Does Sharia compliance reflect better environmental, social, and governance (ESG)? Evidence from Indonesia's energy sector

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Article Info

Abstract

Purpose – This study aims to compare the environmental, social, and governance (ESG) performance of Sharia-labeled and conventional companies in the energy industry and examine the effect of the Sharia label on ESG performance. This study is important because Sharia-labelled companies are expected to adhere to Islamic values reflected in good corporate governance, demonstrate social responsibility, and participate in environmental conservation.

Methodology – This study uses a quantitative approach with a fixed effect model panel data regression technique, involving financial and non-financial data from companies listed on the ISSI and non-ISSI in the 2016-2023 period.

Findings – This study found that Sharia companies in the energy sector have lower sustainability (ESG) performance than conventional companies, especially in the environmental dimension. The Islamic dummy variable shows a negative effect on ESG performance, while control variables, such as total assets, DER, and leverage, play an important role in influencing performance. There is no significant difference in social and governance dimensions between Islamic and conventional companies. This study recommends that Islamic stock index screening include sustainability aspects more comprehensively.

Implications – Policy makers, industry, and academics can use the findings of this study as recommendations to strengthen sustainable performance in Sharia-labelled companies.

Originality – This study analyzes sustainability performance in each industrial sector using materiality-based ESG performance.

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Introduction

Academics and other stakeholders have been studying the topic of sustainability more recently, considering it an important issue (Binmahfouz & Hassan, 2013; Dai, 2024; Hambali & Adhariani, 2023). Sustainability is defined as current development that does not sacrifice meeting future needs (United Nation, 1987). A total of 195 countries around the world, including Indonesia, have signed the Paris Agreement, demonstrating a growing global commitment to sustainability. Indonesia ratified Law Number 16 of 2016 concerning the Paris Agreement. This agreement encourages companies to commit to sustainability and social responsibility issues, which are becoming

increasingly important as the concept of sustainable development is developing globally (Pinheiro et al., 2022). In sustainable practices, companies must disclose reports that cover three main dimensions: environmental, social, and governance (ESG) (Adams & Abhayawansa, 2022; Hambali & Adhariani, 2023).

ESG factors, which are sustainability indicators, are currently one of the main benchmarks for assessing a company's performance and commitment to sustainability issues (Qoyum et al., 2022; Velte, 2022). The term ESG refers to a company's standards or procedures for conducting businesses that emphasize sustainability (Xu et al., 2021). The implementation of ESG in companies presents a short-term trade-off, as the additional cost of investing in green technology may reduce revenue. However, in the long run, ESG practices can increase profitability and sustainable growth because of regulatory pressures and shifting investor approaches (Chininga et al., 2024; Pinheiro et al., 2024; Yadav et al., 2024). In developed countries, ESG practices have become mandatory for companies, and investors pay special attention to these issues. Investment appraisals are based not only on financial statements, but also on ESG ratings (Torre et al., 2020; Pedersen et al., 2021; Costa et al., 2022;Pinheiro et al., 2024).

The implementation of ESG practices in Indonesia has begun to receive attention, one of which is the progressive policy of the Financial Services Authority (Otoritas Jasa Keuangan, OJK) in Regulation No. 51/POJK.03/2017, which requires sustainability reporting for financial institutions, issuers, and public companies. ESG is an important benchmark in the energy sector because of the large impact of this industry on the environment and society (Esparza et al., 2023). Energy companies are required to reduce carbon emissions, encourage clean energy production, and strengthen their governance structures. However, the implementation of ESG in Indonesia still faces several challenges such as low awareness, the absence of a standard ESG framework, and the dominance of symbolic compliance compared to substantive changes (Bebic et al., 2025). These challenges need to be addressed immediately, especially since investor behavior is now shifting when considering sustainability factors when choosing issuers to invest in.

According to research Raut et al. (2023), investors' primary motivations for investing are economic and social responsibilities. The stakeholder theory Freeman (1994) states that companies should look for shareholders and stakeholders to protect the environment and improve local communities. Therefore, the achievement of current financial statements is less meaningful if companies ignore their social and environmental responsibilities. Both institutional and retail investors consider not only fundamental information, such as financial statements and technical data on past performance, but also other aspects, such as commitment to ESG issues. Investors, especially in developed countries, are now starting to incorporate an ESG vision into their portfolios. As a result, the socially responsible investing (SRI) approach has been encouraged as an alternative for assessing companies (Erragragui & Revelli, 2016).

