






## Article

# The Impact of Perceived CSR on Employees' Pro-Environmental Behaviors: The Mediating Effects of Environmental Consciousness and Environmental Commitment

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**Abstract:** Employees' pro-environmental behaviors contribute to environmental sustainability. Drawing on social exchange theory, this research extends corporate social responsibility (CSR) literature by investigating the positive effect of perceived CSR on employees' pro-environmental behaviors and exploring the mediating mechanisms of environmental consciousness and environmental commitment between perceived CSR and employees' pro-environmental behaviors. Survey data were collected from 301 employees working in the textile manufacturing industry of Pakistan. The findings of this study demonstrate a positive direct impact of perceived CSR on pro-environmental behaviors. Moreover, environmental consciousness and environmental commitment mediated this relationship. Taken together, this study indicates that perceived CSR has three paths to impact employee pro-environmental behavior: direct effect, indirect effect via environmental consciousness, and indirect effect via environmental commitment. The contributions of this study include supporting social exchange theory and presenting pioneering evidence of environmental consciousness and environmental commitment mediating processes between perceived CSR and pro-environmental behaviors. This paper provides directions for future research and suggests practical implications for organizations.

**Keywords:** corporate social responsibility; environmental commitment; environmental consciousness; pro-environmental behaviors; textile manufacturing industry



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## 1. Introduction

Over the past two decades, there have been rising concerns and pressure on organizations to improve environmental performance and address ecological problems. The term "environment" is often associated with a broader sustainability framework called the "triple bottom line" and consists of economic, social, and environmental considerations [1,2]. Research has advocated for firms to seek and attain a balance between the firm's growth and the preservation of the natural environment for future generations [3–6]. The governments challenge organizations to adopt pro-environmental practices and have introduced related environmental legislation in the form of financial penalties, legal actions, and fines for non-compliance (e.g., Climate Change Levy, UK; Department of Energy and Climate 2010 [7]).

However, there is a lack of understanding of how organizations achieve environmental sustainability through their policies, organizational structure, initiatives, and activities [5,8–11]. The awareness of pro-environmental behavior is a major factor in promoting sustainable development [12]. Most past studies have considered the macro foundations [13–17] rather than micro-level factors, such as the role of employees [1,18] in investigating pro-environmental behavior (PEB). Researchers have emphasized that to protect the environment, the key mechanism is to develop a link between organizational efforts and employee behavior, as human activity causes environmental issues and, by influencing human activity, organizations can tackle those issues [19–23]. Business leaders are also recognizing the significance of pursuing employees' PEB for the benefit of their competitive advantage as well as for their reputation building [24–26]. Kim and Moon [27] defined PEB as a series of their attitudes and behaviors towards the environment and their inclination to improve environmental degradation, lessen the negative impact of human activities on nature, and achieve environmental sustainability. Examples of PEB in the workplace include actions such as conserving energy in the office, saving paper through double-sided printing, recycling, and producing environmentally friendly ideas for achieving sustainable performance [19,28,29].

Research has shown that the role of employees' perceptions of corporate social responsibility (CSR) is vital in promoting employees' PEB [30–33]. CSR is defined as “context-specific organizational actions and policies that take into account stakeholders' expectations and the triple bottom line of economic, social and environmental performance” [1]. The literature in human resource management/organizational behavior has also shown that there is a need to understand the micro-level phenomenon of CSR perception [34–37]. Recent limited studies have shown that CSR has a positive impact on employee behaviors and attitudes [38–41]. However, very few studies explain the role of CSR perception, which ultimately affects employees' PEB [42–44].

It is also important to investigate the mediating processes between perceived CSR and PEB. The role of environmental consciousness (Econ) is crucial in cultivating employees' PEB [45,46]. Econ refers to deep-down feelings that environmental issues are caused by humans [47]. It is the psychological state of an employee being concerned and feeling responsible for the issues related to environmental sustainability. Employees with a good understanding of environmental issues, such as pollution, environmental degradation, disposal of waste, etc., are more inclined towards environmental protection [45,48–50].

Findings of some of the studies reported that organizations displaying their responsibility towards the environment through their CSR policies and activities can be mirrored by their employees, who, in turn, demonstrate their eco-mindedness through their corresponding actions for environmental sustainability [13,28,51]. In the last decade, studies on CSR have mainly focused on the sustainability behaviors of large-scale businesses [52]. However, small- and medium-sized enterprises (SMEs) play a significant role in their socio-economic and, particularly, their environmental impacts [53]. Therefore, the attention of research and business leaders are now focused on the importance and impact of CSR practices, particularly those in SMEs [54]. SMEs are extremely important for the economy in every country worldwide. They produce a large volume of output not only in industrialized countries but also in developing countries such as Pakistan and India, where they play an important role in improving the economy [55].

It is necessary to recognize that SMEs differ not only from one another but also from larger enterprises in various ways [56,57]. For instance, based on the resource-based view of the firm [58], Sheehan [59] argues that employees are a significant source of sustainable competitive advantage for SMEs. In his longitudinal research, the author demonstrated that implementing HRM practices improves SME's performance in terms of profitability, innovation, and lower turnover [59]. This suggests that investing in HRM practices, such as pro-environmental practices, could attract positive employee and organizational outcomes.

Research indicates that SMEs cause more than 70% of global environmental pollution, with the main contributor being the manufacturing sector [60,61]. A study conducted

in Italy showed that when SMEs consider CSR as an effective competitive strategy, this ultimately contributes to many intangible benefits including improved employee motivation and relationships, as well as tangible benefits including a better public image of the firm and efficiency [62]. In Pakistan, the economic role of SMEs is crucial as, according to SMEDA (Small and Medium Enterprises Development Authority), 90% of enterprises are SMEs, with a combined share of more than 40% of the country's annual gross domestic product (GDP) [63]. There is mounting evidence that SMEs are contributing to environmental issues such as climate change and biodiversity loss. SMEs' individual environmental effects may be small, but their cumulative influence can be significant. Therefore, the environmental impact of SMEs is widely recognized [55,64]. Further, Ansari et al. [65] conducted a study of pro-environmental behaviors in Pakistan's hotel industry and called for conducting studies at the individual employee level in other SME industries. Similarly, a study by Islam et al. [66] conducted in the hospitality industry to investigate the link between environmental CSR and pro-environmental behaviors, also strongly endorsed further research on pro-environmental behaviors in Pakistan.

This research provides a substantial addition to the existing theories and literature on CSR and environmental management. The social exchange theory [67] is implemented to provide the empirical evidences on the effect of perceived CSR on employees' PEB. This is due to the employees' reciprocation for the organizations' policies and practices concerning environmental preservation [22,28]. The mediators of Econ and Ecom also support the social exchange theory [67], as employees working in organizations devoted to CSR demonstrate a high level of Econ and exhibit pro-environmental behavior [19]. Additionally, working in CSR-active organizations leads to greater commitment to sustainable practices and activities that address environmental issues [22]. By providing an in-depth analysis and various perspectives on its causes, it can help strengthen the understanding of employee PEB due to perceived organizational CSR practices.

