

Article

Does ESG Impact Firms' Sustainability Performance? The Mediating Effect of Innovation Performance

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Abstract: In this age of global warming, academics and policymakers are increasingly concerned about firm environmental sustainability success. Therefore, this study aims to investigate whether Environmental, Social and Governance (ESG) performance impacts sustainability performance through the mediating effect of firm innovation. To this end, Structural Equation Modeling (SEM) was deployed to analyze data collected from the employees of manufacturing industries in Bangladesh. The results revealed that ESG performance significantly enhances the innovation and sustainability performance of manufacturing industries, indicating that the higher the ESG performance of a firm, the greater its innovation and sustainability performance. Furthermore, the results confirmed that firm innovation performance fully mediates the relationship between ESG initiatives and sustainability performance. The findings of this study provide policymakers and industry authorities with valuable insight into the role of ESG and innovation performance in improving sustainability performance. Specifically, the study sheds knowledge on how firm ESG initiatives and innovation performance impact sustainability performance in the manufacturing sector of an emerging economy such as Bangladesh.

Keywords: sustainability performance; environmental; Social and Governance (ESG) performance; innovation performance; mediating effect; manufacturing firms



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1. Introduction

Traditionally, the performance of business firms was measured based on economic indicators. However, this evaluative approach has now been upgraded to include sustainable performance [1]. As a result, firms now prioritize sustainable performance to meet the demand of some notable stakeholders such as regulatory bodies, environmentally concerned institutions, society, etc. [2]. Sustainable performance is inextricably related to Corporate Social Responsibility (CSR), because it helps firms address the environmental and social interests of their stakeholders [3]. Sustainable performance, indicated by economic, social and environmental indicators, shows the path to solving sustainability challenges, thereby providing organizations with a competitive edge [4]. To manage sustainable challenges, regulators are pressuring firms to incorporate social and environmental goals into their economic agenda [5]. Moreover, the sustainable performance also aids the achievement of the Sustainable Development Goals (SDGs), which primarily focus on economic development, extreme poverty elimination, social trust building and protection of the environment [6].

Many factors contribute to the sustainable practices of business organizations, among which is compliance with ESG principles [7]. ESG principles are considered a prerequisite for sustainable development of the global economy and society [8]. The COVID-19 pandemic and recent concerns to society and the environment brought on by industrialization have increased interest in ESG on a worldwide scale [9]. When assessing a

corporation's sustainable growth, the three fundamental ESG factors—environmental, social and governance—are thought to be essential for investment research and decision making [10,11]. The sustainability of an organization's operations and its social impact are measured by these three variables. Developments based on ESG principles such as ESG disclosure standards, ESG evaluation systems and ESG index systems have been constantly promoting a new pattern of sustainable development since the formal inception of ESG principles in 2004 [8]. Owing to the wide adoption of ESG in the practical field, global research interest in ESG has increased.

As a crucial determinant of sustainable business practices, ESG has been investigated from the perspective of developed countries. Hussain et al. [11] analyzed the performance of the triple bottom line to investigate the relationship between corporate governance and Sustainability Performance in US-based firms; Maali et al. [12] analyzed the mediating role of CSR on the relationship between corporate governance and sustainability performance in the UK; Yang et al. [13] investigated the impact of changes in clean energy, green financing and economic practices on sustainability performance through ESG performance in G7 countries; Ye et al. [14] explored the impact of ESG on sustainability performance, reflected as stock return, in EU members countries. Also, remarkable studies have been conducted to measure the impact of ESG performance on sustainability performance in emerging economies such as China [9], Korea [15], India [16], etc. While some studies have also been conducted to address ESG and sustainability performance issues in Bangladesh, an emerging market [17,18], less emphasis has been given to exploring such issues in the manufacturing industry. Bangladesh significantly depends on the manufacturing industry, particularly the Ready-Made Garment (RMG) sector, for its forex inflow. It is the 39th largest economy in the world, with a promising manufacturing industry, which currently contributes a Manufacturing Value Added (MVA) of 20.6% to GDP [19].

This study aims at examining the impact of ESG practices on the Bangladeshi Manufacturing industry. Sustainable business practice has a huge significance for manufacturing industries because it facilitates their environmental and social compliance. The manufacturing industry tends to generate more negative outcomes on the environment than the service industry, thus necessitating their adoption of sustainable business practices [20]. Earlier studies conducted in developed and emerging economies have demonstrated the influence of ESG principles on sustainable business performance. However, this relationship remained unexplored in the Bangladeshi manufacturing industry, which is known for flaunting its environmental and social requirements. A crucial reason for selecting the Bangladeshi manufacturing industry is the lack of compliance with environmental and social issues. ESG principles could be a panacea for sustainability challenges of the Bangladeshi manufacturing industry, particularly the RMG sector, which is also criticized for the mistreatment of its workers [21]. The sector was also censured for its violation of local and global labor standards and rights, which jeopardize the safety of its workers. The Rana Plaza collapse, causing the death of 1129 workers in 2013, the Spectrum Sweater collapse in 2005 and the Tazreen Garments Fire in 2012 are some of the unforgettable scary evidence of poor workplace safety in Bangladesh [22]. Proper compliance with ESG principles could overcome the shortcomings of Bangladeshi manufacturing industries. Prior research identified environmental, social and governance performance as influential factors for green practices and performances of the manufacturing industries in Bangladesh [23]. Therefore, the study investigates how the Bangladesh manufacturing industry performs ESG to ensure sustainability performance.

In addition, the study will also examine the mediating impact of innovation performance on the relationship between ESG practice and the sustainable performance of the Bangladeshi manufacturing industry. Adoption of new technologies and the development of innovative business models are considered crucial players in sustainable business development [3]. The scarcity of resources, considered a notable peril towards the sustainability of the business, is also a major concern of ESG principles and could be resolved through green innovation performance. Innovation strategies, aligned with sustainability goals,

reduce negative impacts on the environment [24]. Though innovation is explored as an influencer of both ESG practices and sustainability practices, no research investigated the mediating role of innovation between ESG practices and sustainability performance. In addressing the issues identified above, this study will examine the following research questions:

RQ 1: How does ESG performance influence the sustainability performance of the Bangladeshi manufacturing industry?

RQ 2: How does innovation mediate the relationship between ESG initiatives and sustainability performance in the Bangladeshi manufacturing industry?

This study contributes to the existing literature in the following ways. First, most of the research that explores the impact of ESG on sustainability performance was conducted in developed countries, creating a deficit of knowledge on the relationship in the context of developing countries. Therefore, this study attempts to fill this gap by investigating the impact of ESG on the sustainability performance of the Bangladeshi manufacturing industry. Second, prior research recognized the direct and indirect effects of innovation on ESG performance, but no study explores the mediating impact of innovation on the association between ESG and sustainability performance. Hence, this study examines the mediating effect of innovation performance on the relationship between ESG and sustainability performance. Finally, this study will offer worthy insights for owners of Bangladeshi manufacturing industries and policymakers who are deeply concerned about the global acceptability of manufacturing firms amid their violation of social and environmental interests.

The remainder of the paper is structured as follows: Section 2 reviews the literature and develops the research hypotheses. In Section 3, the study describes the sample, variables, empirical models and method. The results are discussed and interpreted in Section 4. Finally, Section 5 presents the conclusion and policy implications.

2. Literature Review and Hypothesis Development

2.1. Theoretical Background

Theories of sustainability such as agency theory, stakeholder theory, legitimacy theory, signaling theory and institutional theory demand the adoption of ESG principles for a corporation to be sustainable. Based on the nature of this study, we followed stakeholder and legitimacy theories to develop the hypotheses.

According to the stakeholder theory, a corporation has to focus on the interest of all the related parties. This theory emphasizes the need for firms to be concerned with social and environmental interests while pursuing organizational objectives. Some research works have argued that sustainability performance is achieved through an enhanced stakeholder relationship [10,25]. In line with the stakeholder theory, Flammer and Kacperczyk [26] found a positive impact of ESG on employee engagement, which is a prerequisite of sustainability performance. To become sustainable and gain a competitive edge, a firm must focus on minimizing the negative impact of its activities on the environment through product innovation and strategy implementation [27]. A key element in balancing the interests of all stakeholders is the development of sustainable performance [28–30]. Stakeholder-oriented management theory indicates that an enhanced stakeholder relationship could promote corporate sustainability performance [31]. According to the notion of enlightened value maximization [32], corporations must consider the interests of all stakeholders who are impacted by or have the potential to influence the firms' performance [10,33,34]. ESG practices help corporations to maximize long-term value by complying with social needs and environmental obligations [32,35]. Corporate shared value theory introduced by Kramer and Porter [36] and Uddin et al. [37] demands the inclusion of societal interest in a firm's strategy and operations to gain a competitive edge and achieve sustainable performance.

Another theory that demonstrates the need for ESG practice to produce sustainable business practice is the legitimacy theory, which opines that a corporation's social acceptance contributes positively toward its existence and growth [38]. This theory outlines

the relationship between society and corporations, claiming that social values, norms and beliefs must be complied with by the companies [39]. ESG practices are considered key to enhancing the social acceptability of the corporation. This theory further suggests that firms follow a symbolic approach that involves the expression of behavior that shows their agreement with the norms of society [40]. To put it simply, firms should try and show society that they are conducting their business in compliance with social norms and bounds. Firms should also undertake social and environmental practices and disclosures to attract societal appraisal and be perceived as legitimate by external stakeholder companies [39].

2.2. Sustainability Performance

Elkington [41] introduced the “Triple Bottom Line” as a concept of sustainable performance in which firms incorporate Economic, Environmental and Social (EES) objectives in their business strategy implementation, intending to protect and sustain the environment and society while maximizing their market capitalization. Supporting this concept, Masud et al. [39] referred to sustainability as the alignment of economic growth with social and environmental objectives to create value for society as well as the corporation. Kamble et al. [42] defined sustainable performance as the deployment of strategies that ensure a balance between social enhancement, environmental protection and economic growth. Helleno et al. [43] also defined sustainability performance as a bunch of business actions intended to meet the present needs without compromising future needs. Moktadir et al. [44] demonstrated that industries motivated by sustainability performance are redefining their business plans and activities by considering economic, environmental and social impacts.

