INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES

Vol 15, Issue 5, (2025) E-ISSN: 2222-6990

Impact of ESG Components on Firms' Performance

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To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v15-i5/25407 DOI:10.6007/IJARBSS/v15-i5/25407

Published Date: 07 May 2025

Abstract

Firms' performance and engagement in environmental, social, and governance (ESG) activities in Africa and Middle East seems low compared to developed countries. This paper investigates impact of environmental, social, and governance components of ESG on firms' performance. The paper applies the two-step system generalized method of moments and 165 ESG firms covering 2012 to 2022 periods. The results reveal that each component of ESG is significantly and positively related to firms' performance. Specifically, environmental component of ESG significantly increases firms' performance. Likewise, social component of ESG significantly increases firms' performance. Moreover, governance component of ESG significantly increases firms' performance. The results suggest that firm-managers and investors should consider the separate impact of ESG components as positive drivers of firms' performance.

Keywords: ESG, Environmental Activity, Social Activity, Governance Activity, Panel Data, System GMM

Introduction

Environmental, Social and Governance (henceforth ESG) corporate responsibility is a management concept whereby firms integrate social, governance, and environmental matters in their business operations and interactions with their stakeholders (Ghardallou, 2022). Firms engage in ESG corporate responsibility to signal that they are responsible to the environment where they operate.

The implementation of ESG practices lay the foundation for the success of firms and help gain competitive hedge in the long-term. As a result, firms are committing their resources to investment in ESG and use different method to communicate their engagement in ESG practices to the stakeholders (Lee et al., 2024; Ghardallou, 2022). Firms' engagement in ESG in Africa and Middle East is growing rapidly because of inequalities, especially among the countries where sustainable development appears most problematic (Cheruiyot and Onsando, 2016). Besides, there has been increased pressure from Stakeholders insisting that firms should be transparent on their ESG policy, commitment, and investment, and ensure positive impact on the stakeholders.

Although firms' engagement in ESG activities in Africa and Middle East is low compared to the Western countries, but ESG activities is increasing in popularity among African firms (Cheruiyot & Maru, 2012) and Middle East firms partly because of improvement in governance and enforcement of social regulations. Besides, firms' performance is lower in most of the selected African and Middle East countries compared to the developed countries. Moreover, the issue of reducing firms' performance in Africa and the Middle East may be reversed by engagement of firms in ESG corporate responsibilities. As firms engage more in ESG practices, they build reputational capital over time resulting in improvement in firms' performance.

Unlike past studies (e.g., Saad and Belkacem, 2022; Fahad and Busru, 2021) that focus on the link between ESG and firms' financial performance in developed countries; firstly, this paper investigate how ESG components impact on firms' performance. Precisely, how environmental (E), social (S), and governance (G) components of ESG impact firms' performance in Africa and Middle East countries which has not received adequate attention in the literature. Secondly, the practical contribution firms' managers should understand that engaging in ESG activities help them retain customer loyalty and build relational capital which translate into improving firm performance. Third, another practical contribution is that government and policymakers should continue to ensure firms actively engage in ESG activities that benefits the society because such practices eventually translate into improve firms' performance.

Africa and the Middle East countries have issues of firms' performance decreasing compared to the developed countries. The selected African and Middle East firms are increasing their commitments and investments in ESG activities and huge financial resources is spent, and thorough research is needed that validate whether such investments in ESG are worthwhile investment which may help increase firms' performance using sample of firms from these regions (Lodh 2022).

Africa is the second largest continent having a population that exceed one billion people. The economy of Sub-Saharan Africa has grown more rapidly over the years (Cheruiyot and Onsando, 2016) and it is projected to grow by 3.3 percent in 2022 (World Bank Report, 2023). Likewise, the economy of the Middle East is projected to grow by 5.4% in 2023 which is the fastest rate since 2016 (World Bank Report, 2023). As a result of the positive projected growth of the selected African and MENA economies and the issues of decreasing performance and increasing cost of debt as well as growing engagement in ESG activities, a study that focuses on the ESG-performance is necessary.

Literature Review

The stakeholder theory is one of the most used ESG theories and perceived as the central part of management theory (Harrison and Freeman 1999). A stakeholder refers to a group or individual who is affected by the achievement of firms' objectives (Edward Freeman 1984). The stakeholder theory emphasizes the need for firms to give attention to broader group of stakeholders' interests and create value for them. This theory is opposed to the shareholder theory that emphasizes firms should maximize only the shareholders' value. The idea behind the stakeholder theory is that the firms' success depends on ability to manage their relationship with key stakeholders (Van Beurden and Gössling, 2008).