This study advances the CSR field in many ways. First, it integrates the dispersed scholastic work into one framework, proposing to test Econ and Ecom as mediating processes in the perceived CSR—PEB relationship. By doing so, this research helps understand how perceived CSR drives pro-environmental behaviors through psychological processes [68–71]. The proposed framework offers an extension to the prior models of pro-environmental behavior that were only limited to direct relationships or simple mediation [30]. Second, this study investigates the dynamics around perceived CSR and pro-environmental behaviors in a workplace setting. Many past studies of this relationship have been mainly conceptual and not set in a work context [22]. Third, it provides insights into a rarely studied context of the textile manufacturing SME sector of Pakistan, which is a developing economy [27]. This study fills an existing gap in the literature by providing empirical evidence of how perceived CSR drives pro-environmental behaviors in SMEs, which are rarely studied in green literature. In Pakistan, approximately 4000 firms operate in the textile manufacturing sector. About 60% of these firms are located in the Punjab province alone, and the remaining 40% exist in the other three provinces of Pakistan [72]. This study targeted firms operating in the Punjab province. Studies show that no formal CSR practices exist in SMEs, particularly in the textile manufacturing industry; instead, informal CSR practices tend to be followed [63,73]. There is limited research on the PCSR on PEB with Econ and Ecom as mediator as the driving force behind this study. Therefore, this study investigation is designed to fill these gaps and has the following research objectives:

- I. To determine the relationship between PCSR and PEB;
- II. To examine the association between PCS;
- III. To investigate the mediating role of Econ between PCSR and PEB;
- IV. To examine the mediating role of Ecom between PCSR and PEB.

The following sections will present theoretical underpinnings and hypotheses development, followed by a methods section, measures, data analysis and results sections, and discussion.

## 2. Theoretical Underpinnings and Hypotheses Development

### 2.1. Social Exchange Theory

The link between CSR and various outcomes at the individual and organizational levels has been studied by scholars through multiple theoretical lenses, including stakeholders' theory [74,75], instrumental theory [76], social exchange theory [77], value belief norm theory [78], institutional theory [54,79], the theory of planned behavior [80], green theory [81], and the natural resource-based view [82]. Social exchange theory suggests that when employees are offered economic and psychological resources by their organizations, they reciprocate by displaying positive behavior under the norm of reciprocity [67]. Employees reciprocate the positive organizational policies and practices as they feel connected with such activities. Furthermore, it may lead to discretionary, extra-role behavior of employees in exchange for positive organizational practices [22,83].

Social exchange theory has been used to predict a relationship between an employer and the employees. Researchers agree that reasonable exchange processes between both parties can exist based on trust [77]. Thus, by applying the premise of social exchange theory, our study aims to answer the research question of how employees' perception of CSR impacts their PEB. A summary of the past related literature is provided in Appendix A.

### 2.2. Perceived Corporate Social Responsibility and Pro-Environmental Behavior

An increasing pressure exists on firms to actively engage in CSR to give back to society and to help in achieving environmental sustainability [18]. The CSR practices adopted by organizations are communicated to employees through a variety of mediums, including e-mails, memorandums, and seminars [84]. Consequently, employees receive information regarding the social and environmental value created by their organization and the role their organization plays in protecting the natural environment. However, research on how organizational CSR perceptions impact employees is scarce [1]. Most researchers agree that at the organizational level CSR activities adopted by firms have a positive impact on employee workplace behavior [85]. Furthermore, CSR has been linked with many favorable outcomes at the employee level, including normative and affective organizational commitment [77], employee engagement [86], organizational identification [87], organizational commitment [88,89], environmental citizenship behaviors [90], and green behavior [91].

When employees perceive that their organizations are behaving responsibly towards their stakeholders and society as a whole, they tend to work harder by putting in extra work effort [19,29]. Employees reciprocate the environmentally friendly policies, strategies, and behavior of their organizations by also adapting those PEB [71]. Kim and Moon [27] defined pro-environmental behavior as a series of attitudes and behaviors shown by individuals that reflect their propensity to help improve the environmental situation and achieve sustainable environmental goals. These positive behaviors have been studied under the banners of environmental behavior, PEB, green behavior, and environmentally friendly behavior by different researchers [92]. They all relate to an individual's behavior towards the environment and their inclination to improve the current situation of environmental degradation, lessen the negative impact of human activities on nature, and achieve environmental sustainability.

Firms that adopt socially responsible practices are also likely to be highly committed to the wellbeing of their employees and provide a supportive work environment for their employees [93]. As a result, employees may be more willing to engage in PEB [19,94]. They may be more inclined to match their values with those of their firm's sustainable strategies through effective learning and subsequent sharing of these environmental attitudes.

Research provides evidence of the impact of firm-level CSR on emotional and behavioral outcomes at the employee level. For instance, Tian and Robertson [42] investigated the link between perceived CSR and environmentally friendly behavior through the mediating role of employee engagement in the hospitality sector. Further, organizational CSR strategies encourage employees to come up with innovative, environmentally friendly ideas and suggest ways to implement these ideas [95].

Social exchange theory posits that when employees perceive that their organizations are behaving responsibly towards their stakeholders and society as a whole, they invest extra efforts in their workplace tasks and discretionary behaviors [96]. Employees tend to reciprocate the environmentally friendly policies and strategies of their organizations with their positive pro-environment behaviors [71]. For instance, Holcomb and Smith [97] found evidence that hotels' positive societal and ecological policies resulted in the higher engagement of their employees in sustainable practices. With more environmentally friendly CSR practices, including plantation drives, effectual waste management systems, sustainability-focused workshops, and alternative green energy conservation practices, employees portrayed such behaviors in their day-to-day work [91]. Therefore, through adopting CSR practices, firms aim to promote a workplace environment that aims to encourage environmental values, beliefs, and norms, and create PEB [98]. Thus, we hypothesize:

**H1.** *There is a positive relationship between perceived corporate social responsibility and employees' pro-environmental behavior.*

### *2.3. Perceived Corporate Social Responsibility, Environmental Consciousness, and Pro-Environmental Behaviors*

Econ is a psychological factor that relates to an individual's inclination towards environmentally friendly practices [45]. Econ has an impact on their attitude, behavior, and intention [99]. It pertains to an individual's morals and values reflected in their attitudes [100,101], and these attitudes impact intentions. Individuals' concerns about a firm's socially responsible practices impact their attitudes, which, in turn, impact their intentions and actions [102].

Afsar and Umrani [22] investigated how perceived CSR impacted employee PEB through moral reflectiveness, coworker pro-environmental advocacy, and Econ. They tested these relationships in selected organizations from the fossil fuel, cement, automobile, pharmaceutical, and agriculture industries. Their study results showed that positive moral reflectiveness, coworker pro-environmental advocacy, and Econ were significantly associated with employee PEB. Further, their study confirmed previous studies where both direct and indirect effects of CSR perceptions on employee PEB have been reported under different contexts and organizational conditions [22]. Gkorezis and Petridou [30] examined the effect of perceived CSR on employees' pro-environmental behaviors via organizational identification. They collected data from 191 private sector Greek employees and the results showed that perceived CSR has both a direct and an indirect influence, through organizational identification, on PEB.

