





## Article

# CSR and Sustainable Environmental Performance: An Exploration of Mediating and Moderating Factors

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**Abstract:** Taking into consideration the moderating role of perceived organizational support within the framework of the natural resource-based view (RBV) theory, the purpose of this study is to investigate the connection between corporate social responsibility (CSR) and sustainable environmental performance. Specifically, this study focuses on the roles that green capability and green transformational leadership play as mediators in this relationship. Through the use of a survey questionnaire, information was collected from 420 employees working for small- and medium-sized enterprises (SMEs) in Bangladesh. The data were analyzed with the help of AMOS and SPSS. The findings indicate that the level of CSR has a significant impact on the performance of sustainable environmental practices. To a large extent, green capability and green transformational leadership serve as mediators in the relationship between CSR and sustainable environmental performance. Furthermore, perceived organizational support plays a significant role in moderating the relationship between CSR and sustainable environmental performance. The relationship between green transformational leadership and sustainable environmental performance is also significantly moderated by perceived organizational support. This is a significant contributor to the connection. This multi-dimensional corporate social responsibility model can be used to assess sustainable environmental performance in both industrialized and developing countries, and it can also be extended to other service sectors, according to the theoretical conclusion that can be drawn from the research. This research demonstrates that there is a direct connection between corporate social responsibility and sustainable environmental performance. As a result, practitioners are able to develop strategies that are effective in terms of corporate social responsibility. These findings should be taken into consideration by policymakers and managers who are dedicated to promoting equitable development of the country.

**Keywords:** CSR; sustainable environmental performance; sustainable development; green leadership; green capability; perceived organizational support



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## 1. Introduction

Degradation of the environment is a common problem that has drawn attention recently. Previously, small- and medium-sized enterprises (SMEs), environmental representatives, researchers, and manufacturers did not first prioritize environmental considerations in their daily operations, causing negative consequences on the environment [1]. The issue

of environmental degradation is widespread and has garnered significant attention recently. The factors contributing to environmental degradation are increasingly recognized in contemporary discourse. These encompass alterations in the environment, escalating water usage, atmospheric contamination, and the discharge of hazardous materials. The declaration that 2018 was the warmest year documented underscores the urgency of addressing environmental concerns. Small- and medium-sized enterprises are actively implementing measures to mitigate their impact on the environment in response to stakeholder demands for a reduced ecological footprint [2–4]. Consequently, enterprises are integrating sustainable environmental practices as an essential element of their daily operations. Sustainable performance refers to an organization's capacity to attain enduring success while mitigating adverse effects on the environment and society. Financial incentives linked to environmental activities serve as a significant motivator for academics and industry professionals [5–7]. Concepts such as “green capability and green transformational leadership” [8], “green HRM activities” [9], “green supply chain operations” [10], and “green innovation” [11] exemplify the active engagement of researchers in shaping the dialogue on environmental sustainability.

The environment directly influences the economic sphere. Achieving a competitive advantage and enhancing profitability can be accomplished by incorporating environmental considerations. The primary objective of this research is to examine the criteria employed to evaluate sustainable environmental performance. Small- and medium-sized enterprises (SMEs) significantly affect the environment, contributing to issues such as resource depletion, air and water pollution, and climate change [3]. Small- and medium-sized enterprises also produce pollution and waste, which can be harmful to local ecosystems. Promoting sustainable environmental practices is imperative, and numerous locations have implemented such programs [12]. For example, Bangladesh, a developing country, generates 7.72% more CO<sub>2</sub> annually than it currently does a concern for scholars and practitioners [13]. According to Centobelli et al. [14], greenhouse gas emissions and CO<sub>2</sub> production have attained unprecedented levels. Our study underscores the importance of social cohesion, economic growth, and environmental awareness. Effective corporate management necessitates comprehension of socioeconomic factors and the resolution of associated challenges [7,15]. Moreover, further research on corporate social responsibility (CSR) is necessary [16,17]. Surveys indicate that approximately 8000 multinational corporations operating in 160 countries have invested nearly \$4 trillion in corporate social responsibility initiatives [18]. Companies must adhere to ethical standards alongside their autonomy to market products. Corporate social responsibility is now universally recognized and an essential element of numerous enterprises.

Organizations must comprehend corporate social responsibility (CSR) as sustainable environmental considerations are increasingly integral to their business strategy. Organizations previously prioritized profit, but now they must also consider environmental sustainability. The correlation between CSR and technical and economic success is currently a prominent area of research; however, the link between corporate social responsibility and sustainable environmental performance (SEP) is garnering comparatively less focus [19]. Some studies suggest that CSR may enhance business efficiency [20].

The resource-based view (RBV) research indicates that a company's sustainable performance framework is a critical component. The correlation between corporate social responsibility and corporate success remains ambiguous; however, numerous experts assert that moderation and mediation are critical components. [8,21]. The investigation's findings show that green capability (GC) and green transformational leadership (GTL), two mediators, link corporate social responsibility and sustainable environmental performance and assist sustainable environmental performance. According to Hart [22], the foundation of RBV is the idea that green capability and green transformational leadership are the two essential elements of sustainable performance. Accordingly, corporate social responsibility, green capability, and green transformational leadership need to be significant metrics for assessing how well a corporation is doing [7,8]. Moreover, it has been shown that obtain-

ing sustainable company success is significantly influenced by perceived organizational support (POS) [21].

What motivated this analysis was the discovery that prior studies had largely overlooked the role that corporate social responsibility plays in enhancing the sustainable environmental performance of SMEs in Bangladesh. The purpose of this work is to close that gap by examining the mediating roles of green transformational leadership and green capability. This study also looks at how perceived organizational support promotes sustainable environmental performance and modifies the link between corporate social responsibility and green transformational leadership. No other study has specifically examined the impact of corporate social responsibility on sustainable environmental performance through the mediating effects of green capability and green transformational leadership, despite the fact that numerous researchers have examined the impacts of corporate social responsibility and other mediators like environmental strategy, green innovation on environmental and organizational performance [7,8,16,23]. In order to close this gap, we looked at how corporate social responsibility affects sustainable environmental performance and how green capability and green transformational leadership work as mediators. In past literature, perceived organizational support influences CSR, green transformational leadership, and sustainable environmental performance in some previously conducted studies. But, in very few studies, the moderating effects of perceived organizational support on the association of CSR and green transformational leadership with sustainable environmental performance have been examined. In order to close this gap, our research looked at how perceived organizational support functioned as a moderating factor between corporate social responsibility and green transformational leadership in the achievement of sustainable environmental performance.

Given these factors, we have formulated three research questions (RQs): RQ1. What factors influence the connection between corporate social responsibility and sustainable environmental performance? RQ2. What intermediary functions do green capability and green transformational leadership play in the connection between sustainable environmental performance and corporate social responsibility? RQ3. What are the roles of perceived organizational support in corporate social responsibility, green transformational leadership, and sustainable environmental performance?

This study's goal is to ascertain how corporate social responsibility and sustainable environmental performance are directly related. It also examines the relationship's possible mediating effect on green capability and green transformational leadership. It also looks at how moderate perceived organizational support influences the relationship between corporate social responsibility and sustainable environmental performance. Furthermore, it looks at how perceived organizational support moderates the relationship between green transformational leadership and businesses' sustainable environmental performance.

Innovator research should be included to combine corporate social responsibility, green capability, green transformational leadership, perceived organizational support, and sustainable environmental performance, according to the present research study. These recommendations are underpinned by the natural resource-based view philosophy, as no prior research has addressed the topic. Currently, directors can enhance the sustainable environmental performance of Bangladesh's SMEs by adopting corporate social responsibility, green competencies, green transformational leadership, and perceived organizational support.

## 2. Literature Review and Hypotheses Development

### 2.1. Natural Resource-Based View (RBV) Theory

This study employed the natural resource-based view (RBV) [24] to elucidate the capabilities and resources within a firm that significantly facilitate the achievement of a competitive advantage. According to Hart [22], the resource-based view (RBV) posits that companies can achieve a competitive advantage by implementing environmentally sustainable practices. Hart [22] identified a significant deficiency in the resource-based view

(RBV) philosophy: It neglects the interplay between an organization's internal dynamics and its external environment. When evaluating the environment, a critical factor to consider is the contribution of the natural environment to establishing a competitive advantage. According to Hart [25], businesses should prioritize the optimization of resources and capacities to increase productivity while minimizing pollution. Additionally, they proposed organizational strategies to facilitate enduring rewards and initiatives aimed at combating pollution. Researchers employ the resource-based view (RBV) framework to assess a company's sustainability by examining the financial, environmental, and social dimensions of corporate social responsibility (CSR) [26]. The resource-based view (RBV) concept has been utilized in previous evaluations of environmental management performance [27,28].

