







“Green finance and ESG practices as drivers of multidimensional corporate performance: Evidence from UAE-listed firms”

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GREEN FINANCE AND ESG PRACTICES AS DRIVERS OF MULTIDIMENSIONAL CORPORATE PERFORMANCE: EVIDENCE FROM UAE-LISTED FIRMS

Abstract

Growing regulatory and investor scrutiny of sustainability has intensified the need to understand whether green finance and environmental, social, and governance (ESG) practices translate into measurable corporate performance gains in emerging markets. This study examines how green finance and ESG practices influence multidimensional corporate performance among firms listed on the UAE stock market. Data were collected via a structured survey of finance and sustainability managers in companies listed on the Abu Dhabi Securities Exchange and the Dubai Financial Market; 167 valid responses (87.4% response rate) were analyzed using structural equation modeling. The survey was administered in the UAE in May 2025. Results show positive effects of green finance on efficiency ($\beta = 0.341$, $p < 0.01$), effectiveness ($\beta = 0.206$, $p < 0.01$), sustainability ($\beta = 0.157$, $p = 0.041$), and customer satisfaction ($\beta = 0.248$, $p < 0.01$). ESG practices also improve efficiency ($\beta = 0.288$, $p < 0.01$), effectiveness ($\beta = 0.179$, $p = 0.032$), sustainability ($\beta = 0.194$, $p < 0.01$), and customer satisfaction ($\beta = 0.142$, $p = 0.028$). Joint modeling indicates complementary effects, with the strongest combined impacts on sustainability ($\beta = 0.376$, $p < 0.01$) and customer satisfaction ($\beta = 0.408$, $p < 0.01$); model fit is strong (GFI = 0.91; CFI = 0.96; RMSEA = 0.014). Overall, integrating green financing with robust ESG practices enhances corporate outcomes in the UAE, providing practical guidance for managers, investors, and policymakers.

Keywords

green finance, ESG, sustainability, performance, disclosure, governance, UAE, SEM

JEL Classification

G32, Q56, M14, O16

INTRODUCTION

Rapid growth in sustainable investment, tighter disclosure expectations, and national net-zero commitments have increased pressure on firms in emerging markets to demonstrate that sustainability initiatives create economic value. However, prior evidence on whether sustainability-oriented financing and environmental, social, and governance practices improve corporate performance remains mixed, particularly where reporting standards and stakeholder monitoring are still evolving. In the UAE, listed companies have expanded sustainability reporting and green financing activities, yet the depth and consistency of implementation vary across sectors and firms. This creates a scientific problem: it remains unclear whether these practices translate into consistent, measurable improvements in corporate outcomes for UAE-listed firms when performance is assessed across multiple dimensions.

Clarifying this relationship is important for managers allocating capital to sustainability initiatives, investors assessing long-term risk and

return, and policymakers designing incentives to scale sustainable finance without imposing unnecessary compliance costs. The UAE market offers a relevant setting because its capital markets are rapidly developing, and sustainability-related requirements and voluntary disclosures are becoming more prominent.

1. LITERATURE REVIEW AND HYPOTHESES

Green finance and environmental, social, and governance (ESG) practices have become central to capital allocation and risk management as global initiatives increasingly align financial markets with sustainable development (The ESG App, 2024; United Nations Environment Programme, 2015; UNESCAP, 2022). In emerging markets, the key question is whether sustainability-oriented financing and governance practices translate into observable corporate outcomes under evolving disclosure and enforcement regimes.

Green finance is typically operationalized through instruments, incentives, and policies that mobilize capital toward environmentally beneficial activities and low-carbon transitions (UNESCAP, 2022; United Nations Environment Programme, 2015). Innovation-system perspectives note that policy design and market institutions determine how effectively green finance supports cleaner technologies and resource efficiency (Austin et al., 2025). Recent evidence finds that green finance policies can ease financing constraints and support ESG performance and sustainability-related outcomes (Gao et al., 2024; Xu et al., 2024; Xie, 2024).