Further, those employees who have a strong positive perception of their firm's CSR activities are more likely to have better self-esteem, which has an impact on their behaviors towards their company [103]. As such, it can be argued that CSR is positively related to organizational consciousness as organizational consciousness is reinforced through an individual's feelings towards certain organizational concepts and practices [104]. Researchers argue that when employees feel a sense of belonging to a socially responsible and environmentally conscious firm, it may lead to higher self-esteem and positive work attitudes [77].

As a part of their attitude towards environmental behavior, Econ is not only important for employees' sensitivity towards sustainable firm practices, but it also pertains to their behavior towards the environment [105]. Econ can influence the attitudes towards the environment, and thus, employees with a greater Econ can display better PEB [106,107]. Econ can also improve their attitudes towards environmental conservation [106,107]. For instance, in their study, Kang et al. [108] discovered that customers with higher Econ would not only opt for an environmentally conscious service but would also be willing to pay more for such service.

Employees' Econ is an important factor in inspiring them to show environmentally friendly behaviors [19]. Those individuals who understand environmental problems, including air, water, and land pollution or disposal of waste issues, are more likely to behave



in a way that protects the environment [48,49,109]. Yucedag et al. [110] posit that the awareness of the outcomes from engaging in a particularly positive or negative environmental behavior can lead to higher employee engagement in pro-environmental intentions.

Consequently, employees tend to follow organizational lead and direction and show their support by adopting environmentally friendly behaviors [2,19]. Therefore, it is likely that employees with high levels of Econ would engage in PEB in a socially responsible organization more often than employees with low Econ [105]. Following social exchange theory, employees working in an organization actively involved in CSR can be expected to reciprocate these environmental behaviors, and there may be a higher probability that these employees will become involved in PEB to augment their personal values [19]. Thus, employees' knowledge about a firm's sustainable ways can result in higher employee Econ, and these individuals can become more mindful about environmental issues. Thus, we hypothesize H2, H4, and H6 as related to PCSR, PEB, and Econ and its mediating role:

**H2.** *There is a positive relationship between perceived corporate social responsibility and environmental consciousness.*

**H4.** *There is a positive relationship between employee Econ and PEB.*

**H6.** *Employee Econ mediates the effect of perceived corporate social responsibility on PEB.*

#### *2.4. Perceived Corporate Social Responsibility, Environmental Commitment, and Pro-Environmental Behavior*

An individual's behavior depends upon his or her commitment to a specific concept [5]. A highly committed employee has a specific mindset, and such an individual thinks about the organizational interests before thinking about their personal goals [111]. Such committed employees are likely to come up with innovative ideas for solving organizational, economic, and social issues [112]. Thus, organizational commitment is a direct consequence of a psychological mindset and a stronger attachment to the goals of the organization [113], leading to a greater sense of responsibility for accomplishing organizational goals [114].

Moreover, employees tend to reciprocate positive organizational practices through voluntary actions of their own [51]; this is also true for the organization's CSR practices [77,115]. Scholars argue that employees tend to demonstrate higher emotional attachment toward socially responsible behavior and involve themselves in exhibiting PEB [116]. Past literature found convincing support for employees' pro-environmental behavior as a consequence of their higher commitment to environmental behavior. Lee et al. [117] found support for improved behavior towards recycling and energy conservation practices of employees who were highly committed to their organizations. Similarly, Zientara and Zamojska [98] posit that the organization's perceived CSR approach has an impact on employees' commitment to behave in a responsible way towards the environment. The reason for this is that employees reciprocate responsible organizational behavior by showing higher concern and sustainably managing their impact on environmental preservation and society in general [118]. Another reason is that these employees relate to the concern shown by their organizations towards stakeholders, community, society, and, lastly, the environment [112].

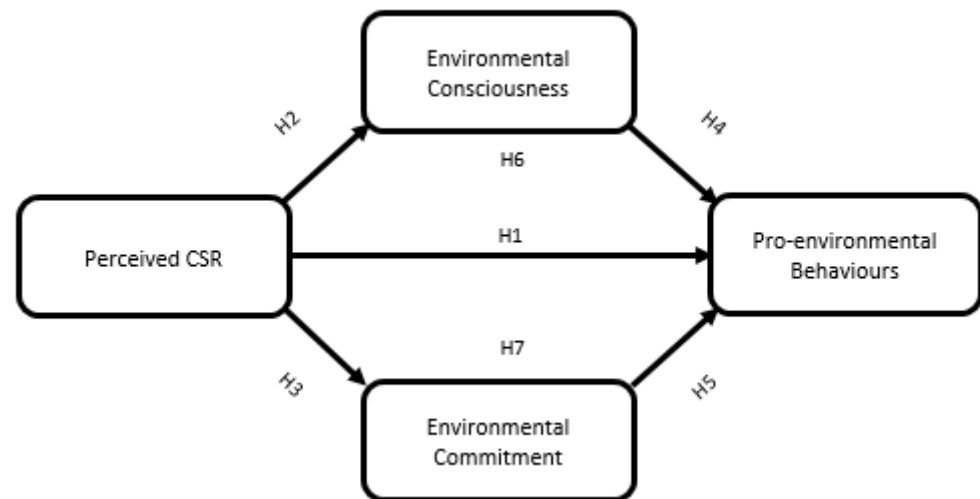
Past research shows that Econ leads to higher employee engagement in activities related to sustainable practices such as quality improvement processes and actions addressing environmental problems [22]. Perceived organizational CSR has been linked to the green behaviors of employees with the mediating effect of Econ [119]. Conversely, one can argue that employees may seem to be less involved in pro-environmental projects in addition to their assigned work in the absence of organizational commitment to environmental concerns [120]. Furthermore, drawing on social exchange theory, Norton et al. [68] suggest that the perceived organizational support of their employees lead employees to engage themselves in pro-environmental practices. Hence, drawing on social exchange theory [67] we propose that employees' perceptions of organizational CSR practices are related to their reciprocated behaviors of becoming more environmentally committed. Thus, we hypothesize: H3, H5, and H7 as related to PCSR, PEB and Econ and its mediating role:

**H3.** There is a positive relationship between perceived corporate social responsibility and employee Ecom.

**H5.** There is a positive relationship between employee Ecom and pro-environmental behavior.

**H7.** Employee Ecom mediates the effect of perceived corporate social responsibility on pro-environmental behavior.

Based on the development hypothesis above, it can be arranged in Figure 1 Theoretical Framework as follows:



**Figure 1.** Theoretical framework.

### 3. Methods

We used a quantitative cross-sectional design and employee survey research method to test the proposed hypotheses. This study's context is textile manufacturing firms in Pakistan's Punjab province. The role of the textile manufacturing industry is crucial, being directly related to GDP, employment, and exports [63,72,121]. We focused on the Punjab province, which hosts two-thirds of Pakistan's textile manufacturing firms. Moreover, due to the local industry, the Punjab province is highly vulnerable to environmental deterioration in terms of water pollution, high energy consumption in production processes, and related air emissions [122,123]. Information regarding textile manufacturing firms was obtained from the All-Pakistan Textile Mills Association and the Chamber of Commerce and Industry [53]. A purposive sampling technique was observed. Firms' senior management were contacted; 272 firms agreed to take part in the survey. Seven hundred questionnaires were distributed to employees with a minimum of two years of experience. Out of 700 distributed surveys, 350 were returned directly to the researchers. Data from 301 fully completed questionnaires showed the following breakdown of respondents: 208 males and 121 females; aged below 35 years (60%) and above 35 years (40%); respondents' reported education levels included graduation (60.3%), post-graduation (25%), and others/not reported (14.7%); and in terms of management level, respondents spanned middle-management level (48.9%), junior-management level (40.1%), and senior management (11%).

#### Measures

We used Likert scales for all four constructs (see Appendix B). Perceived CSR was measured using a 6-item scale from Turker [124]. A sample item is "My organization participates in activities which aim to protect and improve the quality of the natural environment." Environmental consciousness was measured using an 8-item scale developed by Huang et al. [104]. A sample item is "I am conscious about environmental knowledge and information." Pro-environmental behaviors were measured using a 12-item scale developed by Robertson and Barling [80]. Sample items include "At work, I take part in environmentally friendly programs." Environmental commitment was measured using

eight items from Allen and Meyer [125] and Herscovitch and Meyer [126]. A sample item is “I feel a sense of duty to support the environmental efforts of my company.”

#### 4. Data Analysis and Results

The structural equation modelling technique in AMOS was used for data analysis [127]. We tested data normality assumptions. The first step towards data normality is to address the issue of missing values. To address this problem, we applied the imputation method, and the mean substitution technique was employed within the scope of this method [128]. Furthermore, to identify any extreme values that needed to be removed from the analysis, the Mahalanobis D2 value was utilized. This was performed and no extreme values were found in the study. Lastly, the skewness and kurtosis values were checked to see whether the data complied with the normal distribution. The skewness and kurtosis values were 2.253 and  $-1.151$ , respectively, which means the dataset can be said to have a normal distribution [129].

To check common method bias, we used the Harman single-factor test; CMB represents the artificial covariation between predictors and criterion variables caused by the same data measurer or source, the same characteristics of the project or project context, and measurement environment. After performing the test, we found that the common factor with the greatest explanatory power is 17.635 in the case of no factor rotation, which explains 41.4% of the total variance. In the present study, we found no serious common method bias as there is no single factor that explains the most covariance of the dependent and independent variables.

The convergent and discriminant validities and goodness of fit of all the variables were checked through AMOS. The descriptive analysis was used to check the nature of the data. To check the hypotheses, bootstrapping procedures were applied with the help of the SPSS process macro [130]. The Cronbach’s alpha values (reliability statistics), standard deviations, mean, and intercorrelations among the study variables are presented in Table 1. As evident in Table 1, positive and significant correlations were found among the predictor, mediator, and outcome variables, providing evidence of preliminary support for the study’s hypotheses.

**Table 1.** Mean, standard deviation, and intercorrelations.

No	All Variables	Mean (SD)	1	2	3	4
1	Perceived CSR	3.55 (0.85)	<b>(0.839)</b>			
2	Environmental consciousness	3.59 (0.82)	0.468 **	<b>(0.890)</b>		
3	Environmental commitment	3.61 (0.80)	0.651 **	0.629 **	<b>(0.849)</b>	
4	Pro-environmental behavior	3.66 (0.74)	0.471 **	0.602 **	0.644 **	<b>(0.902)</b>

\*\* Correlation is significant at the 0.01 level (2-tailed). Values in bold are the Cronbach’s alphas.

##### 4.1. Measurement Model

Before testing the hypotheses, we performed a confirmatory factor analysis to examine the fit of the four-factor model (perceived CSR, Econ, Ecom, and pro-environmental behavior). We found the four-factor model to be a superior fit to the data on the overall sample when compared to the three-factor model (where Econ was loaded on a single factor), the two-factor model (where Ecom and pro-environmental behavior were loaded on a single factor), and the one-factor model (where all the items were loaded on a single factor) (see Table 2). Table 3 presents evaluation results of the modified model. Table 4 presents the convergent validity, where all the factor loadings were found to be significant [131]. For reliability analysis, Cronbach’s alpha values were checked, with the values of all the constructs above 0.70 (see Table 1).



**Table 2.** Results of model comparisons using a confirmatory factor analysis approach.

Model	$\lambda^2$	df	TLI	CFI	IFI	NFI	RMSEA	SRMR
Four-Factor Model (M0)	527.701	247	0.930	0.942	0.943	0.880	0.062	0.0517
Three-Factor Model (M1)	255.282	90	0.927	0.946	0.946	0.078	0.066	0.0554
Two-Factor Model (M2)	51.647	36	0.988	0.992	0.992	0.975	0.038	0.0289
One-Factor Model (M3)	123.879	9	0.825	0.895	0.895	0.888	0.206	0.0582

Note: TLI = Tucker Lewis index, CFI = comparative fit index, IFI = incremental fit index, NFI = normed fit index, RMSEA = root mean square error of approximation, SRMR= standardized root mean square residual.

**Table 3.** Evaluation results of the modified model.

	Indicator	Norm
Absolute fit measures	GFI	>0.9
	RMR	<0.05
	RMSEA	<0.08
Incremental fit measures	NFI	>0.9
	CFI	>0.9
	IFI	>0.9
Parsimonious fit measures	PGFI	>0.5
	PNFI	>0.5
	PCFI	>0.5
	X <sup>2</sup> /df	<5

Note: GFI = goodness-of-fit index, RMR = root mean square residual, RMSEA = root mean square error approximation, NFI = normative fit index, CFI = comparative fit index, IFI = incremental fit index, PGFI = parsimony goodness-of-fit Index, PNFI = parsimony normed fit index, PCFI = parsimony comparison fitting index.

**Table 4.** Construct validity.

Construct	Dimension	Factor Loading	AVE	CR	CB alpha
Perceived CSR	PCSR 1	0.80	0.59	0.89	0.83
	PCSR 2	0.88			
	PCSR 3	0.83			
	PCSR 4	0.75			
	PCSR 5	0.74			
	PCSR 6	0.63			
Environmental consciousness	ECon 1	0.79	0.89	0.85	0.89
	ECon 2	0.79			
	ECon 3	0.85			
	ECon 4	0.78			
	ECon 5	0.74			
Environmental commitment	ECom 1	0.84	0.85	0.89	0.84
	ECom 2	0.82			
	ECom 3	0.71			
	ECom 5	0.64			
	ECom 7	0.61			
Pro-environment behavior	PEB 3	0.60	0.50	0.89	0.92
	PEB 4	0.60			
	PEB 5	0.59			
	PEB 6	0.66			
	PEB 7	0.79			
	PEB 8	0.78			
	PEB 9	0.78			
	PEB 10	0.79			
	PEB 11	0.72			

Note: AVE= average variance extracted, CR= composite reliability.