Researchers can more easily determine sustainable environmental performance through corporate social responsibility, green capability, and green transformational leadership with the expanding natural resource-based view of the RBV philosophy [22,29]. In the context of CSR, NRBV helps explain how firms leverage their internal and external resources and capabilities to drive GTL, GC, and sustainable development. CSR develops environmental competencies, which results in a long-term competitive advantage. By incorporating GTL and GC practices, organizations can cultivate a workforce skilled and motivated to implement green innovation, thus bolstering the firm's strategic resources and capabilities. The mediating roles of GTL and GC can be analyzed through the NRBV lens to understand how these elements translate CSR into actionable strategies that contribute to sustainable development. Ultimately, NRBV offers a powerful perspective for understanding and leveraging internal assets and capabilities to drive a firm's long-term success and competitive positioning. Within the context of the natural RBV framework, this study suggests that CSR, which includes social, economic, and environmental aspects, together with GC and GTL, will improve SEP [9].

## 2.2. Small and Medium Enterprises (SMEs) in Bangladesh

Bangladesh is among the fastest-growing economies in South Asia, with a pre-pandemic annual GDP growth rate of 7.1%. Despite facing economic challenges, the country has demonstrated resilience and adaptability. SMEs are at the heart of this economic transformation, playing a key role in driving growth. Since SMEs dominate the country's industrial and commercial sectors, focusing on Bangladesh offers valuable insights into how this vital sector contributes to both economic progress and sustainable development. Bangladesh comprises 99% of all businesses and employs approximately 7.8 million people [30]. SMEs contribute 25% to the nation's GDP and account for 85% of industrial employment, playing a key role in driving economic growth and reducing poverty [31]. The definition of an SME varies from country to country and from industry to industry. According to the Bangladesh Bank [32], small enterprises are defined as businesses with 10–49 employees and assets ranging from BDT 5 to 100 million. Medium enterprises, on the other hand, have 50–249 employees and assets between BDT 100 and 300 million [32].

SMEs are critical to job creation, accounting for around 85% of the industrial workforce and roughly 35% of the total labor force. They also form vital links in the supply chain, benefiting both large industries and local economies. As Bangladesh transitions to middle-income status, the role of SMEs in poverty reduction and employment generation, especially in sectors like textiles, leather, agriculture, and IT services, becomes increasingly important. Although SMEs are a critical contributor to the country's economy, they are facing increasing pressure from the government and other stakeholders to prioritize sustainability and improve their overall performance. As a result, firms have become increasingly focused on corporate social responsibility in recent years and have started adopting sustainable practices to minimize their environmental impact and enhance their social responsibility [33]. According to Zhang et al. [34], adopting CSR practices can also benefit SMEs by enhancing stakeholder engagement, reputation, and overall sustainable performance [34]. In addition, a growing number of SMEs are acknowledging the significance of building green capabilities, which involve adopting eco-friendly technologies,

enhancing resource efficiency, and responding to the demands of sustainable markets. Moreover, green transformational leadership is increasingly common, with SME leaders driving change by cultivating a sustainability-focused culture within their organizations, motivating employees to embrace green practices and align with broader environmental sustainability goals. SMEs need to incorporate sustainability into every aspect of their operations, from long-term strategic planning to routine activities, to ensure their actions are consistent with their sustainability objectives [21].

### *2.3. Corporate Social Responsibility (CSR), Green Capability (GC), Green Transformational Leadership (GTL), and Sustainable Environmental Performance (SEP)*

Small- and medium-sized enterprises significantly influence the environment and society. The prevailing consumer demand for eco-friendly products and services has resulted in a notable focus on corporate social responsibility in research. This viewpoint is supported by [7], which notes that CSR has gained significance as a domain for both practitioners and academics. The absence of a clear definition of CSR, despite numerous studies on the topic, impedes empirical research [3,35]. Organizations must align public expectations with their strategies and policies to thrive in the current market. CSR encompasses a company's dedication to implementing methods, making choices, and taking measures that are beneficial to the well-being of the surrounding area. A company's commitment to ethical practices, social equity, and environmental sustainability in its operations is referred to as CSR [23]. This research assesses the impact of CSR on the economy, society, and environment. Research indicates that integrating CSR into a company's regular operations can enhance its efficiency [21,36]. The finding of Kraus et al. [37] indicates that CSR has minimal influence on environmental performance in large industrial enterprises, suggesting an inconsistent relationship that warrants further investigation, particularly concerning SMEs. When assessing corporate social performance, it is essential to consider various stakeholders and indicators such as working conditions, detrimental emissions, stakeholder relationships, and other environmental and social issues. Reference [7] indicates the necessity of considering additional factors, including employee relations, community engagement, environmental consequences, diversity in social initiatives, and product standards. It is essential to examine corporate social responsibility alongside sustainable performance (social, environmental, and financial).

Research indicates that CSR develops environmental competencies, which results in a long-term competitive advantage. The ability of an organization to minimize its environmental impact through sustainable practices is called sustainable environmental performance [16]. The natural RBV hypothesis posits that a company's environmental performance can be enhanced through CSR as a resource [22]. This study advocates for additional research on the relationship between CSR and SEP. Peñalver et al. [38] assert that innovation is crucial for CSR initiatives designed to enhance economic performance. Experimental data indicates that environmental CSR influences green skills [3].

Moreover, Reference [23] identified that green IT capital, encompassing human, structural, and relational capital, is significantly affected by environmental corporate social responsibility (CSR). Environmental obligations and competencies are crucial for SMEs. This study aims to address the deficiency in evaluating green capabilities resulting from CSR.

Furthermore, transformational leaders exhibiting these attributes may be identified as having a substantial correlation between social responsibility (CSR) and green transformational leadership (GTL) [39]. Hussain et al. [8] indicate that CSR programs frequently promote principles such as environmental stewardship, social justice, and sustainability. Leaders who adhere to these principles are likely to exhibit GTL, motivating and inspiring employees to pursue environmentally sustainable practices and innovative solutions. Robust CSR strategies enable businesses to garner the respect and reputation of all stakeholders, including employees. Workers are more likely to endorse and engage with leadership aligned with the company's CSR principles, thereby facilitating the successful

implementation of green projects by leaders. This study proposes the following hypotheses to address the deficiency in CSR's contribution to GTL measurement:

**H1.** *CSR has a significant relationship with SEP.*

**H2.** *CSR has a significant relationship with GC.*

**H3.** *CSR has a significant relationship with GTL.*

#### *2.4. Green Capability (GC), Green Transformational Leadership (GTL) and Sustainable Environmental Performance (SEP)*

In the contemporary, rapidly evolving business landscape, an organization's capacity for sustainability is essential for its survival, attainment of a lasting competitive advantage, and overall success.

To improve sustainable environmental safety, GC entails integrating, creating, and reconfiguring internal and external resources. The abilities and resources that an organization holds to adopt and improve environmentally sustainable practices are called green capabilities [40]. Recent research demonstrates that an organization's overall business success is profoundly affected by its skills and competencies [3]. Moreover, the natural resource-based approach posits that GC may serve as a significant indicator of enhanced socioeconomic performance [22]. Research indicates that information and communication technologies (ICTs) significantly impact the promotion of innovation in small- and medium-sized enterprises in Italy. The capacity for creative thinking to integrate diverse types of information, including knowledge from both inside and outside sources as well as research and development activities, is under examination. The impact of green dynamic capabilities on competitive advantage has been thoroughly examined; however, the contribution of green capabilities to the formation of sustainable competitive advantage (SEP) has been relatively overlooked. The objective of this investigation is to bridge that gap.

