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Environmental, Social, and Governance Performance and Value Creation in Product Market: Evidence from Emerging Economies

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Abstract: Using a unique sample of 13,412 firm-year observations from 19 countries of the emerging economies for the period of 2011 to 2019, we investigate the association between the firms' environmental, social, and governance (ESG) performance and their value creation in the product market. Specifically, we first used the pooled OLS regression model for panel data as our baseline model and found that ESG performance (as well as its pillars) has a strong positive effect on the future value creation of the firms in the product market. We also conducted some additional analyses using various regression models, as well as adopting multiple tests for endogeneity, and the additional analyses revealed that the results are robust under different scenarios. Overall, the findings of this study highlight the importance of firm-level ESG performance for the value creation of firms in the product market in emerging economies and have theoretical and practical implications for academic researchers, market participants, and government entities in studying, evaluating, and governing firms' ESG performance and reporting.

Keywords: ESG; value creation; product market; emerging economies



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1. Introduction

The assessment of a firm's environmental, social, and governance (ESG) performance has garnered considerable importance in scholarly investigations, the current corporate environment, and real-world implementation. The rise in the significance of this phenomenon has received growing attention from stakeholders at both national and international levels (Mohammad and Wasiuzzaman 2021; Wu et al. 2022).

ESG performance is defined as an organization's relationship with its ecological surroundings, as well as its coexistence and interaction with other populations and human organisms.¹ It also supports businesses in controlling their internal systems of rules and regulations to serve the interests of shareholders and other interest groups (Whitelock 2015). Participation in environmental, social, and governance (ESG) activities can potentially benefit firms by lowering the cost of capital and improving the reputation of the firms (Bhattacharya and Sharma 2019; Gennari and Salvioni 2019). Furthermore, actively engaging in ESG activities can help firms foster "trustful" relationships with a variety of stakeholders, including staff members, consumers, investors, local communities, environmental advocates, and concerned citizens. The aforementioned linkages play a crucial role in supporting the continuous performance, financial stability, and ability to generate value of the firms (Brooks and Oikonomou 2018; Freeman 2017; Li et al. 2018).

Customers and communities place notable emphases on the disclosure policies of firms regarding their ESG considerations. The assessment of a firm's standing as a responsible corporate entity is frequently determined by the evaluation of the disclosed ESG information. The aforementioned perception can exert a direct influence on the customers'

behaviors and the community's attitudes, along with the investors' investment decisions, towards the firm. Compared to "traditional" firms, investors normally view firms with appropriate ESG strategies as long-term investment targets (Mohamad 2020; Mohammad and Wasiuzzaman 2021; Sadiq et al. 2020; Van Duuren et al. 2016; Yip and Lee 2018).

Similarly, consumers who consider a firm as a responsible and ethical entity are more likely to purchase its products or services. The heightened level of patronage has the potential to result in amplified sales and revenue for the corporation inside the product market. As a result, the firm can attain higher levels of profitability, thereby making a significant contribution to its overall value creation (Fuentes-García et al. 2008).

Numerous prior studies reveal a direct link between "ESG and Firm Value", but the studies base their findings on samples from developed economies with more sophisticated financial markets (Alsayegh et al. 2020; El Houry et al. 2021; Harjoto and Jo 2015; Mohamad 2020; Plumlee et al. 2015; Yadav et al. 2016; Yordudom and Suttipun 2020). A small number of studies have focused on emerging markets (Azmi et al. 2021; Malarvizhi and Matta 2016; Siagian et al. 2013), but not even a single study has been conducted in the product market, which is crucial to a firm's ability to create value (Fresard 2010).

This study attempts to fill this gap by investigating the association between "ESG and firm value" in the product market of emerging economies. Emerging economies are considered as a global economic engine in the twenty-first century because of their low leverage, limited penetration of goods and services, and demographic dynamics. It is reasonable to assume that firms in an emerging market will engage in more ESG activities to achieve sustainable growth. Simultaneously, many of these countries have to deal with significant challenges, such as poverty, pollution, corruption, inadequate physical and social infrastructure, governance issues, political instability, poor consumer protection, and a lack of product standards (Behl et al. 2021). Hence, instead of becoming involved in social issues including the environment and society, businesses in emerging markets prioritize operating efficiency and profit maximization (Teoh and Thong 1984; Yoon et al. 2018), and consequently, firms may lose their social capital and worth in the product market due to the damage to their reputation and the loss of trust from customers (Sadiq et al. 2020). Overall, the association between ESG and firm value in the product market of the emerging economies is an empirical question.

To further study this topic, we first collected the ESG and other firm-level financial information of the firms from 19 countries of the emerging economies for the period of 2011 to 2019 from the Thomson Reuters Datastream dataset.² We next obtained country-level economic data from the World Bank open dataset. In the last step, we merged all the datasets, deleted the observations with missing values for variables required in the regression, as well as the observations in finance (SIC codes 6000–6999) and utility (SIC codes 4000–4999) industries, and formed our final dataset for the empirical study.

We first investigated the association between a firm's ESG performance and value creation in the product market and found a strong positive association between the two variables in our baseline model. To ensure that our results were robust, we re-examined the topic using various regression models, as well as tests for endogeneity, and we found that the strong positive association between ESG performance and value creation holds under different scenarios.

Our study makes several contributions to the literature. First, we confirm the findings from the extant ESG literature that firms' ESG performance has a positive effect on the value creation of the firms in the future (Alsayegh et al. 2020; El Houry et al. 2021; Harjoto et al. 2015; Mohamad 2020; Plumlee et al. 2015; Yadav et al. 2016; Yordudom and Suttipun 2020), thus lending support to the theories that predict the positive association between the two items (e.g., stakeholder theory and the resource-based view theory).³ Additionally, we contribute to the ESG literature by identifying the positive influence of ESG on value creation in the product market. Our empirical evidence implies that firms' ESG performance helps attract customers to consume the products or services provided by the firms and maintain a high profit margin for the firms' operations. To some extent,

firms' ESG performance can help them obtain and safeguard their competitive advantage within the market. Furthermore, as the product market plays an important role in the overall value creation of firms in the future, our result has practical implications for the market participants (e.g., analysts and investors). Specifically, when the market participants evaluate the equity value of firms (e.g., using the discounted cash flow method to perform equity evaluation), they should take into consideration the impact of the ESG performance of the firms on the sales growth and profitability of the firms, and potentially assign a comparatively higher sales growth rate and profit margin to firms with a higher level of ESG performance (compared to their industry peers). Moreover, we provide empirical evidence to support the policies adopted by some global institutions (e.g., CFA Institute) to promote ESG reporting and disclosure of firms. Meanwhile, our empirical evidence also suggests that other government entities or organizations should establish appropriate policies or regulations to govern the ESG reporting and disclosure of firms because the appropriate disclosure of ESG information can assist the market participants in identifying firms with potential value for long-term investment. Overall, our results highlight the importance of firm-level ESG performance in terms of the value creation of firms.

The subsequent sections of this article are organized in the following manner: Section 2 reviews the literature and develops the hypotheses, Section 3 introduces the research methodology, Section 4 reports the empirical results, Section 5 discusses the relevant implications of the results, and Section 6 presents conclusions.

2. Literature Review and Hypothesis Development

2.1. Theoretical Framework

A large number of studies theoretically and empirically examine the association between firms' ESG performance and value creation (Brogi and Lagasio 2019; Brooks and Oikonomou 2018; Friede et al. 2015; Muhmad et al. 2021; Wu et al. 2022). Basically, the extant literature suggests two sets of theories that forecast the link between ESG and financial performance. The first set of theories includes the stakeholder theory (Freeman 1984), the resource-based view (RBV) theory (Wernerfelt 1984), the legitimacy theory (LT) (Dowling and Pfeffer 1975), and the agency theory (Jensen and Meckling 1976), and these theories forecast a positive association between ESG and firm value. The second set of theories is led by the tradeoff theory (Kraus and Litzenberger 1973), and it predicts a negative association between ESG and firm value.

The stakeholder theory (Freeman 1984) argues that firms' participation in ESG activities can potentially bring sustainable growth opportunities for the firms and is thereby in line with the interests of the stakeholders. According to Rindova and Fombrun (1999), the support of the stakeholders for a firm can lead to their greater willingness to invest, and consequently, the firm will have greater access to capital resources.

The resource-based view (RBV) theory (Wernerfelt 1984), in line with the stakeholder theory, claims that a firm can achieve some extra benefits by adopting active CSR policies. For example, Godfrey et al. (2009) argue that ESG investments can be viewed as "insurance" against reputational risks. In addition to having the role of "insurance" against reputational risks, investing in CSR can gradually improve a firm's reputation. McWilliams et al. (2006) demonstrate that a positive reputation has positive economic value. They claim that customers view products from well-reputed firms as being of high quality. Godfrey (2005) and Wang et al. (2008) highlight that a positive reputation also increases stakeholder engagement and makes partners and suppliers seemingly act in favor of a firm (Godfrey 2005; Wang et al. 2008).

Moreover, according to legitimacy theory (LT) (Dowling and Pfeffer 1975), firms' ESG disclosures enable the firms to engage with society in producing a defensible pool of profits. In support of the statements above, the agency theory (Jensen and Meckling 1976) argues that resolving the potential agency problems between owners, managers, and shareholders can help increase the value of firms (Fama and French 1998).

However, the traditional tradeoff theory views it as an additional cost for a firm to invest in socially responsible activities (Palmer et al. 1995). Additional costs decrease a firm's profit in a competitive marketplace, which will ultimately reduce the firm's value (Baumol and Blackman 1991). Wang et al. (2008) find that a reduction in profits and income does not correspond to the well-known "shareholders theory" (Friedman 1970), which claims that a company's social responsibility is only to maximize the value of shareholders.

Overall, existing theories predict contradictory outcomes for the association between ESG and firm value, thus motivating researchers to delve into this subject.

2.2. ESG and Firm Value

The question of "whether ESG affects the value of a firm" has been a popular subject of many academic studies recently. Although the majority of the empirical evidence reveals a positive association between ESG and firm value (Fatemi et al. 2018; Wong et al. 2021), some researchers have uncovered conflicting (Ullmann 1985) or even contradicting evidence (Hsu et al. 2021; Humphrey et al. 2012). For example, Friede et al. (2015) observe a strong positive association between ESG and firm value, which is also supported by various studies (Ammann et al. 2011; Balatbat et al. 2012; Boeche and Cruz 2010). Similarly, Fatemi et al. (2018) contend that an increase in ESG activities and disclosures can raise firm value. In addition, Wong et al. (2021) look into the positive association between "ESG and value creation" in emerging countries and discover that making investments in ESG lowers a business's cost of capital and, as a result, greatly raises its value.