As seen in Table 5, the average variance extracted (AVE) values were greater than 0.50, and all composite reliability (CR) values were greater than the AVE values, further confirming the convergent validity of the hypothetical model [128]. Furthermore, to check the multicollinearity issue, the variance inflation factor values were checked and found to range from 2.21 to 4.10, which is below 10, indicating that there is no multicollinearity issue [132].

**Table 5.** Discriminant validity.

All Variables	CR	AVE	MSV	MaxR(H)	PCSRR	PEBB	ECom	ECon
PCSRR	0.898	0.597	0.462	0.912	<b>0.773</b>			
PEBB	0.899	0.500	0.476	0.910	0.511	<b>0.707</b>		
ECom	0.850	0.535	0.516	0.872	0.680	0.690	<b>0.731</b>	
ECon	0.892	0.624	0.516	0.896	0.505	0.669	0.718	<b>0.790</b>

#### 4.2. Structural Path Model

The proposed model was subjected to several satisfactory goodness of fit indices as described by Hair et al. [133] and Hu and Bentler [134]:  $\chi^2/df = 2.453$ , Root Mean Square Error of Approximation (RMSEA) = 0.070, Goodness of Fit Index (GFI) = 0.863, and Comparative Fit Index (CFI) = 0.926. Table 6 represents that effects of perceived CSR on pro-environmental behavior had positive influence ( $\beta = 0.40$ ,  $p < 0.01$ ,  $t$ -value = 9.610) and were statistically significant, resulting in support for H1, PCSRR has positive association with Econ ( $\beta = 0.54$ ,  $p < 0.01$ ,  $t$ -value = 7.430), and supporting H2. In addition to that, PCSRR has positive effect on ECom ( $\beta = 0.68$ ,  $p < 0.01$ ,  $t$ -value = 8.196), resulting in supporting H3, while Econ has also been found to have positive association on PEB ( $\beta = 0.36$ ,  $p < 0.01$ ,  $t$ -value = 5.363), supporting H4, and Ecom has a positive influence on PEB ( $\beta = 0.44$ ,  $p < 0.01$ ,  $t$ -value = 5.372) and also support H5. Moreover, the results of the structural model are presented in Table 6. The mediation analysis suggests that perceived CSR positively affects employees' pro-environmental behavior through two mediators (Econ and Ecom). Table 7 presents the standardized mediation estimates along with their corresponding 95% confidence intervals computed across 5000 bootstrapped samples [135]. The bootstrapping results reveal that significant mediation occurred between perceived CSR and PEB through Econ and Ecom, thus providing support for H6 and H7.

**Table 6.** Regression results of the structural model and hypotheses test outcomes.

Hypothesis	Predicted Relationship	Standard Path Loadings	Standard Error	$t$ -value	$p$ -Value	Decision
H1	Perceived CSR $\rightarrow$ PEB	0.40	0.05	9.610	0.001	Supported
H2	Perceived CSR $\rightarrow$ Econ	0.54	0.08	7.430	0.001	Supported
H3	Perceived CSR $\rightarrow$ ECom	0.68	0.09	8.196	0.002	Supported
H4	ECon $\rightarrow$ PEB	0.36	0.53	5.363	0.003	Supported
H5	ECom $\rightarrow$ PEB	0.44	0.65	5.372	0.001	Supported

Note: CSR = corporate social responsibility, Econ = environmental consciousness, ECom = environmental commitment, PEB = pro-environmental behavior; goodness of fit:  $\chi^2/df = 2.453$ , RMSEA = 0.070, GFI = 0.863, CFI = 0.926.

**Table 7.** Standardized mediation effects: parameter estimate and bootstrap percentile method confidence intervals.

Hypothesis	Parameter	Estimate	Lower Bound	Upper Bound	p-Value	Decision
H6	Panel I <sup>a</sup>					
	Perceived CSR →ECon →PEB	0.275	0.188	0.375	0.016	Supported
H7	Panel II <sup>b</sup>					
	Perceived CSR →ECom →PEB	0.415	0.314	0.537	0.009	Supported

Note: CSR = corporate social responsibility, Econ = Econ, ECom = environmental commitment, PEB = pro-environmental behavior. <sup>a</sup> Goodness of fit:  $\chi^2/df = 2.589$ , RMSEA = 0.053, GFI = 0.923, CFI = 0.939; ("Perceived CSR →ECon" were constrained to be zero). <sup>b</sup> Goodness of fit:  $\chi^2/df = 1.618$ , RMSEA = 0.045, GFI = 0.928, CFI = 0.976; ("Perceived CSR →ECom" were constrained to be zero).

## 5. Discussion

The objectives of this study were to investigate (1) the direct impact of CSR perception on employees' PEB and (2) the indirect impact of CSR perception on employees' PEB via Econ and Ecom. The findings of the study suggest a positive impact of perceived CSR on PEB. Moreover, the pioneering findings of this study suggest that Econ mediated this relationship. It also found that Ecom mediated this relationship. Taken together, perceived CSR has three paths to impact employee pro-environmental behavior: direct effect, indirect effect via Econ, and an indirect effect via Ecom. The results also indicate a positive relationship between perceived CSR and Econ, and Econ and PEB.

### 5.1. Perceived Corporate Social Responsibility and Pro-Environmental Behavior

We found support for the relationship between perceived CSR and pro-environmental behaviour (H1). Our findings can be explained by social exchange theory [67]. Social exchange theory suggests that when employees are offered economic and psychological resources by their organizations, they reciprocate in their behavior [67]. Employees reciprocate with pro-environmental behaviours in exchange for positive organizational policies and practices towards the preservation of the environment [2,22,71,83]. A study conducted by the Afsar and Umrani [22] found the positive relationship in the context of various industries, which were fossil fuel, cement, automobile, pharmaceutical and agriculture; however, this study is conducted in the context of the textile manufacturing industry particularly and its findings are important for the textile industry operating in Pakistan. SMEs in Pakistan is very crucial to be taken care of as it has significant impact on the economy of Pakistan, so organizations operating in this industry need to adopt the PSCR practices while considering the PEB which ultimately translate into the betterment of the organization, the industry, and in the larger context of the GDP of Pakistan. This is consistent with other similar research findings. Holcomb and Smith [97] found that hotels' positive societal and ecological policies resulted in higher engagement of their employees in sustainable practices. In response to increased organisational environmentally friendly CSR practices, i.e., improved waste management systems, sustainability-focused workshops, and alternative green energy conservation practices, employees demonstrated similar behaviors in their daily work [14,91]. When organisations engage in promoting environmental values, beliefs, and norms and adopting CSR practices, they encourage pro-environmental employee behaviors [98].