Transformational leaders substantially influence organizational performance in various manners. They possess the capacity to influence employee engagement, success, conduct, and disposition. Green transformational leadership (GTL) refers to a leadership style that encourages and inspires employees to adopt and carry out sustainable practices [39]. Research by Abu et al. [7] indicates that GTL positively influences the promotion of sustainable environmental behaviors and encourages participation in eco-friendly initiatives. Adherents of GTL are inspired and driven to perform their responsibilities in a manner that minimizes harm to the environment and society. Based on the existing literature, the following hypotheses have been proposed:

**H4.** *GC has a significant relationship with SEP.*

**H5.** *GTL has a significant relationship with SEP.*

#### *2.5. Mediating Role with Green Capability (GC) and Green Transformational Leadership (GTL)*

Zhang et al. [41] emphasized that green capabilities (GC) are crucial for firms aiming for sustainable development in a rapidly changing environment. These capabilities involve adopting new strategies while phasing out outdated ones to align with green market demands, technology, and pro-environmental policies. GC also improves a firm's competencies in green development, providing a competitive edge [42]. As ecological concerns grow, corporate social responsibility (CSR) practices are vital for enhancing GC by enabling firms to acquire diverse resources for green initiatives. Mousavi et al. [43] highlighted that companies integrating CSR can better meet consumer expectations regarding product environmental performance and reduce environmental harm during production. Firms actively practicing CSR are likely to lessen negative impacts throughout a product's life cycle and select eco-friendly suppliers [44]. Organizations with strong dynamic capabilities

can quickly gather relevant information from stakeholders to seize opportunities, adapt technologies, and modify strategic frameworks [43]. Ultimately, companies that consistently meet their social responsibilities improve their capacity to effectively integrate and utilize green resources, leading to sustainable environmental performance [45]. CSR has a strong and positive correlation with leadership. Therefore, it is essential for organizations to actively engage in CSR activities. Leaders who are trusted and well-aware of both their strengths and weaknesses should demonstrate authenticity to their employees rather than imposing their views. By acting in line with their values, leaders are more likely to achieve high levels of performance and inspire others to reach similar goals. Additionally, leaders who are seen as loyal and who foster a fair work environment can encourage greater levels of sustainable environmental performance [46].

The proposal states that CSR has an impact on a person's capacity to utilize GTL and provides insightful data to enhance SEP. Previous studies on CSR have shown that it improves the performance of organizations [47]. Significant variations in how CSR and corporate performance interact, as reported by Hernández et al. [48]. Consequently, more research into other mediating elements is necessary since the relationship between business accomplishment and CSR remains unclear. The way that GC and GTL illustrate the relationship between financial incentives and environmental sustainability is explained by RBV theory [22]. As a result, between CSR and SEP, GC and GTL serve as mediating factors. Thus, this study proposes the following hypotheses:

**H6.** *GC mediates the significant link between CSR and SEP.*

**H7.** *GTL mediates the significant link between CSR and SEP.*

#### *2.6. Moderating Role of Perceived Organizational Support (POS)*

Perceived organizational support refers to employees' belief that their organization appreciates their efforts and encourages them to embrace sustainable practices [39]. Kim et al. [49] examined the link between POS, CSR, and firm sustainable performance. Their study suggests that when companies support their employees, it encourages adherence to social and environmental regulations in business operations, facilitating CSR implementation and enhancing SEP aimed at social well-being. Similarly, Abu et al. [7] found that POS is crucial for executing CSR and improving firm performance, which ultimately boosts environmental sustainability through CSR initiatives.

Reference [50] examined the correlation among POS, GTL, and environmental sustainability. Research revealed that when organizations offer economic and social support, transformational leaders are more effective in motivating employees to adopt environmentally sustainable practices. This commitment improves environmental performance in processes, product quality, and customer service, fostering sustainable operations. Abbas and Sagsan [51] found that organizations providing support to their employees, whether economic, social, or emotional, lead to higher employee satisfaction and engagement. This support encourages employees to become more proactive, attentive, and responsible, fostering green creativity and driving innovation in business processes. As a result, negative environmental impacts from business activities are minimized, and natural resources are preserved for future use, contributing to long-term sustainable business performance. Similarly, Zhao and Huang [39] demonstrated that effective GTL, which encourages employees to address the environmental requirements of customers and regulatory bodies, is more successful when organizations provide sufficient economic, social, and environmental support. This strategy enables organizations to attain environmental sustainability alongside profitability, highlighting both environmental and social performance [52,53]. Based on these findings, we propose the subsequent hypotheses (Figure 1):

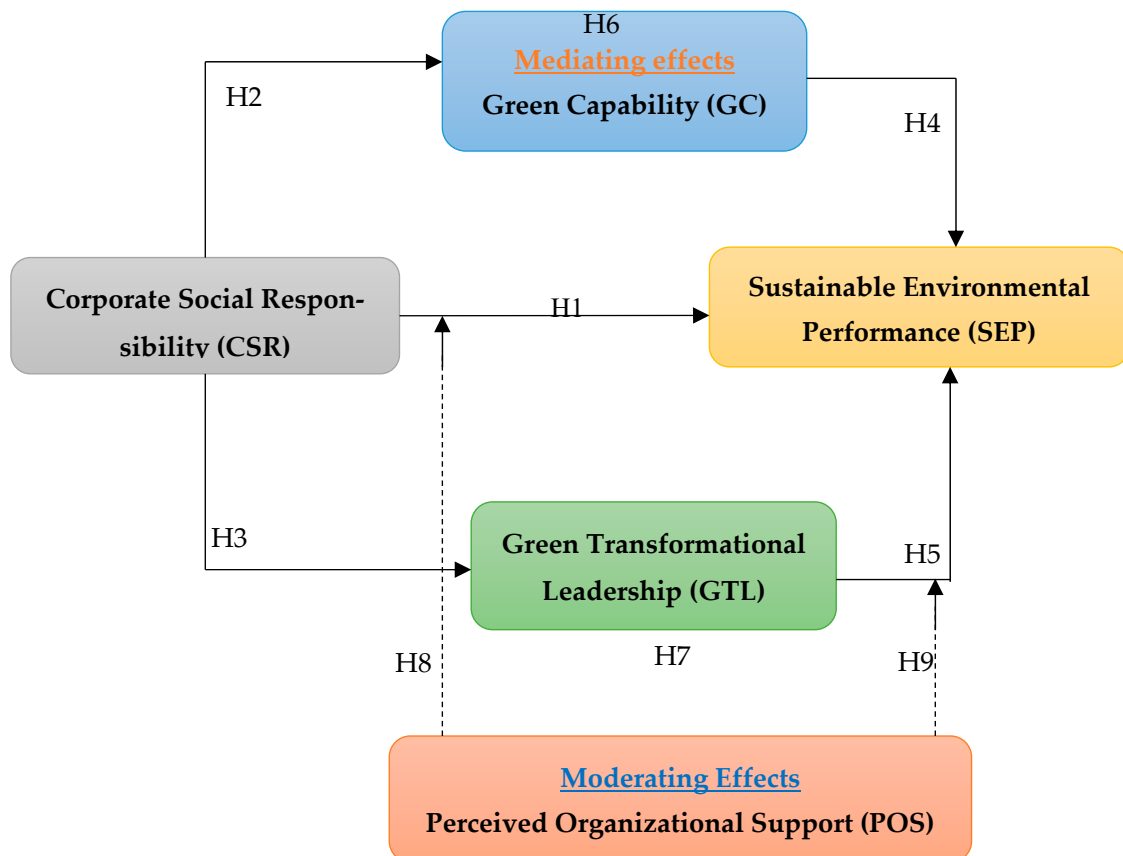


Figure 1. Conceptual framework.

**H8.** POS moderates the significant link between CSR and SEP.

**H9.** POS moderates the significant link between GTL and SEP.

### 3. Methodology

#### 3.1. Research Design

We implemented a three-step approach to formulate the questionnaire we used for the present study. Initially, we formulated our questionnaire utilizing existing literature. A focus group comprising three research scholars with significant expertise in SMEs meticulously prepared the research questions. Following a comprehensive analysis, we identified the most essential questions and eliminated superfluous ones to enhance clarity and understanding. Prior to commencing the analysis, we executed a pilot test involving a sample of 35 participants chosen at random to verify the data's validity. Our pilot test findings indicate that the data are entirely suitable for further analysis. We performed a reliability test, yielding favorable results, with a minimum Cronbach's alpha value of 0.70 ( $\alpha > 0.70$ ) for each construct.