The stakeholder theory is applied in this study to explain how ESG is related to firms' performance. Several theories have looked at ESG concept such as legitimacy theory (Palazzo and Scherer 2006), the resource-based view theory (McWilliams and Siegel 2011), and stakeholder's theory (Branco and Rodrigues 2007). However, this study uses the stakeholder theory framework to explain the link between ESG and firm performance. This theory focuses on the benefits of major stakeholders who the ESG activities of the firms' impact such as creditors, shareholders, customers, the community, and the environment. The stakeholder theory is one of the most used ESG theories and perceived as the central part of management theory (Harrison and Freeman 1999).

Social Component of ESG and Firm Performance

Firms engage in ESG activities to show that they are socially responsible to the environment. According to the stakeholder theory, the goals of the firms are to maximize shareholders' value and the needs of other stakeholders. Firms' long-term survival depend on ability to satisfy their major stakeholders (Clarkson, 1995) which help increase consumer supports and loyalty to patronise the firms' products. Furthermore, investors may retain their shares, employee may stay and work at full capacity level, the government may reduce subsidies and impose favourable regulations (Wood, 1991).

Milton Friedman in the 1970s argued that social responsibility badly impacts firms' financial performance and that governments' regulation and interference also impact the macroeconomy and subsequently lower firms' performance. Conversely, towards the end of the 20th century, however, a contrary theory began to gain ground. James Coleman in 1988 confronted the conventional belief that firms should focus only on maximizing shareholders' value and he introduced the concept of social capital into the measurement of value.

Recent findings of Narula et al. (2024) reveal that social component of ESG has no significant impact on firms' performance in India after the covid-19 years which suggest that

the impact of social component of ESG activities are yet to have noticeably impact for firms' performance. Contrarywise, the ESG components impact firms' performance at different phases of the firms' life cycle. The social component of ESG increase firms' performance at the early stage and the maturity stage (Hendratama and Huang, 2021) which suggest that the firm-managers should consider life cycle of the firms as its impact their decision to invest in ESG activities. Likewise, the overall ESG the social component of ESG have positive impact on firms' performance suggesting that firms that invest in the social component of ESG can increase their performance (Aydogmus, Gulay, Ergun, 2022).

The reaction of the stakeholders affects the firms' performance; therefore, it is important to have long-term relationships with stakeholders. As firms establish good relationship with major stakeholders, they gain a competitive advantage (Barney and Hansen 1994). The ability to manage the major stakeholders help improve firms' performance and reduce costs (Mishra and Suar 2010). Therefore, hypothesis 1a: social component of ESG should be positively related to firms' performance.

Environmental Component of ESG and Firm Performance

Ou of the three areas of concern that ESG represented, the environmental has received most of the public and media attention, not least because of the growing fears concerning climate change. Firms engage in environmental component of ESG activities to show that they are responsible to care for the environment. According to the stakeholder theory, the goals of the firms are to maximize shareholders' value and the needs of other stakeholders. Firms' long-term survival depend on ability to signal to the various stakeholders that they would take proper care of the environment (Clarkson 1995) which in turn makes consumers' commit to purchase the firms' products. As firms care for the environment, they may enjoy favourable regulations from the government that enhance firms' performance (Wood 1991).

Chris Yates-Smith who leads a leading consultancy in the UK, established one of the first environmental finance research groups examine environmental and social standards impact firms' financial performance. Nevertheless, some section of the investing markets holds the traditional belief the costs for firms behaving in a responsible manner to care for the environment exceed the benefits. Supporting this view empirically, Aydogmus et al. (2022) findings reveal that the environmental component of ESG has insignificant impact on firms' performance and that firms that invest in the environmental component of ESG may not increase their performance.

Conversely, recent findings of Cheng, Kim, and Ryu (2023) reveal that environmental component of ESG significantly impact on firms' performance in China after the covid-19 pandemic suggesting that the impact of environmental component of ESG activities has noticeably impact for firms' performance. Likewise, the environmental component of ESG increase firms' performance only at the later stage of the firms' life cycle (Hendratama, and Huang, 2021) suggesting that the corporate managers should consider the firms' life cycle when formulating the decisions to invest in ESG activities. Moreover, the overall ESG the environmental component of ESG have positive impact on firms' performance which indicate that firms that invest in the environmental component of ESG can increase their performance (Nassim et al., 2022).