Islamic-labelled companies should have a stronger commitment to sustainability issues when it comes to corporate compliance in implementing ESG standards (Masih et al., 2018; Qoyum et al., 2022). This is based on the comprehensive and universal values of Islam, which govern all aspects of life, including the economy, to achieve social justice and environmental responsibility (Hambali & Adhariani, 2023). Therefore, energy companies included in the Sharia index should not be involved in environmental or social conflicts. This principle is based on the teachings of the Koran, which prohibits environmental destruction, as stated in Surah Al-A'raf verse 56 which means: *"Do no mischief on the earth, after it hath been set in order, but call on Him with fear and longing (in your hearts): for the Mercy of Allah is (always) near to those who do good".*

According to this verse, the objectives of Sharia (maqashid Sharia), also known as Hifdzul Bi'ah or protecting the environment (Al-Biah), include an obligation to protect the environment. This principle confirms the alignment between the concept of sustainability as measured by ESG and the principles of Sharia, both of which emphasize the importance of environmental responsibility, ethics, and social justice (Chatzitheodorou et al., 2019; Qoyum et al., 2021). Thus, the implementation of ESG in business practices is not only in line with Islamic values, but also supports the achievement of balance and sustainability, which are at the core of Sharia teachings.

Ideally, Islamic-labelled energy companies that adopt Islamic values will be more ESG-compliant. However, there is still debate as Sharia screening is not as complex as the SRI index, which covers social responsibility and sustainability across the board. Sharia screening focuses on the conformity of business outputs with Sharia principles and usury-related financial ratios (Binmahfouz & Hassan, 2013). In fact, the process of producing output is also very important, especially in the energy sector, which has a huge environmental and social impact as it deals directly with natural resources (Kumar et al., 2022; Pinheiro et al., 2024). Critiques have surfaced, underscoring the significance of incorporating sustainability values, as measured by ESG scores, into the evaluation of companies seeking inclusion in Sharia stock indices (Binmahfouz & Hassan, 2013; Masih et al., 2018; Paltrinieri et al., 2020).

Various studies have explored the use of ESG as a measure of corporate sustainability and have linked it to Islamic labels (Gati et al., 2024a; Hambali & Adhariani, 2023; Qoyum et al., 2021, 2022, 2024; Ullah et al., 2023). Gati et al. (2024) It was found that companies labeled Islamic have a higher commitment to sustainability report disclosure than conventional companies, but they do not evaluate their performance. Ullah et al. (2023) The study revealed that Islamic-labeled companies excel in governance Qoyum et al. (2022) despite their superior performance in environmental and social dimensions. Hambali and Adhariani, (2023) This analysis, which utilizes the most recent data and incorporates Covid-19 variables, yields similar findings because of criteria that do not specifically distinguish them from conventional companies. Islamic-labeled companies perform well in environmental and social dimensions, but not in governance (Hayat & Hassan, 2017).

However, previous studies tend to test this in aggregate, which can provide biased results because each sector has a different methodology for measuring ESG. Therefore, this study will more specifically examine the ESG performance of Islamic-labelled companies in the energy industry in Indonesia. The energy sector was chosen because of its large impact on the environment and society, making it very important in sustainability studies (Kumar et al., 2022; Pinheiro et al., 2024). Given the sensitivity of this sector to sustainability issues, evaluating the suitability of energy companies included in the Sharia index is important for assessing whether their ESG performance is in line with Islamic principles. Energy companies included in the Sharia index are expected to not only comply with Islamic financial standards but also demonstrate a commitment to sustainability practices, as reflected in their ESG performance across all three dimensions.

Theoretically, this research can enhance the existing literature on ESG in the context of Islamic companies, an area that has received little in-depth exploration. Practically, this research benefits both institutional and retail investors by providing more comprehensive information as a basis for making investment decisions. Investors should not only pay attention to the Sharia label but should also consider the extent of the company's commitment to ESG in determining responsible investment choices. In addition, this research is useful for policymakers, providing a basis for formulating more comprehensive policies. The integration of ESG elements in the screening of Islamic-labelled companies will result in policies that more accurately reflect Sharia principles while encouraging sustainability and social responsibility. This can positively impact the Islamic stock index in the Indonesian capital market.

Literature Review

Stakeholder theory

The stakeholder theory states that the better a company manages its relationships with all its stakeholders, the more successful it will be over time. Individuals or groups that gain from or suffer from a company's actions are considered stakeholders (Freeman, 1994b). Freeman's theory suggests that a company's true success lies in its ability to satisfy all stakeholders, not just shareholders. According to stakeholder theory, environmental, social, and governance (ESG) activities can be transferred or synergized into a company's market performance. For example, satisfied and happy employees will be more motivated in their work, satisfied customers will increase loyalty, satisfied suppliers will provide discounts, and so on, all of which will improve a company's reputation and result in better financial and sustainability performance (Peng & Isa, 2020).

ESG practices targeted at stakeholders can have a synergistic effect on corporate performance, allowing companies to gain competitive advantage by increasing their ESG commitments (Alsayegh et al., 2020). From this perspective, ESG can play a synergistic role in corporate performance. In addition, this theory argues that firms should prioritize stakeholder satisfaction to achieve competitive advantage. El Ghoul et al. (2017) The theory suggests that ESG engagement positively impacts firm performance, as ESG practices aid in resolving organizational disputes between stakeholders and management. As a result, ESG activities are beneficial because they increase value for stakeholders, and it is no wonder that stakeholder theory is the most widely applied framework for explaining corporate ESG practices (Khamisu et al., 2024).