The survey questionnaire comprises three sections (See Appendix A). The initial section solicited participants for the research study, guaranteeing that their responses would remain confidential and utilized exclusively for the investigation. The second section contained demographic information. The final section sought to assess the perspectives of SME employees regarding CSR and its mediating and moderating influences on sustainable environmental performance, comprising a total of 25 questions (5 questions for each aspect). The references that provided the CSR, GC, GTL, and SEP items were [8,16,23]. The POS items were ultimately sourced from references [21,39].

### 3.2. Data Collection

We used a convenient sampling method to gather data from the employees who are currently working in various small- and medium-sized enterprises (SMEs) in Bangladesh. These SMEs were garments, textile and leather, food and beverages, pharmaceutical companies, minerals, furniture, IT, retail, light engineering, and construction. Between the months of November and December 2023, we carried out a web-based survey in Bangladesh to collect responses using a Google form. The information in question was collected in a random fashion from a wide range of communication platforms, such as email, other digital networks, Facebook, WhatsApp, and Messenger, among others. There were no missing values in any of the 435 questionnaires that we received; instead, they were all complete. On the other hand, twenty-five responses and two items were eliminated because they were either outliers or otherwise unusable. After everything was said and done, we kept 420 valid responses for further examination.

### 3.3. Respondent's Profile

Table 1 indicates that 59.5% of the respondents were male and 40.5% were female. A total of 21.4% of respondents were under 25 years old, 34.8% were aged 25 to 35, 29.5% were aged 35 to 45, and 14.5% were over 46. Regarding educational qualifications, 40.5% possessed graduate degrees, approximately 47.4% held master's degrees, 4.8% had intermediate credentials, and 7.4% obtained a PhD. Consequently, it can be inferred that most respondents possessed a high level of education. Among the survey respondents, 22.9% were senior officers, 18.6% were assistant managers, 31.9% were deputy managers, 18.1% were managers, and 8.6% held general manager positions. A total of 27.6% of respondents with experience worked for less than two years, 36.9% for two to six years, 23.1% for between 7 and 9 years, and 12.4% for over ten years.

**Table 1.** Respondent's Profile (Total = 420).

<b>Age</b>	Bellow 25 years	21.4% (90 persons)	<b>Education</b>	Intermediate	4.8% (20 persons)
	25–35 years	34.8% (146 persons)		Graduation	40.5% (170 persons)
	35–45 years	29.5% (124 persons)		Master's Degree	47.4% (110 persons)
	Above 45 years	14.3% (60 persons)		PhD	7.4% (31 persons)
	Total	100% (420 persons)		Total	100% (420 persons)
<b>Job Position</b>	Senior officer	22.9% (96 persons)	<b>Experience</b>	Less than 2 years	27.6% (116 persons)
	Assistant manager	18.6% (78 persons)		2–6 years	36.9% (155 persons)
	Deputy manager	31.9% (134 persons)		7–9 years	23.1% (97 persons)
	Manager	18.1% (76 persons)		Over10 years	12.4% (52 persons)
	General manager	8.6% (36 persons)		Total	100% (420 persons)
Total	100% (420 persons)				
<b>Marital Status</b>	Married	70.95% (298 persons)	<b>Gender</b>	Male	59.5% (250 persons)
	Unmarried	29.05% (122 persons)		Female	40.5% (170 persons)
	Total	100% (420 persons)		Total	100% (420 persons)

### 3.4. Data Analysis Tools

For the purpose of conducting an analysis of the hypothetical pathways, we made use of the Amos-24 software to carry out a structural equation model-based analysis. In addition, we utilized IBM SPSS Statistics-24 to present descriptive statistics as well as demographic information. Through the use of structural equation modeling (SEM), the validity of the hypothesized routes was demonstrated, and the accuracy and reliability of the data were validated through the thorough examination of the measurement model [54–57].

### 3.5. Common Method Variance

In the course of our investigation, we decided to check for common method variance (CMV) by employing Harman’s single-factor test. According to the findings of 41. Podsakoff et al. [54], there is a possibility that CMV problems are present if a single factor reveals more than fifty percent of the variation or if all of the items come into play on the same factor. Based on the findings of our tests, it appears that the data do not contain any CMV issues. There are only a few components that have self-values that are greater than one in the first component, which is responsible for 40.33 percent of the total variation [54,55,58].

## 4. Analysis and Result

### 4.1. Inter-Item Correlation Matrix

Table 2 presents a matrix depicting the correlation among each factor. The table demonstrates a positive correlation of 0.13 between sustainable environmental performance and perceived organizational support. It demonstrates positive correlations with green transformational leadership, green capability, and CSR at 0.21, 0.20, and 0.20, respectively.

**Table 2.** Inter-Item Correlation Matrix.

	CSR	GC	GTL	POS	SEP
CSR	1.00	0.31	0.22	0.16	0.20
GC	0.31	1.00	0.21	0.19	0.20
GTL	0.22	0.21	1.00	0.16	0.21
POS	0.16	0.19	0.16	1.00	0.13
SEP	0.20	0.20	0.21	0.13	1.00

Notes: CSR = corporate social responsibility, GC = green capability, GTL = green transformational leadership, POS = perceived organizational support, SEP = sustainable environmental performance.

### 4.2. Descriptive Statistics (EFA)

The main conclusions of the exploratory factor analysis (EFA) are shown in Table 3. Factor analysis was supported by the correlation matrix analysis, which verified substantial relationships between the measurements. The number of factors was ascertained by using the eigenvalue, and the Kaiser–Meyer–Olkin measure was 0.903, suggesting that it fell within a reasonable range. The correlation matrix suited the data well, according to Bartlett’s sphericity test ( $p < 0.000$ ). The 25 measures’ communalities varied from 0.872% to 0.960%, indicating a high degree of shared variation that the components may account for.

**Table 3.** Descriptive statistics (EFA).

Items	Factor Loadings				
	1	2	3	4	5
CSR4	0.960				
CSR3	0.947				
CSR2	0.933				
CSR5	0.927				
CSR1	0.927				
GTL4		0.946			
GTL1		0.945			
GTL3		0.943			
GTL5		0.943			
GTL2		0.916			
GC2			0.954		
GC3			0.946		
GC4			0.945		
GC1			0.903		
GC5			0.883		
SEP2				0.949	
SEP3				0.934	
SEP4				0.919	
SEP5				0.919	
SEP1				0.896	
POS4					0.952
POS3					0.942
POS5					0.942
POS1					0.891
POS2					0.872

Notes: CSR = corporate social responsibility, GC = green capability, GTL = green transformational leadership, POS = perceived organizational support, SEP = sustainable environmental performance.

#### 4.3. Overall Confirmatory Factor Analysis (CFA)

Statistics for all five variables in the utilized frameworks are presented. Statistics are provided for each construct. The mean value ranges for each construct are as follows: 5.40, 5.24, 5.28, 5.50, 5.43, 5.44, 5.48, 5.35, 5.42, 5.25, 5.26, 5.26, 5.22, 5.44, 5.35, 5.01, 4.85, 5.15, 5.09, 5.16, 5.21, 5.39, 5.47, 5.26, and 5.23. The table presents the standard deviations associated with each construct. The computed mean values indicate that the majority of survey respondents concurred with the survey items. Skewness and kurtosis were employed to assess the data's consistency. For normal data analysis, skewness and kurtosis values must fall within 2.00. The gathered data were determined to be within the acceptable limits for skewness and kurtosis, signifying proper collection. The findings reveal the maximum and minimum response rates for each inquiry. The research further demonstrates the strong correlation among the responses for each of the five components with one another (Table 4).