However, the majority of the ESG studies use samples from developed nations, where institutional factors affecting "CSR and ESG practices" have a strong foundation (Ioannou and Serafeim 2010). According to Sassen et al. (2016), firms that disclose their ESG information are less vulnerable to both systematic and idiosyncratic risks in developed markets and are thereby less likely to face negative market reactions. Additionally, as participation in ESG activities potentially offers sustainable solutions to social and environmental problems, firms with more ESG disclosures and higher ESG performance normally can obtain and maintain their competitive advantages in the market (Porter et al. 2019). In addition, Brooks and Oikonomou (2018) suggest that ESG initiatives can support the development of trustworthy relationships with a range of stakeholders, including investors and customers, which are critical to the long-term prosperity and financial standing of a firm.

Nevertheless, studies on ESG and firm value provide contradictory findings in emerging markets. Fatemi et al. (2018) find that the disclosure of ESG information lessens information asymmetry and shapes investors' perceptions of investment strategies, whereas Buallay et al. (2020a) reveal that ESG disclosure has a detrimental impact on the performance of firms in both developed and developing economies. On the other hand, Buallay et al. (2020b) study the firms in the Middle East and North Africa (MENA) and find that ESG has a beneficial impact on firm performance.

The existing theories also have contradictory predictions for the association between ESG and firm value. According to the resource-based view theory (Wernerfelt 1984) and the stakeholder theory (Freeman 1984), a business that adopts an active CSR program can benefit from the program in the long run. According to Fombrun and Shanley (1990), a firm can charge a higher price than its rivals if it has a stronger reputation in the market due to its "socially responsible actions" or "green sustainable products". Additionally, a good reputation increases customers' loyalty to the firm and thus boosts the product sales of the firm (Porter et al. 2019; Sassen et al. 2016). Weber (2008) presents a theory that bears close resemblance to the "discounted cash flow" technique. According to Weber's study, "doing good" can be "profitable" if the gains outweigh the losses.

Hence, based on the theoretical views and the empirical evidence from the extant literature, we develop the following hypothesis that is in line with the empirical evidence from mainstream research:

Hypothesis 1. *Environmental, social, and governance (ESG) performance positively affects the value creation of firms in the product market.*

2.2.1. Environmental Activities and Firm Value

As revealed in the extant literature, research has been conducted to address the association between environmental performance and firm value since the 1980s. [McGuire et al. \(1988\)](#) present one of the earliest studies to provide insight into the theoretical arguments related to the association between environmental performance and firm value. They discriminate between three theoretical notions that predict different outcomes for the relationship. First, the management team faces a tradeoff between environmental and economic performance. Second, enhancing a firm's environmental performance can bring the management team other benefits such as boosted morale or productivity at a minimum cost. Third, the cost of improving environmental performance is offset by a decrease in other costs or an increase in sales.

The stakeholder theory and the resource-based theory predict a positive association between an organization's environmental policies and its value. In line with the prediction from the theories, [Porter and Van der Linde \(1995\)](#) claim that well-crafted environmental legislation reduces the externalities (pollution) of a business and allows it to reduce expenses through innovation. Such activities of firms play a major role in enhancing their reputation in the market and create a positive image in the minds of their customers that will eventually enhance their sales and profitability ([Fombrun and Shanley 1990](#)). Thus, firms' financial performance can be favorably correlated with a well-executed social responsibility strategy. It is worth noting that [Walley and Whitehead \(1994\)](#), however, claim that environmental regulations cause firms to incur additional, unrecoverable expenditures, which also lowers the firms' profitability.

Additionally, the study of [Russo and Fouts \(1997\)](#) finds a significant positive association between environmental activities and firm value for American firms. They highlight that the association between environmental activities and firm value is stronger with the expansion of the industrial sector. [Konar and Cohen \(2001\)](#) attempt to examine the association between the market value of the S&P 500 firms and their environmental performance and, resultantly, find a positive link between them ([Konar and Cohen 2001](#)). Similarly, [King and Lenox \(2001\)](#) find a significantly positive association between environmental performance and the value creation of firms in the product market. [Nakao et al. \(2007\)](#) also find a significant association between environmental activities and firm value for Japanese firms.

With the discussion above, it appears that the theories and empirical evidence tend to support a positive link between environmental performance and firm value. Thus, we formulate the following hypotheses in support of the viewpoint:

Hypothesis 1a. *Environmental performance notably explains firms' value creation in the product market.*

2.2.2. Social Activities and Firm Value

According to the stakeholder theory and the legitimacy theory (LT), participation in social activities helps improve a firm's value in the market. The social activities of firms encompass all their relationships with stakeholders, such as suppliers, the local community, customers, the government, and employees. The concept of the balanced scorecard (BSC) can be considered as "a theoretical starting point" for a connection between social activities and the financial performance of firms. [Kaplan and Norton \(1992\)](#) created the idea of a balanced scorecard, aiming to promote a long-term vision for the activities of firms and to measure them from different perspectives. The objective is to improve non-financial measures to advance the interests of stakeholders to ensure the long-run development and profitability of a firm. The idea of a balanced scorecard has been adopted by various firms

as a control system. This concept favors the hypothesis that a firm's engagement in social activities helps support its profitability in the long run.

Orlitzky et al. (2003) review 52 previous studies and conclude that social activities have a positive influence on a firm's profitability by increasing its sales in the product market. Chi and Gursoy (2009) observe that customer satisfaction in the hospitality industry can be a major cause of progress in the financial position of top-class hotels. Bowen et al. (2010) argue that firms have great possibilities to cultivate "engagement strategies" to attract the public by providing relevant means that support them. Hatane (2015) reveals that employees' satisfaction and performance help improve the overall financial performance of the firms in Indonesia. Eklof et al. (2020) try to quantify the association between customers' satisfaction and their loyalty from 2004 to 2014 for the nine banks of Scandinavia and, resultantly, point out a significant positive association. However, other studies, such as that of Scholtens and Zhou (2008), document evidence that lends support to an opposite conclusion. Specifically, they find a negative but insignificant connotation between the financial performance of a firm and various social activities, such as programs for housing, charity, and educational support. Overall, the discussion above leads to the following hypothesis:

Hypothesis 1b. *Social performance positively influences the value creation of firms in the product market.*

2.2.3. Governance and Firm Value

The agency theory predicts that improved governance raises the performance and value of a firm. A considerable body of research has presented compelling evidence that supports the complex interconnections between corporate governance, profitability, and investment success (Anson et al. 2004; Bhagat and Bolton 2008; Larcker et al. 2007). These empirical studies collectively argue that the implementation of efficient corporate governance methods has a significant impact on maintaining the long-term viability of different entities, such as customers, employees, and other stakeholders, while also protecting the interests of investors. The results derived from this research emphasize the crucial significance of effective corporate governance in establishing a favorable setting for the sustainability and success of firms. These governance measures serve as a safeguard for the various stakeholders associated with a company, guaranteeing their welfare and cultivating trust. Furthermore, these factors function as a source of reassurance for investors, enhancing their trust in the financial stability and ethical practices of the entities in which they opt to allocate their investments. These studies provide insight into the various ways in which corporate governance affects the operational and financial elements of firms, emphasizing its essential importance in today's corporate environment.

Harjoto et al. (2015) conducted a study on U.S. firms and discovered that board diversity plays a pivotal role in enabling firms to effectively cater to various stakeholders while enhancing their environmental, social, and governance (ESG) performance. This finding underscores the positive impact of diversity within corporate boards. Similarly, Erhardt et al. (2003) conducted a study on approximately 100 large firms in the USA and discovered a positive correlation between financial performance and board diversity, considering factors like ethnicity and gender. This study provides further evidence of the advantages associated with diverse boards. Contrastingly, Hermalin and Weisbach (1991) reach the conclusion in their work that the composition of a board of directors does not significantly influence financial performance, challenging the notion of a direct relationship between board composition and financial outcomes. Another study conducted by Jo and Harjoto (2011) suggests a relatively weaker impact of governance indicators in enhancing firm value, indicating that the connection between governance practices and financial performance may not always be straightforward. Goel (2018) focuses on Indian firms and tests the association between the financial performance and the governance of the firms, particularly in the context of tightened governance legislation implemented by the Indian

government in two phases. Interestingly, the first phase of legislation reveals a positive correlation between governance and financial performance, while no such association is observed during the second phase. Giannarakis et al. (2020) emphasize the role of governance initiatives and disclosure in reducing agency costs and promoting sustainable business transparency. These initiatives are vital for stakeholders and contribute to value creation within the product market. The above arguments lead to the next hypothesis:

Hypothesis 1c. *Governance performance has a significantly positive effect on the value of firms in the product market.*

3. Sample Construction and Research Methodology

3.1. Sample Construction

We first collected firm-level ESG and other financial information from the Thomson Reuters Datastream dataset for the period of 2011 to 2019. We started our sample at the year of 2011 because the Datastream dataset started to provide ESG information from that year. We next obtained country-level economic data from the World Bank open dataset. Finally, to form our final sample for the empirical test, we merged all the datasets and deleted the observations with missing values for variables required in the regression, as well as the observations in finance (SIC codes 6000-6999) and utility (SIC codes 4000-4999) industries. Our final sample yielded 13,412 firm-year observations.

Table 1 reports the statistics for the sample distribution by countries (Panel A), by industries (Panel B), and by years (Panel C). Panel A reveals that China provides the largest number of observations (4783 or 35.66%) to our sample, followed by India (1334 or 9.94%) and South Africa (1004 or 7.49%).⁴ Panel B indicates that the industries of textiles and apparel, food products, and consumer goods contribute the most observations to our sample. Interestingly, Panel C demonstrates that our sample is distributed nearly equally in different years.

Table 1. Sample distribution/data sampling.

Panel A: By Countries					
No.	Country	Nation Code	No. of Firms	No. of Observations	Sample Percentage %
1	Argentina	25	51	450	3.35
2	Brazil	76	116	1020	7.61
3	Chile	152	38	335	2.50
4	China	156	534	4783	35.66
5	Colombia	175	18	160	1.19
6	Egypt	220	18	162	1.21
7	Hungry	350	14	126	0.94
8	India	356	150	1334	9.94
9	Indonesia	366	45	403	3.00
10	Malaysia	458	61	525	3.91
11	Mexico	484	47	418	3.12
12	Philippines	608	21	198	1.48
13	Poland	617	32	286	2.13
14	Russia	643	43	378	2.82
15	Saudi Arabia	682	29	253	1.89
16	South Africa	710	116	1004	7.49
17	Thailand	764	100	847	6.32
18	Turkey	796	70	616	4.59
19	The United Arab Emirates	784	14	114	0.85
	Total		1517	13,412	100

Table 1. Cont.