The concept of ESG in the Qur'an

Corporate procedures often use ESG to refer to a set of elements that integrate the traditional economic and financial parameters to estimate the long-term sustainability of investments (Pinheiro et al., 2024). Generally, companies measure their ESG performance based on their commitment to disclose their ESG practices (El Khoury et al., 2022).. A company's choice of ESG implementation strategy can have a positive impact on company value and performance. Integrating ESG into corporate operations is an innovative strategy in modern companies (Chen et al., 2022).

Every company aims to maximize its profit. However, it is important to remember that a company does not stand alone; to continue operating, it must provide support to all the parties around it. While pursuing profits is permissible, companies should not concentrate solely on achieving substantial profits. Instead, companies should strive to achieve Maslahah, a business model that benefits both society and the environment. Ideal business promotes human welfare in this world and the next, rather than brutally exploiting profits (Gati et al., 2024b).

Approximately three decades ago, there was a collective realization that business activities must consider human and environmental sustainability. The Quran (7:56, 85) states that the environment or nature is a trust that requires proper maintenance and management in Islamic teaching. This concept is in line with the Environmental, Social, and Governance (ESG) dimension. Similarly, social justice and community welfare are crucial aspects, so companies must pay attention to the social impact of their business activities (Al-Quran 4:36, 58). Islam encourages transparency, accountability, integrity, and good governance (Quran 2:42, 16:90), which are relevant to ESG principles. We need to study many more Islamic teachings in the Quran, including the method of interpreting Quranic verses, to determine whether a Murabahah contract complies with Sharia law (Tlemsani et al., 2020).

ESG issues and the application of Islamic values are essential for investors who wish to align their investments with Islamic principles. These issues seek to promote ethical, socially responsible, and environmentally friendly business practices, while adhering to Islamic principles (Gati et al., 2024b).

Islamic labelling and ESG performance

The "Islamic" label is not just a marketing label but also a quality certification. The label should ideally reflect a company's adherence to Sharia, including environmental stewardship and social responsibility (Qoyum et al., 2024). The Islamic perspective views social responsibility and sustainability as means of fulfilling obligations to both God (Allah) and society (Harun et al., 2020). Companies adhering to Sharia principles can fulfill this accountability by conducting their business operations in line with these principles and ensuring that stakeholders receive transparent information (Albassam & Ntim, 2017). Companies that claim to comply with Sharia generally undergo a screening process by the relevant authorities in their respective countries.

The Sharia screening criteria not only serve as labels, but also reflect better sustainability performance than conventional companies (Binmahfouz & Hassan, 2013; Hambali & Adhariani, 2023). This screening allows ethical businesses to improve their social image and differentiate themselves from their competitors. In addition, healthy financial ratio requirements such as minimizing interest-bearing debt reduce the risk of default or bankruptcy. By contrast, conventional companies that do not have these restrictions could potentially have high interest-

bearing debt, which could increase financial risk and lower share prices. Sharia screening, therefore, produces a double effect of reducing business risk and increasing profits, especially during economic downturns. This proves that Sharia is more than just a label; it represents positive performance and adds value (Ullah et al., 2023).

Qoyum et al. (2022) explored the sustainability of Islamic and non-Islamic companies based on each ESG dimension, and found that Islamic companies performed better in environmental and social aspects, but not in governance. This is thought to be due to the absence of specific Islamic governance standards, which makes it difficult to distinguish governance practices between Islamic and conventional companies. However, the data used in the study covered the period 2009–2018, when sustainability regulations have not yet developed significantly. Hambali and Adhariani, (2023) examined the ESG performance of Islamic-labeled companies considering the impact of Covid-19 and obtained similar results: Islamic-labeled companies tended to excel in environmental and social aspects, but not in governance. Meanwhile, research by Ullah et al. (2023) tated the opposite: Islamic companies showed better governance performance than conventional companies.

Most previous studies have been conducted in aggregate across sectors, without considering that each sector has different characteristics and ESG measurement methodologies. This approach has the potential to cause bias and obscure the understanding of actual ESG performance in strategic sectors. Therefore, this study focuses specifically on the energy sector, which has a large impact on the environment and society, and is vulnerable to social conflict. To update and strengthen the findings, this study uses the latest data with a base year of 2016, when the Paris Agreement was ratified in several countries.

The findings from previous studies are an important historical contribution to building the theoretical basis and formulating the hypotheses of this study. The hypothesis is formulated based on empirical evidence that companies labeled as Islamic tend to have better ESG performance, especially in environmental and social aspects, but still leaves room for further evidence in the energy sector and governance dimensions.

Following this line of argument, we develop three hypotheses as follows:

H_1: Islamic energy companies have better aggregate ESG performance than conventional companies.

