

## **Original Research Article**

# **The Impact of Sustainability Practices on the Financial Performance of listed companies in Saudi Arabia**

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### **ABSTRACT**

This research explores the relationship between sustainability and financial performance of Saudi listed firms. Using a mixed-methods approach, it examines financial data and sustainability indicators from various industries. Initial findings show a positive impact of sustainability on financial performance, suggesting that organizations adopting sustainable practices tend to have improved financial outcomes. The study also explores the underlying mechanisms driving this relationship, including corporate governance, stakeholder engagement, innovation, and strategic alignment. It also considers contextual factors like industry characteristics, geographical location, regulatory frameworks, and firm size. The findings have implications for academia and practitioners, providing empirical evidence of the benefits and challenges of sustainability practices. The research aims to provide a holistic perspective on guiding organizations towards more sustainable and financially resilient futures.

*Keywords: corporate sustainability; financial performance, Firm Size, Leverage, Oil prices*

### **1. INTRODUCTION**

Sustainability and financial performance are critical components of the business landscape for companies listed in different markets. Sustainability is integral to corporate practices, it transcends mere performance, integrating social and environmental aspects into business operations through a bottom-line strategy. (Othman & Ameer, 2012) Business sustainability encapsulates the strategic imperative of remaining in business by harmonizing economic pursuits with environmental stewardship and social responsibility. Another facet of sustainability lies in its commitment to meet the needs of the present without compromising the ability of future generations to fulfill their own requirements. (Klarin, 2018) At its core, sustainability involves striking a balance between environmental considerations, social responsibility, and effective corporate governance. This balance is essential for ensuring

long-term growth and development while preserving resources to meet future needs. (Dong & Michael, 2017)

Although the importance of sustainable practices is widely acknowledged, the intricate relationship between these practices and financial performance remains a complex and debated topic. Therefore, the primary objective of this study is to examine the impact of sustainability on financial profitability in the context of the Kingdom of Saudi Arabia. Notably, prior research has not adequately explored this relationship, highlighting a gap in the understanding of the interconnectedness of sustainability practices and financial performance. To address this gap, statistical tools and analytical models are employed to scrutinize the data and elucidate the dynamics between sustainability initiatives and financial profitability.

The paper contributes to the evolving literature in two ways: First, Saudi regulators are committed to integrate sustainability into various aspects of its economy and society. By embracing sustainable practices, the country aims to promote sustainable practices across different sectors as part of Vision 2030, environmental protection, economic diversification, and social well-being. The findings of this research should contribute to the literature through defining whether sustainability practices of Saudi listed firms affect their performance and help on achieving the required above mentioned goals. Second, Saudi market is an evolving one with high dependence on oil. The results add to the literature by defining how sustainability practices can improve the performance of listed companies in an emerging market with oil dominance.

This investigation is based on the inferential analysis of financial data from the financial statements obtained from various Saudi companies during the 8 years from 2015 to 2022. According to the results of the research, there is no positive, statistically significant relationship between financial performance with two measurements, which are return on assets and return on equity and sustainability regardless of the Short time, different nature of business.

This paper is organized as follows. Section 2 presents a comprehensive literature review on related areas. In Section 3, the hypotheses are developed. Section 4 describes the dataset and the variables. Section 5 lays out the estimation framework and introduces the econometric model. Section 6 discusses the results and their implications. Section 7 concludes with future research opportunities.

## **2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT**

Research findings demonstrate variations and heterogeneity on the impact of sustainability on firm performance. Some research demonstrates a Positive relationship. (Nizam & Ng, 2019) While other studies reveal a negative relationship. (Al- Saeed & Al-Azzam, 2021) Few other studies demonstrate that the two variables are unrelated. (Smith, Johnson, & Davis, 2023)

Quality management of sustainability and loan growth are the main drivers of beneficial impact on financial performance. (Nizam & Ng, 2019) finds a positive impact of access to finance and environmental financing on global banking sector financial performance through loan growth and management quality. (Taylor, 2016) inferences that sustainability performance likely increases a firm's financial performance, especially in the long run. Compared to social sustainability, environmental sustainability, to a greater extent, contributes to the positive CSP-CFP relationship. (Pham1, 2021) Findings indicate a positive

relationship between corporate sustainability and financial performance, that is measured by earnings yield, return on asset,

return on equity, and return on capital employed. (Serafeim & Yoon, 2022) reveal that firms with strong sustainability performance tend to have higher profits, and sales growth.

