

ESG Driven Profitability: Does Gender Diversity Explain Heterogeneity Among Firms in BRICS Economies

Fareeha Waseem¹, Usman Sarwar², Sana Azeem³, Nimra Bint-e-Naeem⁴,
Umme Ammara⁵ and Veera Salman⁶

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Abstract

This paper explores the relationship between the Environmental, Social, and Governance (ESG) performance and the financial performance of companies and consider how gender diversity can moderate this relationship. The paper analyses the information of BRICS countries in top listed companies with the help of panel regression analysis. The results indicate that the effectiveness of ESG performance has a negligible effect on the Return on Equity (ROE), which implies that sustainability efforts do not directly result in the financial benefits in the short term in this setting. Also leverage has been found to have a negative relationship with ROE, with firm age showing a positive relationship, which suggests that older firms have a better financial performance. The results contribute to the existing literature and provides valuable insights for policymakers and corporate decision-makers aiming to balance sustainability objectives with financial outcomes.

Keywords: ESG Performance, Return on Equity, Board Gender Diversity, BRICS, Sustainability.

Introduction

Concerns about climate change have prompted governments concerns worldwide to include the Sustainable Development Goals in their agendas, and they are also exerting pressure on businesses to follow it (United Nations, 2023). According to WCED (1987), sustainability refers “to fulfil current demands without compromising the potential of future generations to meet their own”. ESG policies are not just morally required, as evidenced by the contemporary corporate environment, which shows a paradigm shift towards sustainable financing (Chouaibi, Rossi, and Abdessamed 2022; Chouaibi et al. 2022; Orazayeva and Arslan 2024). Moreover, better financial performance, risk management, and quicker recoveries from losses are linked to high ESG scores (Suttipun 2023). Paranita et al. (2025) said that the Businesses that show a strong commitment to

¹ Lecturer, Hailey College of Banking & Finance, University of the Punjab, Lahore, Pakistan.

Email: fareeha.waseem@puhcbf.edu.pk

² Assistant Professor, Hailey College of Banking & Finance, University of the Punjab, Lahore, Pakistan.

Email: usmansarwar@puhcbf.edu.pk

³ Lecturer, Institute of Business Studies, GC Women University, Sialkot, Pakistan.

Email: sana.azeem@gcwus.edu.pk

⁴ Research Scholar, Hailey College of Banking & Finance, University of the Punjab, Lahore, Pakistan.

Email: nimranaeem023@gmail.com

⁵ Research Scholar, Hailey College of Banking & Finance, University of the Punjab, Lahore, Pakistan.

Email: cheemaammara123@gmail.com

⁶ Research Scholar, Kinnaird College for Women University, Lahore, Pakistan.

Email: veerasalman242@gmail.com



social concerns are frequently better equipped to establish a good reputation and enduring, mutually beneficial connections with both society and consumers.

The issue of climate change has become that important as it forced many governments to include the Sustainable Development Goals into their strategies and, it also, put pressure on companies to do the same (United Nations, 2023). ESG is a framework which is used for measurement, rating, and for evaluation of businesses' sustainability performance, where investors, regulators, stakeholders, and all other stakeholders are held accountable for the actions they make on the environment and on society as a whole, and the internal management processes (Arayssi et al., 2020; Birindelli et al., 2019; Kamaludin et al., 2022; Cucari et al., 2018). However, today's environmental measurement requires businesses not only to adopt the principles of sustainability but also incorporate ESG policies into their business models (Chouaibi et al. 2022; Orazayeva & Arslan 2024).

Within the last two decades, the standard requirements in terms of ESG performance has increased significantly, due to which companies are more accountable for their socially responsible behavior (Gao et al., 2022). The ESG Performance (ESGP) of a business shows its development capacity as well as future value in long run, as it become a important factor in terms of borrowing from lending organizations (Xiaonan et al., 2024). In turn, there are many other ways in which a firm can improve its ESGP. Over the recent years, the financial market has shown a noticeable increase in relation to financial instruments linked to environment, society and governance (ESG) such as ESG-related credits (Dikau & Volz 2021; Muller 2021; Carrizosa & Ghosh 2022; IASB 2022). Isack et al. (2024) argues that CSR assurance and ESG rating, the two primary reliability-enhancing routes, develop in conjunction and help to build trust in ESG information. Yet, the disputes around ESG ratings firms, such as doubts about their reliability and consistency, as well as its obvious application, cause friction in the course of decision-making (Lareker et al., 2022). Although investors who care about the surroundings have utilized ESG scores as a method for allocation of assets, a number of subsequent studies have cast doubt on the accuracy and dependability of these ratings (Berg et al., 2022; Christensen et al., 2022; Gibson Brandon et al., 2021). Sirimon et al. (2024) said that the reliability of ESG ratings has also been called into doubt recently; specifically, whether companies with high ratings truly live up to their claims of being better for the environment, society, and government. According to Cohen et al. (2020), for instance, the brownest companies actually take more steps to lower their environmental impact in the years ahead. According to Birindelli, companies that aim to include environmental, social, and governance disclosures in their reports demonstrate that they are cognizant of their long-term goals and provide them with a competitive advantage.

Businesses now operate differently in the ESG-conscious world due to sustainability regulations and businesses (Nizam et al., 2019; Waseem et al., 2025). According to Hassel and Semenova (2015), corporate social responsibility (CSR) has developed into three primary categories of relationships: governance (G), social (S), and environmental (E). The current trend regarding sustainability is transforming the accounting and financial industries, Institutional and private shareholders support sustainable finance goals, as they all want to invest in businesses that perform well according to ESG performance (Migliorelli, 2021). However, some research contends that ESG practices could lower a business's cash flow, which would lower CFP (Duque-Grisales & Aguilera-Caracuel, 2021; Talha et al., 2025). According to Barclift (2012) and Bernal et al. (2014), financial institutions like banks and insurers have an important role in fostering the stability and expansion of the financial system. But when mitigation of risks crashes, they can also cause systemic disturbances throughout the economy, as the economic downturn of 2007–2008

demonstrated (Bebchuk et al., 2010; Wagner, 2010). Lee et al. (2024) claims that the Company's risk impacts financial organizations' cost of funding capital, hence efficient institution risk management is very important.