H_2: Ilamic energy companies have better environmental ESG performance than conventional companies.

H_3: Islamic energy companies have better ESG performance in the social dimension than conventional companies.

H_4: Islamic energy companies have better ESG performance in the governance dimension than conventional companies.

Research Methods

Data and sample

This study investigates the sustainability performance of energy sector companies on the IDX BEI during the period 2016-2023. We categorize companies listed in the Sharia index, ISSI, as 1 and non-Sharia companies as 0. The ESG score measures sustainability performance data, and Bloomberg Intelligence provides financial data that are used as control variables. This study restricts its sample size to companies that report sustainability performance and have an ESG score. Based on the screening process, many energy companies did not have ESG scores. The final sample of this study consists of 11 companies, which would ideally yield 88 observations for the period 2016–2023. However, due to data limitations, this study used unbalanced panel data, as detailed in Table 2 (descriptive statistics).

Researrh variabels

This study used the dependent variable in the form of an aggregate ESG score, as well as for each dimension of environment (ENVI), social (SOCI), and governance (GOVE). The independent variable has a dummy value of 1 for Sharia stocks and 0 for non-Sharia stocks. This study also used

control variables to produce a more accurate and objective analysis. The control variables used include the Covid-19 dummy (1 for 2020-2021, 0 for other years), as well as financial ratios and firm value, such as total assets, Tobin's Q, DER, leverage, profit margin, and ROA. The selection of financial ratios as control variables considers the additional costs required by companies to achieve higher sustainability performance (Hambali & Adhariani, 2023; Qoyum et al., 2024; Ullah et al., 2023).

Table 1. Summary of operational variables

Definition and Measurement			
Symbol	Definition	Measurement	Source of variable data
Dependents Variables			
ESG	Composite score reflecting a company's overall Environmental, Social, and Governance (ESG) performance.	The score ranges from 0 to 10; 10 is the best.	Bloomberg Intelligence
ENVI	Score indicating a company's environmental performance, including sustainability practices and impact on nature.	The score ranges from 0 to 10; 10 is the best.	Bloomberg Intelligence
SOCI	Score measuring a company's social performance, such as labor practices, community engagement, and human rights	The score ranges from 0 to 10; 10 is the best.	Bloomberg Intelligence
GOVE	Score representing a company's governance quality, including board structure, transparency, and ethical conduct.	The score ranges from 0 to 10; 10 is the best.	Bloomberg Intelligence
Independent variables			
IS	Represents a company's Sharia compliance as measured by a dummy variable.	Binary variable that equals 1 if an Islamic firm, and 0 othewise	Indonesia Stock Exchange (IDX)
Control variables			
COV	The emergence of the Covid-19 virus	The pandemic period 1 for 2020-2021 and 0 otherwise	Ministry of Health of Indonesia
LNTA	Natural logarithm of total assets, used as a proxy for company size.	Total assets	Bloomberg Intelligence
DER	Debt-to-Equity Ratio; measures a company's financial leverage by comparing total debt to shareholders' equity.	$\frac{\text{Long term debt + Short term}}{\text{Equity}} \times 100\%$	Bloomberg Intelligence
LEV	Leverage Ratio; calculated as total liabilities divided by total assets, indicating financial risk.	$\frac{\text{Total debt}}{\text{Total assets}} \times 100\%$	Bloomberg Intelligence
PROM	Net Profit Margin; the ratio of net income to total revenue, reflecting profitability.	$\frac{\text{Net profit}}{\text{Revenue}} \times 100\%$	Bloomberg Intelligence
ROA	Return on Assets; the ratio of net income to total assets, showing how efficiently a company uses its assets.	$\frac{\text{Net profit}}{\text{Total assets}} \times 100\%$	Bloomberg Intelligence
TOBS	Tobin's Q: the ratio of market capitalization to total assets, often used to assess market valuation relative to asset value.	$\frac{\textit{Market cap} + \text{Total liabilitas}}{\text{Total aset}}$	Bloomberg Intelligence

Source: Author's own elaboration

Regression model

This study aimed to analyze the effect of Sharia labels on sustainability performance, as measured using ESG scores. In addition to analyzing the whole, this study also evaluates its impact on each

ESG dimension: environmental, social, and governance. Hypothesis testing is carried out using unbalanced panel data regression, which allows for analysis even though not all subjects are observed in each period due to data limitations (Yeon et al., 2021). Panel data imbalance is not a significant obstacle because methods such as fixed effects, random effects, or Generalized Least Squares (GLS) can overcome it (Mansor, 2022; Wibowo et al., 2017; Yeon et al., 2021). These methods are effective in handling differences in characteristics between subjects and relationships between variables, even though there are incomplete data. To determine the best estimation model, the Chow, Hausman, and Lagrange Multiplier tests were used. Model diagnostics only include multicollinearity tests because panel data tends to reduce common problems in cross-section and time series data, such as normality and heteroscedasticity. We explain the study's model as follows.