Panel B: By Industries, Following the Industry Classification of (Fama and French 1997)			
No.	Industry	No. of Observations	Sample Percentage %
1	Agriculture	943	7.03
2	Food Products	1506	11.23
3	Consumer Goods	1509	11.25
4	Health Care	1453	10.83
5	Manufacturing	1176	8.77
6	Construction	1070	7.98
7	Chemicals	1406	10.48
8	Machinery	803	5.99
9	Medical Equipment	1147	8.55
10	Textiles and Apparel	1541	11.49
11	Petroleum	858	6.40
	Total	13,412	100

Panel C: By Years			
Year		No. of Observations	Sample Percentage %
2011		1453	10.83
2012		1468	10.95
2013		1477	11.01
2014		1486	11.08
2015		1493	11.13
2016		1501	11.19
2017		1505	11.22
2018		1512	11.27
2019		1517	11.32
Total		13,412	100

Note: Panel A displays the sample descriptions including the country, nation code, number of firms, No. of observations, and sample percentage; Panel B displays the sample descriptions including the industry, No. of observations, and sample percentage; Panel C displays the sample descriptions including year, No. of observations, and sample percentage.

3.2. Research Methodology

To test the hypotheses, we followed the extant literature (e.g., [Aboud and Diab 2018](#)) and used the pooled OLS regression model for panel data as our baseline regression model.⁵ The use of panel data allows us to control for the firm heterogeneity, and the pooled OLS regression model is a good reference model for the panel data setting ([Dowell et al. 2000](#)). The baseline regression model is shown below:

$$VC_{i,j,t+1} = \beta_0 + \beta_1 ESG_{i,j,t} + \delta Controls_{i,j,t} + \lambda Country_{i,j,t} + \gamma Year_{i,j,t} + \zeta Industry_{i,j,t} \quad (1)$$

The dependent variable, **VC**, in the regression model (1) is proxied for by the return on sale (ROS) ([Gong et al. 2021](#); [Isidro and Sobral 2015](#); [Zhu et al. 2014](#)) or the sales growth (SG) ([McGuire et al. 1988](#); [Saeidi et al. 2015](#); [Zhu et al. 2014](#)) of a firm in year $t + 1$. As sales growth and return on sale can capture the top- and bottom-line performance of the firms, respectively, we believe that both proxies can well represent the abilities of the firms to create value in the product market. Our variable of interest, **ESG**, is the aggregate ESG performance of a firm (ESG) and the individual environmental (ENV), social (SOC), and governance (GOV) performance ([Grewatsch and Kleindienst 2017](#)). Following prior studies (e.g., [McWilliams and Siegel 2001](#); [El Khoury et al. 2021](#)), we used the one-year lag value for ESG along with its pillars to control for the potential reverse-causation effect between ESG and value creation. **Controls** represent a vector of the firm-level and country-level control variables. Specifically, the firm-level control variables include a firm’s size (FS) ([Aboud and Diab 2018](#)), age (FA) ([Saeidi et al. 2015](#); [Yordudom and Suttipun 2020](#)), financial leverage (FL) ([Yordudom and Suttipun 2020](#)), capital expenditure (CAPEX) ([Aboud and Diab 2018](#); [Ammann et al. 2011](#)), and liquidity (CR) ([Sulong et al. 2018](#); [Yordudom and Suttipun 2020](#)).

The country-level variables include a country’s GDP growth (*GDP*) (Azmi et al. 2021), unemployment rate (*UNE*) (Karakus and Bozkurt 2017), and currency exchange rate (*EXR*) (Karakus and Bozkurt 2017). Additionally, to further control for the heterogeneity within the sample, we also included country, year, and industry fixed effects in all the regressions. Please refer to Appendix A for a detailed description of the variables.

4. Results and Discussion

4.1. Descriptive Statistics and Correlation Analysis

Table 2 reports the descriptive analyses of all the variables used in this study. The mean value of *ROS* is 15.91, which indicates that a firm’s net income (return on sale) is around 15.91% of total sales. The mean value of *SG* is 11.14, demonstrating that the firms in emerging economies have an average value of 11.14% sales growth from the total sales of the previous year in the product market. The mean value of *ESG* is 38.487. The average values of the *ESG* pillars, *ENV*, *SOC*, and *GOV*, are 32.27, 37.147, and 46.885, respectively. The correlation analysis in Table 3 shows that *ROS* and *SG* have positive correlations with *ESG* and its pillars, *ENV*, *SOC*, and *GOV*. The correlation analysis provides initial evidence that there is a positive association between firms’ *ESG* performance and the value creation of the firms.

Table 2. Descriptive statistics.

Variable	Observations	Mean	Std. Dev	Q1	Q2	Q3
ROS	13,412	15.910	16.529	5.542	12.467	22.671
SG	13,412	11.140	21.024	1.724	10.521	20.538
ESG	13,412	38.487	20.523	22.02	37.03	54.345
ENV	13,412	32.270	24.896	10.61	27.645	51.9
SOC	13,412	37.147	25.180	14.78	33.595	57.48
GOV	13,412	46.885	22.453	29.625	47.42	64.84
FS	13,412	24.503	2.379	22.786	24.111	25.754
FA	13,412	27.602	22.539	14	20	34
FL	13,412	0.938	0.453	0.619	0.795	1.068
CAPEX	13,412	8.697	3.982	6.231	7.741	9.402
CR	13,412	2.077	1.443	1.253	1.652	2.280
GDP	13,412	0.358	1.261	0.026	0.059	0.074
UNE	13,412	8.772	5.922	5.51	6.98	11.6
EXR	13,412	2.578	1.679	1.815	1.893	3.432

Table 3. Correlation analysis.

Variable	ROS	SG	ESG	ENV	SOC	GOV	FS	FA	FL	CAPEX	CR	GDP	UNE	EXR
ROS	1.000													
SG	0.184	1.000												
ESG	0.212	0.371	1.000											
ENV	0.127	0.422	0.434	1.000										
SOC	0.258	0.176	0.408	0.3401	1.000									
GOV	0.229	0.321	0.469	0.427	0.275	1.000								
FS	0.399	0.377	0.128	0.101	0.141	0.252	1.000							
FA	0.130	0.157	0.183	0.165	0.232	0.237	0.272	1.000						
FL	0.261	0.302	0.134	0.116	0.137	0.233	0.147	0.205	1.000					
CAPEX	0.311	0.246	0.222	0.136	0.127	0.217	0.212	0.383	0.012	1.000				
CR	0.265	0.306	0.356	0.244	0.264	0.127	0.395	0.188	0.172	0.208	1.000			
GDP	0.379	0.248	0.218	0.111	0.237	0.302	0.349	0.228	0.217	0.126	0.125	1.000		
UNE	0.257	0.106	0.108	0.201	0.310	0.401	0.128	0.112	0.156	0.259	0.331	0.217	1.000	
EXR	0.363	0.239	0.110	0.264	0.154	0.119	0.334	0.168	0.122	0.211	0.402	0.268	0.203	1.000

4.2. The Association of ESG and Its Pillars with Value Creation in the Product Market

This section reports the overall results of the association of *ESG* and its pillars with the value creation of firms in the product market. Table 4 reports the results of the baseline regression. As can be seen from all columns of the table, the coefficients for *ESG*, as well as

its pillars, *ENV*, *SOC*, and *GOV*, are significantly positive ($p < 0.01$). The result indicates that the ESG activities of the firms have a strong positive effect on the value creation of the firms in the product market by increasing their return on sale and sales growth. Furthermore, the effect of ESG on value creation is also economically significant. Taking “Model 1” as an example and holding other factors constant at mean values, a 1 unit increase in ESG is associated with a 270-basis-point increase in the return on sale of a firm. Increasing from the 25th to 75th percentile of in-sample ESG is associated with around a 5.49% increase in the return on sale of a firm.⁶ The findings of this study suggest that an increase in the performance of ESG and its pillars (environmental, social, and governance) is associated with an increase in the value creation of the firms through an increase in their return on sale and sales growth, thus supporting the prediction of the hypotheses.

Table 4. Estimation results for the association of ESG and its pillars with ROS and sales growth in the product market: linear relationship approach.

Value Creation in the Product Market Is the Dependent Variable in All the Columns								
Variable	ROS				SG			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
ESG	0.0270 *** (0.0070)				0.0500 *** (0.0090)			
ENV		0.0146 *** (0.0057)				0.0385 *** (0.0074)		
SOC			0.0260 *** (0.0058)				0.0447 *** (0.0075)	
GOV				0.0110 *** (0.0036)				0.0285 *** (0.0078)
FS	0.1435 ** (0.0698)	0.1517 ** (0.0700)	0.1437 ** (0.0697)	0.1544 ** (0.0735)	0.6540 *** (0.0988)	0.6570 *** (0.0987)	0.6574 *** (0.0989)	0.5927 *** (0.0958)
FA	0.0215 *** (0.0075)	0.0200 *** (0.0075)	0.0235 *** (0.0076)	0.0219 *** (0.0054)	0.0350 *** (0.0093)	0.0358 *** (0.0093)	0.0321 *** (0.0094)	0.0393 *** (0.0105)
FL	0.4037 (0.3198)	0.4240 (0.3197)	0.3978 (0.3195)	0.4169 (0.3199)	0.6122 (0.4380)	0.6208 (0.4375)	0.6027 (0.4379)	0.6141 (0.4377)
CAPEX	0.0439 *** (0.0137)	0.0433 *** (0.0138)	0.0430 *** (0.0137)	0.0435 *** (0.0135)	0.1723 *** (0.0475)	0.1684 *** (0.0475)	0.1714 *** (0.0475)	0.1668 ** (0.0488)
CR	0.4088 *** (0.0951)	0.4025 *** (0.0951)	0.4128 *** (0.0951)	0.4004 *** (0.0934)	0.2693 * (0.1386)	0.2749 ** (0.1388)	0.2630 * (0.1384)	0.2546 * (0.1382)
GDP	0.6165 *** (0.1013)	0.6250 *** (0.1014)	0.6118 *** (0.1012)	0.6136 *** (0.1012)	0.8711 *** (0.1301)	0.8719 *** (0.1304)	0.8740 *** (0.1308)	0.8748 *** (0.1310)
UNE	0.0697 *** (0.0289)	0.0677 ** (0.0289)	0.0680 ** (0.0289)	0.0637 ** (0.0286)	0.0186 * (0.0103)	0.0183 * (0.0103)	0.0185 * (0.0103)	0.0189 * (0.0107)
EXR	0.4163 *** (0.1070)	0.4347 *** (0.1074)	0.3941 *** (0.1070)	0.4164 *** (0.1066)	0.1883 * (0.1011)	0.1891 * (0.1014)	0.1844 * (0.1009)	0.1892 * (0.1017)
Cons	0.1664 ** (0.0712)	0.1547 ** (0.0704)	0.1635 ** (0.0709)	0.1481 ** (0.0718)	0.7899 *** (0.2930)	0.7989 *** (0.2925)	0.7768 *** (0.2922)	0.7848 *** (0.2926)
No. of Obs	13,412	13,412	13,412	13,412	13,412	13,412	13,412	13,412
R ²	0.194	0.195	0.196	0.193	0.195	0.192	0.194	0.193
Country Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Prob > F	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000

Note: The models in the table are estimated with a linear approach using the “Pooled (OLS)” estimator. The table shows the direct impact of the activities of ESG and its pillars on the return on sale and sales growth of the firms in the product market of emerging economies. “Standard errors” are presented in brackets below “the corresponding coefficient”. Symbols ***, **, and * mean a variable is significant at the 1%, 5%, and 10% level, respectively. The number of observations is 13,412, representing emerging-economy firms involved in ESG activities and available for all regressions.