The reaction of the stakeholders regarding how firms show responsible care to the environment affects the firms' performance; therefore, it is important for firms to have long-term relationships with relevant stakeholders via taking proper care of the environment to retain their support and product patronage. As firms establish good relationship with the relevant stakeholders, they become more competitive (Barney and Hansen 1994). As firms manage the major stakeholders well, they can raise performance and lower costs (Mishra and Suar 2010).
Therefore, hypothesis 1b: environmental component of ESG should be positively related to firms' performance.

Governance Component of ESG and Firms' Performance
The governance component of ESG incorporates firms' board of directors and management structures, plus firms' standards, policies, disclosure of information, compliance issues, and audits. Behl et al. (2022) focus on the link between ESG component and firms' performance in India energy sector and report mixed results. Over the years, the governance component of ESG has received more attention in the corporate governance literature. Several corporate governance scandals have challenged the survival of firms, but the policymakers have intensified efforts to formulate stringent legislation aim at protecting investors' investment (Narula et al., 2014).

Some available empirical evidence reveals that all components of ESG have insignificant effect on firms' performance in India (Narula et al., 2024). Likewise, Lopez-de-Silanes et al. (2020) use cross-country study to examine how ESG reporting and quality impact firms' performance and find that ESG scores have insignificant impact on firms' performance which challenge the conventional belief that ESG and its component impact firms' performance. Duque-Grisales and Aguilera-Caracue (2021) assess how ESG component impact the performance of multinational firms in Latin America and find that governance component of ESG has a negative impact on firms' performance. These studies above challenge the need for firms to commit resources to governance component of ESG activities.

Hendratama, and Huang (2021) note that the ESG components impact firms' performance at different phases of the firms' life cycle. Precisely, the governance component of ESG increases firms' performance at the growth stage and at the peak stage and declining stage and other components of ESG impact firms' performance at the early stages of the firms' life cycle (Hendratama, and Huang, 2021) which suggest that the life cycle of the firms plays important role in the firms' decision to invest in ESG activities. Abdi et al. (2022) focus on the impact of ESG scores on firms' performance in the aviation industry. Their findings indicate that firms that invest in governance component of ESG increase firms' performance. Similarly, governance component of ESG is significantly and positively related to firms' performance (Aydogmus et al., 2022) supporting the importance of engaging in governance related activities to increase firms' performance. In a related study, Shaikh (2022) focus on the impact of ESG sustainability practices on firms' performance and report evidence that governance component of ESG has positive impact on firms' performance which support the need for firms to engage in governance component of ESG.
Therefore, hypothesis 1c: governance component of ESG should be positively related to firms' performance.

Data and Research Method

Data

The study obtains the firm-level data from the Thomson Reuters DataStream Database for the period of 2013-2022. This study relies on environmental, social and governance (ESG) scores provided by Thomson Reuter's database as proxy for ESG. The Thomson Reuters database is used because it is standard and frequently used by other researchers (e.g., Badayi et al., 2021; Bae et al., 2017).Inflation rate is obtained from the World Bank Database. The data starts from 2013 and ends in 2022 period because they reflect the time that ESG practice was in place and data availability as well. The sample constitute observations with appropriate data to help determine the dependent variable, independent variables, and control variables. As in similar studies (e.g., Fahad and Busru, 2021; Benjamin and Biswas, 2022), banks, insurance, and other financial services firms are excluded from the sample because their financial statement is different from the financial statement of non-financial firms. The final sample for the study includes 165 firms from five countries with ESG data in selected African and Middle East countries.

Variable Justification

Tobin's Q measures firms' market valuation in relation to their assets-in-place. It captures the markets evaluation of the future cash flow and related risk (Cahan et al., 2016). Tobin's Q is a forward-looking measure of firms' performance, and this is important because the impact of ESG is mostly seen in the medium-term and long-term future (Pekovic and Vogt 2020). As this study expect the impact of ESG on firms' performance to be in the medium-term and long-term, Tobin's Q is used as the main measure of firms' performance. Tobin's Q is the ratio of total debt plus market value of equity to total assets.