$$ESG_{it} = \beta_0 + \beta_1 IS_{it} + \beta_2 COV_{it} + \beta_3 LNTA_{it} + \beta_4 DER_{it} + \beta_5 LEV_{it} + \beta_6 PROM_{it} + \beta_7 ROA_{it} + \beta_8 TOBS_{it} + \varepsilon_{it} \quad (1)$$

$$ENVI_{it} = \beta_0 + \beta_1 IS_{it} + \beta_2 COV_{it} + \beta_3 LNTA_{it} + \beta_4 DER_{it} + \beta_5 LEV_{it} + \beta_6 PROM_{it} + \beta_7 ROA_{it} + \beta_8 TOBS_{it} + \varepsilon_{it} \quad (2)$$

$$SOCI_{it} = \beta_0 + \beta_1 IS_{it} + \beta_2 COV_{it} + \beta_3 LNTA_{it} + \beta_4 DER_{it} + \beta_5 LEV_{it} + \beta_6 PROM_{it} + \beta_7 ROA_{it} + \beta_8 TOBS_{it} + \varepsilon_{it} \quad (3)$$

$$GOV_{it} = \beta_0 + \beta_1 IS_{it} + \beta_2 COV_{it} + \beta_3 LNTA_{it} + \beta_4 DER_{it} + \beta_5 LEV_{it} + \beta_6 PROM_{it} + \beta_7 ROA_{it} + \beta_8 TOBS_{it} + \varepsilon_{it} \quad (4)$$

Results and Discussion

Descriptive statistics

Table 2 presents the descriptive statistics of the study. Although using unbalanced panel data with varying numbers of observations, this is not a problem because panel data have high variability and can overcome the weaknesses of cross-section and time series data. (Mansor, 2022) The statistics show that Islamic-labeled companies have better ESG and environmental performance than conventional companies. The average ESG score of Islamic-labelled companies is 3.367, which is higher than the 3.461 obtained by conventional companies. Similarly, the average environmental performance of Islamic-labelled companies reached 3,388, while that of conventional companies was only 2,688. This finding is in line with Sharia principles, which emphasize the importance of attention to sustainability issues (Qoyum et al., 2022). However, in the social and governance dimensions, conventional companies had higher average performance scores. This result supports the statement Hayat and Hassan (2017) that companies labeled Islamic do not always have better quality in terms of governance. However, the differences in the average ESG scores for each dimension did not show significant results.

Table 2. Descriptive statistics

| Variable | All Sample | | | | | Is | | Non-Is | |
	Obs	Mean	SD	Min	Max	Obs	Mean	Obs	Mean
ESG	63	3.595	1.256	1.060	5.380	48	3.637	15	3.461
ENVI	63	3.221	2.074	0.300	6.340	48	3.388	15	2.688
SOCI	63	3.892	1.592	0.480	6.770	48	3.805	15	4.172
GOV	68	4.171	0.934	0.900	5.690	53	4.087	15	4.468
COV	82	0.243	0.432	0.000	1.000	63	0.222	19	0.315
LNTA	83	47371	38883	5.163	16720	63	44611.32	20	61467.39
DER	83	8.999	1.637	-1.612	1.233	63	34.586	20	257.497
LEV	83	1.658	3.838	-1.979	7.940	63	2.066	20	0.267
PROM	83	37.96	232.78	-42.76	2149	63	11.598	20	129.961
ROA	83	8.365	1.042	-9.600	5.573	63	9.746	20	5.023
TOBS	83	1.224	0.515	0.620	4.060	63	1.203	20	1.291

Source: Computed by author (StataSE16)

Table 2 shows that conventional energy companies' average asset value is higher than that of Islamic-labeled energy companies, indicating a significant difference. Meanwhile, the DER ratio of Islamic-labeled energy companies is 34,856, which is smaller than conventional energy companies' 257,497. This indicates that Islamic-labeled energy companies have healthy financial performance and can minimize financial risks (Brahmana & Kontesa, 2024). However, on the leverage side, which is the ratio between liabilities and assets, Islamic energy companies have an average of 2.066, much higher than 0.267 in conventional energy companies. This suggests that Islamic-labeled energy companies are quite aggressive in using debt to invest in assets due to their different capital structure from conventional energy companies, especially in accessing tangible asset-based funding (Ahmed et al., 2018; Brahmana & Kontesa, 2024; Hassan et al., 2019)

To ensure that the data in this study were free from multicollinearity, we conducted a Pearson correlation test. Table 3 indicates that our data are free from multicollinearity, as none of the independent variables exhibit perfect correlations with each other. Nonetheless, the main independent variable (IS) shows no statistical significance for dependent variables such as ESG, ENVI, SOCI, and GOV. Conversely, the control variables DER and ROA exhibit a positive correlation with ESG performance, indicating that companies heavily financed by debt outperform in terms of sustainability and social responsibility. This may be because of the use of debt to invest in sustainable projects.