### 5.2. Perceived Corporate Social Responsibility, Environmental Consciousness, and Pro-Environmental Behavior

We found support for the positive relationship between perceived CSR and Econ amongst employees (H2). This can be explained by employees having a better sense of belonging affecting their mindset and behaviour towards their company due to a strong

positive perception of their firm's CSR commitment and activities [28,77,103]. Therefore, perceived CSR is positively related to an individual's Econ [104].

We found support for a positive relationship between employee Econ and pro-environmental behavior (H4). Employees' Econ is not only important for their sensitivity and attitudes towards sustainable firm practices, but it also affects their own behavior towards the environment [105]. Individuals with greater Econ display better environmental behaviors such as environmental conservation [26,106,107]. This was demonstrated in a Kang et al. [108] study that discovered that customers with higher Econ would not only opt for an environmentally conscious service but would also be willing to pay more for such a service.

We found support for H6 that suggested that employee Econ mediates the effect of perceived corporate social responsibility on pro-environmental behavior. Applying social exchange theory [67], we argue that employees working in an organization actively involved in CSR will display higher levels of Econ and will therefore reciprocate by engaging in pro-environmental behaviors in alignment with their environmental values [19]. However, this study was conducted in the hotel industry of Malaysia while considering the 3-star, 4-star and 5-star hotels, so the context is different, while this study focused on the developing country context, particularly the textile industry which is a significant contributor in the sector. So, the findings of this study are important for top management of the industry to consider the Econ, as results have shown significant impact of it on PEB. This is a pioneering finding as previous research focused on the investigation of other psychological processes as mediators between perceived CSR and pro-environmental behavior. For instance, Afsar and Umrani [22] investigated how perceived CSR impacted employee pro-environmental behavior through moral reflectiveness, coworker pro-environmental advocacy, and Ecom, and Gkorezis and Petridou [30] examined the effect of perceived CSR on employees' PEB via organizational identification which were conducted in multiple industries, resulting in difficulty to generalize their findings on the textile industry in particular.

### *5.3. Perceived Corporate Social Responsibility, Environmental Commitment, and Pro-Environmental Behavior*

We found support for a positive relationship between perceived CSR and employee Ecom (H3). Employees commit to organizational goals and objectives as a result of their positive mindset towards their organizations [111,113], which leads to a greater sense of responsibility for accomplishing organizational goals [114]. When organizations exhibit a commitment towards the environment through their positive CSR policies and practices, employees, in turn, demonstrate their Ecom through their reciprocating actions towards environmental sustainability [51,77,115].

We found support for the positive relationship between employee Ecom and pro-environmental behavior (H5). This is consistent with previous research findings. Scholars argue that employees tend to demonstrate higher emotional attachment toward socially responsible behavior and exhibit PEB [116]. Lee et al. [117] found support for improved behavior towards recycling and energy conservation practices of employees who were highly committed to their organizations. Employees reciprocate responsible organizational behavior by showing higher concern and sustainably managing their impact on environmental preservation [118]. Employees also reciprocate the organizations' concerns towards stakeholders, community, society, and the environment [112].

We found support for H7 that suggested that employee Ecom mediates the effect of perceived corporate social responsibility on pro-environmental behavior. Applying the social exchange theory [67], and supporting Norton et al. [68], we argue that employees engage in pro-environmental practices as a result of perceived organizational CSR and their Ecom. This is consistent with past research that showed that Ecom leads to higher employee engagement in activities related to sustainable practices and actions addressing environmental problems [22]. Further, it supports past research findings that perceived

organizational CSR is linked to the green behaviors of employees with the mediating effect of Ecom [119].

#### 5.4. Theoretical and Research Contributions

This study offers several contributions to the existing theorizing and literature on CSR and environmental management. First, the positive effect of perceived CSR on employees' PEB provides strong support for the social exchange theory [67]. When employees perceive organizational commitment to CSR they reciprocate in their pro-environmental behavior. They do so in exchange for positive organizational policies and practices towards the preservation of the environment [22,71,83,97]. The positive effect of perceived CSR on employees' PEB through the mediating mechanisms of Econ and Ecom also supports social exchange theory [67]. Employees working in an organization actively involved in CSR display higher levels of Econ and reciprocate by engaging in pro-environmental behaviors [19]. Further, working in an organization displaying CSR also leads to higher employee commitment to activities related to sustainable practices and actions addressing environmental issues [22].

Second, drawing on social exchange theory, this study extends CSR literature. It helps improve understanding of employee PEB as a result of perceived organizational CSR by offering in-depth analysis and multiple insights into its antecedents. The results are in line with past research from other organizational contexts that report the direct and indirect effect of CSR perception on employees' PEB [19,22,30,66]. The findings provide an extension to the work of Gkorezis and Petridou [30] and Afsar and Umrani [22], where the direct as well as the indirect relationship of perceived CSR with employee pro-environmental behavior was reported. The results help us understand how perceived CSR drives PEB through psychological processes of Econ and Ecom as mediating processes [68–71]. No prior research-tested Econ as mediating process in the perceived CSR—pro-environmental behavior relationship exists. The integrated framework offered an extension to the prior models of pro-environmental behavior that were mainly limited to direct relationships or simple mediation [22,30].

Third, this study also addresses the current gap in the literature by investigating the dynamics of perceived CSR and PEB in a workplace setting. Many past studies of this relationship have been mainly conceptual and have not been set in a work context [22]. Our study examines this relationship in the Pakistani textile sector and provides insights into a rarely studied context of the SME sector in a developing economy [22,27,83,112,136]. The study fills this literature gap by providing empirical evidence for the perceived CSR—pro-environmental behavior relationship in SMEs where mainly informal CSR practices exist [73].

#### 5.5. Practical Implications

The current study provides valuable insights for organizations. It demonstrates that employees' perception about their organization's commitment and involvement in CSR reciprocates the organizations through invoking pro-environmental behaviors among their employees. Therefore, to cultivate pro-environmental behavior in SMEs where CSR tends to be informal, such as in the textile industry in developing economies, organizations need to develop contextual enablers to stimulate PEB amongst their employees. Those contextual enablers are positive CSR policies and practices that are incorporated into the organization's long-term strategy for protecting the environment and society [30]. By applying such CSR measures, organizations communicate their Ecom and intentions that can trigger employee PEB at the individual level (Han and Chan 2013). The organizational CSR strategy, CSR initiatives and activities, and environmental policies need to be genuinely, widely, and frequently communicated to employees to build their awareness and perceptions of CSR in their organizations.