According to Pham et al. (2022), the results of previous studies on the ESG-CFP relationship are unclear, conflicting, confusing and the CPF and ESG performance metrics, as well as the methodologies employed, may be responsible for these contradicting findings. The majority of recent studies on the relationship between ESG and CFP has taken financial or market output performance metrics, including earnings, revenues, market value, return on Equity (ROE), Return on Investment (ROI), Tobin's Q, and so on (Lazzolino et al., 2023). When it comes to ESG, corporate governance can act as a link between sustainability efforts and profitable outcomes (Paranita et al., 2025; Zafar et al., 2025). Some stakeholders, such as shareholders, regulators, employees, suppliers, and clients, are the source of these standards and the development of the corresponding value (Camilleri, 2015). With organizations trying to adopt sustainable business models (Bagnoli et al., 2019) and facing environmental problems (Paletta et al., 2019) and technological advancements (Calandra et al., 2023), the link between sustainability and value creation has become one of the critical topics to investigate in the accounting and management domain. While ESG-related studies have gained increasing popularity, there are a series of problems associated with the concept (Arvidsson & Dumay, 2022; Bint-e-Naeem et al., 2026). Due to the absence of a unified definition of ESG, its measurement across companies becomes challenging, making it hard to conduct empirical research in the realm of ESG.

ESG measures have been regarded as a potential indicator for sustainability and the profitability of firms because of their potential, making them popular with the current investment industry (Fulton et al., 2012; Shaukat et al., 2024). Firms that are efficient in mitigating risks from the environment are considered to be more resilient against the effects of international economic challenges, especially during a period where laws concerning the environment are becoming tighter (Schmidheiny, 1992; Hillary, 2017). In the opinion of Huang et al. (2018), environmental performance is a vital measure for assessing the likelihood of material risks that could hinder business activities. Some of the concerns that come into play include social responsibility, human rights, employment security, gender balance, and impact on the community (Stahl et al., 2020; Torres et al., 2019). By fostering brand loyalty and lowering the possibility of lawsuits or boycotts brought on by ethical or social transgressions, the social component can contribute value in the investment industry (Hunt, 2019; Vogel, 2007). According to Previtali and Cerchiello (2023) and Wijayati et al. (2016), corporate governance encompasses elements including the composition of the board of directors, financial statement openness, company ethics, and anti-corruption policies. Even if a corporation does well in the social and environmental aspects, poor governance can undermine investor confidence (Mukhtaruddin et al., 2019). According to Opferkuch et al. (2021), sustainability reporting has emerged as a crucial instrument for businesses to convey to investors and other stakeholders how their operations affect economic, environmental, and social aspects. Furthermore, enhancing investor trust and operational efficiency is largely dependent on effective corporate governance (Azeem et al., 2026; Sarwar et al., 2023; Shahid & Abbas, 2019). But since ESG is mainly concerned with the non-financial aspects of business management, its influence on CFP is not distinct and centralized (Nirino et al., 2021). According to certain studies, ESG actually improves CFP by lowering financing costs and increasing stakeholders' trust in the business (Friede et al., 2015). ESG may improve market value and profitability while also decreasing reputational risks (Chen, Hasan, et al., 2021; Zumente & Julija, 2021), increasing employee productivity, and strengthening teams' management skills (Branco & Rodrigues, 2006). A gap in

the literature is highlighted by the paucity of studies that employ metrics other than account-based and market-based ones, such as value-based metrics (La Torre et al., 2021) or comparing company success to operating and input performance (Pham et al., 2022).

According to Birindelli et al. (2019), the board of directors in a firm plays a important role in the success of the business entity and is tasked with implementing ESG in all aspects of operations within the organization. Research conducted in the field of corporate governance has established the effects of gender diversity on boards on firm performance (Conyon and He 2017; Khuong et al. 2022; Arora 2022; Ben Fatma and Chouaibi 2023; Sarwar et al., 2025b). Resource dependence theory (Hosny and Elgharbawy 2021) and agency theory (Fama and Jensen 1983) states that female directors enhance firm performance through improving the board's monitoring and controlling processes and making it easier for firms to access finances and other sources of resources.

As a key internal governance tool, the Board of Directors (BOD) is in charge of managing and guiding a company and safeguarding the interests of its stockholders (Amran & Che Ahmad, 2011; Gillan, 2006; Kılıç & Kuzey, 2016). Over the past 20 years, researchers and decision-makers have been interested in the study of board gender diversity (Khatri, 2022). In various study contexts, prior research has typically demonstrated a correlation between sustainability performance and board gender diversity. However, there are very few studies that use Nordic firm-level data to assess the possible relationship between board gender diversity and sustainability performance (Khatri, 2022). According to Seierstad and Opsahl (2011), Norway was the first nation in the world to implement a gender quota in 2003, this requirement was later enforced in 2006, forcing public limited firms to appoint at least forty percentage of each gender to their boards of directors within two years. Khatri, (2022) claims that our work supports ideas indicating that gender diversity on boards has a substantial positive correlation with sustainability performance by empirically examining them in the Nordic setting.

The emphasis on ESG further strengthens the argument that businesses exist to serve more than just maximizing profits and that they are responding to stakeholder demand to reveal their social impact (Ismail & Latiff, 2019). For investors and for other stakeholders, it is important to include sustainable investments and practices (Arayssi, Jizi, & Tabaja, 2020). For regulators too, there has been an understanding that it is important for listed companies to share information regarding ESG either on a voluntary basis or via regulatory requirements (Ismail & Latiff, 2019). According to Tibiletti et al. (2021), one of the possible requirement within corporate governance that is used for influencing CSR is corporate boards. The decisions of corporate boards on specific strategic issues are affected significantly by the directors themselves (Azeem et al., 2025; Chang et al., 2017; García-Sánchez et al., 2021; Kim et al., 2009; Seto-Pamies, 2015). The demographic factors associated with board members like gender, experience, education level, and age play an important role in the decisions (Kagzi & Guha, 2018). Furthermore, directors can provide support to corporate boards in terms of resource provision, guidance, advice, stakeholder relations, strategy implementation, among others (Hillman & Dalziel, 2003).