2.3. Hypothesis Development

The earlier section highlights the propositions of different theories, which demonstrate how corporate sustainable performance could be achieved by ESG practices. Several research works have been conducted to help define sustainable business practices and the impact of ESG practices.

2.3.1. Environmental Performance, Innovation Performance and Sustainability Performance

Major environmental concerns include air and water pollution, GHG emissions, waste management, climate change, natural system, changes in land use, loss of biodiversity, renewable energy, etc. [45–48]. Moreover, depleting natural resources, population growth, slowed economic development and climate change call for conscious efforts from various stakeholders to ensure the sound functioning of the society and economy [49]. Sultana et al. [17] indicated that corporations with worthy environmental practices could achieve sustainable and viable financial returns while also earning satisfactory environmental compliance ratings. Mousa and Othman [50] found a positive impact of green HRM and a dimension of environmental practice on sustainability performance. Abdul-Rashid et al. [51] proposed that sustainability performance can be achieved in the manufacturing industry by undertaking environmental initiatives. Ali et al. [52] evidenced a positive impact of resource, energy and waste management on the sustainable performance of manufacturing firms. Because the environmental issue is now a concern for environmental pressure groups, regulatory bodies and society [53], consideration of this issue in business decision making could help firms, including the Bangladeshi manufacturing industry, achieve a competitive edge, high compliance ratings as well as sustainable performance.

Ong et al. [54] highlighted that the implementation of active environmental protection strategies and routines can promote innovations in organizations. Crossan and Apaydin [55] identified organizational capability, generated by the proper implementation of environmental strategies, mission, systems and structures, as the foundation of innovation practices. Cohen and Levinthal [56] claimed that innovation performance is the outcome of a corporation’s absorption capacity, which is reflected by environmental performance. Delmas and Burbano [57] also mentioned dynamic environmental performance as an indi-

cator of a corporation's ability to identify new dimensions of environmental knowledge and utilize them for importing new business solutions and developing products and processes. Based on a survey of 2000 European manufacturing firms, Wagner [58] observed a positive impact of environmental performance on both product and process innovation. A study on Taiwanese manufacturing firms by Chiou et al. [59] demonstrated that a crucial outcome of environmental performance is green product innovation. Sezen and Cankaya [60] also demonstrated the positive impact of environmental performance by manufacturing firms on green process innovation. In light of the above, it is assumed that a firm's greater environmental performance will result in better environmental innovation. Consequently, the following hypotheses are advanced:

H1: *Environmental performance enhances sustainability performance in the Bangladeshi manufacturing industry.*

H2: *Environmental performance enhances innovation performance in the Bangladeshi manufacturing industry.*

2.3.2. Social Performance, Innovation Performance and Sustainability Performance

Taddese, Durieux [61] defined social performance as the societal impact of business practices on delivered products and services. They describe human rights, health and safety practices and development management as indicators of social performance. Based on the sustainable assessment theory, Chaim et al. [62] stated that long-term sustainability could be achieved through the training and development of employees, which is considered a social contribution. Avery [63] documented that a sustainable corporation must have a mission to contribute to society, considering the direct or indirect relationship between corporate and societal sustainability. Ketprapakorn and Kantabutra [64] highlighted that corporate sustainability depends on four social dimensions, namely leadership, resilient development, stakeholder focus and sharing practices. Chams and García-Blandón [65] argued that sustainable human resource management is necessary to ensure sustainable performance and ultimately attain SDGs. Kim [66] also emphasized the need for social capital for attaining sustainability.

Corporate social performance can be defined as discretionary activities to meet the demand and expectations of society and external stakeholders beyond the interest of shareholders and the firm [67]. Prior studies argued that social performance such as external stakeholder relationship management helps corporations access diversified knowledge and information [68]. McWilliams and Siegel [69] claimed that access to external knowledge enhances firms' absorption capacity, which is necessary to promote their innovativeness. Accordingly, Mahlouji and Anaraki [70] argued that corporations that fail to consider CSR might struggle to innovate. Kramer and Porter [36] also regarded CSR as a potential source of competitive edge and innovation for firms. A study on 320 Japanese firms by Broadstock et al. [71] revealed that CSR activities developed a firm's capacity for innovativeness. Based on the responses from 433 Chinese firms, Zhang et al. [72] also found a positive impact of social performance on innovation performance with a moderating role of corporate governance. Thus, this study concludes that societal performance might facilitate access to stakeholder support to elevate the innovative capacity of the Bangladeshi manufacturing industry and posits the following:

H3: *Social performance enhances sustainability performance in the Bangladeshi manufacturing industry.*

H4: *Social performance enhances innovation performance in the Bangladeshi manufacturing industry.*

2.3.3. Corporate Governance Performance, Innovation Performance and Sustainability Performance

Rodrigue et al. [73] identified a positive link between corporate governance and environmental disclosure, which is a requirement for sustainable performance. Similarly, Ricart et al. [74] found a positive impact of the sustainability committee, a corporate

governance characteristic, on sustainability performance. Many studies have found a positive relationship between corporate governance and sustainability performance [75,76], but some researchers such as Rodrigue et al. [73] have reported an insignificant relationship between sustainability committees and sustainability performance. Maali et al. [12], however, demonstrated a positive relationship between corporate governance and sustainability performance through the mediating effects of CSR. Considering that good governance ensures corporate compliance with social and environmental standards, Arora and Dharwadkar [77] concluded that corporate governance plays a crucial role in ensuring sustainable performance. Bravo and Reguera-Alvarado [78] recognized the positive role of a diversified board on sustainability performance. In the same vein, Rao and Tilt [79] highlighted the importance of diversified stakeholders in corporate governance structure to ensure sustainable and financial performance. Hussain et al. [11] demonstrated that corporate governance enhances sustainability performance by building stakeholder trust. Furthermore, García Martín and Herrero [80] identified the education background of the board of directors, a crucial characteristic of board composition, as generating positive outcomes on sustainability performance.

Corporate governance entails the implementation of some crucial policy instruments to attain organizational goals; it encompasses control mechanisms, risk management, corporate strategy and coordination [81]. A desired corporate governance mechanism promotes better innovation management activities for achieving organizational sustainability. Prior research claimed that the possession of larger board size and an internal governance mechanism promotes firms' innovation and sustainability performance [82]. Wang et al. [83] argued that a larger board size would promote firms' innovation by enabling the convergence of expertise, skills and ideas. However, AlHares [84] identified agency conflict and communication gaps due to larger board size as key hindrances to firms' innovation. Consequently, Lu and Wang [85] recommended a positive role of independent directors in innovative performance. Nevertheless, some researchers found that concentrated ownership could facilitate sustainable innovation because large stockholders have the power and incentive to encourage management toward innovation [86]. In view of the foregoing, this research posits the following hypotheses:

H5: *Corporate governance enhances sustainability performance in the Bangladeshi manufacturing industry.*

H6: *Corporate governance enhances innovation performance in the Bangladeshi manufacturing industry.*

2.3.4. Innovation Performance and Sustainability Performance

Sustainability is defined as a “mother lode of organizational and technological innovations” [87]. Examining the impact of innovation on sustainability performance is crucial to promote SDG 9. Knowles [88] mentioned that a firm's ability to innovate positively influences its capability of survival and prospects. Similarly, Varis and Littunen [89] highlighted that the survival, success and growth of corporations tremendously depend on innovation capability irrespective of their size and other attributes. They investigated different dimensions of innovation and found that a firm's growth was positively influenced by market, product and process innovations, as opposed to organizational innovation. Chen et al. [90] also identified the crucial role of administrative, product and process innovation on firm sustainability. Rashid et al. [23] demonstrated that innovation capability is crucial for the expansion and growth opportunities of businesses and also their achievement of a competitive edge. Bakhtina [91] and Mustafa et al. [92] acknowledged the contribution of innovation in controlling carbon emissions and climate change. Also, Kramer and Porter [36] highlighted the role of cultural openness and the learning capability of firms in their attainment of sustainable competitive advantage. Backed by these shreds of evidence, the following hypothesis is advanced:

H7: *Innovation Performance enhances sustainability performance in the Bangladeshi manufacturing industry.*

2.3.5. The Mediating Role of Innovation on the Relationship between ESG and Sustainability Performance

Considering the importance of sustainability, firms, policymakers and societal actors are now searching for innovation to help organizations achieve sustainability [93]. Innovation is considered a key factor in a sustainable manufacturing process [94]. Prior studies described a sustainable manufacturing system as the development of the product while conforming with the global best practices, such as controlling negative environmental consequences, conserving natural resources and energy and ensuring the safety of the workplace [95,96]. Kanashiro and Rivera [97] demonstrated that sustainability issues could be solved through strategic change, innovation and new strategy implementation. Wong et al. [98] highlighted the significance of green innovation in controlling environmental impact and attaining eco-targets. Huang et al. [99] described green innovation as having a positive impact on the management of internal dynamic dimensions, pressure from market and customers as well as compliance with environmental regulations. Dicuonzo et al. [100] identified a positive relationship between ESG performance and innovation, measured by R&D investment and the number of patents developed by firms. Carayannis et al. [101] described business model innovation and technology as prerequisites for growth and industrialization. Ahmad and Wu [102] also evidenced the role of eco-innovation on ecological sustainability. Du and Li [103] documented that technological innovation promotes total factor carbon productivity. Although several studies have found a positive relationship between innovation and sustainability, some researchers such as Du and Li [103] demonstrated that innovation negatively affects sustainability. Prior studies further evidenced that innovation affects sustainability and ESG practices, and they also revealed that innovation mediates ESG's effects on a number of significant corporate challenges. Xu et al. [104] documented that green innovation plays a mediating role in the relationship between ESG and financial performance. Ge et al.'s [105] analysis showed that innovation input mediates the association between ESG and the high-quality development of Chinese enterprises. Yoo et al. [106] confirmed the mediating role of technology on CSR and corporate financial performance in the US hospitality industry. Shih [107] also noted that innovation, an outcome of knowledge management, mediates the CSR contribution to promoting corporate performance. Javed et al. [108] demonstrated that innovation plays a significant mediating role between ESG and responsible leadership. The impact of economic, social and environmental performance on the different corporate outcomes through innovation has been studied extensively, but a significant research gap exists on the mediating role of innovation in the association between ESG and sustainability performance. In light of the above-mentioned factors, this study hypothesizes the following:

H8: *Innovation performance mediates the relationship between environmental performance and sustainability performance.*

H9: *Innovation performance mediates the relationship between social performance and sustainability performance.*

H10: *Innovation performance mediates the relationship between corporate governance performance and sustainability performance.*

Based on the discussion on the development of hypotheses, the study proposes the following model presented in Figure 1.