4.3. Robustness of Results/Additional Testing

As shown in the statistics of the sample distribution, different countries contribute different numbers of observations to our sample. To ensure that the main result in Table 4 is not driven by the countries that contribute a large number of observations to our sample, we apply two different methods for further analyses: sensitivity analysis by excluding observations from China and the weighted least square (WLS) model. In Panel A of Table 5,

we present a sensitivity analysis conducted by excluding the firms from China, which contributes the highest number of observations in our sample; the results of this sensitivity analysis are consistent with the ones from Table 4. In panel B, we present a re-estimation of our model performed using the weighted least square (WLS) model based on the number of observations of a country, and it can be seen that the results are similar to our main results.

Table 5. Robustness/additional testing.

Panel A: Sensitivity Analysis by Excluding Observations from China								
Value Creation in the Product Market Is the Dependent Variable in All the Columns								
Variable	ROS				SG			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
ESG	0.0257 *** (0.0066)				0.0495 *** (0.0088)			
ENV		0.0138 *** (0.0049)				0.0376 *** (0.0070)		
SOC			0.0256 *** (0.0056)				0.0439 *** (0.0068)	
GOV				0.0105 *** (0.0035)				0.0175 *** (0.0064)
FS	0.1540 ** (0.0717)	0.1586 ** (0.0719)	0.1570 ** (0.0716)	0.1554 ** (0.0718)	0.5496 *** (0.0953)	0.5414 *** (0.0951)	0.5539 *** (0.0953)	0.5496 *** (0.0952)
FA	0.0293 *** (0.0081)	0.0294 *** (0.0082)	0.0305 *** (0.0082)	0.0215 *** (0.0045)	0.0375 *** (0.0099)	0.0362 *** (0.0099)	0.0355 *** (0.0100)	0.0368 *** (0.0099)
FL	0.4285 (0.3176)	0.4392 (0.3174)	0.4231 (0.3175)	0.4108 (0.3122)	0.5415 (0.4216)	0.5264 (0.4214)	0.5559 (0.4215)	0.5219 (0.4213)
CAPEX	0.0681 *** (0.0172)	0.0680 *** (0.0173)	0.0675 *** (0.0172)	0.0674 *** (0.0171)	0.1609 *** (0.0361)	0.1579 *** (0.0361)	0.1573 *** (0.0360)	0.1678 *** (0.0363)
CR	0.3836 *** (0.0924)	0.3712 *** (0.0924)	0.3833 *** (0.0923)	0.3813 *** (0.0922)	0.2514 ** (0.1283)	0.2559 ** (0.1281)	0.2555 ** (0.1285)	0.2587 ** (0.1290)
GDP	0.5961 *** (0.1031)	0.5980 *** (0.1033)	0.5993 *** (0.1031)	0.5989 *** (0.1034)	0.8621 *** (0.1292)	0.8629 *** (0.1291)	0.8627 *** (0.1290)	0.8623 *** (0.1291)
UNE	0.0820 *** (0.0307)	0.0891 *** (0.0307)	0.0803 *** (0.0307)	0.0827 *** (0.0308)	0.1022 *** (0.0411)	0.1019 *** (0.0410)	0.1015 *** (0.0407)	0.1010 *** (0.0402)
EXR	0.3984 *** (0.0955)	0.3996 *** (0.0963)	0.3949 *** (0.0953)	0.3944 *** (0.0952)	0.1720 * (0.0938)	0.1724 * (0.0946)	0.1723 * (0.0943)	0.1721 * (0.0938)
Cons	0.1709 ** (0.0784)	0.1607 ** (0.0781)	0.1708 ** (0.0782)	0.1506 * (0.0780)	0.7524 *** (0.2718)	0.7427 *** (0.2721)	0.7522 *** (0.2717)	0.7329 *** (0.2722)
No. of Obs	8629	8629	8629	8629	8629	8629	8629	8629
R ²	0.174	0.175	0.178	0.178	0.173	0.176	0.173	0.175
Country Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Prob > F	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Panel B: Weighted Least Square								
Value Creation in the Product Market Is the Dependent Variable in All the Columns								
Variables	ROS				SG			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
ESG	0.0284 *** (0.0081)				0.0510 *** (0.0091)			
ENV		0.0151 *** (0.0059)				0.0392 *** (0.0077)		
SOC			0.0283 *** (0.0062)				0.0489 *** (0.0083)	
GOV				0.0120 *** (0.0041)				0.0289 *** (0.0079)
FS	0.1481 ** (0.0691)	0.1483 ** (0.0691)	0.1486 ** (0.0693)	0.1571 ** (0.0687)	0.6143 *** (0.0979)	0.6155 *** (0.0977)	0.6163 *** (0.0978)	0.6108 *** (0.0963)
FA	0.0284 *** (0.0080)	0.0281 *** (0.0080)	0.0282 *** (0.0080)	0.0277 *** (0.0078)	0.0386 *** (0.0089)	0.0376 *** (0.0089)	0.0356 *** (0.0080)	0.0344 *** (0.0087)
FL	0.4741 (0.3142)	0.4747 (0.3148)	0.4749 (0.3149)	0.4744 (0.3141)	0.4809 (0.4201)	0.4704 (0.4200)	0.4709 (0.4201)	0.4707 (0.4202)
CAPEX	0.0575 *** (0.0123)	0.0592 *** (0.0126)	0.0580 *** (0.0124)	0.0563 *** (0.0122)	0.1343 *** (0.0259)	0.1346 *** (0.0260)	0.1344 *** (0.0260)	0.1347 *** (0.0261)
CR	0.4489 *** (0.1015)	0.4520 *** (0.1015)	0.4636 *** (0.1018)	0.4477 *** (0.1015)	0.2646 ** (0.1321)	0.2660 ** (0.1326)	0.2589 * (0.1328)	0.2815 ** (0.1317)
GDP	0.6288 *** (0.1098)	0.6230 *** (0.1082)	0.6292 *** (0.1091)	0.6286 *** (0.1087)	0.8775 *** (0.1316)	0.8712 *** (0.1312)	0.8740 *** (0.1312)	0.8725 *** (0.1312)
UNE	0.0605 *** (0.0235)	0.0603 *** (0.0231)	0.0606 *** (0.0235)	0.0601 *** (0.0235)	0.0230 ** (0.0111)	0.0233 ** (0.0112)	0.0237 ** (0.0114)	0.0239 ** (0.0116)
EXR	0.4189 *** (0.1076)	0.4137 *** (0.1041)	0.4100 *** (0.1038)	0.4161 *** (0.1048)	0.1955 * (0.1022)	0.1949 * (0.1020)	0.1940 * (0.1020)	0.1938 * (0.1020)
Cons	0.1772 ** (0.0831)	0.1851 ** (0.0828)	0.1762 ** (0.0832)	0.1667 ** (0.0837)	0.7738 *** (0.2573)	0.7694 *** (0.2599)	0.7761 *** (0.2574)	0.7728 *** (0.2549)

Table 5. *Cont.*

No. of Obs	13,412	13,412	13,412	13,412	13,412	13,412	13,412	13,412
R ²	0.171	0.170	0.172	0.171	0.173	0.172	0.171	0.170
Country Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Prob > F	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Note: The models in the table are estimated with a linear approach using the “Pooled (OLS)” estimator. The table shows the direct impact of the activities of ESG and its pillars on the return on sale and sales growth of the firms in the product market of emerging economies. “Standard errors” are presented in brackets below “the corresponding coefficient”. Symbols ***, **, and * mean a variable is significant at the 1%, 5%, and 10% level, respectively. Panel A: The number of observations is 8629, representing emerging-economy firms involved in ESG activities and available for all regressions. Panel B: The number of observations is 13,412, representing emerging-economy firms involved in ESG activities and available for all regressions.

Additionally, extant literature suggests that country-level governance quality can drive a firm or market outcome (Bhatia and Makkar 2020; Chen et al. 2016; De Villiers and Marques 2016; Mooneapen et al. 2022). It is possible that the increase in the value creation of the firms is driven by the country-level governance quality, rather than the firm-level ESG performance. To ensure that the positive association between ESG and the value creation of the firms is not conditioning on the country-level governance quality, we also conducted additional analyses (results un-tabulated) by including a dummy variable of high country-level governance quality in the regression model (1) and examining the interactions of the dummy variable with the variables of ESG.⁷ If the country-level governance quality is the main factor that drives the improvement of firm value in the future, we would expect to see a significantly positive value for the interaction terms between ESG and the dummy variable of high country-level governance quality. The un-tabulated results show that the coefficient of the interaction terms is not significantly different from zero. Hence, we conclude that the effect of ESG on value creation is not conditioning on the country-level governance quality.

4.4. Endogeneity Tests

Previous studies raise concerns about endogeneity issues (e.g., omitted variable biases, sample selection biases, reverse causality) in the study of the association between ESG and firm performance, e.g., (Liu et al. 2021). To deal with potential endogeneity issues, we adopted three additional approaches: the entropy balancing method (Hainmueller 2012), the two-stage least squares (2SLS) method, and the generalized method of movement (GMM) approach by following (Callen and Fang 2015; Wintoki et al. 2012). Table 6 report the results for the tests of endogeneity. As shown in Panel A, we applied the entropy balancing method to remove the sample selection biases and reweight our observations to ensure that the distributional characteristics of the treatment and the control groups are similar to the post-weighting distributional characteristics. As can be seen from Panel A, the coefficients for all ESG measures are significantly positive, similar to the results in Table 4.

To further mitigate the endogeneity concern (e.g., the potential reverse causation between dependent and independent variables; the potential high correlation between the standard error of the regression model and the independent variable suggested by (Callen and Fang 2015)), for Panel B, we applied the instrumental variable method. Specifically, we followed Sadiq et al. (2020) and used the presence of “CSR committee on the Board of Directors” as an instrumental variable to run two-stage least squares (2SLS) regressions. The outcomes from the 2SLS regressions further support our earlier finding as all the values of the coefficients for ESG in Panel B are significantly positive.

Table 6. Test for endogeneity.