Problem Statement

In recent years, firms have implemented ESG strategies due to multiple reasons, such as stakeholder demands or accountability, government policies, and the increasing importance of sustainability in business. However, research findings have been conflicting; thus, empirical data on the association between ESG and financial performance are inconclusive (Friede, Busch, &

Bassen, 2015). Additionally, there hasn't been much focus in academic literature on how board gender diversity might moderate this association.

The relationship between corporate governance and ESG disclosures has been the subject of some empirical research (Buchetti, Arduino, & De Vito, 2022), but there still exists a research gap. The majority of research on board diversity focuses on gender diversity, with little consideration given to other crucial elements including age, independence, and capabilities & skills. Therefore, it is still unknown which elements of board diversity have the greatest impact on ESG disclosure.

Research Questions

1. Does a company's financial performance (ROE) depend significantly on its ESG performance?
2. To what extent does board gender diversity moderate the relationship between ESG performance and firm profitability?

Significance of the Study

Many stakeholders, such as academics, investors, business managers, and lawmakers, will find value in this research. Understanding the impact of ESG practices on financial performance can help managers make strategic decisions. Using the findings, investors can match their funds with businesses that adopt sustainable business methods. Regulatory ramifications are one tool that lawmakers may use to promote moral business conduct. Lastly, by addressing the gaps in the literature, this work contributes to the academic discourse on profitability, corporate governance, and ESG.

Literature Review

Numerous studies emphasize the need for more thorough investigation into company-specific ESG initiatives (Gregory, 2022; Sabharwal, 2014; Suci et al., 2020, among others). Suci et al. (2020) reaffirm the vital role that human capital plays in business, stressing the relevance of employee involvement, professional development, and diversity as crucial components in lowering risks and improving financial performance. Gregory (2022) concludes that ESG initiatives are advantageous to businesses and that, in advanced economies, investing excessively in labor conditions exacerbates the impact of ESG on an organization's free money flow. Return on equity (ROE) and return on assets (ROA) are positively and significantly correlated with the first variable, according to Adu's (2022) personal investigation of the effect of employee ratings on bank performance. Candio (2024) argue that Hiring and keeping competent staff is essential to providing exceptional service. For instance, banks that implement best practices can boost productivity and profitability by luring highly skilled workers, inspiring them, and fostering a sense of camaraderie among them (Bhattacharya et al., 2008 and Kabir & Thai, 2017). A significant finding by Magrizzos et al. (2021) strengthens the importance of ESG initiatives. They examine this variable's function in the context of an economic crisis and come to the conclusion that ESG practices had a beneficial impact during the crisis (Magrizzos et al., 2021). This brings up an intriguing point of view about the part ESG initiatives play during times of crisis, a topic that hasn't been thoroughly examined by many writers (Folger-Laronde et al., 2022; Ursic & Cestar, 2022). This beneficial effect might result from businesses' dedication to ESG encouraging employee behavior in the workplace (Garrido-Ruso & Aibar-Guzmán, 2022) these attitudes will affect how well the business performs.

Consequently, keeping up a high level of participation in these activities during times of crisis can be a calculated move to increase employee loyalty to the company, which will ultimately improve

corporate performance (Garrido-Ruso & Aibar Guzmán, 2022; Naffa & Dudas, 2023). Candio (2024) said that to clarify how ESG issues and financial performance interact, a number of theoretical frameworks have been developed. Several of these are important, including value relevance concept (Cheng & Micale, 2022; Usman et al., 2026), institutional theory (Pinheiro et al., 2023), and stakeholder theory (Donaldson Preston, 1995). Han et al. (2016) examined their ability to predict financial performance as measured by return on equity (ROE), price–earnings ratio (PER), and market price for companies listed on the Korean stock exchange using three distinct ESG scores as stand-ins for CSR initiatives. There was limited proof that the social component affected financial performance, and inconsistent findings were observed for certain ESG scores (Candio, 2024). Chen and Wang (2011) looked at the correlation between CSR initiatives and three financial performance metrics in Chinese listed companies during 2007 and 2008, and they found that there was an overall favorable effect. Using a multilevel regression technique, Liu et al. (2020) discovered an overall favorable impact on ROA.

Hakimi et al. (2023) focused on the correlation between ROA and Tobin's Q ratio, using data from 813 European companies over a ten-year period. They discovered that ESG had a favorable impact on financial performance only when the ESG score surpassed a threshold of 56.78%. Agoraki et al. (2023) examined the relationship between a company's ESG reputational risk and ROA, ROE, and Tobin's Q in European listed companies over a 14-year period. Bifulco et al. (2023), however, discovered a negative correlation among the market share price and ESG score after examining a similar dataset. Koundouri et al. (2022) empirically examined the relationship between ESG performance and the overall financial position of companies, focusing on the public entities listed in the STOXX Europe ESG Leaders fifty Index. Numerous recent studies support the idea that ESG practices should be incorporated into business management since they enhance financial performance and, in turn, provide competitive benefits. The theory of stakeholders is now one of the most popular frameworks in academia for conceptualizing and comprehending matters pertaining to businesses' ethical obligations (Dmytriiev et al., 2021; Schwartz & Carroll, 2008). Freeman (2004) argues that taking into account an organization's stakeholders is the first step towards a socially responsible organization since they all have a significant impact on performance results (Buciłunienė & Kazlauskaitė, 2012; Odriozola & Baraibar-Diez, 2017).