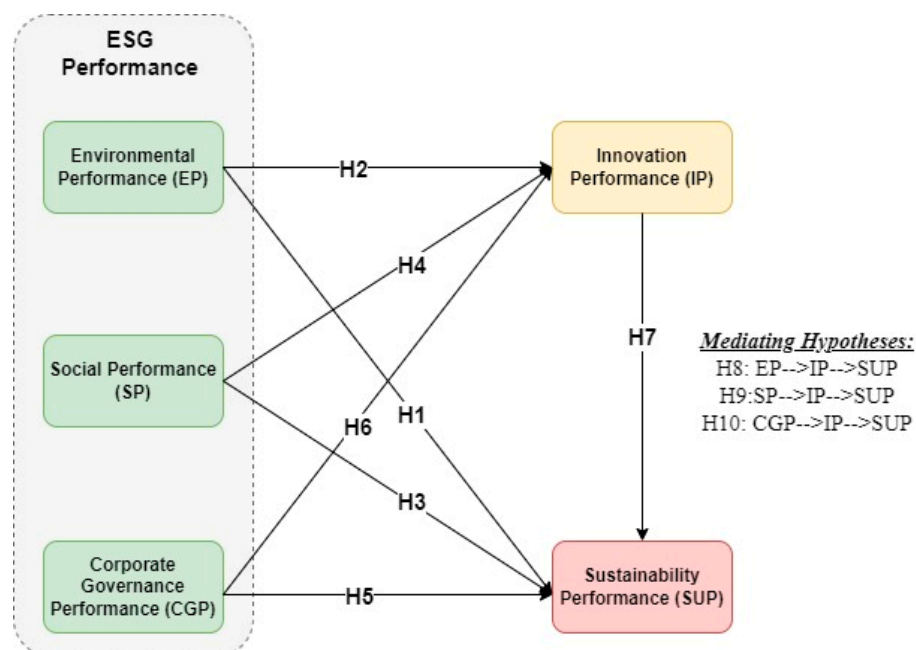


Figure 1. Proposed Model.

3. Materials and Methods

3.1. Sample and Data Collection Procedure

To collect data, a structured close-ended questionnaire was distributed among employees of manufacturing industries in Chattogram, a port city and the site of most Bangladeshi companies. The manufacturing industry has been selected for this study due to the lack of prior studies on the relationship between ESG and sustainability performance in the industry and the developing country, particularly Bangladesh. The manufacturing industry is a critical part of the economy in Bangladesh, and it is important to understand how ESG and sustainability performance can be improved in this sector. This study will help to fill the gap in the literature and allow for a better understanding of the relationship between ESG and sustainability performance in the manufacturing sector. This study will identify best practices for improving ESG and sustainability performance in the manufacturing sector of Bangladesh and provide a basis for further research and policy making. Based on random stratified sampling, a total of 350 questionnaires were served, of which 280 were returned. However, after filtering out the incomplete data, a total of 250 complete responses, indicating a response rate of 71.43%, were retained for further analysis. Studies have suggested that for an investigation having three or more indicators per factor, a sample size of 150 is usually considered sufficient for a convergent and proper solution [109]. As a result, respondents' demographic information can be shown in Table 1.

Table 1. Respondents' Demographic Profile.

Items	Categories	Frequency	Percent
Types of companies	Steel	65	26.0
	Cement	64	25.6
	Glass	70	28.0
	Textile	51	20.4
Number of employees	Below 100	57	22.8
	More than 100	189	77.2
Employee position	Top level	81	32.4
	Middle and lower level	193	67.6
Firm age	Less than 20 years	115	54.0
	More than 20 years	135	46.0
Total		250	100

3.2. Measurement Instrument

The respondents were asked to complete a close-ended structured questionnaire to assess their firm sustainable performance (SUP). The questionnaire employed a seven-point Likert scale ranging from one (strongly disagree) to seven (strongly agree). Items of the questionnaire were adapted from earlier research on ESG practices and sustainable performance [10,39,110]. The survey was made up of two segments: demographic and item-related sections. Specifically, the study included twenty-two (22) items with seven (5) latent variables. The items under each construct have been presented in Appendix A.

3.3. Variables Description

The study defines each of the variables, ESG, innovation and sustainability performance based on the prior studies presented in Table 2.

Table 2. Variables Description.

Variables	Description
Sustainability Performance	The concept of “Triple Bottom Line” focuses on the alignment of social and environmental goals with economic growth to meet the present needs of society and corporations without comprising future needs [39,41–43].
Innovation Performance	Innovation performance could be described as the employment of green technologies in developing business processes and products to facilitate environmental protection and get a sustainable competitive edge [23,54,60].
Environmental Performance	Environmental performance could be referred to as the consideration of environmental protection strategies, mission and structures in business practices and decision-making processes [17,55].
Societal Performance	Social performance can be defined as the impacts of discretionary business activities of a corporation to meet the demand and expectations of society and external stakeholders beyond the interest of shareholders and the firm [61,66,67].
Corporate Governance Performance	Corporate governance performances include the use of risk control tools, enhancing transparency and accountability, improvement rules and regulations, presence of a diversified board, compliance with social and environmental standards and use of a sustainability committee [74,78,81].

3.4. Data Analysis Tools

The study used Partial Least Squares–Structural Equation Modeling (PLS-SEM) to examine the hypothesized relationship. Since PLS-SEM enables the estimation of a number of intricate structural relationships between the variables and the investigation of their mediating effects, this method is especially suitable for this model. Furthermore, PLS-SEM can produce reliable results with a small sample size [111]. The PLS-SEM analysis was carried out using SmartPLS 3.3.3 software, and the model was developed from a causal approach [112]. To clarify the complex interactions between one or more predictor factors and one or more dependent variables, this study used a number of statistical approaches, including measurement and structural models. While the structural model investigated the interactions between latent variables, the measurement model focused on the relationships between measurable and latent variables [110].

For the descriptive statistics, the study estimated the mean, standard deviation, skewness and kurtosis. The study also calculated Cronbach’s Alpha (CA) coefficient, Average Variance Extracted (AVE) and Composite Reliability (CR) to check the consistency and reliability of the data. Moreover, the study estimated R^2 to check the explaining power of the model and conducted the Fornell–Larcker test to check the discriminant validity of the constructs. Also, HTMT correlations were analyzed to check the internal correlations among the variables and multicollinearity issues, and lastly, SEM was performed to examine the significance of the proposed relationships.

4. Results

4.1. Descriptive Statistics

For descriptive analysis, the study calculated the mean, standard deviation, kurtosis and skewness (see Table 3). The mean value of all items was observed to be within the range of 5–6, indicating that most of the respondents moderately agree with items of sustainability performance and its indicators. Moreover, the standard deviations were within 0.5 to 0.7, suggesting that the items are uniformly dispersed. Furthermore, the values of kurtosis and skewness were lower than 3 and 10, respectively, thus validating the normality of the data and their suitability for further analysis [113]. Also, the Variance Inflation Factor (VIF) values of all items were less than the threshold of 10, indicating the absence of multicollinearity in the study [114]. Finally, because the predictor and outcome data were collected with a single technique, the study examined the presence of Common Method Bias (CBM) and confirmed the inexistence of CBM.

Table 3. Descriptive Statistics with Factor Loadings and VIF.

Variables	Items	Mean	Standard Deviation	Kurtosis	Skewness	Factor Loadings	VIF
Corporate Governance Performance (CGP)	CGP10	5.812	0.67	−0.799	0.24	0.853	2.784
	CGP11	5.836	0.646	−0.656	0.17	0.909	3.761
	CGP12	5.836	0.627	−0.541	0.138	0.899	3.581
	CGP13	5.84	0.637	−0.603	0.152	0.899	3.825
	CGP14	5.828	0.631	−0.575	0.155	0.904	4.128
Environmental Performance (EP)	ENP1	5.88	0.64	−0.367	0.02	0.918	3.696
	ENP2	5.852	0.656	−0.334	−0.006	0.93	4.233
	ENP3	5.876	0.617	−0.174	−0.019	0.928	4.109
	ENP4	5.852	0.656	−0.521	0.079	0.897	3.067
Innovation Performance (IP)	INP15	5.924	0.592	−0.166	0.021	0.855	2.087
	INP16	5.88	0.595	−0.249	0.043	0.825	1.931
	INP17	5.876	0.636	−0.565	0.111	0.848	2.156
	INP18	5.916	0.584	−0.102	0.013	0.811	1.87
Social Performance (SP)	SOP5	5.908	0.61	−0.337	0.05	0.853	2.306
	SOP6	5.916	0.604	−0.283	0.039	0.867	2.658
	SOP7	5.928	0.609	−0.314	0.038	0.86	2.664
	SOP8	5.896	0.637	−0.554	0.092	0.868	2.761
	SOP9	5.912	0.633	−0.516	0.073	0.823	2.161
Sustainability Performance (SUP)	SUP19	5.9	0.64	−0.579	0.092	0.847	2.159
	SUP20	5.864	0.649	−0.66	0.141	0.898	2.95
	SUP21	5.9	0.647	−0.623	0.098	0.893	2.781
	SUP22	5.892	0.645	−0.618	0.105	0.848	2.302

4.2. Reflective Measurement Model

The study validates the measurement of the constructs by undertaking reliability (item and internal consistency) and validity (convergent and discriminant) tests. First, the study examines the loading values of individual items shown in Table 3 and Figure 2 to evaluate the internal consistency. The results revealed that the loading values of all items exceeded the threshold value of 0.70 [115], indicating that the items utilized in this study are reliable. Table 4 shows the outcomes of the construct's reliability and validity. Moreover, the internal reliability of the structures was validated using CA and CR values, and a result greater than 0.70 is considered acceptable [115]. As the CA and CR values for all factors were higher than the recommended value of 0.7 [115], the study satisfies the internal consistency requirement.