**Table 4.** Overall confirmatory factor analysis (CFA) results.

Items	$\bar{x}$	$\sigma$	Skew	Kurtosis	Min	Max	$\alpha$	Loading	Overall ( $\bar{x}$ )	Overall ( $\sigma$ )
CSR1	5.40	1.561	−1.622	2.025	1	7	0.966	0.927	5.468	1.604
CSR2	5.24	1.763	−1.214	0.517	1	7		0.933		
CSR3	5.28	1.725	−1.363	0.856	1	7		0.947		
CSR4	5.50	1.837	−1.581	1.355	1	7		0.960		
CSR5	5.43	1.669	−1.661	1.971	1	7		0.927		
GC1	5.44	1.432	−1.821	3.121	1	7	0.958	0.903	5.491	1.406
GC2	5.48	1.556	−1.794	2.561	1	7		0.954		
GC3	5.35	1.527	−1.795	2.584	1	7		0.946		
GC4	5.42	1.578	−1.867	2.759	1	7		0.945		
GC5	5.25	1.531	−1.518	1.837	1	7		0.883		
GTL1	5.26	1.577	−1.444	1.394	1	7	0.966	0.945	5.407	1.494
GTL2	5.26	1.491	−1.123	0.991	1	7		0.916		
GTL3	5.22	1.424	−1.456	0.794	1	7		0.943		
GTL4	5.44	1.551	−1.483	1.293	1	7		0.946		
GTL5	5.35	1.921	−1.451	1.377	1	7		0.943		
POS1	5.01	1.612	−1.154	0.599	1	7	0.954	0.891	5.144	1.567
POS2	4.85	1.572	−0.855	−0.054	1	7		0.872		
POS3	5.15	1.882	−1.082	0.056	1	7		0.942		
POS4	5.09	1.842	−1.037	−0.084	1	7		0.952		
POS5	5.16	1.773	−1.207	0.380	1	7		0.942		
SEP1	5.21	1.617	−1.303	1.028	1	7	0.957	0.896	5.412	1.517
SEP2	5.39	1.694	−1.428	1.075	1	7		0.949		
SEP3	5.47	1.715	−1.534	1.292	1	7		0.934		
SEP4	5.26	1.608	−1.167	0.671	1	7		0.919		
SEP5	5.23	1.607	−1.244	0.934	1	7		0.919		

Source: Author calculation. Notes: CSR = corporate social responsibility, GC = green capability, GTL = green transformational leadership, POS = perceived organizational support, SEP = sustainable environmental performance.

#### 4.4. Measurement Model Analysis

The internal consistency of the scale items was evaluated, and the reliability of the measurement model was assessed using two metrics. Hair et al. [55] indicate that composite Cronbach's alpha ( $\alpha > 0.70$ ) and composite reliability (CR  $> 0.70$ ) are acceptable thresholds for reliability. Fornell and Larcker [56] assert that factor loadings exceeding 0.70 and average variance extracted greater than 0.50 are adequate criteria for assessing convergent validity. Concerning the evaluation of discriminant validity, Reference [58] asserts that the maximum correlation coefficient must be less than the square root of the average variance extracted (AVE). The variance inflation factor (VIF) is employed to assess multicollinearity, with a threshold value of 10 or less. Moreover, commonly accepted metrics for assessing model fit, such as the root mean square error of approximation (RMSEA  $< 0.05$ ), the chi-square to degrees of freedom ratio ( $X^2/d > 3$ ), the incremental fit index (IFI  $> 0.90$ ), the Tucker–Lewis index (TLI  $> 0.90$ ), and the comparative fit index (CFI  $> 0.90$ ), are regarded as indicators of a well-fitting model [59,60].

Figure 2 illustrates the measurement model, while Table 5 presents its validity and reliability. The findings demonstrate both discriminant and convergent validity, as the inter-construct correlation coefficient is inferior to the square root of the average variance extracted (AVE). Factor loadings approach 0.70, AVE scores exceed 0.50, and both CR and Cronbach's alpha values surpass the 0.70 threshold [57–59]. The model demonstrates no multicollinearity, as VIF values range from 1.071 to 1.165. Table 5 presents the model fit indices:  $X^2/d = 2.168$ , GFI = 0.905, AGFI = 0.781, CFI = 0.989, TLI = 0.966, IFI = 0.980, NFI = 0.965, and RMSEA = 0.063.

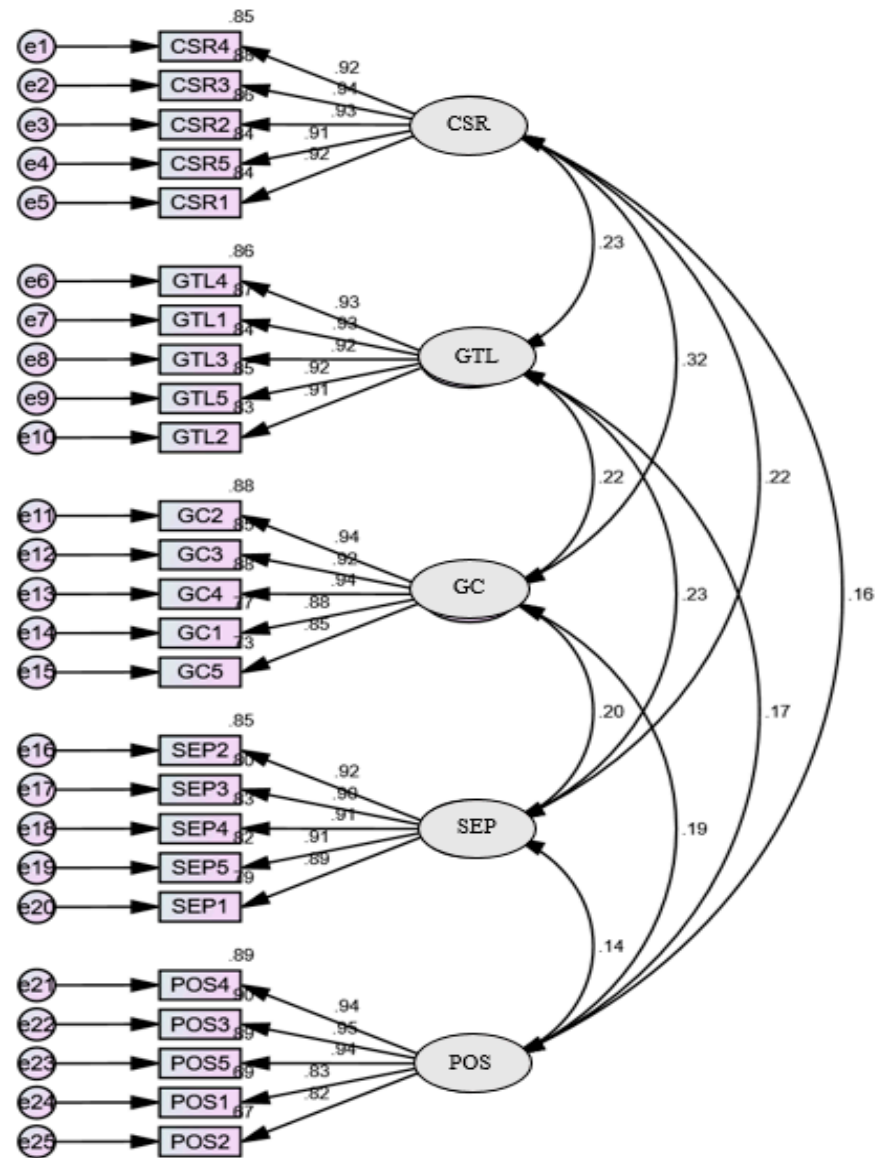


Figure 2. Measurement model.

Table 5. Construct validity statistics.

Constructs	CR	AVE	MaxR(H)	MSV	1	2	3	4	5	VIF
1 CSR	0.889	0.848	0.964	0.106	0.941					1.137
2 GTL	0.956	0.822	0.958	0.066	0.189	0.911				1.165
3 GC	0.874	0.864	0.974	0.109	0.288	0.188	0.909			1.075
4 SEP	0.948	0.825	0.959	0.062	0.209	0.233	0.201	0.807		
5 POS	0.914	0.811	0.971	0.038	0.168	0.119	0.184	0.152	0.897	1.071

Note: Model fit indices:  $\chi^2/d = 2.168$ , GFI = 0.905, AGFI = 0.781, CFI = 0.989, TLI = 0.966, IFI = 0.980, NFI = 0.965, RMSEA = 0.063. bold diagonal values are the square root of AVE value. Notes: CSR = corporate social responsibility, GC = green capability, GTL = green transformational leadership, POS = perceived organizational support, SEP = sustainable environmental performance.