Also consider the potential influence of industry-specific characteristics and geographic location on this relationship, as it relates to the environmental element of sustainability. (Zhang, Sarkis, & Zhu, 2022)SSCM methods improve financial performance, including profitability, via a variety of processes such as cost reduction, risk avoidance, and increased customer satisfaction.

(Al-Hussein & Akeel, 2020) reveals a positive correlation between sustainability and financial performance in Saudi publicly traded enterprises, utilizing financial measures like return on assets and return on equity. (Weber, 2017) concludes that Chinese banks' environmental and social performance significantly improved between 2009 and 2013, with a bidirectional causality between financial performance and sustainability performance, possibly influenced by the Chinese Green Credit Policy.

Other papers reveal a negative relationship between sustainability and performance. (Soytas, Usar, & Denizel, 2019)discover that highly productive organizations have less incentive to participate in sustainability initiatives because they are more expensive. (Al-Saeed & Al-Azzam, 2021) reveal a negative relationship between sustainability and profitability, suggesting that companies that prioritize sustainability may experience lower profitability in the Saudi Arabian context. (H. Dkhili, 2019)show the absence of a relationship between the CSR and the financial performance measured by ROA, whereas the relationship become positive if the financial performance is measured by the ROE.

Few studies demonstrate that the two variables are unrelated. (Smith, Johnson, & Davis, 2023) explores the impact of sustainability reporting on profitability, highlighting the need for

transparency and accountability, while also addressing potential challenges like initial investment costs and organizational resistance. (Chaaben, 2022) says Saudi Arabia's green economy performance is commendable, but it still faces challenges in environmental protection, well-being enhancement, and economic diversification, despite its promising progress.

This study seeks to empirically test the following hypotheses by drawing on the knowledge gained from earlier scholarly investigations and being motivated by a keen interest in exploring the complex interactions between sustainability, which includes societal, environmental, and governmental dimensions, and its impact on the financial performance of publicly traded corporations.

Hypothesis: There is a positive relationship between sustainability and firm performance.

### **3. DATA AND VARIABLE.**

#### **3.1 DATA SOURCES**

This study investigates the impact of sustainability on the firm performance of Saudi Arabian companies listed on the Saudi main market that enforce sustainability. It's collected from 39 companies from 10 different industries: telecommunication, health care, financials,

real estate, consumer discretionary, consumer staples, industrials, basic materials, energy, and utilities, for the period of 8 years from 2015 to 2022. The data was originated from the company's annual financial reports Regarding the sustainability. The firm characteristics of the collected data used in this study are obtained from Bloomberg, a highly credible and popular platform known for its vast. There are 174 listed companies on a stock exchange between 2015 and 2022, that lacked sustainability policies, were excluded from the research.

### 3.2 VARIABLE

Dependent variables are Return on Assets (ROA) is computed as a financial metric used to assess a company's profitability relative to its capacity to generate earnings from its assets or operational efficiency. This measure reflects a company's ability to generate profits through the utilization of its asset base. (M Heikal1, 2014)  $ROA = \text{Net income} / \text{Total Asset}$ . Return on Equity (ROE) is a financial ratio that indicates the company's profitability and efficiency in generating returns for shareholders (Damodaran, 2007)  $ROE = \text{Net income} / \text{Total Equity}$ .

Independent variables include Sustainability, a concept widely recognized for its multifaceted nature, encompasses the enduring capacity of a corporation to persist over time, navigating dimensions of profitability, productivity, and financial performance. This holistic framework extends to the adept management of environmental and social assets, constituting the capital that sustains the business. Calculated in Saudi Arabia by ESG Score (environmental, social, and governance score)

A set of control variables are added to the model. Firm size (SIZE) measured by the natural log of total assets, The research suggests that measuring a company's size by its assets is more effective than other metrics like market value and employment, offering valuable insights (Gibrat & Alvarez, 2017), (AGE) The age of a company can be calculated by determining the number of years that have elapsed since its establishment. leverage (LEV) Leverage ratio, refers to Debt to Equity Ratio to measure the extent to which the capital owners cover the entire debt (both current liabilities and long-term debt) to external parties and as the ratio that assesses the extent to which of the business is funded by debt. (Satryo., Rokhmania., & Diptyana., 2017)  $\text{Debt to Equity Ratio} = \text{Total Debt} / \text{Equity}$ . Interest rate and Oil prices (Brent Prices) are added to measure the macroeconomic effect.

