2023). Garcia et al. (2017) examined firms in Brazil, India, Russia, South Africa, and China and found a positive relationship between environmental sustainability and profitability. Similarly, De Lucia et al. (2020) demonstrated a link between environmental efficiency and ROA in European firms. Thus, the following hypothesis is proposed:

H_2: Environmental pillar performance is positively related to profitability.

Corporate social performance also demonstrates a positive association with profitability. According to stakeholder theory and RBV, social sustainability practices enhance public trust and corporate reputation, fostering long-term profitability (Shen et al., 2016). Tamayo-Torres et al. (2019) found that many investors prefer companies with strong social performance. Additionally, engaging in social initiatives can drive innovation, enabling firms to develop technologies that yield both financial and social benefits (García-Amate et al., 2023). Based on these insights, the following hypothesis is proposed:

H_3**:** Social pillar performance is positively related to profitability.

Good governance further contributes to profitability by promoting trust and collaboration among stakeholders, as suggested by stakeholder theory (Gjergji et al., 2021). Niesten et al. (2017) found that companies with strong governance structures tend to achieve higher profitability, highlighting the role of stakeholder engagement in building trust. From the RBV perspective, good governance enhances a company's reputation, improving competitiveness and profitability (García-Amate et al., 2023). Accordingly, the following hypothesis is proposed:

H_4: Governance pillar performance is positively related to profitability.

Sharia principles and sustainability share fundamental similarities. In Islam, social responsibility and environmental stewardship are viewed as forms of accountability to society and Allah the Almighty (Harun et al., 2020). Islamic business practices, guided by the concept of maslahah, aim to advance social welfare and public interest through faith-based ethics (Lee & Isa, 2023). This concept aligns with sustainability principles, as both prioritize societal and environmental well-being.

Companies included in the Sharia stock index are those that meet stringent screening criteria, excluding entities with high leverage or involvement in prohibited activities (Hambali & Adhariani, 2023). According to stakeholder theory (Freeman, 1994), such companies are subject to external pressures from stakeholders who expect adherence to Sharia principles and the preservation of social and environmental harmony. Consequently, these companies are often more motivated to engage in sustainability practices. Furthermore, they appeal to Muslim investors by aligning with Islamic principles and maintaining low interest-bearing financial ratios, consistent with the Resource-Based View (RBV).

Transparency is a key requirement of Sharia principles, fostering trust and potentially increasing profitability (Alsaadi et al., 2017; Hassan et al., 2021). Companies listed on the Sharia stock index often prioritize sustainability and transparency, which strengthens stakeholder relationships and enhances profitability. For example, Peng and Isa (2020) demonstrated that sustainability practices positively influenced the profitability of 461 companies listed in the MSCI World Islamic Index between 2010 and 2017. These findings suggest that integrating ESG criteria with Sharia screening can enhance firm value, promote ethical practices, and attract a broader investor base, thereby boosting profitability. Based on this reasoning, the following hypothesis is proposed:

H_5: Inclusion in the Sharia stock index strengthens the positive relationship between sustainability performance and profitability.

In addition to overall sustainability performance, inclusion in the Sharia stock index is expected to moderate the relationship between individual

sustainability pillar performances—environmental, social, and governance—and profitability. This expectation is rooted in the alignment of ESG performance with stakeholder trust and Islamic accountability (Indriastuti & Najihah, 2020). Empirical evidence supports this view; for instance, Nugraheni and Anuar (2014) found that companies listed in the Sharia stock index have higher average ESG scores compared to those in conventional indexes. Similarly, Lee and Isa (2023) identified a moderating role of Sharia stock index inclusion on the positive relationships between ESG pillars and profitability. Based on this evidence, the following hypothesis is proposed:

H_6: Inclusion in the Sharia stock index strengthens the positive relationship between individual sustainability pillar performances and profitability.

This study also incorporates firm size and the debt-to-equity ratio (DER) as control variables to account for their potential influence on profitability and to reduce bias in the regression models. Drawing from prior research (García-Amate et al., 2023; Hasan et al., 2022; Jan et al., 2019; Maji & Lohia, 2023; Tamayo-Torres et al., 2019; Zyadat, 2017), firm size, measured as the natural logarithm of total assets, serves as a proxy for resource availability and its impact on profit generation (Delvina & Hidayah, 2023). Larger firms are often more attractive to investors due to their resource capacity and profit-generating potential, making firm size positively associated with profitability.