#### 4.5. Structural Model Analysis

We performed a structural equation model (SEM) analysis (Figure 3) to evaluate the proposed pathways according to the measurement model’s fitness. Table 6 displays the pertinent model fit data: Model fit indices: CMIN/DF = 2.096, GFI = 0.928, AGFI = 0.908,

CFI = 0.982, TLI = 0.979, IFI = 0.982, NFI = 0.966, RMSEA = 0.051. The table indicates that the variances in GC, GTL, and SEP exhibit R<sup>2</sup> values of 10%, 6%, and 9%, respectively. Among the nine hypotheses, the initial five (H1 to H5) are direct, whereas the final two incorporate mediation and moderation effects. All are highly significant, with *p*-values under 0.05. Table 6 demonstrates that CSR ( $\beta = 0.157$ ) exerts a positive effect on SEP, thereby validating H1. Moreover, the table indicates that CSR ( $\beta = 0.217, \beta = 0.189$ ) significantly correlates with GC and GTL, thereby corroborating H2 and H3, which also influence SEP. Table 6 further illustrates that GC ( $\beta = 0.147$ ) and GTL ( $\beta = 0.178$ ) exert positive influences on SEP, thereby corroborating H4 and H5.

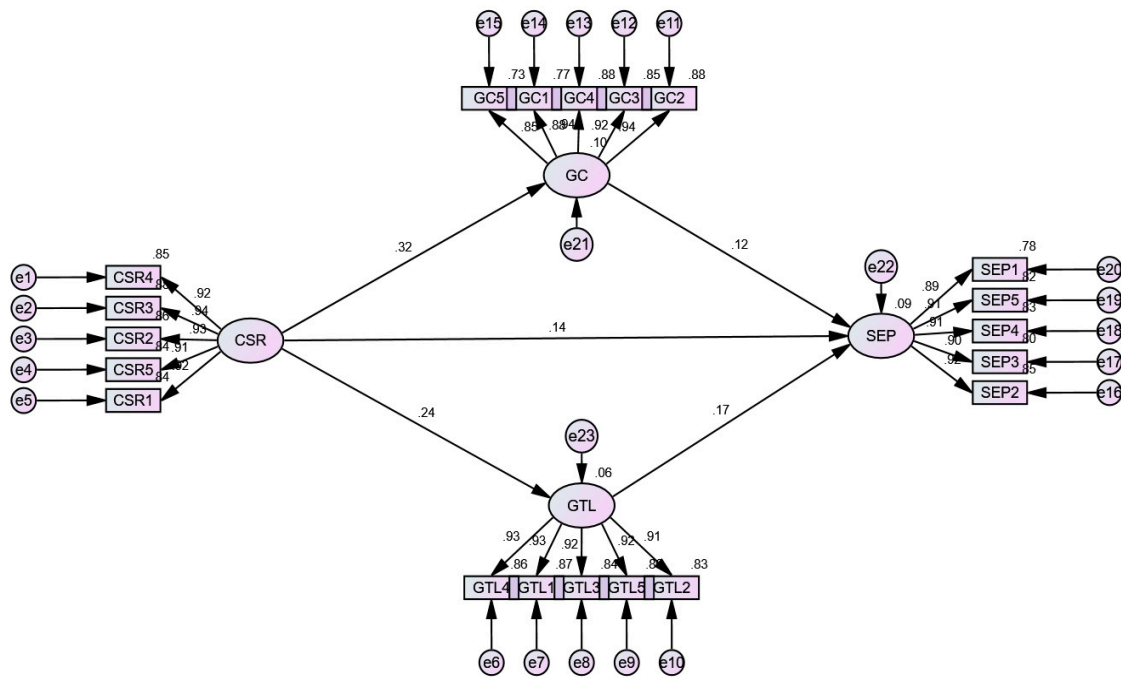


Figure 3. Structural equation model.

Table 6. Hypotheses results analysis.

Results	Factors	Estimate	S.E and T Value	<i>p</i> -Value	Hypothesis	Decision
GC (R <sup>2</sup> = 10%)	GC←CSR	0.217	0.037 (6.52)	***	H2	Accepted
GTL (R <sup>2</sup> = 6%)	GTL←CSR	0.189	0.044 (5.12)	***	H3	Accepted
SEP (R <sup>2</sup> = 9%)	SEP←GTL	0.178	0.055 (2.48)	***	H5	Accepted
	SEP←CSR	0.157	0.051 (2.39)	0.007	H1	Accepted
	SEP←GC	0.147	0.049 (2.19)	0.016	H4	Accepted

Notes: Model fit indices: X<sup>2</sup>/d = 2.072, GFI = 0.981, AGFI = 0.911, CFI = 0.967, TLI = 0.977, IFI = 0.969, NFI = 0.988, RMSEA = 0.061. *p* > 0.05 = not significant and \*\*\* or *p* < 0.05 is accepted. Notes: CSR = corporate social responsibility, GC = green capability, GTL = green transformational leadership, POS = perceived organizational support, SEP = sustainable environmental performance.

#### 4.6. Mediation Analysis

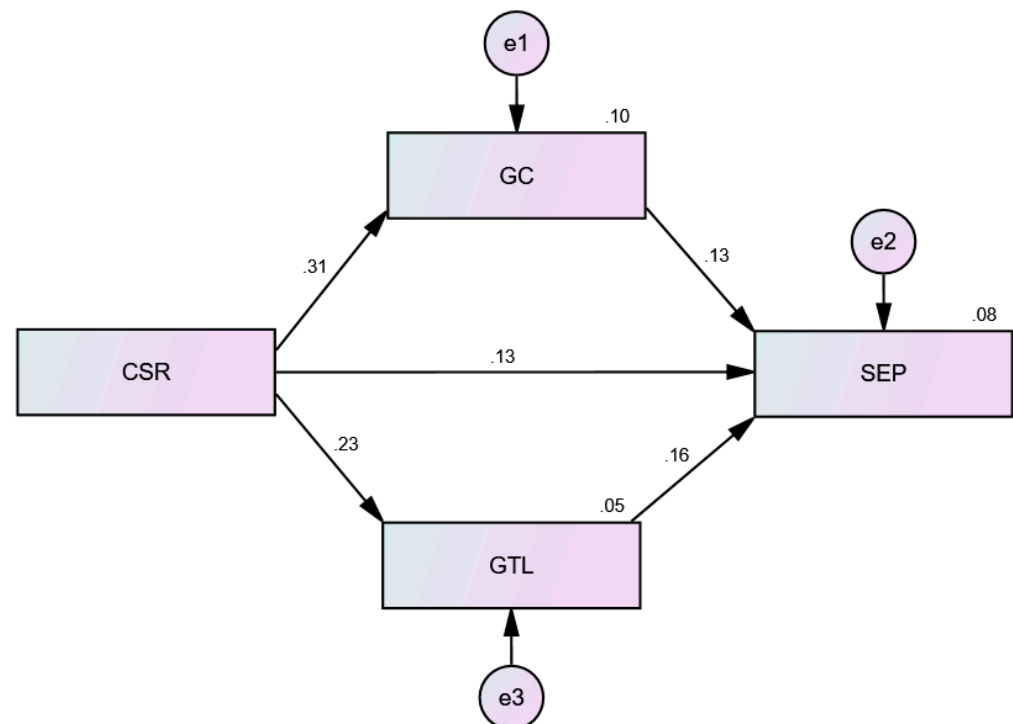
This study employed bootstrapping to evaluate the mediating effects within the model, following the guidelines established by Baron and Kenny [61]. Bootstrapping facilitates an indirect effect on the independent variable via a mediator. Table 7 demonstrates that the correlation between CSR and SEP is significantly mediated by both GC and GTL. The indirect effects are CSR→GC→SEP = 0.037 and CSR→GTL→SEP = 0.034, corroborating H6 and H7 in the bias-corrected model with a 95% confidence interval. Moreover, Table 7 demonstrates that the *p*-value for all indirect effects is below 0.05, and the lower and

upper bounds of all mediations are positive, indicating that all relationships are statistically significant. Figure 4 illustrates the results of the pictorial mediation analysis.

**Table 7.** Mediation analysis.

Variables	Estimate	Bootstrapping		
		Lower	Upper	<i>p</i>
CSR→GC→SEP	0.039	0.013	0.077	0.05
CSR→GTL→SEP	0.036	0.012	0.068	0.001

Notes:  $p < 0.05$  significant;  $p > 0.05$  insignificant; CI = confidence interval; the process repeated 5000 times.