## 4. METHODOLOGY.

In this research test, a linear regression model is employed to explore the impact of sustainability on the firm performance of Saudi Arabian listed companies. The context of analyzing the relationships between variables, the establishment of a measurement model and precise identification of relevant variables are fundamental steps. The selection of an appropriate model is crucial for investigating these associations. Established statistical techniques and regression models have been used for many years. Notably, they have recently demonstrated their utility in exploring long-term correlations within economic time series (U Bhatti, 2023)

The models are expressed as follows.

$$Y_1 = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + e$$

Were,

$$ROA = \alpha + \beta_1 \text{ESG} + \beta_2 \text{SIZE} + \beta_3 \text{AGE} + \beta_4 \text{LVRG} + \beta_5 \text{INTREST\_RATE} + \beta_6 \text{OIL\_GAS} + e$$

In Model 2, we replace the independent Variable ROA with the ROE:

$$ROE = \alpha + \beta_1 ESG + \beta_2 SIZE + \beta_3 AGE + \beta_4 LVRG + \beta_5 INTREST\_RATE + \beta_6 OIL\_GAS + e$$

## 5. EMPIRICAL RESULTS ANALYSIS

### 5.1 DESCRIPTIVE STATISTICS.

Table 1. Descriptive results.

Variables	Dependent variable		Independent variable					
	ROA	ROE	ESG	LVRG	AGE	SIZE	INTREST_RATE	OIL_GAS
Mean	0.06	0.13	1.49	0.21	31.64	5.71	0.02	63.26
Median	0.02	0.12	1.47	0.19	31.00	5.69	0.02	60.15
Maximum	0.43	0.60	1.79	0.43	89.00	5.99	0.05	100.64
Minimum	-0.14	-0.47	0.61	0.02	1.00	5.47	0.01	41.63
Std. Dev.	0.08	0.14	0.17	0.12	18.69	0.12	0.01	17.49
Skewness	1.66	0.64	-2.08	0.20	0.74	0.01	1.19	0.87
Kurtosis	6.06	5.54	12.98	1.65	3.18	2.26	3.69	3.07
Observations	301	300	223	298	312	302	312	312

As shown in Table 1, the dependent variable in this dataset is "return of assets and return on equity," which measures the profitability of the firm in the context of the given observations. The mean of "ROE" (Return on Equity) is calculated at 0.13, indicating the average value across the dataset, while the median at 0.12 suggests the middle point in the distribution. The range from a minimum of -0.47 to a maximum of 0.6 demonstrates the variability of return in Equity. The standard deviation of 0.14 reflecting variability in how efficiently entities generate returns for their shareholders, capturing nuances in financial performance. With 320 observations, as well as in "ROA" Return on asset that have Mean of 0.06 and less Volatility than ROE with a minimum of -0.14 to 0.43 with a standard deviation 0.08 reveals a diverse landscape of asset utilization efficiency, with some entities achieving higher returns than others. this variable's descriptive statistics offer valuable insights into the central tendency and spread of Performance test essential for comprehending the overall distribution and trends in the dataset.

The "ESG" variable, denoting environmental, social, and governance scores, is centred around a mean of 1.49, indicating a substantial commitment to sustainable and responsible business practices across the dataset. With a low standard deviation of 0.17, there is a relatively tight distribution of ESG scores, suggesting a consistent adherence to ethical considerations among the observed entities.

The "LVRG" (Leverage) variable, with a mean of 0.21 and a low standard deviation of 0.20, suggests a consistent but moderate level of financial leverage employed across entities.

"Age" characterized by a mean of 31.64 years with a maximum of 89 years, as shown in Saudi Arabian Oil Co "Aramco."