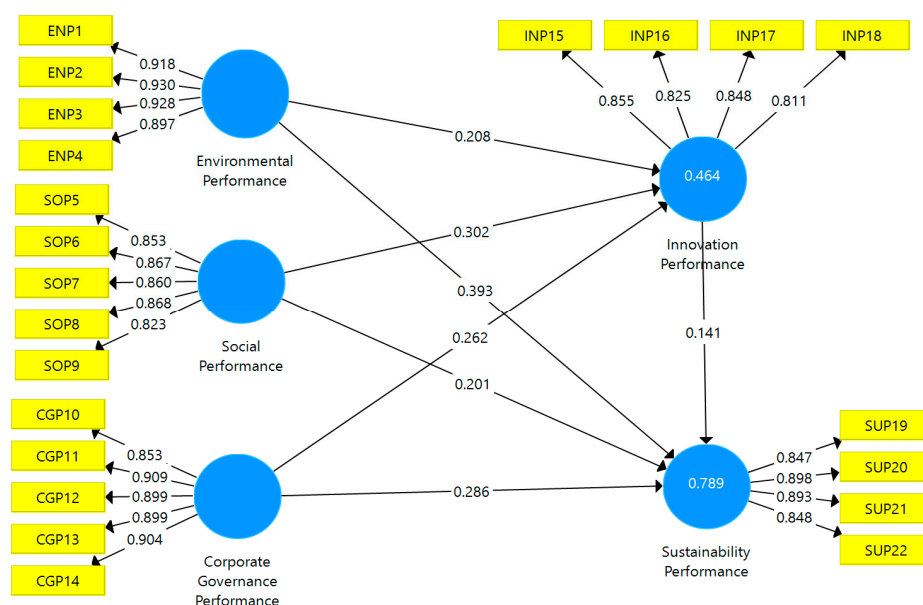


Figure 2. Measurement Model.

Table 4. Reliability.

Variables	Cronbach's Alpha	rho_A	Composite Reliability	AVE	R ²
Corporate Governance Performance	0.937	0.937	0.952	0.798	-
Environmental Performance	0.938	0.938	0.956	0.843	-
Innovation Performance	0.855	0.86	0.902	0.697	0.789
Social Performance	0.907	0.91	0.931	0.73	-
Sustainability Performance	0.895	0.896	0.927	0.76	0.464

Further, the study examines the convergent validity using the AVE. The values of AVE were between 0.697 and 0.843, which exceed the threshold level of 0.05 [115]. Therefore, the research fulfills the criteria of convergent validity. Additionally, the Heterotrait–Monotrait correlation ratio (HTMT) and the Fornell–Larcker criteria were employed to evaluate the discriminant validity of the research constructs. The discriminant validity results, which are displayed in Table 5, showed that each set of variable correlations did not exceed the square root of the AVE. Likewise, all component HTMT values were less than 0.90, proving that discriminant validity is not a problem [116].

Table 5. Discriminant Validity.

Variables	Fornell–Larcker Approach				
	CGP	EP	IP	SOP	SUP
Corporate Governance Performance	0.893				
Environmental Performance	0.769	0.918			
Innovation Performance	0.616	0.592	0.835		
Social Performance	0.642	0.606	0.596	0.854	
Sustainability Performance	0.804	0.819	0.67	0.707	0.872
	HTMT Approach				
	Corporate Governance Performance				
	Environmental Performance	0.82			
	Innovation Performance	0.684	0.658		
	Social Performance	0.691	0.654	0.672	
	Sustainability Performance	0.877	0.893	0.762	0.779

4.3. Model Fit Statistics

Table 4 represents the constructs' predictive power, which also shows how well the model's explanatory variables predict outcomes. The result showed a predictive power (R^2) of 0.789 and 0.464 for innovation performance and sustainability performance, respectively. As per the past literature, an R^2 value larger than 0.26 [117] is indicative of good predictive power.

The Confirmatory Factor Analysis (CFA) was further performed on the final measurement model to examine the degree of fit of our measuring model. However, the validity of the CFA model is dependent on the good fit of the conceptual model. To check the fitness of the model, the study employed the Standardized Root Mean Square Residual (SRMR), which is an indicator of the difference between the observed correlation and the model-implied correlation matrix. The results revealed an SRMR value of 0.05, which is less than the benchmark of 0.08 [118] and thus confirms the fitness of our proposed model.

4.4. SEM Hypotheses Testing

To test the proposed hypotheses, the study applied the SEM method, a popular multivariate statistical tool for validating the relationship between latent variables [116]. Additionally, the SEM method is more suitable for both complex and simple models [112], and its results show the paths, beta values (coefficients), t-statistics and p -values. The SEM results are presented in Table 6 and show that environmental performance (EP) significantly impacts sustainability performance (SUP) ($\beta_1 = 0.393$, $p = 0.001$), thus supporting H1. The coefficient value indicates that a 1% change in EP results in a 0.392% change in SUP. Similarly, EP was observed to significantly impact innovation performance (IP) ($\beta_1 = 0.208$, $p = 0.007$), thus validating H2. The results also revealed that a 1% change in EP leads to a 0.208% change in IP. The social performance (SOP) was found to enhance both SUP ($\beta_1 = 0.201$, $p = 0.000$) and IP ($\beta_1 = 0.302$, $p = 0.000$) at the 1% level of significance, supporting H3 and H4. The results indicated that a 1% rise in SOP would enhance the SUP and IP by 0.20% and 0.30%, respectively. Moreover, Table 6 also shows that corporate governance performance (CGP) positively and significantly impacts the SUP ($\beta_1 = 0.286$, $p = 0.000$) and IP ($\beta_1 = 0.262$, $p = 0.002$) in the Bangladeshi manufacturing industry, thus affirming H5 and H6, respectively. The results further indicated that if the governance performance is raised by 1%, the SUP and IP will be increased by 0.286% and 0.262%, respectively. The result of the direct relationship between the mediating variables (IP and SUP) supported the H7 of a significant positive effect of IP on SUP ($\beta_1 = 0.141$, $p = 0.002$) at the 1% level of significance.

Table 6. Results of Hypotheses.

Hypothesis	Paths	Beta Value	T Statistics	p Values	Remarks
H1	EP \rightarrow SUP	0.393	6.097	0.000 ***	Supported
H2	EP \rightarrow IP	0.208	2.704	0.007 ***	Supported
H3	SOP \rightarrow SUP	0.201	4.228	0.000 ***	Supported
H4	SOP \rightarrow IP	0.302	4.265	0.000 ***	Supported
H5	CGP \rightarrow SUP	0.286	4.966	0.000 ***	Supported
H6	CGP \rightarrow IP	0.262	3.169	0.002 ***	Supported
H7	IP \rightarrow SUP	0.141	3.157	0.002 ***	Supported
Mediation analysis					
H8	EP \rightarrow IP \rightarrow SUP	0.029	2.053	0.040 **	Full mediation
H9	SOP \rightarrow IP \rightarrow SUP	0.043	2.537	0.011 **	Full mediation
H10	CGP \rightarrow IP \rightarrow SUP	0.037	2.236	0.025 **	Full mediation

Note: significant at 1% (***) and 5% (**); r^2 for IP = 0.789 and r^2 for SP = 0.464.

Further, the SEM hypotheses results showed that IP fully mediates the relationship between ESG and firm SUP at the 5% significance level. More specifically, IP has a significant positive influence on the effects of EP, SOP and CGP on SUP. Therefore, the results supported H8, H9 and H10, and further indicated that a 1% increase in EP, SOP and CGP would enhance the SUP by 0.029%, 0.043% and 0.037% respectively, via IP.

5. Discussion and Conclusions

The study examines whether ESG performance impacts sustainability performance through the mediating effect of firm innovation in Bangladeshi manufacturing industries. The results revealed that the higher the ESG performance of a firm, the greater its sustainability and innovation performance. Moreover, innovation fully mediates the relationship between ESG initiatives and sustainability performance, indicating that if a firm enhances its innovation performance, its ESG will accelerate sustainability performance.

As exhibited in Table 6 and Figure 3, a positive relationship exists between environmental performance, innovation and sustainability performance. The empirical results support hypotheses H1 and H2 and are consistent with the findings of the prior literature [50–52]. The finding implies that the higher the environmental performance of manufacturing industries, the greater their sustainability performance. In other words, if firms ensure the reduction of air emissions, hazardous and harmful material consumption and frequent environmental accidents through proper resource, energy and waste management, their environmental performance will increase. Moreover, environmental performance enhances firms' ability to identify the new dimension of environmental knowledge and innovation and use it for providing innovative business solutions and developing products and processes [57]. Thus, the study evidenced that environmental performance plays a crucial role in making manufacturing firms in Bangladesh more sustainable and innovative.