Despite the literature's inconsistent findings, a sizable portion of the publications support the Stakeholder Theory's favorable association (Garrido-Ruso et al., 2024). It is clear from a study of the literature that there are somewhat more research showing a positive relationship between the two variables than there are not (Huang, 2021; Velte, 2017). Furthermore, a paper by Whelan et al. (2021) that presents the findings of a meta-analysis extended using over 1,000 articles published among 2015 and 2020 lends credence to this viewpoint. In a meta-analysis of 1816 research, Friede, Busch, and Bassen (2015) discovered that whereas 48.2% of the studies indicated a positive association between ESG and FP, 23.0% were neutral, 10.7% were negative, and 18% were mixed. From the standpoint of the concept of agency, certain research studies claim that needless ESG expenses can reduce the worth of shareholders (Friede, Busch, and Bassen 2015; Hang, Geyer-Klingeborg, and Rathgeber 2019; Xin, Zhang, and Xiang 2024), while others contend that ESG activities may increase resource consumption, thereby reducing FP (Ruan and Liu 2021; Sarwar et al., 2025c). The body of research on ESG practices has expanded significantly, especially when considering how they affect the resilience and financial performance of corporations (Yadav and Asongu, 2024).

Additionally, the current research frequently concentrates on particular sectors or geographical areas (Abedifar et al. 2023; Wang et al. 2023; Zhang and Chen 2023; Castellano, Cini, and Ferrari

2024), which leaves a gap in the cross-sectoral and cross-regional implementation of ESG principles. Based on the data development analysis approach (DEA), a seminal study by Habib (2022) carefully assesses the effectiveness of working capital management in US companies and its ensuing effect on firm value in light of ESGP. The growing field of sustainable finance is explored in another fascinating study by Castellano, Cini, and Ferrari (2024), which emphasizes the integration of ESG considerations into corporate strategies as a driver for innovation in strategy and a means of gaining a competitive edge. Liu et al. (2024) use the Fama–French five-factor approach and cross-sectional regression analysis to investigate how resilient Chinese businesses are to extreme heat occurrences and they find that companies with good ESGP are more resilient in the near term, especially in areas with aggressive environmental regulations (Sarwar et al., 2025a). Using an interactive regression model with fixed factors, Abedifar et al. (2023) investigate how resilient social and environmental resources were to the COVID-19 pandemic. Aguinis and Glavas (2012) draw the conclusion that socioenvironmental performance gives businesses a competitive edge by lowering risks associated with luring investors and improving management's perceived quality (Melo et al., 2020; Wang et al., 2014). CSR is one of the most effective business initiatives to have developed in the previous 20 years, according to Váldez Juárez et al. (2018, p. 1), who also highlight how crucial it is to a company's ability to survive. According to existing research, understanding sustainable development requires taking into account particular historical and contextual factors (Dong. Et al., 2025). The continual growth attained by combining financial goals with non-monetary elements, such ESG concerns, is what is meant by sustainability from a business standpoint (Arif et al., 2026; Choi et al., 2024; Lee et al., 2024; Wijethilake 2017). Studies have indicated that SDS incorporates an inclusive management strategy that takes into account ESG issues, which have a major impact on FP improvement (Friede, Busch, and Bassen 2015; Son and Kim 2022; Wijethilake 2017).

Businesses can achieve both sustainability and economic performance by considering stakeholders as partners, which promotes trust and collaboration (Freeman 1984; Son and Kim 2022). Through programs that match business objectives with more general social goals, SDS fortifies these stakeholder ties (Dong. e t al., 2025). Second, according to the slack resource hypothesis (Waddock and Graves, 1997), businesses with higher FP have more resources available for active corporate engagement. Third, SDS lowers operating expenses and optimizes resource allocation to increase FP (Dong. et al., 2025). For example, putting into practice strategies that emphasize resource conservation and energy efficiency can reduce expenses and increase profitability over time (Ruan and Liu, 2021; Xin, Zhang, and Xiang, 2024). CSR is seen as a key component of business strategies used to increase competitiveness (Ahmad et al., 2025a; Bai & Chang, 2015). The academic literature (Nguyen et al., 2021) has extensively studied the connection between ESG and performance from a variety of angles (Arendt & Brettel, 2010; Vlachos et al., 2009). While some authors look at how the use of ESG affects financial performance (Chtourou & Triki, 2017), others look into how ESG affects financial performance. Regarding the connection between these two factors, there are various schools of thought (Garrido-Ruso. et al., 2024).

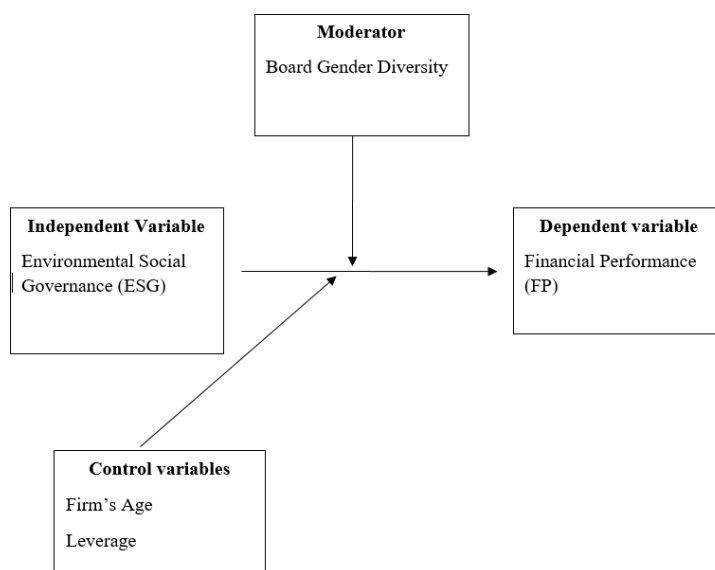
Theoretical Framework

The theoretical framework for this study includes the principles of Stakeholder Theory and the Resource-Based View which offer a solid basis for explaining how ESG practices affect the performance of a company and why gender diversity on the board of directors could improve this connection. According to Stakeholder Theory developed by Freeman (1984), companies are not

only supposed to maximize shareholder value but are also expected to meet their obligations to other stakeholders.