In contrast, DER, calculated as the ratio of total debt to total equity, measures a company's leverage and its associated investment risks. A high DER indicates greater financial risk, including potential default and liquidation, which can adversely affect profitability. Thus, DER is expected to have a negative relationship with profitability. The hypotheses and variables discussed above are illustrated in the conceptual framework presented in Figure 1.

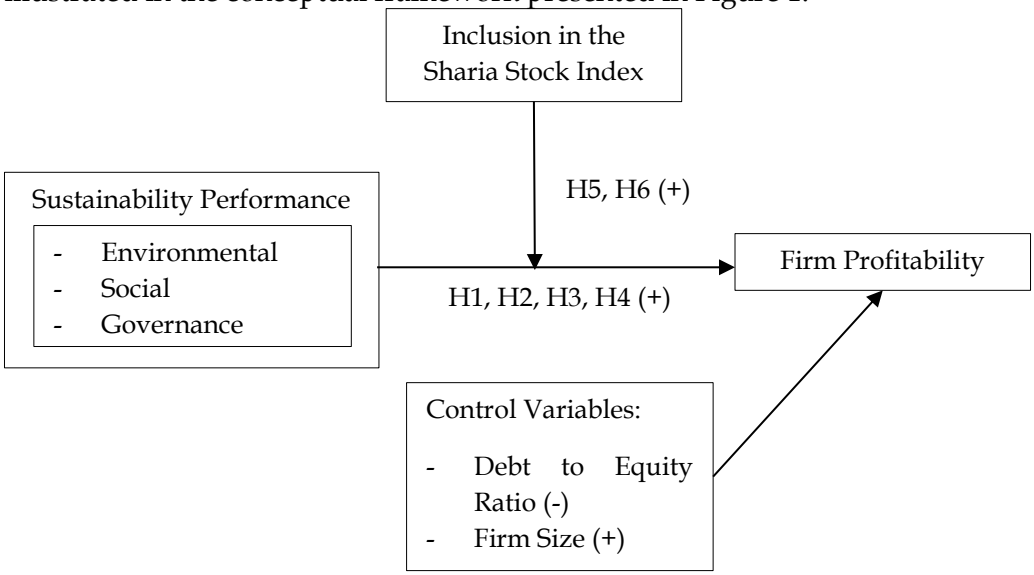


Figure 1. Conceptual Framework

Source: Research Data, 2024

RESEARCH METHOD

This study adopts an empirical approach using data from the Refinitiv database for the period 2018–2022. A purposive sampling method was employed to select Indonesian and Malaysian companies with complete financial data available during the observation period. These countries were chosen due to the limited research on the relationship between sustainability performance and profitability in firms listed on Sharia stock indexes, particularly in Southeast Asia. Both Indonesia and Malaysia have substantial Muslim populations and play significant roles in the development of Islamic capital markets and finance (Qoyum et al., 2022). Furthermore, their Sharia stock screening criteria, including thresholds for interest-based debt and non-halal income ratios, exhibit similar characteristics (Hambali & Adhariani, 2023).

The dependent variable, profitability, is measured using return on assets (ROA), calculated as net income divided by total assets. ROA reflects a company's earnings relative to its asset base, serving as a key indicator of financial performance (Silpachai et al., 2024). The independent variable, sustainability performance, is proxied by Refinitiv's ESG scores, which are derived from disclosures in annual and sustainability reports (Gonçalves et al., 2021). ESG scores encompass 178 indicators across 10 categories, including resource use, product processing, emissions management, and corporate responsibility to labor, communities, consumers, and shareholders. Scores range from 0 to 100, with higher values indicating superior sustainability performance.

The moderating variable, inclusion in the Sharia stock index, is represented by a dummy variable, where a value of 1 is assigned to companies listed in the Sharia stock index and 0 otherwise. The Indonesia Shariah Stock Index (ISSI) and the FTSE Bursa Malaysia (FBM) Emas Shariah Index serve as references. Both indexes screen companies based on their business activities and financial ratios to ensure compliance with Sharia principles.

Two control variables are incorporated into the analysis: the Debt-to-Equity Ratio (DER) and company size. DER, calculated as total debt divided by total equity, measures a company's leverage. Higher DER values indicate elevated debt levels, which may deter investors and negatively affect profitability (Kasmir, 2018). Firm size is proxied by the natural logarithm of total assets, reflecting a company's resource capacity. Larger firms, with greater total assets, are generally expected to generate higher profits (Delvina & Hidayah, 2023).