The impact of ESG on firms' performance is mixed in the literature suggesting the need to add clarity to the mixed findings. For example, Marti et al. (2015) report positive impact of ESG on firms' performance. Conversely, Buallay et al. (2020) and Cris´ostomo et al. (2011) report negative impact of ESG on firms' performance, while Karim et al. (2020) and Velte (2017) report insignificant impact of ESG on firms' performance (Rodriguez-Fernandez, 2016; Velte, 2017). As firms establish good relationship with major stakeholders, they gain a competitive advantage. The ability to manage the major stakeholders help increase firms' performance (Mishra and Suar 2010). Moreover, ESG increase firms' performance because better corporate social performance reveals the markets expectations of an increase in future cash flow and likely sustainability-related opportunities of the firms (Cahan et al., 2016). Conversely, ESG can reduce firms' performance if corporate responsibility activities inadequately address aspects of ESG based on markets expectations which cause investors to expect future decrease in cash flow, thereby reducing firms' performance. (Cris´ostomo et al., 2011). This study expects ESG components to increase firms' performance because as firms engage in ESG activities, they build reputational capital through good relationships with various stakeholders and enjoy customer loyalty overtime which translate into improve firms' performance. ESG is measured using the ESG scores provided by Thomson Reuters DataStream Database.

Debt is a control variable. Modigliani and Miller's theory states that debt is positively related to firms' performance. Debt increases firms' performance due to the advantage of debt interest tax-shield (Modigliani and Miller, 1963). Modigliani and Miller (1958) document

a positive impact of debt on firms' performance (i.e., return on common stock). Bhandari (1988) and Benjamin and Biswas (2022) report a positive impact of debt on firms' performance (i.e., stock return), and concludes that debt predicts stock returns. Debt is expected to be positively related to returns due to the substantial benefit of the interest tax shield. As in Benjamin and Biswas, (2022) debt is measured as the ratio of total debt to total assets. Firm size is an important driver of firms' performance. For example, Fama and French (1992) suggested that bigger firms are more stable and unlikely to experience bankruptcy problem. Size is positively related to firms' performance in several studies (Fahad and Busru, 2020; Matemilola, Bany-Ariffin, and Nassir, 2019) while few researchers (e.g., Al-Shammari, Banerjee, and Rasheed, 2022; Benjamin and Biswas, 2022) report negative impact of firm-size on firms' performance. This study expect size to be positively related to firms' performance because as firms grow bigger, they enjoy stable cash-flow and unlikely to face bankruptcy problem. In accordance with majority of prior studies, firm-size is measured as log of total assets.

Inflation is another control variable. Inflation impact firms' performance. Based on Fisher (1930) theory, inflation should positively impact firms' performance (Fisher, 1930) as inflation translate into increase in prices of the firms' products which increase revenue to the firms. However, mixed findings have been reported in the literature. Fama and Schwert (1977) findings indicate that unexpected and expected inflation negatively affect firms' performance which suggest that higher inflation seems to be bad news. Likewise, Matemilola et al. (2018) findings reveal that inflation is negatively related to firms' performance suggesting that investors' regard inflation as bad news. Conversely, Brown et al. (2016) findings reveal that inflation is positively related to firms' performance. This study expects inflation to be positively related to firms' performance as rising prices translate into increase revenue to the firms. Like past studies, inflation is measured as changes in consumer price index. The industry where firms conduct their business operation affect firms' performance. For instance, market entry barriers shied certain firms from total demand shocks but expose other firms to total demand shock (Hou and Robinson, 2006). Firms that operate in industry where there is no barrier to enter the industry experience reduction in their performance as they are not protected against distress risk. Hou and Robinson (2006) findings reveal that firms operating in the industries where high barrier to entry exist experience increase in their performance because they are protected from distress risk. This paper uses industry fixed effects (industry dummy) to control for possible industry effect on firms' performance. Benjamin and Biswas (2022) and Shahzad et al. (2022) has recognized industry dummy as one of the best ways to control for industry effects in firms' performance model.