Panel A: Entropy Balancing Method								
Value Creation in the Product Market Is the Dependent Variable in All the Columns								
Variable	ROS				SG			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
ESG	0.0273 *** (0.0071)				0.0497 *** (0.0088)			
ENV		0.0149 *** (0.0058)				0.0381 *** (0.0073)		
SOC			0.0257 *** (0.0057)				0.0449 *** (0.0075)	
GOV				0.0116 *** (0.0037)				0.0287 *** (0.0079)
FS	0.1363 ** (0.0653)	0.1471 ** (0.0638)	0.1352 ** (0.0618)	0.1495 ** (0.0639)	0.6085 *** (0.0816)	0.6092 *** (0.0819)	0.6079 *** (0.0814)	0.6012 *** (0.0810)
FA	0.0236 *** (0.0083)	0.0229 *** (0.0087)	0.0264 *** (0.0088)	0.0203 *** (0.0084)	0.0364 *** (0.0092)	0.0353 *** (0.0091)	0.0330 *** (0.0088)	0.0315 *** (0.0085)
FL	0.3724 (0.3017)	0.3823 (0.3052)	0.3122 (0.3049)	0.3342 (0.3055)	0.5508 (0.4191)	0.5213 (0.4085)	0.5679 (0.4095)	0.5497 (0.4088)
CAPEX	0.0418 ** (0.0199)	0.0431 ** (0.0194)	0.0428 ** (0.0195)	0.0427** (0.0194)	0.1403 *** (0.0366)	0.1402 *** (0.0366)	0.1435 *** (0.0367)	0.1445 *** (0.0366)
CR	0.4309 *** (0.1006)	0.4302 *** (0.1013)	0.4353 *** (0.1016)	0.4328 *** (0.1012)	0.2296 ** (0.1092)	0.2193 ** (0.1096)	0.2153 ** (0.1089)	0.2133 ** (0.1085)
GDP	0.6106 *** (0.1007)	0.6166 *** (0.1050)	0.6192 *** (0.1055)	0.6172 *** (0.1043)	0.8793 *** (0.1392)	0.8747 *** (0.1311)	0.8772 *** (0.1387)	0.8775 *** (0.1390)
UNE	0.0786 *** (0.0293)	0.0762 *** (0.0290)	0.0723 *** (0.0289)	0.0724 *** (0.0288)	0.0246 * (0.0136)	0.0270 ** (0.0136)	0.0239 * (0.0136)	0.0237 * (0.0135)
EXR	0.4221 *** (0.1106)	0.4257 *** (0.1109)	0.4210 *** (0.1100)	0.4242 *** (0.1107)	0.1908 * (0.1021)	0.1976 * (0.1057)	0.1970 * (0.1050)	0.1936 * (0.1039)
Cons	0.1750 ** (0.0816)	0.1777 ** (0.0818)	0.1720 ** (0.0812)	0.1760 ** (0.0817)	0.7898 *** (0.2884)	0.7890 *** (0.2831)	0.7891 *** (0.2846)	0.7893 *** (0.2847)
No. of Obs	13,412	13,412	13,412	13,412	13,412	13,412	13,412	13,412
R ²	0.184	0.185	0.186	0.183	0.185	0.182	0.184	0.183
Country Fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Prob > F	0.000	0.000	0.000	0.000	0.000	0.0000	0.000	0.000

Panel B: Endogeneity/Reverse Causality/2SLS								
Value Creation in the Product Market Is the Dependent Variable in All the Columns								
Variable	ROS				SG			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
Instrumented ESG	0.0296 *** (0.0074)				0.0507 *** (0.0093)			
Instrumented ENV		0.0150 *** (0.0060)				0.0393 *** (0.0076)		
Instrumented SOC			0.0267 *** (0.0059)				0.0464 *** (0.0078)	
Instrumented GOV				0.0119 *** (0.0040)				0.0294 *** (0.0081)
FS	0.1507 ** (0.0701)	0.1504 ** (0.0700)	0.1506 ** (0.0703)	0.1514 ** (0.0705)	0.6610 *** (0.1011)	0.6613 *** (0.1011)	0.6622 *** (0.1015)	0.6614 *** (0.1012)
FA	0.0255 *** (0.0078)	0.0282 *** (0.0078)	0.0295 *** (0.0079)	0.0290 *** (0.0078)	0.0406 *** (0.0097)	0.0404 *** (0.0096)	0.0401 *** (0.0094)	0.0408 *** (0.0095)
FL	0.4105 (0.3211)	0.4102 (0.3211)	0.4107 (0.3211)	0.4110 (0.3212)	0.6178 (0.4434)	0.6152 (0.4425)	0.6013 (0.4394)	0.6087 (0.4396)
CAPEX	0.0481 *** (0.0157)	0.0487 *** (0.0159)	0.0480 *** (0.0156)	0.0486 *** (0.0160)	0.1733 *** (0.0486)	0.1664 *** (0.0413)	0.1687 *** (0.0435)	0.1786 *** (0.0494)
CR	0.4119 *** (0.1025)	0.4141 *** (0.1061)	0.4183 *** (0.1071)	0.4104 *** (0.1004)	0.2745 ** (0.1390)	0.2769 ** (0.1392)	0.2762 ** (0.1390)	0.2704 ** (0.1380)
GDP	0.6162 *** (0.1010)	0.6135 *** (0.1007)	0.6169 *** (0.1011)	0.6124 *** (0.1009)	0.8701 *** (0.1313)	0.8710 *** (0.1319)	0.8705 *** (0.1314)	0.8714 *** (0.1321)
UNE	0.0513 * (0.0274)	0.0575 ** (0.0278)	0.0530 * (0.0275)	0.0566 ** (0.0274)	0.0256 * (0.0141)	0.0260 * (0.0141)	0.0264 * (0.0143)	0.0266 * (0.0144)
EXR	0.4158 *** (0.1056)	0.4152 *** (0.1056)	0.4226 *** (0.1058)	0.4157 *** (0.1056)	0.1894 * (0.1019)	0.1890 * (0.1017)	0.1893 * (0.1018)	0.1897 * (0.1021)
Cons	0.1782 ** (0.0763)	0.1618 *** (0.0669)	0.1735 ** (0.0785)	0.1711 ** (0.0712)	0.7602 *** (0.2725)	0.7685 *** (0.2727)	0.7719 *** (0.2780)	0.7711 *** (0.2712)
No. of Obs	13,412	13,412	13,412	13,412	13,412	13,412	13,412	13,412
R ²	0.172	0.171	0.174	0.173	0.174	0.171	0.173	0.172
Country Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Prob > chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.000	0.000

Table 6. Cont.

Panel C: Endogeneity/Omitted Variable/GMM								
Value Creation in the Product Market Is the Dependent Variable in All the Columns								
Variable	ROS				SG			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
VC _(t+1)	0.0335 *** (0.0111)	0.0442 ** (0.0203)	0.0326 *** (0.0107)	0.0205 ** (0.0093)	0.0572 *** (0.0192)	0.0379 ** (0.0171)	0.0417 *** (0.0115)	0.0432 *** (0.0114)
ESG	0.0281 *** (0.0079)				0.0495 *** (0.0088)			
ENV		0.0153 *** (0.0060)				0.0383 *** (0.0073)		
SOC			0.0269 *** (0.0061)				0.0450 *** (0.0076)	
GOV				0.0125 *** (0.0042)				0.0292 *** (0.0080)
FS	0.1521 ** (0.0759)	0.1513 ** (0.0748)	0.1451 ** (0.0698)	0.1542 ** (0.0731)	0.6581 *** (0.0993)	0.6414 *** (0.0909)	0.6575 *** (0.0990)	0.6055 *** (0.0960)
FA	0.0237 *** (0.0084)	0.0199 *** (0.0074)	0.0239 *** (0.0077)	0.0227 *** (0.0055)	0.0347 *** (0.0092)	0.0415 *** (0.0094)	0.0419 *** (0.0094)	0.0463 *** (0.0106)
FL	0.4180 (0.3231)	0.4251 (0.3221)	0.3983 (0.3196)	0.4173 (0.3230)	0.6023 (0.4304)	0.6067 (0.4316)	0.5957 (0.4301)	0.6053 (0.4313)
CAPEX	0.0533 *** (0.0195)	0.0537 *** (0.0196)	0.0532 *** (0.0194)	0.0541 *** (0.0198)	0.1695 *** (0.0493)	0.1693 *** (0.0493)	0.1701 *** (0.0494)	0.1699 *** (0.0494)
CR	0.4012 *** (0.0931)	0.4014 *** (0.0932)	0.4103 *** (0.0941)	0.4059 *** (0.0937)	0.2785 ** (0.1399)	0.2763 ** (0.1391)	0.2651 * (0.1380)	0.2591 * (0.1381)
GDP	0.6233 *** (0.1085)	0.6173 *** (0.1014)	0.6258 *** (0.1088)	0.6094 *** (0.1000)	0.8763 *** (0.1375)	0.8697 *** (0.1295)	0.8771 *** (0.1380)	0.8516 *** (0.1213)
UNE	0.0717 *** (0.0281)	0.0851 *** (0.0313)	0.0757 *** (0.0291)	0.0611 *** (0.0232)	0.0303 ** (0.0150)	0.0296 ** (0.0145)	0.0307 ** (0.0150)	0.0199 * (0.0110)
EXR	0.4263 *** (0.1114)	0.4351 *** (0.1075)	0.4095 *** (0.1072)	0.4271 *** (0.1115)	0.1873 * (0.1009)	0.1889 * (0.1015)	0.1887 * (0.1014)	0.1891 * (0.1017)
Cons	0.1801 ** (0.0820)	0.1759 ** (0.0817)	0.1671 ** (0.0715)	0.1813 ** (0.0821)	0.7878 *** (0.2841)	0.7895 *** (0.2851)	0.7899 *** (0.2894)	0.7885 *** (0.2842)
No. of Obs	13,412	13,412	13,412	13,412	13,412	13,412	13,412	13,412
Instruments	81	81	81	81	81	81	81	81
No. of Groups	1517	1517	1517	1517	1517	1517	1517	1517
AR (1)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AR (2)	0.795	0.843	0.783	0.950	0.981	0.801	0.776	0.834
Hansen Test	0.138	0.126	0.140	0.135	0.143	0.136	0.140	0.139
Country Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: The models in the table are estimated with a linear approach using the “Pooled (OLS)” estimator. The table shows the direct impact of the activities of ESG and its pillars on the return on sale and sales growth of the firms in the product market of emerging economies. “Standard errors” are presented in brackets below “the corresponding coefficient”. Symbols ***, **, and * mean a variable is significant at the 1%, 5%, and 10% level, respectively. The number of observations is 13,412, representing emerging-economy firms involved in ESG activities and available for all regressions.

As shown in Panel C, we additionally applied the generalized method of movement (GMM) approach to further alleviate the endogeneity issue. According to Antoniou et al. (2006), the GMM model provides accurate results and also recovers the efficiency of the estimator with lower bias and standard errors. Our GMM findings propose a positive association of ESG along with its pillars with the value creation of the firms in the product market of emerging economies, similar to our main results demonstrated in Table 4.