To test the hypotheses, this study employs multivariate regression analysis with four models: two non-moderated models (Models 1 and 2) and two moderation models (Models 3 and 4). These models facilitate an in-depth examination of the relationships between sustainability performance, Sharia stock index inclusion, and profitability.

$$ROA_{it} = \alpha + \beta_1 ESG_{it} + \beta_2 SHARIA_{it} + \beta_3 5DER_{it} + \beta_4 SIZE_{it} + \varepsilon_{it} \quad \text{.....(1)}$$

$$ROA_{it} = \alpha + \beta_1 ENV_{it} + \beta_2 SOC_{it} + \beta_3 GOV_{it} + \beta_4 SHARIA_{it} + \beta_5 5DER_{it} \ldots + \beta_6 SIZE_{it} + \varepsilon_{it} \quad \text{.....(2)}$$

$$ROA_{it} = \alpha + \beta_1 ESG_{it} + \beta_2 SHARIA_{it} + \beta_3 ESG * SHARIA_{it} + \beta_{45} 5DER_{it} + \beta_5 SIZE_{it} + \varepsilon_{it} \quad \text{.....(3)}$$

$$ROA_{it} = \alpha + \beta_1 ENV_{it} + \beta_2 SOC_{it} + \beta_3 GOV_{it} + \beta_4 SHARIA_{it} + \beta_5 ENV * SHARIA_{it} + \beta_6 SOC * SHARIA_{it} + \beta_7 GOV * SHARIA_{it} + \beta_8 5DER_{it} + \beta_9 SIZE_{it} + \varepsilon_{it} \quad (4)$$

Here, ROA represents return on assets, ESG refers to the overall ESG score, ENV denotes the score of the environmental pillar, SOC represents the score of the social pillar, GOV indicates the score of the governance pillar, SHARIA is a dummy variable, taking the value of 1 for companies listed in the Sharia stock index and 0 otherwise, ESG*SHARIA is the interaction variable between ESG and SHARIA, ENV*SHARIA is the interaction variable between ENV and SHARIA, SOC*SHARIA is the interaction variable between SOC and SHARIA, GOV*SHARIA is the interaction variable between GOV and SHARIA, SIZE refers to company size, and DER is the debt-to-equity ratio.

RESULT AND DISCUSSION

Purposive sampling was employed to select companies that met specific criteria for inclusion in the study. From a total of 2,047 companies listed in the Refinitiv database, only 103 had complete ESG scores and financial data available for the period 2018–2022. After further screening, a final sample of 75 companies was selected, resulting in 375 firm-year observations over the five-year period.

The dependent variable in this study is profitability, measured using return on assets (ROA). Sustainability performance, represented by ESG scores, serves as the independent variable, while inclusion in the Sharia stock index is used as a moderating variable, indicated by a dummy variable. To improve the precision of the regression model, two control variables were included: the debt-to-equity ratio (DER) and firm size (SIZE). DER is calculated as total debt divided by total equity, while firm size is proxied by the natural logarithm of total assets. A summary of the descriptive statistics for the variables used in the analysis is presented in Table 1.

Table 1. Summary of Descriptive Statistics

Variable	Observation	Mean	Std. Dev.	Minimum	Maximum
ROA	375	0.067	0.090	-0.180	0.846
ESG	375	58.224	16.356	13.522	91.409
ENV	375	50.602	21.501	0	93.642
SOC	375	63.056	18.308	12.968	97.43
GOV	375	56.491	22.143	2.977	95.413
SHARIA	375	0.480	0.500	0	1
DER	375	0.905	1.333	0.001	12.952
SIZE	375	31.821	1.180	28.881	35.315

Source: Research Data, 2024

The return on assets (ROA) ranges from -0.18 to 84.6%, reflecting significant variation in profitability among the sampled companies. The average ESG score is 58.224, indicating a relatively high level of sustainability performance across the sample. However, the notable difference between the mean and standard deviation highlights substantial dispersion in ESG scores among the companies.

Among the ESG pillars, the social pillar score has the highest average at 63.056, while the environmental pillar score has the lowest average at 50.602. These

figures suggest that the sampled companies are most actively engaged in sustainability practices within the social sector and least involved in the environmental sector.

The SHARIA variable indicates that 48% of the sample, representing 36 companies, are listed in Sharia stock indices. On average, the sampled companies have total assets equivalent to 31,821 million rupiahs (natural logarithm) and a debt-to-equity ratio (DER) of 90.50%.