Model Specification

The study specifies four dynamic models because previous year performance can affect the current year firms' performance (Karmani and Boussaada, 2021). The ordinary least squares, the fixed-effect model, and random-effect model are prone to omitted variable bias and measurement errors. Nevertheless, the Generalised Method of Moments is appropriate to estimate dynamic models and can mitigate these problems (Arellano and Bond, 1991; Blundell and Bond, 1998; Karmani and Boussaada, 2021). The model below is specified to test the three hypotheses **(H_{1a}, H_{1b}, and H_{1c})**

$$FIRMP_{ij,t} = \lambda FIRMP_{ij,t-1} + \beta_0 + \beta_1 ESG_{\mathbf{ij,t}} + \beta_2 DEBT_{ij,t} + \beta_3 FSIZE_{ij,t} + \beta_4 INFLA_{j,t} + \emptyset_i + \alpha_t + \mu_{it}$$

Where:

FIRMP = Firms' Performance (Proxy by Tobin's Q)
$FIRMP_{ijt-1}$ = Previous year Firms' Performance
ESG = Components of ESG (namely social component, environmental component , and governance component)
DEBT = Debt Ratio
FSIZE = Firm Size
INFLA = Inflation
$Ø_i$ = Industry effects
α_t = Year fixed effects
λ = Adjustment parameter
μ = Error term

The study uses the panel Generalized Moments of Method (GMM) estimation technique to control for omitted variables, measurement errors, and reverse-causality. This GMM method is usually used in dynamic models where the data set comprises large N cross-sectional observations and short T time series. There is the need to control for time invariant and observed differences using the firm-fixed effects across the firms. The use of the Ordinary Least Square (OLS) technique to estimate parameters in a dynamic model that comprises the lagged dependent variable and firm-specific effects may likely lead to biased coefficients. This bias is of concern because the coefficients of other variables could be doubt if the lagged dependent variable coefficient is biased (Karmani and Boussaada, 2021; Flannery and Hankins, 2013). Additionally, where endogenous problems for some explanatory variables and firm- specific effects exists, it would be appropriate to consider an instrumental variable estimator to rectify such endogeneity and firm-specific effects problems. The GMM is the correct estimation method to apply because problem related to the endogeneity of independent variables is resolved by the GMM using the lag values of the dependent and independent variables as internal instruments (Karmani and Boussaada, 2021).

Results

Descriptive Statistics Results

An examination of the descriptive statistics in Table 1 for dependent variables and independent variables show some vital information. The mean value of firms' performance (proxy by PB which is Tobin-Q) is (1.281365) and the standard deviation is 1.784417 while the minimum value and maximum value are 0.387084 and 15.35261, respectively. The bank branches have a mean value 11.144 which falls within 1 (minimum value) and 34 (maximum value) for the firms. This implied that on average, some African countries have more bank branches than others, which could increase firms' access to borrowing. Next, the automatic teller machine (ATM) mean value of 20.282 which falls within 3 (minimum value) and 69 (maximum value). Hence, on average, some firms in African countries have more access to finance than others. GDP growth rate (GDPGR) have the highest mean and the lowest standard deviation. The results in Table 2 below indicate the degree of association between most of the control variables are lower because the correlation coefficients among the independent variables are generally low. Thus, the results also suggest little risk of multicollinearity problems. Although the correlation analysis establishes the degree of relationship between the variables, the correlation analysis appears insufficient to establish a cause-and-effect relationship between the dependent (firms' performance) and independent variables. Thus, advanced modelling analysis is needed to establish a cause-and-

effect relationship between firms' performance and the independent variables. Thus, the two-step System and the generalized method of moments and the two-step difference generalized method of moments estimation technique are employed to establish the relationship between firms' performance measure and the independent variables.

Table 1
Descriptive statistics and correlation results

VARIABLE	OBS	MEAN	STD. DEV.	MIN	MAX
PB	1,650	1.281365	1.784417	0.387084	15.35261
EPS	1,650	34.91333	26.19792	0	96.58471
SPS	1,650	42.54511	24.08565	0.299180	95.16963
GPS	1,650	48.78372	22.83576	0.338542	97.54444
TDTA	1,650	0.256702	0.64876	0	1.070070
LTA	1,650	23.67766	1.486088	16.38911	28.75323
INFR	1,650	4.749445	2.783992	0.540315	29.50661

Table 2
Correlation results for firms' performance models

	PB	EPS	SPS	GPS	TDTA	LTA	INFR
PB	1.0000						
EPS	-0.0655	1.0000					
	0.0077						
SPS	-0.0839	0.5759	1.0000				
	0.0082	0.0000					
GPS	-0.0666	0.3447	0.4638	1.0000			
	0.0077	0.0000	0.0000				
TDTA	-0.0490	-0.0832	-0.0932	0.0073	1.0000		
	0.0418	0.0007	0.0002	0.7663			
LTA	-0.1997	0.3696	0.3020	0.1768	-0.0873	1.0000	
	0.0000	0.0000	0.0000	0.0000	0.0004		
INFR	-0.1497	0.0783	0.1031	0.0137	-0.0575	0.1189	1.0000
	0.0000	0.0015	0.0000	0.5780	0.0199	0.0000	