However, it is important to note that this univariate analysis does not consider other factors that may affect a company's sustainability performance. Therefore, the results presented in Table 3 should be viewed as preliminary evidence. To gain a more comprehensive and accurate understanding of the previously described hypotheses, multivariate analysis is required to examine the complex relationships between the variables involved.

Univariate analysis

Table 3. Pearson correlation and multicollinearity test

	ESG	ENVI	SOCI	GOV	IS	COV	LNTA	DER	LEV	PROM	ROA	TOBS
ESG	1.000											

ENVI	0.9075	1.000										
	0.0000	-----										
SOCI	0.466	0.1105	1.000									
	0.0001	0.3922	-----									
GOV	0.3482	0.0984	0.3789	1.000								
	0.0055	0.4465	0.0024	-----								
IS	0.0014	0.1136	0.1722	-0.2084	1.000							
	0.9910	0.3793	0.1807	0.1041	-----							
COV	0.0999	0.0930	0.0455	0.0826	0.1222	1.000						
	0.4397	0.4720	0.7253	0.5232	0.3437	-----						
LNTA	0.0593	0.1811	0.5003	0.0911	0.1490	0.0547	1.000					
	0.6470	0.1587	0.0000	0.4810	0.2476	0.6724	-----					
DER	0.2910	0.4194	0.1679	0.1488	0.7716	0.1755	0.3211	1.000				
	0.0217	0.0007	0.1920	0.2481	0.0000	0.1722	0.0109	-----				
LEV	0.1822	0.3029	0.1426	0.1521	0.3507	0.1220	0.1752	0.2806	1.000			
	0.1564	0.0167	0.2687	0.2378	0.0052	0.3445	0.1730	0.0271	-----			
PROM	0.1702	0.2235	0.0878	0.1424	0.0796	0.2303	0.0490	0.3532	0.219759	1.000		
	0.1859	0.0807	0.4972	0.2693	0.5381	0.0717	0.7050	0.0049	0.0861	-----		
ROA	0.3342	0.3457	0.0447	0.1351	0.2246	0.1771	0.2250	0.4996	0.2533	0.8057	1.000	
	0.0079	0.0059	0.7301	0.2948	0.0792	0.1684	0.0786	0.0000	0.0469	0.0000	-----	
TOBS	0.1098	0.0617	0.2201	0.0604	0.0100	0.0484	0.3540	0.2477	-0.114320	0.501395	0.4861	1.000
	0.3953	0.6336	0.0856	0.6407	0.9380	0.7085	0.0047	0.0522	0.3763	0.0000	0.0001	-----

Source: Computed by author (StataSE16)

Multivariate analysis and hypothesis testing

Table 4 presents the results of panel regression estimation using three model approaches: the Common Effect Model (CEM), Fixed Effect Model (FEM), and Random Effect Model (REM). Each model produces varying estimation results depending on the data characteristics and model specifications. To determine the most appropriate estimation model, a series of model selection

tests were conducted, namely, the Chow test to choose between CEM and FEM, and the Hausman test to determine the choice between FEM and REM.

Table 4. Regression results

	C	IS	COV	LNTA	DER	LEV	PROM	ROA	TOBS
Common Effect Model (CEM)									
ESG	4.986	-2.304	0.399	0.242	-0.014	-0.129	-0.028	0.054	-0.924
	0.024	0.000	0.184	0.217	0.000	0.072	0.129	0.009	0.002
ENVI	10.40	-3.724	0.648	-0.019	-0.025	-0.296	-0.014	0.048	-1.628
	0.004	0.000	0.182	0.951	0.000	0.012	0.628	0.140	0.001
SOCI	-7.91	-1.136	0.241	1.261	-0.006	-0.006	-0.046	0.045	-0.174
	0.009	0.120	0.554	0.000	0.134	0.943	0.068	0.104	0.664
GOV	5.287	-0.688	0.110	-0.026	-0.001	0.034	-0.006	0.000	-0.153
	0.013	0.184	0.694	0.887	0.592	0.627	0.726	0.965	0.578
Fixed Effect Model (FEM)									
ESG	-19.2	-1.015	0.522	2.334	-0.013	-0.123	-0.001	-0.033	0.060
	0.00	0.026	0.023	0.000	0.003	0.103	0.929	0.117	0.881
ENVI	-22.7	-1.687	0.604	2.722	-0.015	-0.165	0.005	-0.046	-0.063
	0.011	0.014	0.075	0.0011	0.023	0.144	0.818	0.144	0.916
SOCI	-23.8	-0.406	0.511	2.711	-0.013	-0.087	-0.010	-0.029	0.441
	0.018	0.587	0.179	0.003	0.075	0.486	0.672	0.407	0.516
GOV	-8.21	-0.513	0.278	1.334	-0.010	-0.086	0.022	-0.090	0.054
	0.084	0.177	0.129	0.002	0.006	0.174	0.078	0.000	0.864
Random effect Model (REM)									
ESG	-3.22	-1.426	0.485	0.911	-0.014	-0.119	-0.014	0.009	-0.472
	0.304	0.001	0.024	0.002	0.000	0.0538	0.278	0.577	0.106
ENVI	-3.76	-2.137	0.655	1.060	-0.019	-0.211	-0.010	0.000	-0.651
	0.492	0.001	0.043	0.037	0.000	0.032	0.611	0.976	0.172
SOCI	-12.1	-0.719	0.367	1.636	-0.009	-0.020	-0.023	0.005	-0.100
	0.010	0.300	0.294	0.000	0.070	0.834	0.3023	0.827	0.8227
GOV	0.911	-0.594	0.201	0.431	-0.006	-0.027	0.013	-0.053	-0.049
	0.705	0.095	0.240	0.052	0.010	0.588	0.258	0.000	0.827