Table 2. Regression Results for Model 1

ROA	Coef.	St.Err.	t-value	p-value	Sig
ESG	0.001	0.000	1.93	0.053	*
SHARIA	0.007	0.013	0.56	0.577	
DER	-0.009	0.004	-2.29	0.022	**
SIZE	-0.025	0.006	-4.18	0.000	***
Constant	0.831	0.191	4.34	0.000	***

*** p<.01, ** p<.05, * p<.1*

Source: Research Data, 2024

Table 2 presents the regression results for Model 1. The ESG variable exhibits a p-value of 0.053 and a coefficient of 0.001, indicating a significant positive relationship with ROA. This result supports H1, confirming that sustainability performance positively influences profitability. However, the relationship between inclusion in the Sharia stock index and profitability is not significant (p-value of 0.577).

The control variables, DER and SIZE, demonstrate significant negative relationships with profitability. Specifically, a 1% increase in DER corresponds to a 0.9% decrease in ROA, while a 1% increase in SIZE results in a 2.5% decline in profitability. These findings suggest that higher leverage and larger firm size may impose additional costs or operational inefficiencies that reduce profitability.

The results align with prior research (García-Amate et al., 2023; Hasan et al., 2022; Jan et al., 2019; Maji & Lohia, 2023; Tamayo-Torres et al., 2019; Zyadat, 2017), which identified a positive relationship between sustainability performance and profitability. This relationship is grounded in stakeholder theory (Freeman, 1994) and the Resource-Based View (Barney, 1991), which assert that effective sustainability practices enhance stakeholder trust and create unique competitive advantages. Such practices improve profitability by fostering investor confidence, cultivating consumer loyalty, and mitigating risks (Delvina & Hidayah, 2023).

Table 3. Regression Results for Model 2

ROA	Coef.	St.Err.	t-value	p-value	Sig
ENV	0.000	0.000	0.18	0.854	
SOC	0.000	0.000	0.74	0.461	
GOV	0.000	0.000	0.96	0.338	
SHARIA	0.007	0.013	0.51	0.612	
DER	-0.009	0.004	-2.28	0.023	**
SIZE	-0.025	0.006	-4.06	0.000	***
Constant	0.829	0.196	4.24	0.000	***

*** p<.01, ** p<.05, * p<.1*

Source: Research Data, 2024

The regression results for Model 2, presented in Table 3, reveal that the individual ESG pillar scores (environmental, social, and governance) are not significantly associated with profitability, with p-values of 0.854, 0.461, and 0.338, respectively. Consequently, H2, H3, and H4 are not supported. The control variables in Model 2, consistent with Model 1, show significant negative relationships with profitability.

These findings diverge from previous studies (García-Amate et al., 2023; Tamayo-Torres et al., 2019) and the theoretical frameworks of stakeholder theory (Freeman, 1994) and the Resource-Based View (Barney, 1991), which suggest that individual ESG pillar scores positively influence profitability.

The lack of a significant relationship between ESG pillar scores and profitability may be attributed to differences in the timeframes required for various sustainability initiatives to generate financial benefits. Environmental projects, for instance, often involve substantial long-term investments. The Porter Hypothesis (Porter & Van Der Linde, 1995) posits that firms may require several years to implement environmental sustainability projects before realizing economic gains (Hang et al., 2019). In contrast, social and governance practices tend to yield returns more quickly, typically within a year (Aydoğmuş et al., 2022).

Additionally, limited financial resources allocated to sustainability initiatives may reduce their effectiveness, further diminishing their potential impact on profitability. As a result, despite reporting sustainability efforts, the financial benefits of these practices may not be immediately apparent.

Table 4. Regression Results for Model 3

ROA	Coef.	St.Err.	t-value	p-value	Sig
ESG	0.001	0.000	1.26	0.207	
SHARIA	0.001	0.042	0.03	0.976	
ESG*SHARIA	0.000	0.001	0.15	0.877	
DER	-0.009	0.004	-2.29	0.022	**
SIZE	-0.025	0.006	-4.16	0.000	***
Constant	0.835	0.195	4.29	0.000	***

**** p<.01, ** p<.05, * p<.1*

Source: Research Data, 2024

Table 4 presents the regression results for Model 3. Unlike Model 1, the findings reveal no significant relationship between ESG scores and ROA. Additionally, the SHARIA variable remains insignificant across both models. To test H5, the interaction variable ESG*SHARIA was included. However, the p-value of 0.877 indicates that the Sharia stock index does not strengthen the positive relationship between sustainability performance and profitability. Thus, H5 is not supported.