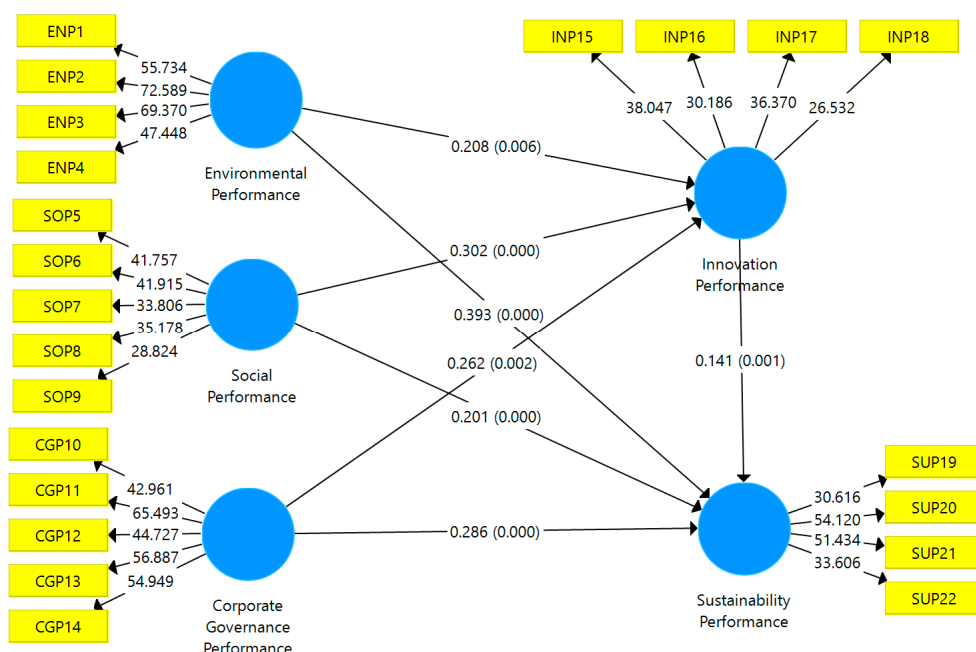


Figure 3. SEM outputs.

Similarly, a significant positive relationship was observed between social performance, innovation and sustainability performance, supporting hypotheses H3 and H4. The result agrees with the studies of Chaim, Muschard [62], Chams and García-Blandón [65] and Kim [66]. The result indicates that if firms improve their human rights, health and safety within their business practices, their social performance will be enhanced [61]. This advises that firms take necessary initiatives such as the provision of employee training and development, promotion of occupational health and safety, and maintenance of commitment

to employee job security and satisfaction as well as community and societal satisfaction to enhance their social performance and in turn achieve long-term sustainability performance. Moreover, social performance enhances firms' capacity for innovativeness [71]. Therefore, the study documented that social performance plays a significant role in the firms' achievement of sustainability and innovation performance.

Moreover, the study found a significant positive association between corporate governance performance, innovation performance and sustainability performance, thereby supporting H5 and H6 as well as the findings of prior studies [75,76]. As good governance encourages firms to prioritize social and environmental issues, corporate governance can be said to be a determinant of sustainability performance [77]. The findings suggest that regulatory bodies should monitor the conformance of firms with environmental and social standards to promote sustainable practices. Also, strong corporate governance demands that the board of directors and investors should not only focus on financial performance but also ensure ESG compliance to enhance sustainability performance. The board of directors should also ensure transparency and accountability at all organizational levels while promoting environmental compliance to build good governance and ultimately accelerate sustainability performance. Additionally, concentrated ownership could facilitate sustainable innovation, because large stockholders have the power and incentive to encourage management toward innovation [86]. The findings also suggest that the management of the manufacturing sectors exercise caution when deciding which risk-control tools to implement.

As indicated in the result, a significant positive relationship was observed between innovation performance and sustainability performance, thus validating H7. The survival, success and growth of a firm are highly dependent on its innovation capacity, firm market, and product and process innovation, all of which also contribute to the firm's sustainability performance [89,90]. Moreover, innovation performance provides firms with a more competitive edge in expanding their business operation [119]. Therefore, firms need to focus on product design and development to satisfy the customers and consequently enhance their sustainability.

Further, the results revealed that innovation performance fully mediates the relationship between ESG and sustainability performance, thus supporting H8, H9 and H10. The study found that ESG performance, directly and indirectly, influences innovation performance, which in turn generates a positive impact on sustainability performance. The results show that when an organization's ESG performance rises, its innovation performance will increase. Because it also mediates the impact of ESG performance on firm performance, company innovation is consequently seen as a critical component in assuring sustainability performance [104]. The company can create products and sustainable production methods through innovation performance. Moreover, innovation performance encourages organizational change to achieve sustainability [93] by controlling negative environmental consequences, conserving natural resources and energy, and ensuring the safety of the workplace [95]. Innovation performance also helps firms' management to comply with environmental, social and governance regulations. Due to innovation performance, products are developed and designed in a way that enables their recycling, reuse and decomposition. Additionally, innovation in green technology increases firms' capacity to satisfy customers with newly designed products, which in turn enhances their competitiveness in the global market. This not only reduces energy consumption and production cost but also enhance firm productivity and financial performance. Therefore, firms should focus on improving their innovation performance to enhance the effect of ESG performance on their sustainability performance.

6. Theoretical and Practical Implications of the Study

The study contributes to the existing literature both theoretically and practically. First, this study develops a conceptual model on the relationship between ESG and sustainability performance encompassing the mediating effect of firm innovation performance. Particu-

larly, the study fills the research gap on the relationship between ESG and sustainability performance in a developing country context such as Bangladesh. Moreover, the study confirmed that ESG performance significantly impacts firms' sustainability performance and innovation performance plays a fully mediating role between them. Finally, this study provides valuable insights for business owners in Bangladesh's manufacturing sector and for decision makers who are deeply worried about manufacturing enterprises' global acceptance despite their violations of social and environmental concerns.

The findings of this study have several implications for the policymakers, the industries' authorities, firm managers, regulatory bodies and other stakeholders. The study provides valuable insight into actions necessary to ensure better sustainability performance through ESG and innovation performance. Because environmental issues are a great concern for environmental pressure groups, regulatory bodies and society, the study suggests that firms consider ESG performance while making a business decision. Firms' prioritization of ESG not only helps them achieve a competitive edge and high compliance rating but also ensures their attainment of better sustainability performance. In this era of globalization, researchers, economists and government and non-government organizations are now concentrating on pro-environmental and social initiatives, including the development of green production processes, reduction of air emissions and solid waste, promotion of employees and society's welfare and encouragement of green behavior among the general public. Therefore, this study highlights some policy implications that are relevant to social and environmental issues of both Bangladeshi and global manufacturing industries. First, the study provides academics with a new conceptual model on how firm innovation plays a crucial mediating role in the relationship between ESG performance and sustainability performance. Second, the study advises firms' managers to adopt new technology and strategies and consider eco-friendly projects while developing their products. The adoption of innovation in product design helps firms not only to satisfy their customers but also helps minimize their eco-unfriendly actions, such as the generation of greenhouse gases and solid wastes. Third, to enhance their reputation, firms should take the necessary initiatives to develop their employees, ensure occupational health and safety, enhance job security and remunerations and address the concerns of the community and other stakeholders. Fourth, the regulatory bodies in conjunction with stakeholders at different levels should monitor the compliance of industries with environmental rules and regulations to promote green innovation and sustainable performance and ultimately protect the environment [120]. Finally, the research offers insights into how the government, local community, corporate organizations and other stakeholders may work together to successfully attain sustainable performance in various industries. This includes the establishment of a set of corporate rules and regulations that guarantee that all manufacturing industries manage environmental resources, ensure high-quality production processes, manage waste and make socially responsible contributions. Additionally, industry management could emphasize the importance of sustainable development and conservation of the environment for future generations by raising public awareness about green performance.

7. Limitations and Directions for Future Studies

Like many other studies, the present study has several flaws. First, the study collected data from employees of manufacturing industries, while neglecting other significant players in the manufacturing industries; hence, the findings may be biased. Due to the employees' reluctance to contribute to the data and the industries' restrictions on access to the workers, the sample size was modest. Therefore, the results of the current research could be strengthened by increasing the sample size and considering other stakeholders in the manufacturing sector, including investors, customers and top-level managers. Future research can also investigate similar hypotheses among other industries operating in Bangladesh (e.g., financial and non-financial sectors). Second, to strengthen the findings, future studies could investigate the impact of ESG performance on sustainability and economic performance through the mediating effect of green innovation practices. Finally,

because the study was carried out in Bangladesh, a developing nation, its conclusions may not be generalizable. Thus, future researchers could carry out a cross-country investigation and a study of similar objectives but on other industries.

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Institutional Review Board Statement: Although there is no institutional review board or committee in Bangladesh, ethical review and clearance were not required for this study. Also, the study was carried out in accordance with the Declaration of Helsinki’s rules. No private information was collected through the research questionnaire.

Informed Consent Statement: Oral consent was obtained from all individuals involved in this study.

Data Availability Statement: The data that support the findings of this study are available from the corresponding authors upon reasonable request.

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Appendix A

Table A1. Survey Items.

Item Code	Descriptions	Sources
Environmental Performance (ENP)		
ENP1	Reduction of air emissions.	[110]
ENP2	Minimization of effluent/solid waste.	
ENP3	Less consumption of hazardous/harmful/toxic materials.	
ENP4	Reduced the frequency of environmental accidents.	
Social Performance (SOP)		
SOP5	Training and development of employee	[17]
SOP6	Promotion of employee occupational health and safety	
SOP7	Employee job security and satisfaction	
SOP8	Commitment to community and society satisfaction	
SOP9	Supplier commitment and initiative	
Corporate governance performance (CGP)		
CGP10	Compliance with the set standards	[39]
CGP11	Improvement of environmental compliance	
CGP12	Improved the set of rules and regulations	
CGP13	Enhancement of risk control mechanism	
CGP14	Promotion of transparency and accountability	
Innovation performance (INP)		
INP15	Improvement of the level of customer satisfaction with product design and development.	[76]
INP16	Development of products that are easy to recycle, reuse and decompose.	
INP17	Improved continual introduction of new product ideas into the production process.	
INP18	Improved market success of new products being tested.	

Table A1. Cont.

Item Code	Descriptions	Sources
Sustainability performance (SUP)		
SUP19	Reduction of the rate of energy consumption and enhancement of economic development	[42,43]
SUP20	Strengthening of the capacity for innovation in green technology and enhancement of competitiveness in the global arena	
SUP21	Promotion of sustainable development and preservation of the environment for future generations	
SUP22	Promotion of best practices and public awareness of the sustainability performance.	