ESG practices capture how firms manage sustainability across operations, stakeholder relations, and governance systems (Saygılı et al., 2022; Yusuf et al., 2025; Song, 2024). Governance mechanisms matter because they influence managerial incentives and mitigate agency problems that may undermine sustainability investments (Bebchuk et al., 2009; Khan, 2019). Survey and asset-pricing evidence further indicate that investors, institutions, and disclosure quality shape how ESG information is interpreted and priced, including through risk disclosure and the cost of capital (Rau & Yu, 2024; Khandelwal et al., 2023; Ismail & Obiedallah, 2022).

Empirical work generally reports positive ESG-performance links, but effect sizes vary by institu-

tional context and measurement choices. Evidence shows that sustainability integration and ESG performance can be associated with improved firm value and corporate outcomes, especially when supported by credible disclosure (Eccles et al., 2014; Fatemi et al., 2018; Gao et al., 2023). A synthesis of the literature also cautions that mixed findings can arise when studies rely on narrow or inconsistent indicators (Zhan, 2023).

Multiple mechanisms may connect green finance and ESG to performance. Sustainability-oriented finance can relax investment constraints and enable green innovation and operational improvements (El-Kassar & Singh, 2019; Liu et al., 2023). ESG practices can reduce information asymmetry, strengthen stakeholder trust, and support sustainable innovation and workplace outcomes (Hussain et al., 2025; Awad et al., 2024; Kim & Keane, 2023; Shma et al., 2025; Koh et al., 2022).

A growing body of studies emphasizes complementarity: green finance and ESG practices may reinforce one another through mutually supportive channels. When financing access is paired with robust ESG systems, firms may realize stronger and more persistent benefits than when either element is implemented in isolation (Huang & Luan, 2024). Operational and supply-chain perspectives similarly suggest that combining green finance policies with ESG capabilities strengthens sustainable operations and outcomes (Liu et al., 2017; Gao et al., 2024).

Despite the rapid expansion of sustainability reporting and green financing initiatives, evidence on their combined effects in the UAE context remains limited. This gap is important because developing-market capital markets differ in disclosure maturity, enforcement intensity, and investor monitoring, which can alter sustainability-performance relationships (Vo & Phan, 2013; Rizwan et al., 2020; Usman & Amran, 2015; El Ghouli & Karoui, 2020; Elamer & Boulhaga, 2024).

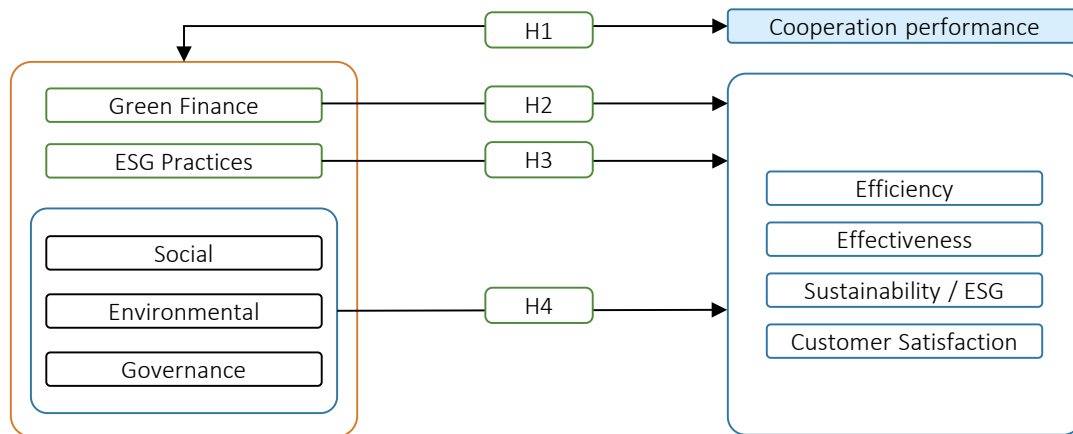


Figure 1. Research theoretical framework

In sum, prior studies suggest meaningful links between green finance, ESG practices, and corporate outcomes, yet results vary by institutional context, disclosure quality, and measurement choices. A multidimensional performance perspective is therefore useful for capturing operational, strategic, sustainability, and customer-related outcomes rather than relying on a single indicator (Simpson & Tamayo, 2020; Zhan, 2023).