The discrepancy between Model 1 and Model 3 may be attributed to the inclusion of the Sharia stock index as a moderating variable, which appears to weaken the observed relationship between ESG scores and profitability. Similarly, neither the individual ESG pillar scores in Model 2 (non-moderated) nor Model 4 (moderated) exhibit significant relationships with ROA. These results suggest that sustainability performance has only a partial positive association with profitability. This conclusion aligns with the findings from Model 2 (Table 3), where ESG pillar scores and ROA were also insignificantly related.

The insignificance of ESG pillar scores may result from the varying timeframes required for sustainable practices to generate financial benefits. Environmental initiatives, for instance, often involve long-term investments, while social and governance practices tend to yield quicker returns (Aydoğmuş et al., 2022). According to the Porter Hypothesis (Porter & Van Der Linde, 1995), companies with strong environmental performance typically realize economic benefits after approximately two years (Hang et al., 2019). This delay reflects the time needed for the development and implementation of environmental practices. Moreover, limited financial resources allocated to sustainability initiatives may further reduce their impact, undermining their potential to enhance profitability.

Table 5. Regression Results for Model 4

ROA	Coef.	St.Err.	t-value	p-value	Sig
ENV	0.000	0.000	0.29	0.774	
SOC	0.000	0.001	0.50	0.616	
GOV	0.000	0.000	0.57	0.570	
SHARIA	0.003	0.044	0.06	0.953	
ENV*SHARIA	0.000	0.001	-0.24	0.809	
SOC*SHARIA	0.000	0.001	0.11	0.914	
GOV*SHARIA	0.000	0.001	0.21	0.835	
DER	-0.009	0.004	-2.27	0.023	**
SIZE	-0.025	0.006	-3.95	0.000	***
Constant	0.824	0.202	4.07	0.000	***

**** p<.01, ** p<.05, * p<.1*

Source: Research Data, 2024

Table 5 presents the regression results for Model 4, which tests H6 by including interaction variables for the ESG pillars (ENV*SHARIA, SOC*SHARIA, and GOV*SHARIA). The p-values (0.809, 0.914, and 0.835, respectively) indicate that inclusion in the Sharia stock index does not moderate the relationship between ESG pillar scores and profitability. Consequently, H6 is not supported.

The results of both moderation models (Models 3 and 4) fail to establish a significant relationship between the Sharia stock index and profitability, either as a predictor or a moderator variable. This finding contrasts with Lee and Isa's (2023) study. Ayedh et al. (2020) suggest that such discrepancies may arise from limitations in Sharia stock screening criteria, which primarily focus on business type and financial ratios rather than a comprehensive evaluation of adherence to Sharia principles. These financial ratios, such as debt structures, are not entirely free from riba (usury), casting doubt on the robustness of Sharia compliance assessments.

Across all four models, the Debt-to-Equity Ratio (DER) consistently demonstrates a significant negative relationship with profitability. This indicates that higher DER and larger company size are associated with reduced profitability. These findings align with prior research (Chen et al., 2022) that highlights the adverse impact of higher debt levels on profitability by increasing financial obligations and limiting available capital (Susilawati et al. 2022). Firm size, proxied by the natural logarithm of total assets, also exhibits a negative relationship with profitability. While this contradicts Delvina and Hidayah (2023) findings of a positive relationship, it is consistent with other studies (Lee & Isa, 2023; Ting, 2021; Zuraida & Husin, 2022). This negative relationship may be attributed to the

calculation method: since ROA is derived from net profit relative to total assets, larger firms often generate lower returns due to their expansive asset bases, which dilute profitability ratios.

A sensitivity analysis was conducted to further examine the relationship between sustainability performance and profitability, as well as the moderating role of the Sharia stock index. In this analysis, profitability was measured using return on equity (ROE), calculated as the ratio of net income to total equity. Unlike ROA, which focuses on a company's total assets, ROE emphasizes the efficiency of capital utilization by investors. ROE serves as an alternative profitability metric, reflecting a company's ability to generate profits from equity financing (Ross et al., 2021). A higher ROE indicates greater efficiency in leveraging equity to generate profits.

The sensitivity analysis included four models: Models A and B (non-moderated) and Models C and D (moderated), utilizing panel data regression methods. The regression results for these models are summarized in Table 6.