In addition, the principles of Resource-Based View formulated by Barney (1991) are based on the idea that competitive advantages arise from the use of resources and capabilities. The diversity of perspectives and experiences resulting from having a diverse board may enhance the effectiveness of the ESG initiatives in terms of their alignment with the organization's financial goals.

Conceptual Framework



Hypothesis of the Study

H1: ESG performance correlates positively with financial performance.

H0: ESG Performance doesn't correlates positively with financial performance.

H2: The existence of board gender diversity positively strengthens the relationship between ESG performance and financial performance due to the former's increasing effect on the latter.

H0: The relationship between financial performance and ESG performance is unaffected by the gender diversity of the board.

Methodology

This chapter provides an overview of the techniques that were used to examine the relationship between financial performance and ESG score. Gender diversity on the board is the moderator variable, while age and leverage are used as the control variables at the firm level. The panel data method involves the use of information from BRICKS countries in the quantitative technique.

Research Design

The research design for the current study uses a quantitative approach, whereby panel data analysis will be used to check the relationship between ESG performance and financial performance, while gender diversity of the board serves as the moderating variable.

Data Collection

Data is collected from 50 registered companies of emerging BRICS economies namely Brazil, Russia, India, China and South Africa. Data of five years (2020-2024) is taken for evaluation. Financial data is taken from annual reports of company, ESG disclosure data is taken from

reputable databases or some from company's sustainability reports and for Gender diversity Data Company's governance report or related disclosure reports are considered.

For analysis, panel regression is applied on collected data with the help of STATA. The study applied both fixed effect and random effect model and then hausman test is used to check which model best fits the data.

Data Analysis

Descriptive Statistics

Table 1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	250	0.149	0.193	-0.360	0.700
ESG	250	51.419	18.218	4.730	100.620
Lev	250	0.469	0.225	-0.140	1.070
Age	250	53.603	32.648	-33.810	140.310

Source: Authors' work

The descriptive statistics shows the average Return on Equity (ROE) of BRICS firms is around 14.9, which is considered as moderate profitability. The average ESG score of 51.42 suggests that companies have a moderate level of sustainability involvement. The leverage ratio of 0.47 shows that on an average 47 per cent of the assets of firms are funded by debt.

Model Estimation

Table 2: Model Estimation

Roe	Coef.	St.Err.	t-value	P-value	[95% Conf	Interval]	Sig
Esg	0	0.001	-0.12	0.904	-0.002	0.002	
bod_GD	0.002	0.003	0.52	0.602	-0.004	0.007	
Lev	-0.134	0.076	-1.77	0.077	-0.282	0.014	*
Age	0.001	0.001	1.4	0.16	0	0.002	
Constant	0.153	0.072	2.12	0.034	0.011	0.294	**
Mean dependent var		0.149	SD dependent var		0.193		
Overall R-squared		0.053	Observations		250		
Chi-square		7.441	Prob > chi2		0.114		
R-squared within		0.02	R-squared between		0.08		

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

By taking the board gender diversity into the model demonstrates that the ESG-ROE relationship is not significant ($p = 0.904$) that is, gender diversity does not have a significant moderating effect

on the influence of ESG on profitability of firms in BRICS countries. Leverage is still negative and it is weakly significant at the 10% level, but firm age is still positively yet significantly insignificant with ROE.

Discussion

The regression analysis of the BRICS sample provides a various significant result. ESG performance with a coefficient = -0.00 and p-value = 0.211 with a negative but statistically insignificant relationship with financial performance (ROE). This would indicate that ESG performance in BRICS companies does not generate a statistically significant change in profitability over the 2020 to 2024 time frame. Conversely, leverage has a negative and significant coefficient (-0.121, $p = 0.027$), which implies that the greater the debt, the lower returns to equity. The firm age coefficient is positive and significant (0.001, $p = 0.014$) which shows that more established and older firms are more likely to be more profitable. The R^2 and F of the model are 0.056 and 4.86 ($p = 0.003$), which indicates a statistically significant albeit a modest fit, which reflects that the age of the firm and leverage are significant determinants of financial performance in the BRICS sample. Such findings are much in agreement with the previous empirical studies. As an illustration, Al Azizah and Haron (2022) discovered the existence of a negative but non-significant correlation between ESG and ROE in Indonesian Shariah-compliant business, and contend that the cost of ESG implementation is high and might lead to a temporary reduction in profitability. Similarly, Setiani (2023) found that ESG activities did not positively affect the financial performance of Indonesian firms, which the author explained by the underdeveloped ESG system and weak regulatory support in the emerging markets. The current results are however in contrast to Thakur (2025) who noted that there was a positive and significant correlation between ESG reporting and ROE in the BRICS economies during 2011-2023. The divergence may be due to the fact that the dataset used by Thakur was pre-pandemic years where ESG adoption was a voluntary approach and cost-effective, whereas the timeframe we (2020-2024) are in the context of the COVID-19 pandemic where compliance costs and economic uncertainty were high (Haris et al., 2025; Sarwar et al., 2024). The positive and significant correlation between firm age and ROE ($\beta = 0.001$, $p < 0.05$) is in favor of the Resource-Based View (RBV) theory (Barney, 1991) that indicates that older firms use the intangible resources like experience, trust, and operational efficiency to achieve profitability (Gulzar et al., 2024; Sarwar & Khan, 2022). On the other hand, the adverse impact of leverage ($= -0.121$) is consistent with Nurul Widya et al. (2024), who found that a high level of debt lowers the capacity of the firm to invest in sustainability and undermines profitability. The combination of the BRICS findings suggests that even though ESG investments could enhance legitimacy and stakeholder relationships, such investments have not yet led to the short-term profitability. Less capable of absorbing ESG costs seems to be financial constrained highly leveraged firms, which supports the idea that ESG benefits will only be realized in the long-run.