Source: Computed by author (StataSE16)

Table 5. Model estimation test

	Model 1	Model 2	Model 3	Model 4
Uji Chow	0.0000	0.0000	0.0001	0.0000
Uji Hausman	0.0187	0.0978	0.5810	0.0003

Source: Computed by author (StataSE16)

Based on the test results in Table 5, it was found that models 1 (ESG) and 4 (GOV) were most appropriately estimated using the Fixed Effect Model (FEM), as indicated by the significant results of the Chow and Hausman tests. Meanwhile, models 2 (ENVI) and 3 (SOCI) were more appropriately estimated using the Random Effect Model (REM), as indicated by the insignificant results of the Hausman test.

By considering the selection of the right estimation model for each ESG dimension, the hypothesis test analysis in this study was conducted based on the estimation results of the FEM model for the ESG and GOV variables and the REM model for the ENVI and SOCI variables. This approach allows for a more accurate and valid interpretation of the results, because it is in accordance with the characteristics of the unbalanced panel data used in the study.

Table 6 presents the results of the regression tests in the form of fixed effects models (Models 1 and 4) and random effects models (Models 2 and 3) based on the Chow and Hausman tests. The dummy variable IS serves as the independent variable, measuring its impact on the aggregate sustainability (ESG) performance, while each of the environmental (ENVI), social (SOCI), and governance (GOV) dimensions serves as the dependent variable. This study also

included control variables that were adopted from the research Hambali and Adhariani, (2023), Qoyum et al. (2024) dan Ullah et al. (2023). If the value β_1 is significant and positive, it indicates that Islamic-labelled companies have better sustainability performance than conventional companies.

Table 6. Summary results

	ESG	ENVI	SOCI	GOV
IS	-1.015 (0.026)	-2.137 (0.001)	-0.719 (0.300)	-0.513 (0.177)
COV	0.522 (0.023)	0.655 (0.043)	0.367 (0.294)	0.278 (0.129)
LNTA	2.334 (0.000)	1.060 (0.037)	1.636 (0.000)	1.334 (0.002)
DER	-0.013 (0.003)	-0.019 (0.000)	-0.009 (0.070)	-0.010 (0.006)
LEV	-0.123 (0.103)	-0.211 (0.032)	-0.020 (0.834)	-0.086 (0.174)
PROM	-0.001 (0.929)	-0.010 (0.611)	-0.023 (0.302)	0.022 (0.078)
ROA	-0.0331 (0.117)	0.000 (0.976)	0.005 (0.827)	-0.090 (0.000)
TOBS	0.060 (0.881)	-0.651 (0.172)	-0.100 (0.822)	0.054 (0.864)

Source: Computed by author (StataSE16)

Table 4 shows that companies labeled as Islamic (IS) have a significant negative influence on ESG with a coefficient of -1.015. The effect on the environmental dimension (ENVI) is also significantly negative, with a coefficient of -2.137. This finding contrasts with previous studies that combined all sectors and found that Islamic companies have better sustainability performance (Hambali & Adhariani, 2023; Qoyum et al., 2021). However, when tested specifically in the energy sector, the results show that conventional companies have superior sustainability performance. The divergence underscores the importance of conducting sector-specific analysis, as sectoral characteristics—such as environmental risk exposure, regulatory pressures, and capital intensity—play a pivotal role in shaping corporate sustainability outcomes.

In addition, the implementation of ESG principles in the energy sector faces major challenges such as regulatory inconsistencies, economic constraints, technical limitations, and social complexity. The lack of standard ESG metrics and fragmented regulations across regions hinders the consistent implementation and comparison between companies. From an economic perspective, high initial investment costs and the market's focus on short-term profits are major obstacles driving sustainability practices. Technically, the integration of advanced technologies, such as AI, and the development of supporting infrastructure often face ethical and practical challenges. Active stakeholder engagement is crucial on the social side but is often hampered by differences in interests and the need for ongoing collaboration. Therefore, ESG performance is not only determined by compliance with Sharia principles but also by various complex and interrelated external factors.