Finally, the "SIZE" variable, representing the logarithm of assets, has a mean of 5.71 and a standard deviation of 0.12, indicating a broad range of entity sizes in the dataset. These details enhance our understanding of the diverse landscape of environmental, financial, and operational characteristics within the dataset, setting the stage for more sophisticated analyses and interpretations.

## 4.2 CORRELATION.

Table 2. Correlation Matrix

Variables	Dependent variable		Independent variable					
	ROA	ROE	ESG	LVRG	SIZE	AGE	INTREST_RATE	OIL_GAS
ROA	1.00	0.86	0.01	-0.46	-0.30	0.16	0.03	0.11
ROE	0.86	1.00	0.04	-0.15	-0.06	0.28	0.01	0.11
ESG	0.01	0.04	1.00	0.08	0.23	0.17	-0.02	0.12
LVRG	-0.46	-0.15	0.08	1.00	0.61	0.14	-0.07	-0.14
SIZE	-0.30	-0.06	0.23	0.61	1.00	0.38	-0.03	-0.07
AGE	0.16	0.28	0.17	0.14	0.38	1.00	0.01	0.05
INTREST_RATE	0.03	0.01	-0.02	-0.07	-0.03	0.01	1.00	0.74
OIL_GAS	0.11	0.11	0.12	-0.14	-0.07	0.05	0.74	1.00

The correlation analysis presented in Table 2 offers comprehensive insights into the relationships between the dependent variables (return on asset and return on equity) and various independent variables. Notably, the positive correlation coefficient of 0.01 in ROA and 0.04 for ROE attributed to ESG suggests a modest positive correlation, indicating that as companies prioritize environmental, social, and governance factors, their financial performance tends to increase marginally. The positive correlation coefficients of 0.16 & 0.28 associated with the variable "age" suggest that older companies exhibit a tendency towards higher financial stability than their counterparts. Additionally, economic variables may exhibit positive relationships. Conversely, the negative correlations observed for LVRG (-0.46 & -0.15) indicate a potential inverse relationship. This implies that companies with lower returns on assets and equity may have higher leverage ratios. These findings underscore the nuanced interplay between various factors influencing financial performance, ranging from corporate governance practices to the financial performance of entities and broader economic conditions. In general, the selection of factors appears favourable and suitable for the research context, as indicated by the correlation matrix, which demonstrates a lack of distinctiveness between factors and their correlations approaching unity.

## 4.1 Regression Results.

Table 3. Independent Variable [ROA]

Variable	Fixed
Intercept	-6.41302 *** (-3.9532)
ESG	0.008966 (0.31525)
SIZE	1.209301 *** (4.1883)
AGE	-0.01045 *** (-4.81807)
LVRG	-0.757081 *** (-5.78319)

INTREST_RATE	-0.956232 ** (-2.396445)
OIL_GAS	0.00094 *** (0.0043)
R-squared	0.768563
F-statistic	13.43425
Adjusted R-squared	0.711353
Hausman Test Prob	0.00

Note: In this table, the results from regressing ESG on stock performance (Y) are presented using fixed effects, respectively. The utilized control variables are firm size (SIZE), (Age), (ROE), (LVRG). \*\*\*, \*\*, and \* demonstrate the levels of significance at: 0.01, 0.05, and 0.10, respectively

Table 3 examines the impact of environmental, social, and governance (ESG) factors on Return on Asset using fixed effects regression models, following the Husman test. Since the p-value is less than 0.05. The results suggest a positive but not significant relationship between ESG scores and return on assets, which is congruent with the research conducted by Al- Saeed & Al-Azzam (2021). The positive association between ROA and sustainability aligns with the findings of Rahmanti & Hayatun (2012) and Pham1, (2021), emphasizing the influence of asset utilization efficiency on sustainability. (Taylor, 2016), (Serafeim, Yoon, & Khan, 2019)

Leverage (LVRG) shows a significant negative relationship. In addition to (interest rate) and (age), this increased leverage may result in higher interest rates and financial risk, which would ultimately lower ROA and profitability.

(size) and (Oil gas prices) exhibit strong and significant relationships with ROA, with positive coefficients.