This study examines how green finance and ESG practices influence multidimensional corporate performance among firms listed on the UAE stock market.

The following hypotheses are tested in the study:

- H1: Green finance and ESG practices are positively correlated with corporate performance in the UAE-listed context.*
- H2: Green finance has a significant positive effect on corporate performance in the UAE-listed context.*
- H3: ESG practices have a significant positive effect on corporate performance in the UAE-listed context.*
- H4: Green finance and ESG practices jointly have a significant positive effect on corporate performance in the UAE-listed context.*

The researchers created the following research framework, which is shown in Figure 1, based on the theoretical considerations mentioned above.

2. METHOD

This study uses a quantitative, cross-sectional survey design to examine the relationships among green finance, environmental, social, and governance practices, and corporate performance in UAE-listed firms. A structured questionnaire was used as the primary data-collection instrument and was administered to managers responsible for finance and sustainability activities within listed companies.

The target population includes companies listed on the Abu Dhabi Securities Exchange and the Dubai Financial Market. At the time of data collection, approximately 188 firms were listed across both exchanges. Questionnaires were distributed to 191 managers, and 167 usable responses were returned (response rate = 87.4%).

Respondents were selected because finance and sustainability managers are directly involved in financing decisions, ESG reporting, and sustainability initiatives, making them well-positioned to assess green finance and ESG practices at the firm level. The survey was administered in the UAE in May 2025, using online and in-person distribution to eligible respondents in listed firms. Participation was voluntary, and no personally identifying information was collected. To ensure research integrity involving human participants, the questionnaire cover page explained the study purpose, the approximate completion time, and the voluntary nature of participation. Informed consent was obtained prior to participation, responses were stored securely, and results were reported only in aggregate form.

Table 1. Overview of the sample demographic distribution

Demographic Variable	Category	Frequency	Valid Percent (%)
Gender	Male	112	67%
	Female	55	33%
Educational Qualification	Bachelor's degree	21	12.6%
	Postgraduate Diploma	73	43.7%
	Master's degree	48	28.7%
	Doctorate (PhD)	25	15%
Job Position	Financial Manager	104	62.3%
	Sustainability Manager	63	37.7%

Measurement items were adapted from established studies and aligned with the study constructs (green finance; ESG practices: environmental, social, governance; corporate performance: efficiency, effectiveness, sustainability, and customer satisfaction). Responses were recorded on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). A pilot test with 15 respondents in comparable roles was conducted to improve item clarity and wording.

Data analysis followed a standard SEM procedure: (1) descriptive profiling of respondents; (2) assessment of reliability and convergent/discriminant validity (factor loadings, Cronbach's α , CR, AVE, and Fornell-Larcker); and (3) hypothesis testing using path estimates and effect sizes.

3. RESULTS

Before testing the structural relationships, the measurement model was assessed to ensure that the constructs were measured reliably and validly. Structural equation modeling (SEM) was employed to evaluate the structural validity and adequacy of the measurement model. This assessment involved examining factor loadings, Composite Reliability (CR), and Cronbach's Alpha (α) for internal consistency, as well as evaluating convergent and discriminant validity. Table 2 reports the descriptive statistics and key measurement indicators for all constructs and dimensions.

As shown in Table 2, all factor loadings exceed the acceptable threshold of 0.50, except for four items

Table 2. Descriptive statistics and measurement model indicators

Constructs	Dimensions	Items	Loading Factor	Mean	S.D	α	CR	AVE
Green Finance	-	GF.1	0.684	4.03	0.821	0.811	0.817	0.622
		GF.2	0.573					
		GF.3	0.664					
		GF.4	0.702					
		GF.5	0.686					
		GF.6	0.544					
ESG Practices	Environmental	ENV.1	0.661	3.97	0.621	0.794	0.803	0.601
		ENV.2	0.550					
		ENV.3	0.422					
		ENV.4	0.711					
		ENV.5	0.695					
		ENV.6	0.601					
	Social	SOC.1	0.594	4.06	0.741	0.807	0.816	0.644
		SOC.2	0.610					
		SOC.3	0.723					
		SOC.4	0.401					
		SOC.5	0.666					
		SOC.6	0.671					
Governance		GOV.1	0.550	4.11	0.552	0.819	0.824	0.701
		GOV.2	0.632					
		GOV.3	0.710					
		GOV.4	0.691					
		GOV.5	0.394					
		GOV.6	0.668					