References

- Chin, T.A.; Tat, H.H.; Sulaiman, Z. Green Supply Chain Management, Environmental Collaboration and Sustainability Performance. *Procedia CIRP* **2015**, *26*, 695–699. [\[CrossRef\]](#)
- Acciaro, M.; Vanelander, T.; Sys, C.; Ferrari, C.; Roumboutsos, A.; Giuliano, G.; Lee Lam, J.S.; Kapros, S. Environmental sustainability in seaports: A framework for successful innovation. *Marit. Policy Manag.* **2014**, *41*, 480–500. [\[CrossRef\]](#)
- Iqbal, Q.; Ahmad, N.H.; Halim, H.A. Insights on entrepreneurial bricolage and frugal innovation for sustainable performance. *Bus. Strat. Dev.* **2021**, *4*, 237–245. [\[CrossRef\]](#)
- Niroumand, M.; Shahin, A.; Naghsh, A.; Peikari, H.R. Frugal innovation enablers: A comprehensive framework. *Int. J. Innov. Sci.* **2020**, *12*, 1–20. [\[CrossRef\]](#)
- Iqbal, Q.; Ahmad, N.H.; Ahmad, B. Enhancing sustainable performance through job characteristics via workplace spirituality: A study on SMEs. *J. Sci. Technol. Policy Manag.* **2021**, *12*, 463–490. [\[CrossRef\]](#)
- Holden, E.; Linnerud, K.; Banister, D. *The Imperatives of Sustainable Development: Needs, Justice, Limits*; Routledge: Oxford, UK, 2017.
- Xu, J.; Liu, F.; Shang, Y. R&D investment, ESG performance and green innovation performance: Evidence from China. *Kybernetes* **2020**, *50*, 737–756. [\[CrossRef\]](#)
- Li, T.-T.; Wang, K.; Sueyoshi, T.; Wang, D.D. ESG: Research Progress and Future Prospects. *Sustainability* **2021**, *13*, 11663. [\[CrossRef\]](#)
- Broadstock, D.C.; Chan, K.; Cheng, L.T.; Wang, X. The role of ESG performance during times of financial crisis: Evidence from COVID-19 in China. *Financ. Res. Lett.* **2021**, *38*, 101716. [\[CrossRef\]](#)
- Alsayegh, M.F.; Rahman, R.A.; Homayoun, S. Corporate Economic, Environmental, and Social Sustainability Performance Transformation through ESG Disclosure. *Sustainability* **2020**, *12*, 3910. [\[CrossRef\]](#)
- Hussain, N.; Rigoni, U.; Orij, R. Corporate Governance and Sustainability Performance: Analysis of Triple Bottom Line Performance. *J. Bus. Ethic* **2018**, *149*, 411–432. [\[CrossRef\]](#)
- Maali, K.; Rakia, R.; Khairiddine, M. How corporate social responsibility mediates the relationship between corporate governance and sustainability performance in UK: A multiple mediator analysis. *Soc. Bus. Rev.* **2021**, *16*, 201–217. [\[CrossRef\]](#)
- Yang, Q.; Du, Q.; Razzaq, A.; Shang, Y. How volatility in green financing, clean energy, and green economic practices derive sustainable performance through ESG indicators? A sectoral study of G7 countries. *Resour. Policy* **2022**, *75*, 102526. [\[CrossRef\]](#)
- Ye, C.; Song, X.; Liang, Y. Corporate sustainability performance, stock returns, and ESG indicators: Fresh insights from EU member states. *Environ. Sci. Pollut. Res.* **2022**, *29*, 87680–87691. [\[CrossRef\]](#) [\[PubMed\]](#)
- Yoon, B.; Lee, J.H.; Byun, R. Does ESG Performance Enhance Firm Value? Evidence from Korea. *Sustainability* **2018**, *10*, 3635. [\[CrossRef\]](#)
- Rajesh, R. Exploring the sustainability performances of firms using environmental, social, and governance scores. *J. Clean. Prod.* **2020**, *247*, 119600. [\[CrossRef\]](#)
- Sultana, S.; Zulkifli, N.; Zainal, D. Environmental, Social and Governance (ESG) and Investment Decision in Bangladesh. *Sustainability* **2018**, *10*, 1831. [\[CrossRef\]](#)
- Zheng, G.-W.; Siddik, A.B.; Masukujjaman, M.; Fatema, N. Factors Affecting the Sustainability Performance of Financial Institutions in Bangladesh: The Role of Green Finance. *Sustainability* **2021**, *13*, 10165. [\[CrossRef\]](#)
- Tribune, D. Is Bangladesh's Manufacturing Sector Fit to Compete? 2022. Available online: <https://www.dhakatribune.com/business/2022/10/11/is-bangladeshs-manufacturing-sector-fit-to-compete> (accessed on 12 October 2022).
- Zaid, A.A.; Jaaron, A.A.M.; Bon, A.T. The impact of green human resource management and green supply chain management practices on sustainable performance: An empirical study. *J. Clean. Prod.* **2018**, *204*, 965–979. [\[CrossRef\]](#)
- Hossan, C.G.; Sarker, M.A.R.; Afroze, R. Recent unrest in the RMG sector of Bangladesh: Is this an outcome of poor labour practices? *Int. J. Bus. Manag.* **2012**, *7*, 206. [\[CrossRef\]](#)
- Ansary, M.A.; Barua, U. Workplace safety compliance of RMG industry in Bangladesh: Structural assessment of RMG factory buildings. *Int. J. Disaster Risk Reduct.* **2015**, *14*, 424–437. [\[CrossRef\]](#)
- Rashid, M.H.U.; Zobair, S.A.M.; Shadek, M.J.; Hoque, M.A.; Ahmad, A. Factors Influencing Green Performance in Manufacturing Industries. *Int. J. Financ. Res.* **2019**, *10*, 159–173. [\[CrossRef\]](#)
- Tariq, A.; Badir, Y.; Chonglertham, S. Green innovation and performance: Moderation analyses from Thailand. *Eur. J. Innov. Manag.* **2019**, *22*, 446–467. [\[CrossRef\]](#)

25. Jahid, M.A.; Rashid, M.H.U.; Hossain, S.Z.; Haryono, S.; Jatmiko, B. Impact of Corporate Governance Mechanisms on Corporate Social Responsibility Disclosure of Publicly-Listed Banks in Bangladesh. *J. Asian Financ. Econ. Bus.* **2020**, *7*, 61–71. [\[CrossRef\]](#)
26. Flammer, C.; Kacperczyk, A. Corporate social responsibility as a defense against knowledge spillovers: Evidence from the inevitable disclosure doctrine. *Strat. Manag. J.* **2019**, *40*, 1243–1267. [\[CrossRef\]](#)
27. Atan, R.; Alam, M.M.; Said, J.; Zamri, M. The impacts of environmental, social, and governance factors on firm performance: Panel study of Malaysian companies. *Manag. Environ. Qual. Int. J.* **2018**, *29*, 182–194. [\[CrossRef\]](#)
28. Jahid, A.; Rashid, M.H.U.; Masud, A.K.; Yaya, R. A longitudinal study of corporate social responsibility expenditure and ownership structure of financial firms. *Banks Bank Syst.* **2022**, *17*, 24. [\[CrossRef\]](#)
29. Masud, M.A.K.; Rahman, M.; Rashid, M.H.U. Anti-Corruption Disclosure, Corporate Social Expenditure and Political Corporate Social Responsibility: Empirical Evidence from Bangladesh. *Sustainability* **2022**, *14*, 6140. [\[CrossRef\]](#)
30. Rashid, M.H.U.; Khanam, R.; Ullah, M.H. Corporate governance and IFSB standard-4: Evidence from Islamic banks in Bangladesh. *Int. J. Islam. Middle East. Financ. Manag.* **2022**, *15*, 1–17. [\[CrossRef\]](#)
31. Freeman, R.E.; Dmytriiev, S. Corporate Social Responsibility and Stakeholder Theory: Learning From Each Other. *Symph. Emerg. Issues Manag.* **2017**, *1*, 7–15. [\[CrossRef\]](#)
32. Zheng, Y.; Rashid, M.H.U.; Siddik, A.B.; Wei, W.; Hossain, S.Z. Corporate Social Responsibility Disclosure and Firm's Productivity: Evidence from the Banking Industry in Bangladesh. *Sustainability* **2022**, *14*, 6237. [\[CrossRef\]](#)
33. Rashid, M.H.U.; Hossain, S.Z. Does board independence moderate the effect of politician directors on CSR disclosure? Evidence from the publicly listed banks in Bangladesh. *Soc. Responsib. J.* **2022**, *18*, 935–950. [\[CrossRef\]](#)
34. Rashid, M.H.U.; Zobair, S.A.M.; Chowdhury, M.A.I.; Islam, A. Corporate governance and banks' productivity: Evidence from the banking industry in Bangladesh. *Bus. Res.* **2020**, *13*, 615–637. [\[CrossRef\]](#)
35. Rezaee, Z. Business sustainability research: A theoretical and integrated perspective. *J. Account. Lit.* **2016**, *36*, 48–64. [\[CrossRef\]](#)
36. Kramer, M.R.; Porter, M. *Creating Shared Value*; FSG: Boston, MA, USA, 2011; Volume 17.
37. Uddin, M.N.; Rashid, M.H.U.; Rahman, M.T. Profitability, marketability, and CSR disclosure efficiency of the banking industry in Bangladesh. *Heliyon* **2022**, *8*, e11904. [\[CrossRef\]](#) [\[PubMed\]](#)
38. Guthrie, J.; Parker, L.D. Corporate Social Reporting: A Rebuttal of Legitimacy Theory. *Account. Bus. Res.* **1989**, *19*, 343–352. [\[CrossRef\]](#)
39. Masud, M.A.K.; Rashid, M.H.U.; Khan, T.; Bae, S.M.; Kim, J.D. Organizational strategy and corporate social responsibility: The mediating effect of triple bottom line. *Int. J. Environ. Res. Public Health* **2019**, *16*, 4559. [\[CrossRef\]](#)
40. Michelon, G.; Pilonato, S.; Ricceri, F. CSR reporting practices and the quality of disclosure: An empirical analysis. *Crit. Perspect. Account.* **2015**, *33*, 59–78. [\[CrossRef\]](#)
41. Elkington, J. Partnerships from cannibals with forks: The triple bottom line of 21st-century business. *Environ. Qual. Manag.* **1998**, *8*, 37–51. [\[CrossRef\]](#)
42. Kamble, S.S.; Gunasekaran, A.; Gawankar, S.A. Achieving sustainable performance in a data-driven agriculture supply chain: A review for research and applications. *Int. J. Prod. Econ.* **2020**, *219*, 179–194. [\[CrossRef\]](#)
43. Helleno, A.L.; de Moraes, A.J.I.; Simon, A.T. Integrating sustainability indicators and Lean Manufacturing to assess manufacturing processes: Application case studies in Brazilian industry. *J. Clean. Prod.* **2017**, *153*, 405–416. [\[CrossRef\]](#)
44. Moktadir, M.A.; Rahman, T.; Rahman, M.H.; Ali, S.M.; Paul, S.K. Drivers to sustainable manufacturing practices and circular economy: A perspective of leather industries in Bangladesh. *J. Clean. Prod.* **2018**, *174*, 1366–1380. [\[CrossRef\]](#)
45. Rashid, M.H.U.; Uddin, M.M. Green financing for sustainability: Analysing the trends with challenges and prospects in the context of Bangladesh. *Int. J. Green Econ.* **2018**, *12*, 192–208. [\[CrossRef\]](#)
46. Bae, S.M.; Masud, A.K.; Rashid, M.H.U.; Kim, J.D. Determinants of climate financing and the moderating effect of politics: Evidence from Bangladesh. *Sustain. Account. Manag. Policy J.* **2022**, *13*, 247–272. [\[CrossRef\]](#)
47. Firoj, M.; Sultana, N.; Khanom, S.; Rashid, M.H.U.; Sultana, A. Pollution haven hypothesis and the environmental Kuznets curve of Bangladesh: An empirical investigation. *Asia-Pac. J. Reg. Sci.* **2022**, *7*, 197–227. [\[CrossRef\]](#)
48. Mustafa, S.; Zhang, W.; Sohail, M.T.; Rana, S.; Long, Y. A moderated mediation model to predict the adoption intention of renewable wind energy in developing countries. *PLoS ONE* **2023**, *18*, e0281963. [\[CrossRef\]](#)
49. Zhu, D. Research from global Sustainable Development Goals (SDGs) to sustainability science based on the object-subject-process framework. *Chin. J. Popul. Resour. Environ.* **2017**, *15*, 8–20. [\[CrossRef\]](#)
50. Mousa, S.K.; Othman, M. The impact of green human resource management practices on sustainable performance in healthcare organisations: A conceptual framework. *J. Clean. Prod.* **2020**, *243*, 118595. [\[CrossRef\]](#)
51. Abdul-Rashid, S.H.; Sakundarini, N.; Ghazilla, R.A.R.; Thurasamy, R. The impact of sustainable manufacturing practices on sustainability performance: Empirical evidence from Malaysia. *Int. J. Oper. Prod. Manag.* **2017**, *37*, 182–204. [\[CrossRef\]](#)
52. Ali, M.H.; Zailani, S.; Iranmanesh, M.; Foroughi, B. Impacts of Environmental Factors on Waste, Energy, and Resource Management and Sustainable Performance. *Sustainability* **2019**, *11*, 2443. [\[CrossRef\]](#)
53. Ahmad, A.; Khan, M.A.; Abdullah, A.A.M.; Rashid, M.H.U. Environmental disclosures: A study on some selected pharmaceutical and chemical companies in Bangladesh. *IIUC Bus. Rev.* **2017**, *6*, 9–24.
54. Ong, T.S.; Lee, A.S.; Teh, B.H.; Magsi, H.B. Environmental Innovation, Environmental Performance and Financial Performance: Evidence from Malaysian Environmental Proactive Firms. *Sustainability* **2019**, *11*, 3494. [\[CrossRef\]](#)