Conclusion

This research aimed to investigate how ESG performance is linked to financial performance, in terms of Return on Equity, where board gender diversity is a moderator. Using the information about 100 companies in the BRICS as well as developed economies in the 2020-2024 timeframe, the findings offer a slightly detailed overview of the relationship among ESG practices, financial structure, and demographic composition of corporate boards as a factor in firm profitability. It is based on the Stakeholder Theory and the Resource-Based View, according to which companies

can generate long term value in the case of matching sustainability practices with internal resources and stakeholder demands. The results show that the impact of ESG performance on ROE is not statistically significant in both BRICS and developed economies. This implies that notwithstanding the fact that ESG initiatives can increase both reputational capital and legitimacy of firms, their immediate effect on profitability is minimal. These findings are in line with those of Aouadi and Marsat (2018) and Broadstock et al. (2021) who discovered that ESG practices do not generate short-term financial gains but have long-term benefits. The discovery also underlines the argument by Buallay (2019) that the introduction of ESG is frequently linked to substantial initial expenses, which might counterbalance its financial benefits in the beginning. Nevertheless, the RBV view of adding internal capabilities and ethical governance to long-term performance could be applied to the strategic implementation of ESG principles into corporate processes, which would mean the presence of a sustainable competitive advantage (Barney, 1991). The analysis also indicated that leverage has a negative and significant effect on ROE especially in BRICS firms. The observation points to the observation that the level of debt is greater, which leads to financial risk and less profitability because of higher interest payments. Other researchers, such as Tran and Nguyen (2022) and Rashid and Jabeen (2023), have found similar outcomes and noted that excessive leverage fixes the managerial flexibility and results in poor financial performance. On the other hand, the firm age showed a positive and significant correlation with ROE, which suggests that established firms enjoy experience, consistency of customer relationships, and operational strategies. This is in line with Akhtar et al. (2023), who held that older firms have better intangible assets that boost their resilience and financial stability. Once the gender diversity in the board was added as a moderating variable, it did not have a significant impact on the ESG-financial performance relationship. Despite the numerous studies that argue that female directors enhance board effectiveness and ethical supervision, this study posits that gender diversity in itself might not lead to better financial performance unless there is actual empowerment and engagement in strategic decision making. The same trends were found by Nadeem et al. (2020) and Arayssi et al. (2022), who found that the lack of substantive engagement with tokens only reduces the potential advantages of diversity. Nonetheless, Khan et al. (2023) argued that in the long run, gender-diverse boards can contribute greater work as companies adopt the culture of inclusion that could lead to innovation and sustainable governance. On the whole, the results of this study indicate that ESG practices are long-term strategic but not financial instrument. In established markets, companies already have established ESG procedures, and regulatory forces and developed governance systems can provide compliance but restrict further financial benefits in the short-term. By comparison, BRICS economies are still in the transitional phase of institutionalizing ESG principles, in which some issues, like poor enforcement mechanisms and low awareness among stakeholders can lessen the short-term financial rewards of sustainability efforts. These cross-market variations highlight the contextuality of the ESG impacts and reaffirm the idea that institutional maturity is a key factor in determining the nexus of ESG performance (Dhaliwal et al., 2021). To sum up, this paper presents proof that the ESG initiatives, although critical to corporate legitimacy and ethical responsibility, do not necessarily lead to the short-term enhancements in profitability as measured by ROE. Rather, the real worth of ESG integration is on the long-term stakeholder trust, risk management, and strategic resilience. The leverage is still a key determinant of firm performance and the age of the firm still plays the role of stabilizing both the developed and emerging situations. Though the gender diversity on the board did not moderate the ESG-financial performance relationship in this study, the inclusivity and diversity promotion is essential in the realization of sustainable governance results. The study adds to the

expanding body of literature through comparing the ESG-performance nexus between the two opposing economic conditions with the notion that the financial implication of sustainability depends on the maturity of a firm, the quality of its governance, and the institutional context.

Limitations and Future Directions

This research offers useful insights on the relationship between ESG performance and the financial performance but there exist some limitations. It is based on ROE which only represents one aspect of financial performance meaning that further measures such as ROA, Q of Tobin or EPS should be incorporated in future studies to have more reliable results. The secondary databases that obtained ESG scores had different methodologies, which could undermine consistency and comparability, which implies the necessity of standardized or primary data. The concept of gender diversity among boards was quantified, ignoring the qualitative and non-quantitative elements of influence and leadership, which can be investigated in future studies. The focus is only on BRICS countries so there might be chance that different economies moves in different directions. In the end, the short time period (2020-2024) and mainly because of COVID-19 disruptions restricts the ability to gain long-term insights, implying that longer durations would be more effective to reflect the long-term effects of the ESG practices.

References

- Ahmad, M. A., Khan, M. B., Zafar, H., & Sarwar, U. (2025). Customer Attitude Towards Car Sharing, Electric Vehicles and Autonomous Driving: Evidence from Indonesia. *Journal of Asian Development Studies*, 14(3), 753-766. <https://doi.org/10.62345/jads.2025.14.3.62>
- Akhtar, N., Ali, S., & Khan, M. (2023). Firm age, experience, and financial performance: Evidence from emerging markets. *Journal of Business Economics and Management*, 24(2), 145–162.
- Al Azizah, N., & Haron, H. (2022). Environmental, social, and governance (ESG) practices and firm financial performance: Evidence from Indonesian Shariah-compliant companies. *Journal of Islamic Accounting and Business Research*, 13(7), 1102–1120.
- Aouadi, A., & Marsat, S. (2018). Do ESG controversies matter for firm value? Evidence from international data. *Journal of Business Ethics*, 151(4), 1027–1047.
- Arayssi, M., Dah, M., & Jizi, M. (2022). Women on boards and corporate social responsibility: Evidence from the MENA region. *Corporate Governance: The International Journal of Business in Society*, 22(5), 937–957.
- Arif, T., Munir, Y., Azeem, S., Khan, M. B., Zafar, H., & Sarwar, U. (2026). Nexus Between Business Incubators, Commercialization and Innovation: Does Absorptive Capacity Act as a Mediator?. *Journal of Asian Development Studies*, 15(01), 1-14.
- Azeem, S., Sarwar, U., Khan, M. B., Zafar, H., & Sattar, S. (2026). The nexus between corporate social responsibility, ownership structure, and financial health: an examination of firm specific predictors of earnings management. *Advance Journal of Econometrics and Finance*, 4(1), 102-112.
- Azeem, S., Shafqat, M. M., Munir, Y., & Sarwar, U. (2025). Impact of ICT Diffusion on Economic Growth: Exploring the Moderating Role of Financial Inclusion in E7 Countries. *Journal of Asian Development Studies*, 14(3), 1339-1354. <https://doi.org/10.1016/j.actpsy.2025.105991>
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.
- Bel-Oms, I., Grau-Grau, A. J., & Núñez-Almonte, J. (2024). The impact of board gender diversity commitment on firm performance moderated by board characteristics: Evidence from sustainable European firms and financial orientation. *Business Strategy & Development*, 7(e70040).