**Figure 4.** Mediation analysis.

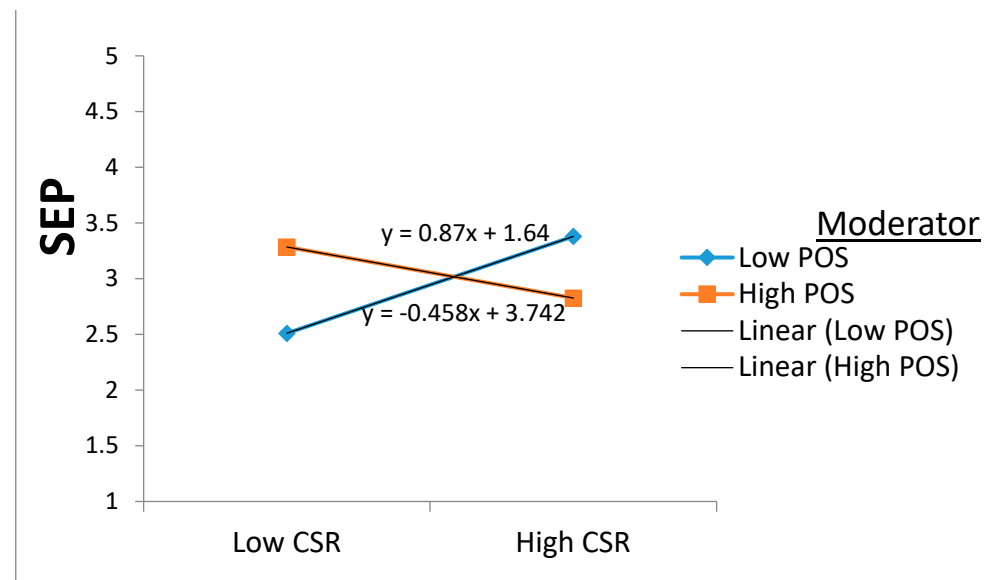
#### 4.7. Moderating Effects

A method to resolve random and non-random measurement sampling challenges is the application of AMOS connection moderation in analysis. This study alters AMOS interactions to investigate the moderating effects of perceived organizational support. Table 8 indicates that perceived organizational support (POS) moderates the relationship between corporate social responsibility (CSR) and sustainable environmental performance, as well as the relationship between green transformational leadership and sustainable environmental performance. SEM analysis yielded interaction coefficients of 0.333 and 0.288, with  $p$ -values of 9.602 and 9.011.  $p < 0.001$  corroborates hypotheses H8 and H9. To predict the outcome variable SEP, we employed a product indicator method that necessitated the multiplication of  $CSR \times POS$  and  $GTL \times POS$ . Figure 5 illustrates the moderating effect depicted in the graph.

**Table 8.** Moderation analysis outcomes.

Hypothesized Path	Estimate	S.E.	t-Value	p	Comment
CSR × POS → SEP	0.333	0.036	9.602	***	Moderate
GTL × POS → SEP	0.288	0.032	9.011	***	Moderate

Notes: \*\*\* or  $p < 0.05$  is significant.

**Figure 5.** Moderation results.

## 5. Discussion

This research examines the intricate interactions among CSR, GC, GTL, TMEC, POS, and SEP. The findings indicate that CSR directly influences SEP, a conclusion partially corroborated by other studies referenced [3,7,8,62]. These findings align with the research conducted by References [16,21], which similarly identified a positive impact of CSR on SEP. Furthermore, it illustrates the degree to which CSR enhances both GC and GTL, as well as how GC and GTL influence the relationship between CSR and SEP. This outcome aligns with studies by References [7,8], which illustrate that CSR has a significant and direct impact on GC and GTL in developing countries. These findings support those of References [8,37], which revealed that GC and GTL influence the correlation between CSR and SEP. The research identifies a positive correlation between GC, GTL, and SEP, corroborating findings from References [3,39,63] that demonstrate the direct influence of GC and GTL on SEP. The research additionally examines how POS alters the relationship between CSR and SEP, aligning with findings from Pham et al. [64–66]. Moreover, this study reveals that POS alters the relationship between GTL and SEP, corroborating the findings of References [7,39,67–69].

The initial hypothesis examined the direct relationship between CSR and SEP in Bangladeshi enterprises. The hypothesis posited a positive correlation between CSR and SEP in Bangladesh. Figure 3 and Table 6 illustrate a positive and statistically significant correlation between CSR and SEP ( $\beta = 0.157$ ,  $t = 2.239$ ), with 9% ( $R^2 = 0.09$ ) of the variance in SEP explained by CSR. The research indicates a moderately strong positive correlation between CSR and SEP. The findings corroborate the initial hypothesis and address our research question one (RQ1). In summary, there exists a robust correlation between CSR and SEP in Bangladeshi SMEs.

The second hypothesis examined the direct correlation between governance compliance and corporate social responsibility in Bangladeshi small- and medium-sized enterprises. A favorable correlation between GC and CSR among SMEs in Bangladesh was anticipated [70–72]. Table 6 and Figure 3 both indicate that the R-squared value is 10%

( $R^2 = 0.10$ ). Table 5 demonstrates a statistically significant positive correlation ( $\beta = 0.217$ ,  $t = 6.652$ ) between corporate social responsibility (CSR) and green consumption (GC). The results demonstrate a strong positive correlation between GC and CSR. The results align with the second hypothesis. Consequently, it can be asserted that a positive correlation exists between CSR and GC among SMEs in Bangladesh. The third hypothesis examined the direct relationship between CSR and GTL in Bangladeshi SMEs. It was expected that there would be a positive correlation between CSR and GTL among Bangladeshi SMEs. Figure 3 and Table 6 indicate that the R-squared value is 6% ( $R^2 = 0.06$ ). A positive and statistically significant correlation between CSR and GTL is demonstrated in Table 6 ( $\beta = 0.189$ ,  $t = 5.12$ ,  $p = 0.001$ ). The results indicate a significant positive correlation between GTL and CSR. The results corroborate the third hypothesis [73,74]. Thus, a positive correlation between CSR and GTL may be observed among SMEs in Bangladesh.

The correlation between GC and SEP in Bangladeshi SMEs was analyzed in the fourth hypothesis. A positive correlation between GC and SEP in Bangladeshi enterprises was anticipated. Table 6 indicates a positive and statistically significant correlation between GC and SEP in Bangladeshi SMEs. The R-squared value is 9%, corresponding to an  $R^2$  of 0.09.  $A = 0.019$ ,  $t = 2.48$ ,  $\beta = 0.178$ . Consequently, GC and SEP exhibit a positive correlation within Bangladeshi SMEs. The fifth hypothesis investigated the correlation between SEP and GTL in Bangladeshi SMEs. A positive correlation between GTL and SEP was anticipated in Bangladeshi enterprises. Table 6 indicates a positive and statistically significant correlation between GTL and SEP in Bangladeshi SMEs. At  $R^2 = 0.09$ , the R-squared value is 9 percent. At  $t = 2.48$ ,  $p = 0.001$ , and  $\beta = 0.178$ . Consequently, there exists a strong correlation between GTL and SEP in Bangladeshi enterprises.

This study examines the mediating roles of GC and GTL in the relationships between CSR and SEP. Refs. [75–77] indicates that partial mediation occurs when there is a significant correlation and relationship between the independent and dependent variables through the mediator [78]. Complete mediation occurs when there is a robust association between the mediator and both the dependent and independent variables, yet a weak direct correlation exists among them. Table 7 demonstrates partial mediation ( $\beta = 0.039$ ) and confirms the significance of the H6 pathway ( $p = 0.05$ ). Partial mediation is observed ( $\beta = 0.036$ ), and the H7 pathway is significant ( $p = 0.01$ ). Consequently, we obtained the answer to our second research question (RQ2), indicating that the relationship between CSR and SEP is predominantly mediated by GC and GTL, corroborating H6 and H7.

This study evaluates the moderating effects of POS on the relationships between GTL-SEP and CSR-SEP. Table 8 indicates a moderation effect ( $\beta = 0.333$ ) and the H8 pathway is statistically significant ( $p = 0.001$ ). Moderation is present ( $\beta = 0.288$ ), and the H9 route is statistically significant ( $p = 0.001$ ). Consequently, POS significantly influences the relationship between CSR-SEP and GTL-SEP, thereby addressing our RQ3. H8 and H9 are additionally supported.