Table 2 (cont.). Descriptive statistics and measurement model indicators

Constructs	Dimensions	Items	Loading Factor	Mean	S.D	α	CR	AVE
Corporate Performance	Efficiency	EFF.1	0.714	3.93	0.426	0.788	0.791	0.574
		EFF.2	0.689					
		EFF.3	0.640					
		EFF.4	0.585					
		EFF.5	0.519					
	Effectiveness	EFV.1	0.621	3.87	0.711	0.772	0.781	0.550
		EFV.2	0.575					
		EFV.3	0.616					
		EFV.4	0.523					
		EFV.5	0.537					
	Sustainability	SUT.1	0.617	4.01	0.810	0.816	0.821	0.714
		SUT.2	0.602					
		SUT.3	0.574					
		SUT.4	0.441					
		SUT.5	0.673					
	Customer Satisfaction	CS.1	0.587	3.96	0.721	0.790	0.803	0.608
CS.2		0.626						
CS.3		0.701						
CS.4		0.592						

(ENV.3, SOC.4, GOV.5, and SUT.4), which fall below this benchmark and were therefore excluded from further analysis, in line with the guidelines of Hair et al. (2014). The remaining items demonstrate satisfactory item reliability. To assess internal consistency, both Composite Reliability (CR) and Cronbach's Alpha (α) were calculated, and Table 2 indicates that all constructs have CR and α values above 0.70, confirming that each construct exhibits adequate reliability.

Convergent validity was evaluated using the Average Variance Extracted (AVE), which is expected to exceed 0.50 (Hair et al., 2014). As indicated in Table 2, all AVE values meet this criterion, supporting the convergent validity of the measurement model for green finance, ESG dimen-

sions, and corporate performance dimensions.

To assess discriminant validity, the Fornell–Larcker criterion was applied. Table 3 presents the square roots of AVE values (on the diagonal) and the inter-construct correlations (off-diagonal).

As indicated in Table 3, for each construct, the square root of the AVE (diagonal value) exceeds its correlations with all other constructs (off-diagonal values). This pattern satisfies the Fornell–Larcker criterion and confirms that discriminant validity is achieved (Hair et al., 2016). Thus, the constructs are empirically distinct yet appropriately related, supporting the robustness of the measurement model.

Table 3. Discriminant validity results based on the Fornell–Larcker approach

Constructs	Green Finance	Environmental	Social	Governance	Efficiency	Effectiveness	Sustainability	Customer Satisfaction
Green Finance	0.811							
Environmental	0.720	0.762						
Social	0.611	0.627	0.744					
Governance	0.422	0.511	0.527	0.806				
Efficiency	0.603	0.670	0.603	0.678	0.788			
Effectiveness	0.511	0.426	0.550	0.711	0.511	0.688		
Sustainability	0.622	0.644	0.626	0.600	0.424	0.406	0.704	
Customer Satisfaction	0.476	0.526	0.588	0.574	0.325	0.517	0.589	0.717

Table 4. Model fit indices

Indices	Symbol	Acceptance Index	Result
Goodness of Fit Index	GFI	> 0.90	0.91
Root Mean Square Residual	RMR	The closer to zero	0.011
Comparative Fit Index	CFI	> 0.95	0.96
Root Mean Square Error of Approximation	RMSEA	< 0.08	0.014

Finally, global model fit was examined using several commonly reported indices: Goodness of Fit Index (GFI), Root Mean Square Residual (RMR), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA). These indices are summarized in Table 4.

As presented in Table 4, all model fit indices fall within the recommended thresholds. GFI (0.91) indicates a good overall fit; RMR (0.011) is very close to zero; CFI (0.96) exceeds the recommended 0.95; and RMSEA (0.014) is considerably below 0.08. Collectively, these indices demonstrate that the measurement model provides an acceptable and strong fit to the data, and it can therefore be considered statistically valid for subsequent hypothesis testing.