Given that the results of this study suggest that Econ leads to enhanced employee pro-environmental behavior, another managerial implication is that organizations should



develop their employees' sense of Econ. The role of leadership can be helpful here, with previous studies reporting a positive correlation between leadership styles and Econ [137,138]. Moreover, communicating the steps the organization is taking towards protecting the environment plays an important role in enhancing employees' Econ. The tangible steps taken by the organization to preserve and protect the environment should be shared with all employees. Such actions communicate to employees that their organization is taking sincere and genuine measures to address environmental issues. Nevertheless, the present study findings focused on employee perceptions; therefore, organizations must communicate their pro-environmental actions internally to employees to build those perceptions. Scholars have argued that employee perception matters more than actual CSR activities as perceptions are much stronger [139]. Organizations can use multiple platforms to create awareness among employees through, for example, their official website, social media, official reports, or internal and external documentation [140]. As a result, employees are likely to demonstrate PEB rather than just advocating for them to their peers.

Moreover, employee pro-environmental behavior should be considered, acknowledged, and rewarded. Managers could encourage employees to come up with novel ways and ideas to address environmental issues and, more importantly, could reward employees regardless of the outcomes of those ideas to promote ongoing engagement. Pro-environmental values could also be incorporated into training sessions and training needs assessments.

In sum, individual-level CSR affects all major actors of the quadruple helix and is also considered a central actor of the institutional and organizational levels of CSR [141]. The quadruple helix model of innovation comprises the elements of science, policy, industry, and society. Perceived CSR plays an important role in the process of shaping Econ and commitment to influence PEB. Thus, CSR can address societal and environmental challenges [142]. By relating to the quadruple helix, industries can pay more attention to PEB when implementing CSR strategies. As a result, employees gradually become accustomed to this change by showing greater Econ and commitment. Therefore, the paradigm shift can be seen as influencing organizations by accelerating and shaping PEB. As boundary spanners between society and industry, practitioners can make this change by implementing new CSR strategies that satisfy the stakeholders' expectations. The industries can re-establish their mission and vision on how to deal with the major societal and environmental challenges and provide them to policymakers. Moreover, as a boundary spanner between industry and government, organizations can help in improving legal and economic processes by providing specific and tangible recommendations. Overall, perceived CSR shapes PEB. These findings provide insights not only for academics and practitioners but also for policymakers in order to contribute to societal betterment by offering solutions to societal and environmental issues.

## 6. Limitations and Future Recommendations

There are some limitations to this study that must be addressed in future research. First, cross-sectional data were used, which can limit the internal validity. Future studies can consider using longitudinal data. Second, only textile industry firms operating in Punjab, Pakistan, were studied. To generalize the findings, data from other sectors, such as leather/footwear, sports, wood, and furniture, should be considered. Third, this study used self-report scales to measure the constructs, which may involve social desirability bias [143] or common-method variance [144]. Future research should incorporate multi-source data collecting procedures to avoid these problems and enhance internal validity. Fourth, this study used the purposive sampling technique which is a non-probability sampling technique. The non-probability sampling technique does not allow an equal chance for the population to be included in the sample, which can lead to biases in the results and, as a result, influence their generalizability. Future research should benefit from using the probability sampling technique. Fifth, other intervening mechanisms, such as an individual's dispositional characteristics (Renwick et al., 2013), could be considered to

explain the effect of CSR perception and pro-environmental behavior. Future research can also benefit from studying stage-1 and stage-2 psychological moderators in the framework of this study.

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**Institutional Review Board Statement:** The study complied with the Declaration of Helsinki and followed its ethical codes for individuals, samples, and data collection involved in each research procedure. Before the initiation of this study, we presented the study topic to the Ethics Committee of the Binus Online Learning, Bina Nusantara University, submitted a proposal stating the purpose of the study, sample, data sources, and details of the written informed consent for respondents. All of the above documents were approved by this committee.

**Informed Consent Statement:** Prior to the questionnaire, the researchers have asked the respondents to read the written informed consent carefully, introduced the purpose of the study to the respondents and explained that the data would be used for research only and that all information about the respondents would be kept confidential. All respondents were informed and volunteered to complete the questionnaire.

**Data Availability Statement:** The original contributions presented in the study are included in the article; further inquiries can be directed to the corresponding author.

**Conflicts of Interest:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as potential conflicts of interest.

## Appendix A. Past Empirical Studies

Reference	Variables	Industry and Country	Methods	Findings
Chou (2014) [25]	IVs: Individual environmental beliefs, personal environmental norms DV: Employees' environmental behaviours Moderator: Green organizational climates	Hotels, Taiwan	Quantitative Questionnaires (survey based)	<ul style="list-style-type: none"> <li>Employees' environmental behavior in Taiwan's hotels was explained more by individual norms than by the organizational climate, although organizational green action may slightly moderate the strength of the relationship between personal environmental norms and employees' green behavior. In addition, under weaker organizational climates, personal norms have a greater effect on the employees' environmental behavior than under stronger climates.</li> </ul>

Reference	Variables	Industry and Country	Methods	Findings
Khuhro et al. (2015) [145]	CSR practices	SMEs, Hyderabad, Pakistan	Quantitative Questionnaires (survey based)	<ul style="list-style-type: none"> <li>Only few companies have information regarding CSR.</li> </ul>
Raza and Majid (2016) [73]	Perceptions and practices of CSR	SMEs, Pakistan	Quantitative: survey instrument (questionnaire) and qualitative interviews	<ul style="list-style-type: none"> <li>The findings of the study reveal that SMEs' approach to CSR in Pakistan is unstructured; however, they are practicing CSR activities in an informal manner with mixed (internal as well as external oriented) methods in most cases. However, few SMEs are also practicing CSR activities in formal manners with external oriented dominant methods over internal methods.</li> </ul>
Kongrerk (2017) [146]	IV: CSR DV: Employee green behavior Mediator: Organizational commitment	ESG-100, 8 major Industries, Thailand	Quantitative Questionnaires (survey based)	<ul style="list-style-type: none"> <li>The results support the hypothesized model along with the mediation of organizational commitment between CSR and employee green behavior.</li> </ul>
Afsar et al. (2018) [147]	IV: Perceived CSR DV: Pro-environmental behavior Mediator: Organizational identification Moderator: Environmentally specific servant leadership	Diverse industry sectors (coal generating power industry, food, chemical, and pharmaceutical industries)	Quantitative Questionnaire based Two-wave study	<ul style="list-style-type: none"> <li>CSR has both a direct and an indirect influence, through organizational identification, on pro-environmental behavior, as well as support for the interactive effect of environmentally specific servant leadership with CSR in predicting employee pro-environmental behaviors.</li> </ul>
Sheeraz et al. (2021) [148]	IV: Perceived CSR DVs: Job satisfaction, organizational citizenship behavior, turnover intention. Mediator: Organizational justice	SMEs, Pakistan	Quantitative Questionnaires (survey based)	<ul style="list-style-type: none"> <li>Significant relationship between variables, i.e., employee's perception of CSR and employee outcomes.</li> <li>Organizational justice partially mediated between employee's perception of corporate social responsibility and employee's outcomes.</li> </ul>