55. Crossan, M.M.; Apaydin, M. A Multi-Dimensional Framework of Organizational Innovation: A Systematic Review of the Literature. *J. Manag. Stud.* **2010**, *47*, 1154–1191. [\[CrossRef\]](#)
56. Cohen, W.M.; Levinthal, D.A. Absorptive capacity: A new perspective on learning and innovation. *Adm. Sci. Q.* **1990**, *35*, 128–152. [\[CrossRef\]](#)
57. Delmas, M.A.; Burbano, V.C. The drivers of greenwashing. *Calif. Manag. Rev.* **2011**, *54*, 64–87. [\[CrossRef\]](#)
58. Wagner, M. Innovation and competitive advantages from the integration of strategic aspects with social and environmental management in European firms. *Bus. Strat. Environ.* **2009**, *18*, 291–306. [\[CrossRef\]](#)
59. Chiou, T.-Y.; Chan, H.K.; Lettice, F.; Chung, S.H. The influence of greening the suppliers and green innovation on environmental performance and competitive advantage in Taiwan. *Transp. Res. Part E Logist. Transp. Rev.* **2011**, *47*, 822–836. [\[CrossRef\]](#)
60. Sezen, B.; Çankaya, S.Y. Effects of Green Manufacturing and Eco-innovation on Sustainability Performance. *Procedia Soc. Behav. Sci.* **2013**, *99*, 154–163. [\[CrossRef\]](#)
61. Taddese, G.; Durieux, S.; Duc, E. Sustainability performance indicators for additive manufacturing: A literature review based on product life cycle studies. *Int. J. Adv. Manuf. Technol.* **2020**, *107*, 3109–3134. [\[CrossRef\]](#)
62. Chaim, O.; Muschard, B.; Cazarini, E.; Rozenfeld, H. Insertion of sustainability performance indicators in an industry 4.0 virtual learning environment. *Procedia Manuf.* **2018**, *21*, 446–453. [\[CrossRef\]](#)
63. Avery, G. *Leadership for Sustainable Futures: Achieving Success in a Competitive World*; Edward Elgar Publishing: Cheltenham, UK, 2005.
64. Ketprapakorn, N.; Kantabutra, S. Sustainable Social Enterprise Model: Relationships and Consequences. *Sustainability* **2019**, *11*, 3772. [\[CrossRef\]](#)
65. Chams, N.; García-Blandón, J. On the importance of sustainable human resource management for the adoption of sustainable development goals. *Resour. Conserv. Recycl.* **2019**, *141*, 109–122. [\[CrossRef\]](#)
66. Kim, J. Social dimension of sustainability: From community to social capital. *J. Glob. Sch. Mark. Sci.* **2018**, *28*, 175–181. [\[CrossRef\]](#)
67. Duque-Grisales, E.; Aguilera-Caracuel, J. Environmental, Social and Governance (ESG) Scores and Financial Performance of Multilatinas: Moderating Effects of Geographic International Diversification and Financial Slack. *J. Bus. Ethic* **2021**, *168*, 315–334. [\[CrossRef\]](#)
68. Choi, J.; Wang, H. Stakeholder relations and the persistence of corporate financial performance. *Strat. Manag. J.* **2009**, *30*, 895–907. [\[CrossRef\]](#)
69. McWilliams, A.; Siegel, D. Corporate social responsibility and financial performance: Correlation or misspecification? *Strateg. Manag. J.* **2000**, *21*, 603–609. [\[CrossRef\]](#)
70. Mahlouji, H.; Anaraki, N.K. Corporate social responsibility towards social responsible innovation: A dynamic capability approach. *Int. Rev. Bus. Res. Pap.* **2009**, *5*, 185–194.
71. Broadstock, D.C.; Matousek, R.; Meyer, M.; Tzeremes, N.G. Does corporate social responsibility impact firms' innovation capacity? The indirect link between environmental & social governance implementation and innovation performance. *J. Bus. Res.* **2020**, *119*, 99–110. [\[CrossRef\]](#)
72. Zhang, Q.; Loh, L.; Wu, W. How do environmental, social and governance initiatives affect innovative performance for corporate sustainability? *Sustainability* **2020**, *12*, 3380. [\[CrossRef\]](#)
73. Rodrigue, M.; Magnan, M.; Cho, C.H. Is Environmental Governance Substantive or Symbolic? An Empirical Investigation. *J. Bus. Ethic* **2013**, *114*, 107–129. [\[CrossRef\]](#)
74. Ricart, J.E.; Rodríguez, M.Á.; Sanchez, P. Sustainability in the boardroom: An empirical examination of Dow Jones Sustainability World Index leaders. *Corp. Gov. Int. J. Bus. Soc.* **2005**, *5*, 24–41. [\[CrossRef\]](#)
75. Liao, L.; Luo, L.; Tang, Q. Gender diversity, board independence, environmental committee and greenhouse gas disclosure. *Br. Account. Rev.* **2015**, *47*, 409–424. [\[CrossRef\]](#)
76. Rashid, M.H.U.; Hamid, M.A. Measurement of CSR Performance in Manufacturing Industries: A SEM Approach. *Int. J. Soc. Ecol. Sustain. Dev.* **2022**, *13*, 1–18. [\[CrossRef\]](#)
77. Arora, P.; Dharwadkar, R. Corporate Governance and Corporate Social Responsibility (CSR): The Moderating Roles of Attainment Discrepancy and Organization Slack. *Corp. Gov. Int. Rev.* **2011**, *19*, 136–152. [\[CrossRef\]](#)
78. Bravo, F.; Reguera-Alvarado, N. Sustainable development disclosure: Environmental, social, and governance reporting and gender diversity in the audit committee. *Bus. Strat. Environ.* **2019**, *28*, 418–429. [\[CrossRef\]](#)
79. Rao, K.; Tilt, C. Board Composition and Corporate Social Responsibility: The Role of Diversity, Gender, Strategy and Decision Making. *J. Bus. Ethic* **2016**, *138*, 327–347. [\[CrossRef\]](#)
80. Martín, C.J.G.; Herrero, B. Do board characteristics affect environmental performance? A study of EU firms. *Corp. Soc. Responsib. Environ. Manag.* **2019**, *27*, 74–94. [\[CrossRef\]](#)
81. E-Vahdati, S.; Zulkifli, N.; Zakaria, Z. Corporate governance integration with sustainability: A systematic literature review. *Corp. Gov. Int. J. Bus. Soc.* **2018**, *19*, 255–269. [\[CrossRef\]](#)
82. Gutiérrez-Martínez, I.; Duhamel, F. Translating sustainability into competitive advantage: The case of Mexico's hospitality industry. *Corp. Gov. Int. J. Bus. Soc.* **2019**, *19*, 1324–1343. [\[CrossRef\]](#)
83. Wang, Y.; Abbasi, K.; Babajide, B.; Yekini, K.C. Corporate governance mechanisms and firm performance: Evidence from the emerging market following the revised CG code. *Corp. Gov. Int. J. Bus. Soc.* **2019**, *20*, 158–174. [\[CrossRef\]](#)
84. AlHares, A. Corporate governance mechanisms and R&D intensity in OECD countries. *Corp. Gov. Int. J. Bus. Soc.* **2020**, *20*, 863–885.