- Biju, A. V. N., Geetha, S., Prasad, S., Sasidharan, A., & Jayachandran, A. (2025). ESG-firm performance nexus: Evidence from an emerging economy. *Business Strategy and the Environment*, 0(1), 1–28.
- Bint-e-Naeem, N., Sarwar, U., & Usman, M. (2026). Digital Skills and Digital Transformation Adoption in SMEs: A Moderated Mediation Framework. *Journal of Asian Development Studies*, 15(03), 290–303.
- Broadstock, D. C., Chan, K., Cheng, L. T. W., & Wang, X. (2021). The role of ESG performance during times of financial crisis: Evidence from COVID-19. *Finance Research Letters*, 38, 101716.
- Bruna, M. G., Loprevite, S., Raucci, D., Ricca, B., & Rupo, D. (2022). Investigating the marginal impact of ESG results on corporate financial performance. *Finance Research Letters*, 47, 102828.
- Candio, P. (2024). The influence of ESG score on financial performance: Evidence from the European health care industry. *Strategic Change*, 33(5), 417–427.
- Dong, X., Son, S., & Roh, T. (2025). Strategic linkages to ESG performance: The role of performance measurement system and psychological empowerment. *Business Strategy and the Environment*, 0(1), 1–20.
- Dwaikat, N., Qubbaj, I. S., & Queiri, A. (2021). Gender diversity on the board of directors and its impact on the Palestinian financial performance of the firm. *Cogent Economics & Finance*, 9(1), 1948659.
- Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The impact of corporate sustainability on organizational processes and performance. *Management Science*, 60(11), 2835–2857.
- Elamer, A. A., & Boulhaga, M. (2024). ESG controversies and corporate performance: The moderating effect of governance mechanisms and ESG practices. *Corporate Social Responsibility and Environmental Management*, 31(4), 3312–3327.
- Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment*, 5(4), 210–233.
- García-Sánchez, I. M., Martínez-Ferrero, J., & García-Meca, E. (2018). Gender diversity, financial expertise and its effects on sustainable development. *Corporate Social Responsibility and Environmental Management*, 25(2), 129–142.
- Garrido-Ruso, M., Otero-González, L., López-Penabad, M.-C., & Durán Santomil, P. (2024). Does ESG implementation influence performance and risk in SMEs? *Corporate Social Responsibility and Environmental Management*, 31(5), 4227–4247.
- Grau-Grau, A., Branco, M., & Bel-Oms, I. (2025). Board characteristics and stakeholder engagement and ESG performance: The relevance of European gender parity. *Corporate Social Responsibility and Environmental Management*, 0, 1–17.
- Gulzar, S., Sarwar, U., Sattar, S., Usman, M., & Quibtia, M. (2024). Tax Audit, Tax Penalty, Religiosity and Tax Compliance. *Journal of Asian Development Studies*, 13(3), 776–79. <https://doi.org/10.62345/jads.2024.13.3.64>
- Gupta, R., & Malhotra, N. (2024). ESG and corporate financial performance: A comprehensive review of research and emerging trends. *SSRN*.
- Gutiérrez-Ponce, H., & Wibowo, S. A. (2023). Do sustainability practices contribute to the financial performance of banks? *Corporate Social Responsibility and Environmental Management*, 31(2), 1418–1432.
- Haris, M., Ahmad, M. A., Hussain, S., Sarwar, U., Zafar, H., & Khan, M. B. (2025). Stimulating Online Purchase Intentions Through Digitalization: Intermediation of Perceptions and Electronic Word of Mouth in Fashion E-commerce. *Journal of Asian Development Studies*, 14(1), 1520–1538. <https://doi.org/10.62345/jads.2025.14.1.120>
- Iannone, R., Duttilo, G., & Gattone, S. A. (2025). ESG portfolios and financial performance in post-crisis Europe. *Journal of Sustainable Finance & Investment*, 15(2), 356–374.