After confirming the adequacy of the measurement model, the study proceeded to test the proposed hypotheses. The analysis began with an examination of the correlations between the main constructs to provide an initial view of their relationships. Table 5 reports the Pearson correlation coefficients among green finance, ESG dimensions, and corporate performance dimensions.

As illustrated in Table 5, there is a strong positive and statistically significant correlation between

all research variables. The lowest correlation coefficient is observed between governance and effectiveness (0.532), while the highest is between green finance and sustainability (0.724). These results indicate that higher levels of green finance and ESG practices are associated with higher levels of efficiency, effectiveness, sustainability, and customer satisfaction. The consistent pattern of positive significant correlations across all constructs supports the existence of a strong positive association among the variables and leads to the acceptance of the first hypothesis (H1).

To examine the direct effects of green finance and ESG practices on corporate performance dimensions and to test hypotheses H2, H3, and H4, structural equation modeling was employed. Table 6 presents the standardized path coefficients (β), effect sizes (f^2), p-values, and the decision regarding each sub-hypothesis.

As presented in Table 6, the results for H2 (H2a–H2d) indicate that green finance exerts a direct, significant, and positive effect on all corporate performance dimensions. Specifically, green finance has a moderate positive impact on efficiency ($\beta = 0.341$, $f^2 = 0.24$, $P = 0.00$) and effectiveness ($\beta = 0.206$, $f^2 = 0.18$, $P = 0.00$), a positive effect of slightly lower magnitude on sustainability ($\beta =$

Table 5. Correlation matrix between variables

Variables	Green Finance	Environmental	Social	Governance	Efficiency	Effectiveness	Sustainability	Customer Satisfaction
Green Finance	1							
Environmental	0.620**	1						
Social	0.588**	0.622**	1					
Governance	0.517**	0.610**	0.577**	1				
Efficiency	0.682**	0.594**	0.691**	0.624**	1			
Effectiveness	0.603**	0.600**	0.622**	0.532**	0.686**	1		
Sustainability	0.724**	0.706**	0.614**	0.616**	0.720**	0.706**	1	
Customer Satisfaction	0.703**	0.583**	0.700**	0.687**	0.646**	0.675**	0.714**	1

Note: ** significant at 0.01.

Table 6. Results of hypothesis testing (direct effects)

Hypotheses	Path Coefficient	f ²	P-Value	Result
Testing H2				
H2a: Green Finance → Efficiency	0.341**	0.24	0.00	Supported
H2b: Green Finance → Effectiveness	0.206**	0.18	0.00	Supported
H2c: Green Finance → Sustainability	0.157*	0.17	0.041	Supported
H2d: Green Finance → Customer Satisfaction	0.248**	0.29	0.00	Supported
Testing H3				
H3a: ESG Practices → Efficiency	0.288**	0.31	0.00	Supported
H3b: ESG Practices → Effectiveness	0.179*	0.19	0.032	Supported
H3c: ESG Practices → Sustainability	0.194**	0.23	0.00	Supported
H3d: ESG Practices → Customer Satisfaction	0.142*	0.27	0.028	Supported
Testing H4				
H4a: Green Finance and ESG Practices → Efficiency	0.242**	0.28	0.00	Supported
H4b: Green Finance and ESG Practices → Effectiveness	0.318**	0.33	0.00	Supported
H4c: Green Finance and ESG Practices → Sustainability	0.376**	0.38	0.00	Supported
H4d: Green Finance and ESG Practices → Customer Satisfaction	0.408**	0.39	0.00	Supported

Note: * significant = 0.05; ** significant = 0.01.

0.157, $f^2 = 0.17$, $P = 0.041$), and a moderate positive effect on customer satisfaction ($\beta = 0.248$, $f^2 = 0.29$, $P = 0.00$). These findings support H2 and suggest that higher levels of green finance are associated with enhanced operational, strategic, and customer-related performance outcomes.

Regarding H3 (H3a–H3d), Table 6 shows that ESG practices also have direct, significant, and positive effects on all corporate performance dimensions. ESG practices positively influence efficiency ($\beta = 0.288$, $f^2 = 0.31$, $P = 0.00$), effectiveness ($\beta = 0.179$, $f^2 = 0.19$, $P = 0.032$), sustainability ($\beta = 0.194$, $f^2 = 0.23$, $P = 0.00$), and customer satisfaction ($\beta = 0.142$, $f^2 = 0.27$, $P = 0.028$). These results lead to the acceptance of H3 and indicate that stronger ESG practices are associated with improved performance across multiple dimensions of corporate outcomes.