Reference	Variables	Industry and Country	Methods	Findings
Ahmed and Khan (2019) [149]	CSR (external and internal dimensions) and performance	SMEs in industrial estate Peshawar, Pakistan	Qualitative semi-structured interviews and observations	<ul style="list-style-type: none"> <li>The findings reveal that SMEs are somehow informally practicing CSR.</li> <li>Surprisingly, CSR at the strategic level is missing.</li> <li>CSR practices towards employees are missing except health and safety measures.</li> <li>Most of the firms contribute in an irregular manner to the local community—training the locals, hiring them as internees, giving charity and donations, and purchasing of local supplies when available and feasible.</li> <li>Except for one firm, the production or manufacturing firms have no environmental implications.</li> </ul>
Peng and Lee (2019) [150]	IV: Work ethic DV: Employees' environmental behaviours Moderators: Environmental benefit sharing and ecological embeddedness	Hotel industry, China	Quantitative Questionnaires (survey based)	<ul style="list-style-type: none"> <li>Employees' work ethic, hotel's environmental benefit sharing, and employees' ecological embeddedness are significantly positively related to employees' pro-environmental behaviors; the interplay of employees' work ethic and ecological embeddedness significantly and negatively affects employees' pro-environmental behaviors.</li> </ul>
Tuan (2019) [151]	IV: Environmentally specific charismatic leadership DV: Organizational citizenship behavior for the environment Mediator: Employee environmental commitment Moderator: Organizational justice for pro-environmental behaviors, procedural OJPB, distributive OJPB, interactional OJPB.	Tour companies, Vietnam	Quantitative Questionnaire based Two-wave study	<ul style="list-style-type: none"> <li>Environmentally specific charismatic leadership demonstrated a role in shaping employee OCBE via employee environmental commitment as a mediator.</li> <li>The positive interaction effects between environmentally specific charismatic leadership and the three dimensions of organizational justice for pro-environmental behaviors—procedural, distributive, and interactional justice—were found to predict employee environmental commitment.</li> </ul>

Reference	Variables	Industry and Country	Methods	Findings
Afsar and Umrani (2020) [22]	IV: Perceived CSR DV: Pro-environmental behavior Mediator: Organizational identification Moderator: Corporate entrepreneurship and employees' environmental consciousness	Diverse industry sectors (fossil fuel, cement, automobile, pharmaceutical, and agriculture industries), Pakistan	Quantitative close-ended questionnaires (survey based)	<ul style="list-style-type: none"> <li>CSR directly impacted moral reflectiveness, coworker pro-environmental advocacy, and environmental commitment.</li> <li>Moral reflectiveness and coworker pro-environmental advocacy significantly and positively influenced environmental commitment.</li> <li>Moral reflectiveness, coworker pro-environmental advocacy, and environmental commitment partially mediated the relationship between perceived CSR and employee pro-environmental behavior.</li> </ul>
Cheema et al. (2020) [96]	IV: Perceived CSR DV: Pro-environmental behavior Mediator: Environmental commitment Moderators: Moral reflectiveness and coworker pro-environmental advocacy	Pakistan-based hotel industry	Quantitative Questionnaire based Two-wave study	<ul style="list-style-type: none"> <li>CSR had both a direct and an indirect influence, through organizational identification, on pro-environmental behavior. The results lent support for the interactive effect of corporate entrepreneurship and environmental consciousness with CSR in predicting pro-environmental behaviors.</li> </ul>

### Appendix B. Variables and Scales

Variables	Definition	No. of Items	Sources of Items
<p><b>Perceived Corporate Social Responsibility</b></p> <p>My organization targets sustainable growth which considers future generations.</p> <p>My organization participates in activities which aim to protect and improve the quality of the natural environment.</p> <p>My organization encourages its employees to participate in voluntarily activities.</p> <p>My organization implements special programs to minimize its negative impact on the natural environment.</p> <p>My organization cooperates with its competitors in social responsibility Projects.</p> <p>My organization emphasizes the importance of its social responsibilities to the society.</p>	<p>CSR is defined as "context-specific organizational actions and policies that take into account stakeholders' expectations and the triple bottom line of economic, social and environmental performance."</p>	6	Perceived CSR was measured using a 6-item scale from Turker (2009).



Variables	Definition	No. of Items	Sources of Items
<p><b>Environmental Commitment</b></p> <p>I really care about the environmental concern of my organization.</p> <p>I would feel guilty about not supporting the environmental efforts of my organization.</p> <p>The environmental concern of my organization means a lot to me.</p> <p>I feel a sense of duty to support the environmental efforts of my organization.</p> <p>I really feel as if my organization's environmental problems are my own.</p> <p>I feel personally attached to the environmental concern of my organization.</p> <p>I feel an obligation to support the environmental efforts of my organization.</p> <p>I strongly value the environmental efforts of my organization.</p>	<p>Environmental commitment refers to an individual's "emotional attachment, identification, and involvement with environmental behaviors."</p>	8	<p>Environmental commitment was measured using eight items from Allen and Meyer (1990) and Herscovitch and Meyer (2002).</p>
<p><b>Environmental consciousness</b></p> <p>I am conscious about the actions I can take to improve the environment.</p> <p>I am often concerned about and absorb environmental knowledge and information.</p> <p>We should devote some part of our national resources to environmental protection.</p> <p>It is important to me that we try to protect our environment for our future generations.</p> <p>It would mean a lot to me if I could contribute to protecting the environment.</p> <p>If things continue on their present course, we will soon experience a major ecological catastrophe.</p> <p>The environment is one of the most important issues facing the world today.</p> <p>We as humans are not doing enough to protect our environment.</p>	<p>Environmental consciousness refers to specific psychological factors related to an individual's evaluation of or an attitude towards environment and its protection.</p>	8	<p>Environmental consciousness was measured using an 8-item scale developed by Huang et al. (2014).</p>
<p><b>Pro-environmental behaviors</b></p> <p>At work, I take part in environmentally friendly programs.</p> <p>I suggest new practices that could improve the environmental performance of my organization.</p> <p>At work, I question practices that are likely to hurt the environment.</p> <p>In my work, I weigh the consequences of my actions before doing something that could affect the environment.</p> <p>At work, I perform environmental tasks that are not required by my organization.</p> <p>At work, I avoid wasting resources such as electricity or water.</p> <p>At work, I take stairs instead of elevators to save energy.</p> <p>At work, I turn off lights when out of office.</p> <p>I print double sided whenever possible.</p> <p>At work, I recycle (e.g., paper, cans, batteries, and oil).</p> <p>I adequately complete assigned duties in environmentally friendly ways.</p> <p>I perform tasks that are expected of me in environmentally friendly ways.</p>	<p>Pro-environmental behaviors refer to behaviors that an employee displays at workplace to protect the natural environment such as turning off light, printing double-side pages, using stairs instead of elevators, and keeping the environment clean, and so on.</p>	12	<p>Pro-environmental behaviors were measured using a 12-item scale developed by Robertson and Barling (2013).</p>

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