Two-Step System GMM Results

The results of both the two-step System GMM and the two-step Difference GMM confirm that the models are dynamic because the coefficients of the lagged dependent variable are statistically significant which indicate that the previous year firms' performance affect the current year performance (refer to Table 3). Furthermore, the study reports two post-estimation tests– first-order and second-order serial correlation of error term tests. The test result of second-order serial correlation which has a null hypothesis of no serial-correlation in the error term is accepted because the p-values are high and not statistically significant. Thus, there is no second-order serial correlation problem in the error term of the model. As expected, there is a first-order serial correlation because the error terms will be correlated with the lagged dependent variable in the model specification.

Based on Table 3, the estimated coefficients of the System GMM model are significant and have the expected sign. The social component of ESG is statistically significant and positively related to firms' performance (i.e., coefficient of 0.0033*** and t-statistics of 16.04). Likewise, the environmental component of ESG is statistically significant and positively related to firms' performance (i.e., coefficient of 0.0112*** and t-statistics of 60.21). Furthermore, the governance component of ESG is statistically significant and positively related to firms' performance (i.e., coefficient of 0.0028*** and t-statistics of 14.57). As a robustness check, the study estimates the Difference GMM model and observed similar results. Specifically, the social component of ESG is statistically significant and positively related to firms' performance (i.e., coefficient of 0.0073*** and t-statistics of 5.94).

Likewise, the environmental component of ESG is statistically significant and positively related to firms' performance (i.e., coefficient of 0.0246*** and t-statistics of 23.74). Furthermore, the governance component of ESG is statistically significant and positively related to firms' performance (i.e., coefficient of 0.0049*** and t-statistics of 6.52). The evidence of a positive relationship between each component of ESG and firms' performance is consistent with the stakeholder theory argument that the goals of the firms are to maximize shareholders' value and the needs of other stakeholders. Firms' long-term survival depend on ability to satisfy their major stakeholders (Clarkson 1995) which help increase consumer supports and loyalty to patronise the firms' products. Furthermore, investors may retain their shares, employee may stay and work at full capacity level, the government may reduce subsidies and impose favourable regulations (Wood 1991) which in turn improve the firms' performance.

The reaction of the stakeholders affects the firms' performance; therefore, it is important to have long-term relationships with stakeholders. As firms establish good relationship with major stakeholders, they gain a competitive advantage (Barney and Hansen 1994). The ability to manage the major stakeholders help improve firms' performance and reduce costs (Mishra and Suar 2010). Therefore, hypothesis 1a that social component of ESG should be positively related to firms' performance is supported. The ESG components impact firms' performance at different phases of the firms' life cycle. The result agrees with Hendratama, and Huang (2021) findings that the social component of ESG increase firms' performance at the early stage and the maturity stage which suggest that the firm-managers should consider life cycle of the firms as its impact their decision to invest in ESG activities. Likewise, Aydogmus et al. (2022) the social component of ESG have positive impact on firms'

performance suggesting that firms that invest in the social component of ESG can increase their performance. Conversely, Narula et al. (2024) findings reveal that social component of ESG has insignificant impact on firms' performance in India which suggest that the impact of social component of ESG activities are yet to have noticeably impact for firms' performance.

The reaction of the stakeholders regarding how firms show responsible care to the environment affects the firms' performance; therefore, it is important for firms to have long-term relationships with relevant stakeholders via taking proper care of the environment to retain their support and product patronage. As firms establish good relationship with the relevant stakeholders, they become more competitive (Barney and Hansen 1994). As firms manage the major stakeholders well, they can raise performance and lower costs (Mishra and Suar 2010). Therefore, hypothesis 1b: environmental component of ESG should be positively related to firms' performance is supported. The results are consistent with Hendratama, and Huang (2021) findings that environmental component of ESG increase firms' performance only at the later stage of the firms' life cycle suggesting that the corporate managers should consider the firms' life cycle when formulating the decisions to invest in ESG activities. Moreover, the results are consistent with the Nassim et al. (2022) findings that overall ESG the environmental component of ESG have positive impact on firms' performance which indicate that firms that invest in the environmental component of ESG can increase their performance (Nassim et al., 2022). Conversely, the result is inconsistent with the Aydogmus, Gulay, Ergun (2022) findings that the environmental component of ESG has insignificant impact on firms' performance and that firms that invest in the environmental component of ESG may not increase their performance.