5. Discussion on the Empirical Results

Our empirical evidence suggests that investment in ESG and its pillars can increase the value of firms, which is consistent with findings from the extant literature (Fatemi et al. 2018; Sadiq et al. 2020). It is possible that firms that involve and disclose their ESG information face lower idiosyncratic and systematic market risks and, thus, will encounter less negative market reactions (Sassen et al. 2016).

Additionally, the investment in ESG activities may have a direct influence on enhancing the reputation of the firms (Fombrun and Shanley 1990). As a result, the investment in ESG activities helps create a strong positive image in the minds of the customers that makes them loyal to the firms and potentially more likely to buy more products or services of the firms (Porter et al. 2019; Sassen et al. 2016). From a different prospect, the investments in ESG and its pillars can also be viewed as “insurance” against reputational risks, especially

for the quality of the products or services of the firms. As customers view products from well-reputed firms as being of high quality, they are more likely to consume the products or services provided by these firms. Thus, a better reputation in the marketplace with “socially responsible activities or green/sustainable products” can help firms build and safeguard their competitive advantages (Boubaker et al. 2020) and thus allow these firms to charge a slightly higher price (than their competitors) for their products or services without losing customers. Socially responsible firms experience better growth in their sales in the product market, which resultantly heightens their financial benefits (Ahmed et al. 2022). Overall, the loyalty and the buying behaviors of the consumers for the products or services of the firms in the product market increase the sale volume of these firms, which will enhance the return on sale and sales growth and eventually lead towards the value creation of these firms in the future (Brooks and Oikonomou 2018; Buallay et al. 2020a; Fatemi et al. 2018).

Furthermore, investments in ESG activities can help firms better coordinate the interests of other stakeholders. For example, an enhanced reputation can help firms raise stakeholder engagement and make partners and suppliers seemingly act in favor of the firms. Additionally, a positive reputation also improves the satisfaction level of employees with their long-term willingness to work for the same firms, and employee satisfaction also has a positive effect on firms’ financial performance or the value creation of firms (Edmans 2011; Fombrun and Shanley 1990; Godfrey et al. 2009; McWilliams et al. 2006; Wang et al. 2008).

It is worth noting that the stakeholder theory (Freeman 1984), the legitimacy theory (LT) (Dowling and Pfeffer 1975), the resource-based view (RBV) theory (Wernerfelt 1984), and the agency theory (Jensen and Meckling 1976) lend support to the empirical results documented in this study. The stakeholder theory supports this work in stating that every stakeholder (whether internal or external) plays a significant role in the value creation process of a firm (Freeman 2010). Thus, it is necessary for the firms to consider all the stakeholders during their operational actions to enhance their repute in the market (Chan et al. 2014), which ultimately helps increase the value creation of the companies. The legitimacy theory (LT) can be connected to this study as firms with ESG performance create a good image in society by acting more legitimately, not only towards the public but also towards other stakeholders. The resource-based view (RBV) theory indicates that ESG activities can be viewed as strategic investments that help firms gain a competitive advantage by improving their repute in society, which plays a key role in enhancing the financial position or value creation of the firms (Barney 1991; Haffar and Searcy 2017). Moreover, to some extent, the agency theory (Jensen and Meckling 1976) is aligned with this study. Implementing good governance activities in firms helps resolve the agency problems between owners, managers, and other stakeholders of the firms and thus helps increase firm value (Fama and French 1998).

6. Conclusions

This study investigates the association between the environmental, social, and governance (ESG) performance of firms and their ability to generate value in the product market in emerging nations. The foremost result of this study indicates that the aggregate-level environmental, social, and governance (ESG) performance of the firms, along with its pillars (environmental, social, and governance), can positively influence the value creation of the firms, proxied for by the return on sale and sales growth of the firms. The results are robust under various regression models and tests for endogeneity. Overall, the findings of this study highlight the importance of firm-level ESG performance for the value creation of the firms in the product market of emerging economies. The overall results thus suggest that firms should take part in ESG activities because these activities can increase the value creation of the firms in the product market, along with enhancing their reputations and earning the loyalty of their customers.

Based on the empirical evidence presented in this study, we propose several recommendations. The prioritization of environmental, social, and governance (ESG) initiatives by firms’ management and board members is crucial in the context of investment decision

making, as it serves to boost the overall value generation of their respective enterprises. Governments in nations characterized by poorer governance systems ought to actively engage in the development and execution of legislation and regulations pertaining to environmental, social, and governance (ESG) matters for corporations. It is imperative to establish a requirement for firms to actively participate in and transparently disclose their environmental, social, and governance (ESG) information to diverse stakeholders. These procedures have the potential to enhance the living standards of societies and yield a favorable influence on the overall value generation of organizations. By adopting these suggestions, corporations and governmental bodies can strive towards attaining sustainable and ethical business strategies, thereby yielding advantages for both the economy and society.

It is also worth noting that this study may have the following limitations: First, although we ran several different robustness tests, we could not eliminate the endogeneity concerns for this study (e.g., firms with the potential for higher value creation in the product market are more likely to invest in ESG activities and have higher ESG performance). We believe that it would be exceedingly fruitful if researchers could try the different-in-difference analysis or control for the firm fixed effect in the regression models for their future studies. Second, in this study, we assumed that ESG has a linear relationship with the value creation of the firms in the future, but we could not completely rule out the possibility of a non-linear relationship between the two subjects. Finally, we may have incurred some sample selection bias in our study as we relied heavily on the availability and accuracy of the data within the Thomson Reuters Datastream dataset to construct our sample. We suggest that researchers take into consideration these limitations or even address these limitations in their future studies.

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Appendix A. Variables

Variable	Notation	Measurement	Source
Dependent Variables			
Return On Sale	(ROS)	The ratio of earnings before extraordinary items to book value of total sale (Gong et al. 2021)	Datastream
Sales Growth	(SG)	Change in sales/sales (Saeidi et al. 2015)	Datastream
Independent Variables			
Environmental, Social, and Governance Score	ESG Score	ESG Score from Datastream and assigned with the following formula (Eikon 2022): $\text{Score} = \frac{\text{No. of Co. with a worse value} + \text{No. of Co. with same value}}{2}$ No. of firms with a value Environmental Score from Datastream (Eikon 2022). Categories: Emission, Innovation, Resource Use Sub-Categories: Waste, Biodiversity, Product Innovation, Energy, Environmental Supply Chain	Datastream
Environmental Score	Env Score		Datastream

Social Score	Soc Score	Score from Datastream (Eikon 2022) Categories: Community, Human Rights, Product Responsibility, Workforce Sub-Categories: Human Rights, Responsible Marketing, Working Conditions, Health Safety	Datastream
Governance Score	Gov Score	Governance Score from Datastream (Eikon 2022) Categories: CSR Strategy, Management, Shareholders Sub-Categories: CSR Strategy, ESG Reporting and Transparency, Structure, Diversity, Shareholder Rights	Datastream
Control Variables			
Company-Level			
Firm Size	Size	The natural logarithm of total assets (Aboud and Diab 2018)	Datastream
Firm Age	Age	Age of company (years) (Yordudom and Suttipun 2020)	Datastream
Financial Leverage	FL	Total debt/total equity (Yordudom and Suttipun 2020)	Datastream
Capital Expenditure	CAPEX	Capital expenditure/total assets (Aboud and Diab 2018)	Datastream
Liquidity	Current Ratio	Current assets/current liabilities (Fang et al. 2009; Yordudom and Suttipun 2020)	Datastream
Country-Level			
GDP Growth	GDP	% change in GDP (Azmi et al. (2021)	WDI
Unemployment	UNE	% of total labor force (Karakus and Bozkurt 2017)	WDI
Exchange Rate	EXR	The natural logarithm of official exchange rate (as USD) (Karakus and Bozkurt 2017)	WDI

Notes

- 1 In this study, we view firms’ ESG and CSR activities similarly. Thus, the concepts of ESG and CSR can be interchangeable within this study.
- 2 As we use a one-year-ahead value for the dependent variable, the two dependent variables contain information for the year 2020.
- 3 We will further discuss the theories in Section 2: Literature Review and Hypothesis Development.
- 4 As China provides the largest number of observations to our sample, to ensure that the main result is not primarily driven by the observations from China, we conducted a sensitivity analysis by excluding the observations from China.
- 5 By using the pooled OLS regression model, we assume that there is a linear relationship between ESG and firm value; however, extant literature also finds a non-linear relationship between the two items (e.g., Pu 2023). Thus, admittedly, the assumption of a linear relationship may be a potential limitation for this study.
- 6 The 5.49% increase is calculated as $0.027 \times (54.345 - 22.02)/15.91$.
- 7 We collected the data for country-level governance quality variables from the World Bank open database.

References

Aboud, Ahmed, and Ahmed Diab. 2018. The impact of social, environmental and corporate governance disclosures on firm value: Evidence from Egypt. *Journal of Accounting in Emerging Economies* 8: 442–58. [CrossRef]

Ahmed, Zeeshan, Saleem, Qasim, Ajmal, Muhammad Maroof, and Hajra Jameel. 2022. Cost of high leverage in socially responsible firms in a linear dynamic panel model. Evidence from product market interactions. *Heliyon* 8: e09235. [CrossRef]

Alsayegh, Maha Faisal, Rashidah Abdul Rahman, and Saeid Homayoun. 2020. Corporate economic, environmental, and social sustainability performance transformation through ESG disclosure. *Sustainability* 12: 3910. [CrossRef]

Ammann, Manuel, David Oesch, and Markus M. Schmid. 2011. Corporate governance and firm value: International evidence. *Journal of Empirical Finance* 18: 36–55. [CrossRef]

Anson, Mark, Ted White, and Ho Ho. 2004. Good corporate governance works: More evidence from CalPERS. *Journal of Asset Management* 5: 149–56. [CrossRef]

Antoniou, Antonios, Yilmaz Guney, and Krishna Paudyal. 2006. The determinants of debt maturity structure: Evidence from France, Germany and the UK. *European Financial Management* 12: 161–94. [CrossRef]

Azmi, Wajahat, M. Kabir Hassan, Reza Houston, and Mohammad Sydul Karim. 2021. ESG activities and banking performance: International evidence from emerging economies. *Journal of International Financial Markets, Institutions and Money* 70: 101277. [CrossRef]

Balatbat, Maria, Renard Siew, and David Carmichael. 2012. ESG scores and its influence on firm performance: Australian evidence. In *Australian School of Business School of Accounting, School of Accounting Seminar Series Semester*. Sydney: University of New South Wales.

Barney, Jay. 1991. Special theory forum the resource-based model of the firm: Origins, implications, and prospects. *Journal of Management* 17: 97–98. [CrossRef]

Baumol, William J., and Sue Anne Batey Blackman. 1991. *Perfect Markets and Easy Virtue Business Ethics and the Invisible Hand*. Hoboken: John Wiley & Sons, Inc.