This is supported by the fact that several control variables influence why conventional companies show excellent sustainability performance, both overall and in the environmental dimension. Table 6 demonstrates the significant positive effect of the Covid-19 variable, with a coefficient of 0.522 on ESG and 0.655 on the environmental dimension. (Hambali & Adhariani, 2023; Qoyum et al., 2021) This finding is consistent with favorable research that reveals that during the COVID-19 pandemic, all companies experienced an increase in sustainability performance. This is because many investors shifted their funds to ESG-based investments during the pandemic, namely companies with good sustainability performance (Folger-Laronde et al., 2022; Hambali & Adhariani, 2023).

Furthermore, financial factors such as total assets (LNASET) and the debt equity ratio (DER) have a significant impact because investments in sustainable projects incur large costs. Table 4 reveals a significant positive effect of total assets, with a coefficient of 2.334 on ESG and 1.060 on the environmental dimension (ENVI). On the other hand, DER has a negative effect, with coefficients of -0.013 for ESG and -0.019 for ENVI. Leverage (LEV) also has a negative effect on the environmental dimension, with a coefficient of -0.211 (Aksoy et al., 2020; Hambali & Adhariani, 2023).

This finding suggests that companies with large assets, low debt, and leverage are more likely to engage in sustainability activities (Aksoy et al., 2020; Hambali & Adhariani, 2023). This finding is in line with the descriptive data, which show that conventional energy companies have larger assets than Islamic-labeled energy companies. Despite Islamic companies' lower DER and leverage, total assets have a greater influence in determining sustainability performance in all three dimensions (Hambali & Adhariani, 2023). Large assets not only increase the company's ability to carry out sustainability projects but also attract more attention from various stakeholders, in accordance with stakeholder theory. Large companies, usually measured by total assets, are under more intensive public and investor scrutiny. This encourages companies to be more transparent in disclosing financial and non-financial information, as well as providing higher assurance of accountability. In addition, companies are expected to demonstrate greater social responsibility by meeting stakeholder expectations in terms of good governance and commitment to sustainability (Sun et al., 2021; Hambali & Adhariani, 2023).

There was no statistical difference between Islamic and conventional energy companies in the social (SOCI) and governance (GOV) dimensions. This finding contradicts previous research, which shows that Islamic-labelled companies have good social performance. Financial factors such as total assets and the debt-to-equity ratio (DER) tend to influence both dimensions. Furthermore, the profit margin and ROA play a role in the governance dimension. This finding supports the opinion Hayat and Hassan (2017) that there are no specific criteria related to governance in Islamic-labelled companies. Therefore, the results of this study are important for regulators to consider the application of Islamic principles as a requirement for screening Islamic stock indices.

The findings of this study indicate the need to revise the screening standards for Islamic stock indices to provide Islamic labels. Currently, Islamic screening prioritizes business output and financial soundness; however, this focus should be broadened. Thus, business processes and Islamic value-based environmental and social issues must be considered. With this more holistic approach, the Islamic label not only serves as a marketing tool, but also reflects Islamic values as a whole and reflects the true quality of a company. Ensuring that companies labeled Islamic truly align with Islamic values and commit to sustainability and social responsibility is crucial.

Conclusion

This study aims to test whether energy sector companies labeled as Sharia have better Environmental, Social, and Governance (ESG) performance. In principle, there is no conflict between Sharia and ESG values because both emphasize social and environmental responsibility. However, the results of the analyses were different.

The regression results show that the Sharia label (IS) has a negative effect on ESG performance, especially in the environmental dimension (ENVI). This means that energy companies labeled as Sharia tend to have lower sustainability performance than conventional companies. This result contradicts previous studies that state that Sharia companies are usually superior in terms of sustainability performance.

Meanwhile, on the social (SOCI) and governance (GOV) dimensions, no significant differences were found between Sharia and conventional companies. This finding supports the view that current Sharia screening does not explicitly cover the aspects of corporate governance. In addition, control variables such as total assets, debt-to-equity ratio (DER), and leverage are shown to have a significant effect on ESG performance, where companies with larger assets tend to have better sustainability performance.

These findings have practical implications in that the Sharia stock screening mechanism needs to be expanded to include environmental and social criteria, not just limited to financial ratios. Therefore, regulators should formulate more comprehensive Sharia screening standards, including sustainability aspects. Thus, the Islamic label is not just a marketing tool, but truly reflects Islamic values in its entirety and becomes an indicator of the quality and responsibility of the company. However, this study has limitations in terms of access to ESG data, because not all companies report their sustainability performance. This affects the number of samples and generalizability of the findings. For further research, it is recommended to use more complete ESG

data or alternative sources such as carbon emissions, CSR programs, or other sustainability indicators. In addition, the use of more relevant variables needs to be considered so that the research results are more accurate and able to provide a deeper understanding of the impact of ESG in various industrial sectors.

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