Table 4. Independent Variable [ROE]

Variable	Fixed
Intercept	-9.09107 ** ( -2.4955 )

ESG	-0.00945 (-0.1480)
SIZE	1.73426 *** (2.6747)
AGE	-0.01967 *** (-4.0370)
LVRG	-0.81851 *** (-2.78421)
INTREST_RATE	-2.55585 *** (-2.85228)
OIL_GAS	0.002699 *** (3.69955)
R-squared	0.62921
F-statistic	6.864904
Adjusted R-squared	0.537554
Hausman Test Prob	0.00

Note: \*\*\*, \*\*, and \* demonstrate the levels of significance at: 0.01, 0.05, and 0.10, respectively

Table 4 applies fixed effects regression models, since the p-value of Husman test is less than 0.05, to examine the effect of (ESG) factors on return on equity. The results indicate a negative but not statistically significant impact of ESG on return on equity. This is due to the fact that being sustainable initially costs businesses money and yields little benefits, but over time, sustainability has a favourable effect. The findings are consistent with the findings of earlier research (Al- Saeed & Al-Azzam, 2021) show a negative correlation between sustainability and profitability, implying that businesses in Saudi Arabia that place a higher priority on sustainability may see a decline in profitability.

In relation to the other variable, leverage (LVRG) showed a statistically significant negative relationship, similar to the findings of return assets, since they measure performance and profitability, as well as (age) and (interest rate). Both (size) and (oil gas prices), exhibiting positive coefficients, which show strong and significant associations with ROE.

The social, environmental, and economic dimensions of sustainability can be challenging to quantify and translate into standardized metrics that can be examined using small sample sizes. This limits the statistical analysis's power and capacity to identify the link between sustainability and performance and could be the cause of the insignificant results in this paper.

It can be challenging to measure a company's true social and environmental impact in a standardized manner, which makes evaluating how sustainability affects financial performance challenging. This could lead to financial outcomes that understate the company's genuine worth and its beneficial effects on the environment and society.

When it comes to performance and sustainability, sectors and industries may differ significantly from one another. Every industry or sector may have different demands and difficulties, which impact how they interact with one another.

To monitor changes and cumulative effects over an extended period, data collection may be necessary to uncover the relationship between sustainability and performance. Long-term data strengthens future recommendations and offers more insight. This is due to not applied in all companies on this factor.

This explains why sustainability and performance do not have a significant relationship.

## **6. Conclusion**

This research investigates the intricate relationship between sustainability and financial performance in the stock market in the KSA. Utilizing a dataset spanning a decade 2015–2022, including 39 companies, the study consistently observes an positive, impactful relationship between sustainability and Performance.

This study contributes to the existing literature through explaining the pivotal roles of Return on Equity (ROE) and Return on Assets (ROA) as critical determinants of sustainability. relationship between ROE and sustainability has no significant, it appears that sustainability is based less on return on equity,

On the contrary, variables such as financial leverage, size and age show more significant effects on financial Performance. The contextual significance of sustainability within Saudi Arabia, as outlined earlier, is amplified by the regulatory mandate imposed by the Capital Market Authority on listed companies.

The results of this paper should assess the managers of Saudi listed firms on enhancing the sustainability of their companies, by developing plans and making well-informed judgments. For investors and financial analysts, understanding how sustainability practices affect the financial profitability of companies listed on the Saudi market will allow them to make better and wiser investment choices. Market regulators should benefit from the findings of this paper ,and encourage the creation of a thorough and well-defined regulatory framework that not only encourages disclosure and openness but also sustains sustainable practices.

The paper highlights the need for more investigation and makes some recommendations for research topics, particularly considering the lack of data prior to 2015. Moreover, a suggestion is made to broaden the range of businesses and attempt experimenting with alternative sustainability metrics, outlining the existing sustainability criteria (environmental, social, and governance), and lastly Many factors, such as a company's industry and the legislative and economic context in which it operates, influence the relationship between sustainability and financial performance. The study offers insightful information that will help direct future investigations in this area. In pursuit of advancing academic research in this domain, scholars are encouraged to extend the temporal scope of data by incorporating recent developments.

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