Behl, Abhishek, P. S. Raghu Kumari, Harnesh Makhija, and Dipasha Sharma. 2021. Exploring the relationship of ESG score and firm value using cross-lagged panel analyses: Case of the Indian energy sector. *Annals of Operations Research* 313: 231–56. [CrossRef]

Bhagat, Sanjai, and Brian Bolton. 2008. Corporate governance and firm performance. *Journal of Corporate Finance* 14: 257–73. [CrossRef]

Bhatia, Aparna, and Binny Makkar. 2020. Stage of development of a country and CSR disclosure—the latent driving forces. *International Journal of Law and Management* 62: 467–93. [CrossRef]

- Bhattacharya, Sonali, and Dipasha Sharma. 2019. Do environment, social and governance performance impact credit ratings: A study from India. *International Journal of Ethics and Systems* 35: 466–84. [\[CrossRef\]](#)
- Boehe, Dirk Michael, and Luciano Barin Cruz. 2010. Corporate social responsibility, product differentiation strategy and export performance. *Journal of Business Ethics* 91: 325–46. [\[CrossRef\]](#)
- Boubaker, Sabri, Alexis Cellier, Riadh Manita, and Asif Saeed. 2020. Does corporate social responsibility reduce financial distress risk? *Economic Modelling* 91: 835–51. [\[CrossRef\]](#)
- Bowen, Frances, Aloysius Newenham-Kahindi, and Irene Herremans. 2010. When suits meet roots: The antecedents and consequences of community engagement strategy. *Journal of Business Ethics* 95: 297–318. [\[CrossRef\]](#)
- Broggi, Marina, and Valentina Lagasio. 2019. Environmental, social, and governance and company profitability: Are financial intermediaries different? *Corporate Social Responsibility and Environmental Management* 26: 576–87. [\[CrossRef\]](#)
- Brooks, Chris, and Ioannis Oikonomou. 2018. The effects of environmental, social and governance disclosures and performance on firm value: A review of the literature in accounting and finance. *The British Accounting Review* 50: 1–15. [\[CrossRef\]](#)
- Buallay, Amina, Sayed M. Fadel, Jasim Alajmi, and Shahrokh Saudagaran. 2020a. Sustainability reporting and bank performance after financial crisis: Evidence from developed and developing countries. *Competitiveness Review: An International Business Journal* 31: 747–70. [\[CrossRef\]](#)
- Buallay, Amina, Sayed M. Fadel, Jasim Yusuf Al-Ajmi, and Shahrokh Saudagaran. 2020b. Sustainability reporting and performance of MENA banks: Is there a trade-off? *Measuring Business Excellence* 24: 197–221. [\[CrossRef\]](#)
- Callen, Jeffrey L., and Xiaohua Fang. 2015. Religion and stock price crash risk. *Journal of Financial and Quantitative Analysis* 50: 169–95. [\[CrossRef\]](#)
- Chan, MuiChing Carina, John Watson, and David Woodliff. 2014. Corporate governance quality and CSR disclosures. *Journal of Business Ethics* 125: 59–73. [\[CrossRef\]](#)
- Chen, Li Zhen, Emmanuel Opoku Marfo, and Xu Hua Hu. 2016. Corporate social responsibility behavior: Impact on Firm's financial performance in an information technology driven society. *International Journal of Engineering Research in Africa* 23: 162–73. [\[CrossRef\]](#)
- Chi, Christina G., and Dogan Gursoy. 2009. Employee satisfaction, customer satisfaction, and financial performance: An empirical examination. *International Journal of Hospitality Management* 28: 245–53. [\[CrossRef\]](#)
- De Villiers, Charl, and Ana Marques. 2016. Corporate social responsibility, country-level predispositions, and the consequences of choosing a level of disclosure. *Accounting and Business Research* 46: 167–95. [\[CrossRef\]](#)
- Dowell, Glen, Stuart Hart, and Bernard Yeung. 2000. Do corporate global environmental standards create or destroy market value? *Management Science* 46: 1059–74. [\[CrossRef\]](#)
- Dowling, John, and Jeffrey Pfeffer. 1975. Organizational legitimacy: Social values and organizational behavior. *Pacific Sociological Review* 18: 122–36. [\[CrossRef\]](#)
- Edmans, Alex. 2011. Does the stock market fully value intangibles? Employee satisfaction and equity prices. *Journal of Financial Economics* 101: 621–40. [\[CrossRef\]](#)
- Eikon, Refinitiv. 2022. *Environmental, Social and Governance Scores from Refinitiv*. London: Refinitiv Eikon.
- Eklof, Jan, Olga Podkorytova, and Aleksandra Malova. 2020. Linking customer satisfaction with financial performance: An empirical study of Scandinavian banks. *Total Quality Management & Business Excellence* 31: 1684–702.
- El Khoury, Rim, Nohade Nasrallah, and Bahaaeddin Alareeni. 2021. ESG and financial performance of banks in the MENAT region: Concavity–convexity patterns. *Journal of Sustainable Finance & Investment* 13: 406–30.
- Erhardt, Niclas L., James D. Werbel, and Charles B. Shrader. 2003. Board of director diversity and firm financial performance. *Corporate Governance: An International Review* 11: 102–11. [\[CrossRef\]](#)
- Fama, Eugene F., and Kenneth R. French. 1997. Industry costs of equity. *Journal of Financial Economics* 43: 153–93. [\[CrossRef\]](#)
- Fama, Eugene F., and Kenneth R. French. 1998. Taxes, financing decisions, and firm value. *The Journal of Finance* 53: 819–43. [\[CrossRef\]](#)
- Fang, Vivian W., Thomas H. Noe, and Sheri Tice. 2009. Stock market liquidity and firm value. *Journal of financial Economics* 94: 150–69. [\[CrossRef\]](#)
- Fatemi, Ali, Martin Glaum, and Stefanie Kaiser. 2018. ESG performance and firm value: The moderating role of disclosure. *Global Finance Journal* 38: 45–64. [\[CrossRef\]](#)
- Fombrun, Charles, and Mark Shanley. 1990. What's in a name? Reputation building and corporate strategy. *Academy of Management Journal* 33: 233–58. [\[CrossRef\]](#)
- Freeman, R. Edward. 1984. *Strategic Management: A Stakeholder Approach*. Boston: Pitman, p. 46.
- Freeman, R. Edward. 2010. *Strategic Management: A Stakeholder Approach*. Cambridge: Cambridge University Press.
- Freeman, R. Edward. 2017. The new story of business: Towards a more responsible capitalism. *Business and Society Review* 122: 449–65. [\[CrossRef\]](#)
- Fresard, Laurent. 2010. Financial strength and product market behavior: The real effects of corporate cash holdings. *The Journal of Finance* 65: 1097–122. [\[CrossRef\]](#)
- Friede, Gunnar, Timo Busch, and Alexander Bassen. 2015. ESG and financial performance: Aggregated evidence from more than 2000 empirical studies. *Journal of Sustainable Finance & Investment* 5: 210–33.
- Friedman, Milton. 1970. The Social Responsibility of Business Is to Increase Its Profits. *New York Times Magazine*, September 13, vol. 3, pp. 122–26.

- Fuentes-García, Fernando J., Julia M. Núñez-Tabales, and Ricardo Veroz-Herradón. 2008. Applicability of corporate social responsibility to human resources management: Perspective from Spain. *Journal of Business Ethics* 82: 27–44. [\[CrossRef\]](#)
- Gennari, Francesca, and Daniela M. Salvioni. 2019. CSR committees on boards: The impact of the external country level factors. *Journal of Management and Governance* 23: 759–85. [\[CrossRef\]](#)
- Giannarakis, Grigoris, Andreas Andronikidis, and Nikolaos Sariannidis. 2020. Determinants of environmental disclosure: Investigating new and conventional corporate governance characteristics. *Annals of Operations Research* 294: 87–105. [\[CrossRef\]](#)
- Godfrey, Paul C. 2005. The relationship between corporate philanthropy and shareholder wealth: A risk management perspective. *Academy of Management Review* 30: 777–98. [\[CrossRef\]](#)
- Godfrey, Paul C., Craig B. Merrill, and Jared M. Hansen. 2009. The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis. *Strategic Management Journal* 30: 425–45. [\[CrossRef\]](#)
- Goel, Puneeta. 2018. Implications of corporate governance on financial performance: An analytical review of governance and social reporting reforms in India. *Asian Journal of Sustainability and Social Responsibility* 3: 4. [\[CrossRef\]](#)
- Gong, Yujing, Cheng Yan, and Kung-Cheng Ho. 2021. The effect of managerial ability on corporate social responsibility and firm value in the energy industry. *Corporate Social Responsibility and Environmental Management* 28: 581–94. [\[CrossRef\]](#)
- Grewatsch, Sylvia, and Ingo Kleindienst. 2017. When does it pay to be good? Moderators and mediators in the corporate sustainability–corporate financial performance relationship: A critical review. *Journal of Business Ethics* 145: 383–416. [\[CrossRef\]](#)
- Haffar, Merriam, and Cory Searcy. 2017. Classification of trade-offs encountered in the practice of corporate sustainability. *Journal of Business Ethics* 140: 495–522. [\[CrossRef\]](#)
- Hainmueller, Jens. 2012. Entropy balancing for causal effects: A multivariate reweighting method to produce balanced samples in observational studies. *Political Analysis* 20: 25–46. [\[CrossRef\]](#)
- Harjoto, Maretno A., and Hoje Jo. 2015. Legal vs. normative CSR: Differential impact on analyst dispersion, stock return volatility, cost of capital, and firm value. *Journal of Business Ethics* 128: 1–20. [\[CrossRef\]](#)
- Harjoto, Maretno, Indrarini Laksmana, and Robert Lee. 2015. Board diversity and corporate social responsibility. *Journal of Business Ethics* 132: 641–60. [\[CrossRef\]](#)
- Hatane, Saarec Elsy. 2015. Employee satisfaction and performance as intervening variables of learning organization on financial performance. *Procedia-Social and Behavioral Sciences* 211: 619–28. [\[CrossRef\]](#)
- Hermalin, Benjamin E., and Michael S. Weisbach. 1991. The effects of board composition and direct incentives on firm performance. *Financial Management* 20: 101–12. [\[CrossRef\]](#)
- Hsu, Po-Hsuan, Hao Liang, and Pedro Matos. 2021. Leviathan Inc. and corporate environmental engagement. *Management Science*. [\[CrossRef\]](#)
- Humphrey, Jacquelyn E., Darren D. Lee, and Yaokan Shen. 2012. Does it cost to be sustainable? *Journal of Corporate Finance* 18: 626–39. [\[CrossRef\]](#)
- Ioannou, Ioannis, and George Serafeim. 2010. The impact of corporate social responsibility on investment recommendations. In *Academy of Management Proceedings*. Briarcliff Manor: Academy of Management.
- Isidro, Helena, and Márcia Sobral. 2015. The effects of women on corporate boards on firm value, financial performance, and ethical and social compliance. *Journal of Business Ethics* 132: 1–19. [\[CrossRef\]](#)
- Jensen, Michael C., and William H. Meckling. 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics* 3: 305–60. [\[CrossRef\]](#)
- Jo, Hoje, and Maretno A Harjoto. 2011. Corporate governance and firm value: The impact of corporate social responsibility. *Journal of Business Ethics* 103: 351–83. [\[CrossRef\]](#)
- Kaplan, Robert S., and David P. Norton. 1992. The Balanced Scorecard—Measures That Drive Performance. *Harvard Business Review* 70: 71–79.
- Karakus, Rifat, and Ibrahim Bozkurt. 2017. The Effect of Financial Ratios and Macroeconomic Factors on Firm Value: An Empirical Analysis in Borsa Istanbul. Paper presented at the Article on RSEP International Conferences on Social Issues and Economic Studies, Prague, Czech Republic, June 29–30.
- King, Andrew A., and Michael J. Lenox. 2001. Does it really pay to be green? An empirical study of firm environmental and financial performance: An empirical study of firm environmental and financial performance. *Journal of Industrial Ecology* 5: 105–16. [\[CrossRef\]](#)
- Konar, Shameek, and Mark A. Cohen. 2001. Does the market value environmental performance? *Review of Economics and Statistics* 83: 281–89. [\[CrossRef\]](#)
- Kraus, Alan, and Robert H. Litzenberger. 1973. A state-preference model of optimal financial leverage. *The Journal of Finance* 28: 911–22.
- Larcker, David F., Scott A. Richardson, and İrem Tuna. 2007. Corporate governance, accounting outcomes, and organizational performance. *The Accounting Review* 82: 963–1008. [\[CrossRef\]](#)
- Liu, Wei, Xuefeng Shao, Marco De Sisto, and Wen Helena Li. 2021. A new approach for addressing endogeneity issues in the relationship between corporate social responsibility and corporate financial performance. *Finance Research Letters* 39: 101623. [\[CrossRef\]](#)
- Li, Yiwei, Mengfeng Gong, Xiu-Ye Zhang, and Lenny Koh. 2018. The impact of environmental, social, and governance disclosure on firm value: The role of CEO power. *The British Accounting Review* 50: 60–75. [\[CrossRef\]](#)