Table 6. Sensitivity Test Results

Variable	Regression Models			
	(A)	(B)	(C)	(D)
ESG	0.00235	0.000915		
ENV			-5.52e-05	0.000370
SOC			0.00217	0.00203
GOV			0.000390	-0.000733
SHARIA	0.0204	-0.159	0.0255	-0.0846
ESG*SHARIA		0.00284		
ENV*SHARIA				-0.000603
SOC*SHARIA				6.10e-05
GOV*SHARIA				0.00227
DER	-0.0313**	-0.0320**	0.155	0.168
SIZE	-0.293***	-0.302***	-0.239***	-0.235***
Constant	9.384***	9.745***	7.564***	7.505***
Observations	375	375	375	375
R-squared	0.052	0.055	0.044	0.048
Number of ID	75	75	75	75

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

Source: Research Data, 2024

The sensitivity analysis, employing return on equity (ROE) as an alternative profitability proxy, further highlights the absence of significant relationships between sustainability performance, its individual pillars, and profitability across Models A to D. These findings contrast with stakeholder theory (Freeman, 1994) and the Resource-Based View (Barney, 1991), which argue that superior sustainability practices create a competitive advantage. The lack of significance may reflect instances of greenwashing, where companies superficially engage in sustainability efforts to enhance their reputation without making substantive investments (Wang & Sarkis, 2017). This aligns with Billio et al. (2021), who also reported no significant relationship between sustainability performance and firm profitability.

Similar to the non-moderation models, inclusion in the Sharia stock index does not exhibit any significant influence on profitability in the sensitivity analysis. This result underscores the persistent methodological and definitional ambiguities in evaluating Sharia compliance within stock indexes. Sharia principles, derived from the Al-Qur'an, Hadith, and secondary legal sources such as ijma and ijtihad, are subject to evolving interpretations and regional variations. These complexities make the consistent application of "pure" Sharia principles challenging in practice (Ayedh et al., 2020). Additionally, sample size limitations further complicate drawing conclusive insights into the Sharia stock index's role in influencing profitability.

Consistent with the findings from Models 1 to 4, the DER and SIZE variables exhibit significant negative relationships with ROE across all four sensitivity models. These results indicate that higher DER and larger company size are associated with lower profitability. This corroborates prior studies (Chen et al., 2022; Lee & Isa, 2023; Ting, 2021; Zuraida & Husin, 2022), which highlight that elevated debt levels reduce available capital and increase financial obligations, negatively impacting profitability. Furthermore, larger firms often generate lower returns due to their expansive asset bases, which dilute profitability ratios (Susilawati et al. 2022).

CONCLUSION

This study examines the relationship between sustainability performance and firm profitability in Indonesia and Malaysia from 2018 to 2022, focusing on the moderating role of the Sharia stock index. The findings contribute to the literature by demonstrating that sustainability performance, proxied by ESG scores, is positively associated with profitability, measured by ROA, in the context of Muslim-majority ASEAN countries. This suggests that strong sustainability performance is valued by stakeholders, incentivizing companies to improve their sustainability practices to achieve greater profitability.

However, no significant relationship is observed between individual ESG pillar scores and profitability. This disparity may be attributed to the varying timelines required for different sustainability initiatives to generate financial benefits, making it challenging to capture their immediate impact on profitability (Aydoğmuş et al., 2022). Additionally, the study reveals that the Sharia stock index does not moderate the relationship between sustainability performance and profitability. This finding offers a new perspective on the role of the Sharia stock index in the sustainability-profitability nexus.

The lack of a moderating effect may stem from the limitations of Sharia stock screening criteria, which do not fully align with comprehensive Sharia principles. For instance, permissible thresholds for non-halal income and interest-bearing debt may dilute the distinction between Sharia-compliant and non-compliant companies. As a result, companies listed in the Sharia stock index may not consistently operate according to Sharia principles. To address this, refining the screening criteria to include additional indicators, such as Sharia governance and financial practices (e.g., zakat expenditure disclosure), could strengthen the assurance of Sharia compliance among listed companies.

Despite its contributions, this study has several limitations. It relies on ESG score data from Refinitiv Eikon, which is limited in availability. Future research could explore alternative proxies for corporate sustainability performance to provide a more comprehensive analysis. Additionally, incorporating Sharia-related variables, such as the Sharia Supervisory Board (DPS) for banks, the Islamic Social Reporting (ISR) index, or measures of religiosity, could enrich future studies on the impact of Sharia compliance on sustainability performance and profitability.

The study's sample is confined to Indonesia and Malaysia, necessitating caution in generalizing the findings to other countries. Future research could expand the scope to include a more diverse sample, encompassing both Muslim-majority and Muslim-minority countries. This broader approach would provide deeper insights into the dynamics of Sharia stocks in relation to sustainability performance and profitability.

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