Moreover, the governance component of ESG is positively related to firms' performance with support the arguments that governance component of ESG incorporates firms' board of directors and management structures, plus firms' standards, policies, disclosure of information, compliance issues, and audits which enforce compliance and ensure enhance performance of firms. Therefore, hypothesis 1c: governance component of ESG should be positively related to firms' performance is supported. This result agrees with Hendratama and Huang (2021) findings that the governance component of ESG impact firms' performance at different phases of the firms' life cycle. Precisely, the governance component of ESG increases firms' performance at the growth stage and at the peak stage and declining stage and other components of ESG impact firms' performance at the early stages of the firms' life cycle. Likewise, the result agrees with Abdi et al. (2022) findings that firms that invest in governance component of ESG increase firms' performance. Similarly, the result also agrees with Aydogmas et al. (2022) findings that governance component of ESG is significantly and positively related to firms' performance supporting the importance of engaging in governance related activities to increase firms' performance. Contrarywise, the result contradicts Duque-Grisales and Aguilera-Caracue (2021) findings reveal that governance component of ESG has a negative impact on multinational firms' performance in Latin America. Likewise, Narula et al. (2024) empirical findings reveal that governance component of ESG has insignificant effect on firms' performance in India. These two studies above challenge the need for firms to commit resources to governance component of ESG activities.

Table 3
Panel GMM Regression Results (Dependent Variable: TOBIN Q)

	TWO-STEP SYSTEM GMM (MAIN RESULTS)	TWO-STEP DIFFERENCE GMM (ROBUST RESULTS)
	MODEL 1A	MODEL 1B
Regressors		
PB (TOBIN Q)$_{it-1}$	0.6631*** (575.34)	0.1982*** (65.78)
EPS (Environmental Pillar Score)	0.0112*** (60.21)	0.0246*** (23.75)
SPS (Social Pillar Score)	0.0033*** (16.04)	0.0073*** (5.94)
GPS (Governance Pillar Score)	0.0028*** (14.57)	0.0049*** (6.52)
LTA (Firm Size)	-0.0871*** (-15.37)	-0.3289*** (-9.85)
INFR (Inflation Rate)	0.0496*** (116.50)	0.0159*** (11.82)
LTD (Total Debt)	-0.2339*** (-20.37)	-0.3091*** (-14.48)
CONSTANT	1.9646*** (14.44)	7.8488*** (9.93)
Industry effects	YES	YES
Year fixed effect	YES	YES
AR (1)	0.1591	0.1366
AR (2)	0.2991	0.7954
Hansen Test / Difference Hansen Test	1.000	1.000
Number of Instruments	129	84
Number of firms	150	149

Note:*** indicate significance at 0.01 level.

Conclusion

The issues of reducing firms' performance in Africa and the Middle East can be reversed by engagement of firms in ESG corporate responsibilities. This paper investigates impact of environmental, social, and governance components of ESG on firms' performance. The paper applies the two-step system generalized method of moments, and the results reveal that each component of ESG is significantly and positively related to firms' performance. Precisely, environmental component of ESG, social component of ESG, and governance component of ESG significantly increases firms' performance. The results suggest that firm-managers and investors should consider the separate impact of ESG components as positive drivers of firms' performance. Specifically, firms' managers should adhere to the governance law encouraging them to regularly involved in ESG activities to the society and environment where their business operate because compliance to the governance law can further improved performance for firms. Furthermore, investors can continuously invest in firms involving in ESG activities and socially responsible to the environment where they conduct business operations. As firms involving in ESG activities profit from built reputational capital over the long term and enjoy customer loyalty which in turn improve their performance, investors invested capital in ESG firms can be secure. Moreover, the policymakers should continue to strengthen notional governance quality as it motivates firms to participate more in ESG activities and profits from higher performance if the country's governance structure monitors

and enforces compliance. The paper contributes to literature focusing on how ESG components (i.e., environmental, social, and governance) impact on firms' performance which has not been adequately researched in the literature. Past studies mostly focus on the link between overall ESG score and firms' financial performance in developed countries. Moreover, a study focusing on how separate components of ESG impact firms' performance in the Africa and Middle East countries provides fresh perspectives on the nexus between ESG and firms' performance in the literature.

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