- Malarvizhi, P., and Ranjani Matta. 2016. "Link between Corporate Environmental Disclosure and Firm Performance"—Perception or Reality? *The British Accounting Review* 36: 107–17.
- McGuire, Jean B., Alison Sundgren, and Thomas Schneeweis. 1988. Corporate social responsibility and firm financial performance. *Academy of Management Journal* 31: 854–72. [CrossRef]
- McWilliams, Abigail, and Donald Siegel. 2001. Corporate social responsibility: A theory of the firm perspective. *Academy of Management Review* 26: 117–27. [CrossRef]
- McWilliams, Abigail, Donald S. Siegel, and Patrick M. Wright. 2006. Corporate social responsibility: Strategic implications. *Journal of Management Studies* 43: 1–18. [CrossRef]
- Mohamad, Nor Edi Azhar Binti. 2020. Do Environmental, Social, and Governance Practices (ESG) Signify Firm Value? Evidence from FTSE4Good Bursa Malaysia (F4GBM). *Global Business & Management Research* 12: 365–76.
- Mohammad, Wan Masliza Wan, and Shaista Wasiuzzaman. 2021. Environmental, Social and Governance (ESG) disclosure, competitive advantage and performance of firms in Malaysia. *Cleaner Environmental Systems* 2: 100015. [CrossRef]
- Mooneepen, Oren, Subhash Abhayawansa, and Naushad Mamode Khan. 2022. The influence of the country governance environment on corporate environmental, social and governance (ESG) performance. *Sustainability Accounting, Management and Policy Journal* 13: 953–85. [CrossRef]
- Muhmad, Siti Nurain, Akmalia M Ariff, Norakma Abd Majid, and Khairul Anuar Kamarudin. 2021. Product market competition, corporate governance and esg. *Asian Academy of Management Journal of Accounting & Finance* 17: 63–91.
- Nakao, Yuriko, Akihiro Amano, Kanichiro Matsumura, Kiminori Genba, and Makiko Nakano. 2007. Relationship between environmental performance and financial performance: An empirical analysis of Japanese corporations. *Business Strategy and the Environment* 16: 106–18. [CrossRef]
- Orlitzky, Marc, Frank L. Schmidt, and Sara L. Rynes. 2003. Corporate social and financial performance: A meta-analysis. *Organization Studies* 24: 403–41. [CrossRef]
- Palmer, Karen, Wallace E. Oates, and Paul R. Portney. 1995. Tightening environmental standards: The benefit-cost or the no-cost paradigm? *Journal of Economic Perspectives* 9: 119–32. [CrossRef]
- Plumlee, Marlene, Darrell Brown, Rachel M. Hayes, and R. Scott Marshall. 2015. Voluntary environmental disclosure quality and firm value: Further evidence. *Journal of Accounting and Public Policy* 34: 336–61. [CrossRef]
- Porter, Michael E., and Claas Van der Linde. 1995. Toward a new conception of the environment-competitiveness relationship. *Journal of Economic Perspectives* 9: 97–118. [CrossRef]
- Porter, Michael, George Serafeim, and Mark Kramer. 2019. Where ESG fails. *Institutional Investor* 16. Available online: <https://www.institutionalinvestor.com/article/b1hm5ghqtxj9s7/Where-ESG-Fails> (accessed on 26 October 2023).
- Pu, Ganlin. 2023. A non-linear assessment of ESG and firm performance relationship: Evidence from China. *Economic Research-Ekonomiska Istraživanja* 36: 2113336. [CrossRef]
- Rindova, Violina P., and Charles J. Fombrun. 1999. Constructing competitive advantage: The role of firm–constituent interactions. *Strategic Management Journal* 20: 691–710. [CrossRef]
- Russo, Michael V., and Paul A. Fouts. 1997. A resource-based perspective on corporate environmental performance and profitability. *Academy of Management Journal* 40: 534–59. [CrossRef]
- Sadiq, Muhammad, Jaspal Singh, Muhammad Raza, and Shafi Mohamad. 2020. The impact of environmental, social and governance index on firm value: Evidence from Malaysia. *International Journal of Energy Economics and Policy* 10: 555–62. [CrossRef]
- Saeidi, Sayedeh Parastoo, Saudah Sofian, Parvaneh Saeidi, Sayyede Parisa Saeidi, and Seyyed Alireza Saeidi. 2015. How does corporate social responsibility contribute to firm financial performance? The mediating role of competitive advantage, reputation, and customer satisfaction. *Journal of Business Research* 68: 341–50. [CrossRef]
- Sassen, Remmer, Anne-Kathrin Hinze, and Inga Hardeck. 2016. Impact of ESG factors on firm risk in Europe. *Journal of Business Economics* 86: 867–904. [CrossRef]
- Scholten, Bert, and Yangqin Zhou. 2008. Stakeholder relations and financial performance. *Sustainable Development* 16: 213–32. [CrossRef]
- Siagian, Ferdinand, Sylvia V. Siregar, and Yan Rahadian. 2013. Corporate governance, reporting quality, and firm value: Evidence from Indonesia. *Journal of Accounting in Emerging Economies* 3: 4–20. [CrossRef]
- Sulong, Sophee, Saleem, Qasim, and Zeeshan Ahmed. 2018. The role of stock market development in influencing the firms performance: A study based on Pakistan stock market. *International Journal of Economics and Finance* 10: 104–14. [CrossRef]
- Teoh, Hai-Yap, and Gregory Thong. 1984. Another look at corporate social responsibility and reporting: An empirical study in a developing country. *Accounting, Organizations and Society* 9: 189–206. [CrossRef]
- Ullmann, Arie H. 1985. Data in search of a theory: A critical examination of the relationships among social performance, social disclosure, and economic performance of US firms. *Academy of Management Review* 10: 540–57. [CrossRef]
- Van Duuren, Emiel, Auke Plantinga, and Bert Scholten. 2016. ESG integration and the investment management process: Fundamental investing reinvented. *Journal of Business Ethics* 138: 525–33. [CrossRef]
- Walley, Noah, and Bradley Whitehead. 1994. It's not easy being green. *Reader in Business and the Environment* 36: 4.
- Wang, Heli, Jaepil Choi, and Jiatao Li. 2008. Too little or too much? Untangling the relationship between corporate philanthropy and firm financial performance. *Organization Science* 19: 143–59. [CrossRef]

- Weber, Manuela. 2008. The business case for corporate social responsibility: A company-level measurement approach for CSR. *European Management Journal* 26: 247–61. [[CrossRef](#)]
- Wernerfelt, Birger. 1984. A resource-based view of the firm. *Strategic Management Journal* 5: 171–80. [[CrossRef](#)]
- Whitelock, Vincent G. 2015. Environmental social governance management: A theoretical perspective for the role of disclosure in the supply chain. *International Journal of Business Information Systems* 18: 390–405. [[CrossRef](#)]
- Wintoki, M. Babajide, James S. Linck, and Jeffrey M. Netter. 2012. Endogeneity and the dynamics of internal corporate governance. *Journal of Financial Economics* 105: 581–606. [[CrossRef](#)]
- Wong, Woei Chyuan, Jonathan A. Batten, Shamsul Bahrain Mohamed-Arshad, Sabariah Nordin, and Azira Abdul Adzis. 2021. Does ESG certification add firm value? *Finance Research Letters* 39: 101593. [[CrossRef](#)]
- Wu, Shiyu, Xinyi Li, Xiaosen Du, and Zexin Li. 2022. The impact of ESG performance on firm value: The moderating role of ownership structure. *Sustainability* 14: 14507. [[CrossRef](#)]
- Yadav, Prayag Lal, Seung Hun Han, and Jae Jeung Rho. 2016. Impact of environmental performance on firm value for sustainable investment: Evidence from large US firms. *Business Strategy and the Environment* 25: 402–20. [[CrossRef](#)]
- Yip, Y. Y., and H. H. Lee. 2018. Does ESG Disclosure Create Value to Firms? The Malaysian Case. *The Journal of Social Sciences Research* 6: 515–21.
- Yoon, Bohyun, Jeong Hwan Lee, and Ryan Byun. 2018. Does ESG performance enhance firm value? Evidence from Korea. *Sustainability* 10: 3635. [[CrossRef](#)]
- Yordudom, Thanyaorn, and Muttanachai Suttipun. 2020. The Influence of ESG Disclosures on Firm Value in Thailand. *Journal of Finance and Banking Review* 5: 108–14. [[CrossRef](#)] [[PubMed](#)]
- Zhu, Yan, Li-Yun Sun, and Alicia S. M. Leung. 2014. Corporate social responsibility, firm reputation, and firm performance: The role of ethical leadership. *Asia Pacific Journal of Management* 31: 925–47. [[CrossRef](#)]

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