For H4 (H4a–H4d), the combined effects of green finance and ESG practices are also found to be positive and significant across all dimensions. As shown in Table 6, the combined influence of green finance and ESG practices on efficiency is moderate and significant ($\beta = 0.242$, $f^2 = 0.28$, $P = 0.00$), while their effect on effectiveness is somewhat stronger ($\beta = 0.318$, $f^2 = 0.33$, $P = 0.00$). Notably, the largest effects are observed for sustainability ($\beta = 0.376$, $f^2 = 0.38$, $P = 0.00$) and customer satisfaction ($\beta = 0.408$, $f^2 = 0.39$, $P = 0.00$), where the joint impact is both strong and highly significant. These findings support H4 and suggest that when green finance and ESG practices are implemented

together, they generate synergistic benefits, particularly in terms of enhancing corporate sustainability and customer-related outcomes in emerging markets.

4. DISCUSSION

The findings indicate that both green finance and environmental, social, and governance practices are positively associated with corporate performance in the UAE-listed context. This pattern is consistent with prior evidence showing that sustainability-oriented practices can enhance firm value and performance, particularly in settings where institutions and disclosure regimes are still maturing (Fatemi et al., 2018; El Ghoul & Karoui, 2020). At the same time, the multidimensional performance perspective used in this study helps explain why results may appear mixed in earlier work that relies on single financial indicators (Zhan, 2023).

The positive effects of green finance are aligned with the view that sustainability-oriented financing eases investment constraints and supports resource-efficient projects that improve operating outcomes (Austin et al., 2025; Liu et al., 2023). In practice, access to green finance can enable firms to upgrade technologies, reduce waste and energy costs, and signal credible commitment to sustainability, which may strengthen relationships with capital providers and customers (Huang & Luan, 2024).

Environmental, social, and governance practices also show significant positive associations with performance dimensions, supporting arguments that transparency and stakeholder-oriented policies reduce information asymmetry and strengthen trust (Saygılı et al., 2022; Yusuf et al., 2025; Song, 2024). The results further suggest that robust governance and internal sustainability systems may help firms manage reputational and operational risks, which is consistent with evidence on the negative consequences of sustainability controversies and the mitigating role of governance quality (Elamer & Boulhaga, 2024; Gao et al., 2023).

Importantly, the joint modeling results imply complementarity: green finance and sustainability practices appear to reinforce each other

when explaining corporate outcomes. This is in line with research emphasizing that regulatory pressure, digitalization, and financial technology diffusion can strengthen sustainable finance channels and improve sustainability systems (Xu et al., 2024; Gao et al., 2024; Hu et al., 2025). For managers, the results imply that performance benefits are more likely when green funding is paired with credible governance and stakeholder practices rather than treated as a standalone financing decision. Future studies could extend this work by using longitudinal or archival performance indicators, examining sector-specific effects, and testing moderating roles of regulatory intensity and firm size in emerging-market settings (Vo & Phan, 2013; Rizwan et al., 2020).

CONCLUSION

This study examines how green finance and ESG practices influence multidimensional corporate performance among firms listed on the UAE stock market. Using survey evidence from listed firms, the results indicate that both green finance and ESG practices are associated with stronger corporate performance across efficiency, effectiveness, sustainability, and customer satisfaction, with the largest combined effects observed for sustainability and customer-related outcomes. These findings imply that managers can improve multidimensional performance by coordinating financing decisions with credible ESG governance and disclosure rather than treating green funding as a standalone initiative. For policymakers and market regulators, the results support continued efforts to strengthen sustainability disclosure quality and to expand accessible green-finance instruments for listed companies. Future research should validate these relationships using longitudinal designs and objective market-based indicators, and should examine boundary conditions such as sector differences, regulatory changes, and the role of ESG controversies in shaping performance effects.

AUTHOR CONTRIBUTIONS

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