- Iazzolino, G., Bruni, M. E., Veltri, S., Morea, D., & Baldissarro, G. (2023). The impact of ESG factors on financial efficiency. *Corporate Social Responsibility and Environmental Management*, 30(4), 1917–1927.
- Isack, M., & Aschauer, E. (2024). CSR report assurance and ESG rating in lending decisions. *International Journal of Auditing*, 1–25.
- Islam, R., French, E., & Ali, M. (2022). Evaluating board diversity and its importance in ESG performance. *Corporate Social Responsibility and Environmental Management*, 29(5), 1134–1145.
- Kalia, D., & Aggarwal, D. (2023). ESG score and financial performance of healthcare companies. *Journal of Global Responsibility*, 14(1), 155–176.
- Khan, H., Ali, M., & Rehman, S. U. (2023). Gender diversity and corporate sustainability. *Sustainability*, 15(1), 584.
- Khatri, I. (2022). Board gender diversity and sustainability performance: Nordic evidence. *Corporate Social Responsibility and Environmental Management*, 30(3), 1495–1507.
- Khatri, I. (2023). Board gender diversity and sustainability performance: Nordic evidence. *Corporate Social Responsibility and Environmental Management*, 30(3), 1495–1507.
- Lee, J., & Koh, K. R. (2024). ESG performance and firm risk. *Review of Financial Economics*, 42(3), 328–344.
- Marie, M., Qi, B., Elamer, A. A., Khatatbeh, I. N., & Al-Fakir Al Rabab'a, E. (2024). Board gender diversity and ESG-cash holdings relationship. *International Journal of Finance & Economics*, 1–19.
- Marie, M., Qi, B., Gerged, A. M., & Nobanee, H. (2024). ESG research trends post-COVID-19. *Corporate Social Responsibility and Environmental Management*, 31(6), 6131–6149.
- MDPI. (2023). Gender diversity, ESG disclosure, and firm performance. *Sustainability*, 15(9), 7342.
- Nadeem, M., Zaman, R., & Saleem, I. (2020). Board gender diversity and financial performance. *Corporate Social Responsibility and Environmental Management*, 27(4), 1668–1679.
- Nurul Widya, M., Rahman, S., & Putra, I. (2024). Leverage and ESG engagement. *International Journal of Finance & Economics*, 29(1), 22–37.
- Odriozola, M. D., Blanco-González, A., & Baraibar-Diez, E. (2024). ESG performance and board gender diversity. *Corporate Social Responsibility and Environmental Management*, 31(6), 5656–5669.
- Paranita, E. S., et al. (2025). ESG factors and investment decisions. *Journal of Ecohumanism*, 4(1), 4522–4533.
- Saini, M., Aggarwal, V., Dhingra, B., Kumar, P., & Yadav, M. (2023). ESG and financial variables: A systematic review. *International Journal of Law and Management*, 65(6), 663–682.
- Saka, N. A. (2024). Board diversity and ESG disclosure. *Master's thesis*.
- Sarwar, U., & Khan, M. M. (2022). Owner-Managers' characteristics, Financial Resilience and Multidimensional Performance During Covid-19 Pandemic: A Resource-Based Perspective. *Journal of ISOSS*, 8(2), 287–306.
- Sarwar, U., Ahmad, M. B., Mubeen, M., Fatima, I., & Rehan, M. (2023). A Bibliometric Analysis of Sustainability Disclosure in High Polluting Industries. *Bulletin of Business and Economics (BBE)*, 12(3), 28–43. <https://doi.org/10.61506/>
- Sarwar, U., Baig, W., Rahi, S., & Sattar, S. (2025b). Fostering Green Behavior in the Workplace: The Role of Ethical Climate, Motivation States, and Environmental Knowledge. *Sustainability*, 17(9), 4083. <https://doi.org/10.3390/su17094083>
- Sarwar, U., Bint-e-Naeem, N., Fahmeed, L., & Atif, M. (2024). Role of Perceived Security and Financial Attitude in Shaping Behavioral Intention under the Moderation of Financial Literacy. *Journal of Asian Development Studies*, 13(3), 1380–1395. <https://doi.org/10.62345/jads.2024.13.3.112>
- Sarwar, U., Sattar, S., & Ar, A. Y. (2025a). Abusive Supervision and Employees Cyber-Loafing: Examination of Intermediation, Impediment and Spark. *Sage Open*, 15(4), 21582440251410815.
- Sarwar, U., Sattar, S., & Noor, L. (2025c). From campus to startup: The impact of institutional support, mental toughness, and physical health on entrepreneurial aspirations. *Acta Psychologica*, 261, 105991.

- Setiani, R. (2023). ESG performance and firm profitability. *Asian Journal of Sustainability and Social Responsibility*, 8(4), 119–134.
- Shaukat, M. Z., Yousaf, S. U., Sarwar, U., & Sattar, S. (2024). Thriving in Turmoil: Unraveling the Interplay of Resources, Resilience, and Performance among SMEs in Times of Economic Vulnerability. *Bulletin of Business and Economics (BBE)*, 13(2), 164–173. <https://doi.org/10.61506/01.00312>
- Strekalina, Y., López, J. M., & Novak, D. (2023). ESG and financial performance across contexts. *Corporate Governance*, 23(6), 1289–1306.
- Talha, M., Saleem, S., Shahbaz, K., Sarwar, U., & Sattar, S. (2025). Investigating financial knowledge driven entrepreneurial intentions: the intermediation of financial knowledge and contingency of risk-taking propensity. *Center for Management Science Research*, 3(3), 450–469. <https://cmsr.info/index.php/Journal/article/view/152>
- Terjesen, S., Couto, E. B., & Francisco, P. M. (2016). Independent and female directors' impact. *Journal of Management & Governance*, 20(3), 447–483.
- Thakur, R. (2025). ESG reporting and firm profitability. *Global Business Review*, 26(1), 44–62.
- Tran, Q. T., & Nguyen, D. T. (2022). Leverage and firm performance. *International Journal of Finance & Economics*, 27(3), 3105–3120.
- Treepongkaruna, S., Au Yong, H. H., Thomsen, S., & Kyaw, K. (2024). Greenwashing, carbon emission, and ESG. *Business Strategy and the Environment*, 33(8), 8526–8539.
- Usman, M., Sarwar, U., & Azeem, S. (2026). Entrepreneurial Tax Compliance in an Emerging Economy: The Role of Audits, Penalties, and Patriotic Values in Pakistan. *Journal of Entrepreneurship*, 6(1), 43–59.
- Waseem, F., Sarwar, U., Azeem, S., & Zafar, J. (2025). Corporate Climate Based Initiatives and Carbon Performance: Evidence from Asian Economies. *Journal of Asian Development Studies*, 14(3), 1973–1984.
- Yadav, A., & Asongu, S. A. (2025). ESG performance and financial distress. *Business Strategy and the Environment*, 0(1), 1–17.
- Zafar, H., Khan, M. B., Sarwar, U., Azeem, S., Sattar, S., & Ashraf, A. (2025). Governance and whistleblowing: a systematic literature review of managerial strategies for encouraging reporting and mitigating retaliation. *Advance Journal of Econometrics and Finance*, 3(1), 151–164.