85. Lu, J.; Wang, W. Managerial conservatism, board independence and corporate innovation. *J. Corp. Financ.* **2018**, *48*, 1–16. [\[CrossRef\]](#)
86. Omri, W.; Becuwe, A.; Mathe, J.C. Ownership structure and innovative behavior: Testing the mediatory role of board composition. *J. Account. Emerg. Econ.* **2014**, *4*, 220–239. [\[CrossRef\]](#)
87. Nidumolu, R.; Prahalad, C.K.; Rangaswami, M.R. Why sustainability is now the key driver of innovation. *Harv. Bus. Rev.* **2009**, *87*, 56–64.
88. Knowles, C.D. *Measuring Innovativeness in the North American Softwood Sawmilling Industry*; Oregon State University: Corvallis, OR, USA, 2007.
89. Varis, M.; Littunen, H. Types of innovation, sources of information and performance in entrepreneurial SMEs. *Eur. J. Innov. Manag.* **2010**, *13*, 128–154. [\[CrossRef\]](#)
90. Chen, J.; Liu, Z.-C.; Wu, N.-Q. Relationships between organizational learning, innovation and performance: An empirical examination. In Proceedings of the 2009 International Conference on Information Management, Innovation Management and Industrial Engineering, Xi'an, China, 26–27 December 2009; IEEE: Piscataway, NJ, USA, 2009.
91. Bakhtina, V.A. Innovation and its potential in the context of the ecological component of sustainable development. *Sustain. Account. Manag. Policy J.* **2011**, *2*, 248–262. [\[CrossRef\]](#)
92. Mustafa, S.; Hao, T.; Qiao, Y.; Shah, S.K.; Sun, R. How a Successful Implementation and Sustainable Growth of e-Commerce can be Achieved in Developing Countries: A Pathway Towards Green Economy. *Front. Environ. Sci.* **2022**, *10*, 1–17. [\[CrossRef\]](#)
93. Ivanaj, S.; Ivanaj, V.; McIntyre, J.; Da Costa, N.G.; Lozano, R. Multinational Enterprises' strategic dynamics and climate change: Drivers, barriers and impacts of necessary organisational change. *J. Clean. Prod.* **2015**, *30*, 1e4. [\[CrossRef\]](#)
94. Faulkner, W.; Badurdeen, F. Sustainable Value Stream Mapping (Sus-VSM): Methodology to visualize and assess manufacturing sustainability performance. *J. Clean. Prod.* **2014**, *85*, 8–18. [\[CrossRef\]](#)
95. Commerce, T. *The US Department of The International Trade Administration and the US Department of Commerce's definition for Sustainable Manufacturing*; The US Department of Commerce: Washington, DC, USA, 2010.
96. Mustafa, S.; Hao, T.; Jamil, K.; Qiao, Y.; Nawaz, M. Role of Eco-Friendly Products in the Revival of Developing Countries' Economies and Achieving a Sustainable Green Economy. *Front. Environ. Sci.* **2022**, *10*, 1082. [\[CrossRef\]](#)
97. Kanashiro, P.; Rivera, J. Do Chief Sustainability Officers Make Companies Greener? The Moderating Role of Regulatory Pressures. *J. Bus. Ethic* **2019**, *155*, 687–701. [\[CrossRef\]](#)
98. Wong, W.P.; Tseng, M.-L.; Tan, K.H. A business process management capabilities perspective on organisation performance. *Total Qual. Manag. Bus. Excel.* **2014**, *25*, 602–617. [\[CrossRef\]](#)
99. Huang, X.-X.; Hu, Z.-P.; Liu, C.-S.; Yu, D.-J.; Yu, L.-F. The relationships between regulatory and customer pressure, green organizational responses, and green innovation performance. *J. Clean. Prod.* **2016**, *112*, 3423–3433. [\[CrossRef\]](#)
100. Dicuonzo, G.; Donofrio, F.; Rinaldo, S.; Dell'Atti, V. The effect of innovation on environmental, social and governance (ESG) practices. *Meditari Account. Res.* **2022**, *30*, 1191–1209. [\[CrossRef\]](#)
101. Carayannis, E.G.; Sindakis, S.; Walter, C. Business Model Innovation as Lever of Organizational Sustainability. *J. Technol. Transf.* **2015**, *40*, 85–104. [\[CrossRef\]](#)
102. Ahmad, M.; Wu, Y. Combined role of green productivity growth, economic globalization, and eco-innovation in achieving ecological sustainability for OECD economies. *J. Environ. Manag.* **2022**, *302*, 113980. [\[CrossRef\]](#) [\[PubMed\]](#)
103. Du, K.; Li, J. Towards a green world: How do green technology innovations affect total-factor carbon productivity. *Energy Policy* **2019**, *131*, 240–250. [\[CrossRef\]](#)
104. Xu, X.; Imran, M.; Ayaz, M.; Lohana, S. The Mediating Role of Green Technology Innovation with Corporate Social Responsibility, Firm Financial, and Environmental Performance: The Case of Chinese Manufacturing Industries. *Sustainability* **2022**, *14*, 16951. [\[CrossRef\]](#)
105. Ge, G.; Xiao, X.; Li, Z.; Dai, Q. Does ESG Performance Promote High-Quality Development of Enterprises in China? The Mediating Role of Innovation Input. *Sustainability* **2022**, *14*, 3843. [\[CrossRef\]](#)
106. Yoo, C.; Yeon, J.; Lee, S. Beyond “good company”: The mediating role of innovation in the corporate social responsibility and corporate firm performance relationship. *Int. J. Contemp. Hosp. Manag.* **2022**, *34*, 3677–3696. [\[CrossRef\]](#)
107. Shih, T.-Y. Exploring the Effects of Prospective Corporate Social Responsibility on Firm Performance: The Mediating Role of Innovation. In *Technology Analysis & Strategic Management*; Taylor & Francis: Abingdon, UK, 2022; pp. 1–13.
108. Javed, M.; Ali, H.Y.; Asrar-ul-Haq, M.; Ali, M.; Kirmani, S.A.A. Responsible leadership and triple-bottom-line performance—Do corporate reputation and innovation mediate this relationship? *Leadersh. Organ. Dev. J.* **2020**, *41*, 501–517.
109. Anderson, J.C.; Gerbing, D.W. The effect of sampling error on convergence, improper solutions, and goodness-of-fit indices for maximum likelihood confirmatory factor analysis. *Psychometrika* **1984**, *49*, 155–173. [\[CrossRef\]](#)
110. Tan, K.; Siddik, A.B.; Sobhani, F.A.; Hamayun, M.; Masukujaman, M. Do Environmental Strategy and Awareness Improve Firms' Environmental and Financial Performance? The Role of Competitive Advantage. *Sustainability* **2022**, *14*, 10600. [\[CrossRef\]](#)
111. Van Riel, A.C.; Henseler, J.; Kemény, I.; Sasovova, Z. Estimating hierarchical constructs using consistent partial least squares: The case of second-order composites of common factors. *Ind. Manag. Data Syst.* **2017**, *117*, 459–477. [\[CrossRef\]](#)
112. Hair, J.F., Jr.; Sarstedt, M.; Ringle, C.M.; Gudergan, S.P. *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*; Sage Publications: New York, NY, USA, 2021.
113. Ringle, C.M.; Wende, S.; Becker, J.-M. *SmartPLS 3*; SmartPLS GmbH: Boenningstedt, Germany, 2015.

114. Hair, J.F.; Anderson, R.E.; Tatham, R.L.; Black, W.C. *Multivariate Data Analysis with Readings*, 1995; Petroleum Publishing: Tulsa, OK, USA, 1984.
115. Hair, J.; Hollingsworth, C.L.; Randolph, A.B.; Chong, A.Y.L. An updated and expanded assessment of PLS-SEM in information systems research. *Ind. Manag. Data Syst.* **2017**, *117*, 442–458. [[CrossRef](#)]
116. Hair, J.F., Jr.; Black, W.C.; Babin, B.J.; Anderson, R.E. *Multivariate Data Analysis: A Global Perspective*, 7th ed.; Pearson Education: Upper Saddle River, NJ, USA, 2010.
117. Cohen, J. *Statistical Power Analysis for the Behavioural Sciences*; Baski: Hillsdale, NJ, USA, 1988.
118. Steiger, J.H. Understanding the limitations of global fit assessment in structural equation modeling. *Pers. Individ. Differ.* **2007**, *42*, 893–898. [[CrossRef](#)]
119. Julienti, L.; Bakar, A.; Ahmad, H. Assessing the relationship between firm resources and product innovation performance: A resource-based view. *Bus. Process Manag. J.* **2010**, *16*, 420–435. [[CrossRef](#)]
120. Aslam, S.; Ahmad, M.; Amin, S.; Usman, M.; Arif, S. The impact of corporate governance and intellectual capital on firm's performance and corporate social responsibility disclosure. *Pak. J. Commer. Soc. Sci.* **2018**, *12*, 283–308.

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