## 6. Conclusions

Businesses in developing economies facing pollution from industrialization, population growth, and climate change must prioritize sustainable performance in relation to environmental, social, and economic factors. This study may elucidate how CSR, GC, GTL, and POS initiatives facilitate the advancement of SMEs in Bangladesh.

### 6.1. Theoretical Implications

This research enhances the natural resource-based view (RBV) by demonstrating how corporate social responsibility (CSR), as a vital organizational asset, can foster sustainable development. To attain competitive advantage through sustainability, it underscores the importance of both tangible and intangible assets, including enhanced efficiency, reduced operating costs via corporate reputation, and organizational commitment. Secondly, by perceiving CSR as a strategic asset that can be managed to enhance environmental sustainability, the findings underscore the alignment of effective CSR with the natural

resource-based view (RBV). Third, the research validates the natural resource-based view's assertion that governance capability (GC) and governance team leadership (GTL) are essential elements for maintaining competitive advantage in dynamic contexts by illustrating that GC and GTL serve a significant mediating function in the corporate social responsibility (CSR)–strategic environmental performance (SEP) relationship. This study indicates that GC and GTL practices can be regarded as complementary resources that enhance the effective utilization of CSR, evidenced by the positive impacts of CSR on GC and GTL. Fifth, it reinforces the idea that the alignment of valuable resources is crucial for SEP by providing theoretical insights into the strategic alignment of GC and GTL. The research substantiates the natural resource-based view's assertion that organizational support is essential for maintaining sustainable entrepreneurial performance by validating the significance of perceived organizational support as a critical modifiers in the corporate social responsibility–sustainable entrepreneurial performance and green transformational leadership–sustainable entrepreneurial performance interactions. This distinction enhances our understanding of the interactions among different components within the natural RBV framework. Furthermore, enhancing our understanding of natural RBV within sustainability lays the foundation for subsequent research exploring the complex relationships among CSR, GC, GTL, POS, and sustainable development.

### *6.2. Implications for Management*

Research findings hold significant practical implications for leaders, stakeholders, legislators, and business proprietors within Bangladesh's SMEs. The research paradigm indicates that SMEs ought to emphasize how GC, GTL, and CSR influence long-term environmental performance. In recent decades, professionals and scholars have increasingly concentrated on sustainable environmental performance. Utilizing the research model, SMEs in developing countries can decrease energy consumption, reduce waste and emissions, enhance their corporate reputation, conserve water, and minimize the use of nonrenewable materials, chemicals, and components, thereby improving SEP. Managers are increasingly prioritizing CSR due to its direct impact on sustainable environmental performance. Furthermore, GC and CSR significantly influence GTL, thereby enhancing SEP. Managers of SMEs must consider CSR, GC, and GTL in their decision-making processes to evaluate environmental performance. The essential role of POS as a mediator underscores the importance of leadership dedication and support in promoting CSR initiatives and achieving sustainable success. Encouraging collaboration between CSR practices, green dynamic capabilities, innovation, and top management facilitates the integration of sustainability goals across the organization, ensuring all units work synergistically towards common objectives. Leadership should promote a culture that values environmental knowledge and innovation, setting sustainability as a core organizational value and encouraging employee contributions to green initiatives. GTL can effectively counsel, motivate, and urge their followers to mitigate the environmental impacts of corporate activities, thereby promoting sustainability, contingent upon the support of their organization.

Adopting continuous improvement and adaptation, using insights from CSR practices, enables companies to regularly update sustainability practices and innovate to meet evolving environmental challenges. Implementing these practices helps organizations harness CSR power, aligning it with HR and innovation strategies to drive sustainable development and secure long-term competitive advantages. Lastly, directors and executives should give CSR, GC, GTL, POS, and SEP top priority when evaluating sustainable environmental performance.

### *6.3. Policy Recommendation*

Management must establish robust policies to enhance SEP and align with corporate objectives. These rigorous standards should seek to diminish the utilization of reusable materials, greenhouse gas emissions, and single-use products, as well as waste and pollution, conserve water and energy, and ultimately enhance the company's reputation for superior

sustainable environmental performance. This proactive strategy advises businesses and investigators to prioritize CSR, GC, GTL, and POS.

#### 6.4. Limitations and Future Research

Despite the current research meeting its objectives, several limitations persist. Initially, due to the cross-sectional methodology employed in this study, it remains ambiguous whether CSR, GC, GTL, and POS in large industrial firms will yield comparable results over an extended duration. Consequently, this study ought to be replicated by other researchers in a similar environment over an extended duration. To facilitate comparison of the findings, future researchers may obtain data from significant industrial groups as this study performed with SMEs.

Future research may examine the correlation between corporate social responsibility (CSR) and environmental performance, with a focus on green climate and green human resource management (HRM) as moderating variables. To determine their significance, they should examine the role of environmental strategy and green human resource management as mediating variables between CSR and sustainable environmental performance. This research focused on Bangladesh, a nation with a unique culture. To examine potential variations in outcomes, future researchers may expand the study model to include both affluent and developing nations.

**Author Contributions:** Conceptualization, S.I. and A.A.M.; Data curation, A.R.b.S.S., M.A.I.G. and M.B.A.; Formal analysis, M.A.; Funding acquisition, M.A.I.G., M.B.A., and M.A.; Investigation, M.A.I.G., M.M.H., A.A.M., M.B.A., and M.A.; Methodology, S.I.; Project administration, A.R.b.S.S. and M.A.I.G.; Resources, A.R.b.S.S., M.M.H., A.A.M., M.B.A., and M.A.; Software, S.I. and A.A.M.; Supervision, A.A.M.; Validation, A.R.b.S.S., A.A.M., M.B.A., and M.A.; Visualization, M.M.H.; Writing—original draft, M.A.I.G. and S.I.; Writing—review and editing, A.R.b.S.S., M.A.I.G., M.M.H., S.I., A.A.M., M.B.A., and M.A. All authors have read and agreed to the published version of the manuscript.

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**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** Data will be made available on reasonable request.

**Conflicts of Interest:** The authors declare that there are no potential conflicts of interest.

## Appendix A

**Table A1.** Questionnaire Items.

Variables	Items	Descriptions	Sources
Corporate Social Responsibility	CSR1	Our organization participates in the activities which aim to protect and improve the quality of the natural environment	Wang and Bian [16]
	CSR2	Our organization implements special programs to minimize its negative impact on the natural environment	
	CSR3	Our organization targets a sustainable growth which considers the future generations	
	CSR4	Our organization respects consumer rights beyond the legal requirements	
	CSR5	Our organization provides full and accurate information about its product to its customers	

Table A1. Cont.

Variables	Items	Descriptions	Sources
Green Capability	GC1	Our organization has the ability that can fast monitor the environment to identify new green opportunities	Rehman et al. [22]
	GC2	Our organization has effective routines to identify and develop new green knowledge	
	GC3	The company has the ability to develop green technology	
	GC4	Our organization has the ability to successfully coordinate employees to develop green technology	
	GC5	Our organization has the ability to successfully allocate resources to develop green innovation.	
Green Transformational Leadership	GTL1	The leader inspires subordinates with the sustainable environmental plan	Hussain et al. [8]
	GTL2	The leader provides subordinates a clear sustainable environmental vision.	
	GTL3	The leader encourages subordinates to work on sustainable environmental plan	
	GTL4	The leader encourages employees to attain sustainable environmental goals	
	GTL5	The leader stimulates subordinates to think and share their green ideas	
Sustainable Environmental Performance	SEP1	Our organization actively reduces energy consumption in all operations.	Zhao and Huang [39]
	SEP2	We adhere strictly to environmental regulations and strive to minimize pollution.	
	SEP3	We invest in technology that reduces the environmental impact of our products/services.	
	SEP4	We measure and report our environmental performance regularly to stakeholders.	
	SEP5	The use of sustainable materials and processes has reduced our operating costs over time.	
Perceived Organizational Support	POS1	The organizational values my contribution to its well-being	Zhao and Huang [39]
	POS2	The organization strongly considers my goals and values	
	POS3	The organization is willing to extend itself in order to help me perform my job to the best of my ability	
	POS4	The organization tries to make my jobs as interesting as possible	
	POS5	The organization take pride in my accomplishments at work	

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