



## Research Article

# Forging Sustainable Development: Exploring the Impact of Green Initiatives and Corporate Social Responsibility

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### Abstract

In today's industrial landscape, businesses are increasingly recognizing the importance of integrating environmentally sustainable strategies to maintain competitiveness considering escalating environmental concerns. This study investigates the relationship between green practices, corporate social responsibility (CSR), managerial support, and sustainable business performance within Pakistan's service sector. Grounded in the resource-based view and stakeholder theory, the research employs a quantitative approach, surveying 506 participants across managerial levels from service sector. The findings underscore a positive correlation between green practices, CSR adherence, and sustainable performance. Notably, managerial support plays a pivotal role in translating green initiatives and CSR commitments into tangible sustainable outcomes. The widespread adoption of eco-friendly technologies within the service sector signifies a broader industry-wide shift towards sustainability. This study contributes valuable insights for academia, policymakers, industry professionals, and organizational leaders, shedding light on effective strategies for sustainable business practices. By aligning green initiatives with CSR objectives and leveraging managerial support, enterprises can position themselves as leaders in sustainable performance, thereby fostering value creation while addressing environmental challenges.

**Keywords:** Green Innovation, Corporate Social Responsibility, Sustainable Performance, Sustainability.

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## 1 INTRODUCTION

In recent years, the Earth's climate has undergone profound transformation, a phenomenon primarily attributed to extensive economic activities that have detrimental impacts on the environment (Alvarado & Toledo, 2017). Environmental scholars emphasize the exigency of a methodical approach toward addressing environmental degradation, underscoring manifold human activities such as fossil fuel combustion, deforestation, carbon dioxide emissions, and plastic pollution in oceans, all of which precipitate adverse consequences for the ecosystem, imperiling numerous species (Anwar et al., 2020). In response to the escalating global consensus regarding the imperative of safeguarding the environment from such dire ramifications, a myriad of organizations is actively embracing Environmental Management Systems (EMS). The nexus between human resources and environmental management techniques is of paramount importance in perpetuating and implementing EMS (Mohammad et al., 2020). Furthermore, it is imperative to perceive environmental management not merely as an organizational procedure but also as a societal obligation, as elucidated by Rauf et al. (2019). The adoption of an EMS engenders an array of both tangible and intangible benefits, encompassing the augmentation of corporate reputation (Miles & Covin, 2000), cultivation of dynamic processes (Zhu et al., 2013), sporadic operational cost reductions (Jasch, 2006), and nurturing customer environmental conscientiousness (Prasad et al., 2019).

In light of the burgeoning global environmental crisis, businesses are compelled to integrate green innovation practices into their operations to pursue financial objectives while concurrently preserving the environment (Li et al., 2017). As defined by Chen et al. (2018), "green innovation" endeavors to mitigate the potential adverse impacts of manufacturing and operational activities on the environment, primarily targeting procedures, technologies, systems, products, and managerial practices. The proficient implementation of such innovations facilitates the propagation of environmentally conscious growth and resolution of environmental preservation issues, thereby constituting fundamental elements for enhancing the economic, social, and environmental performance of diverse enterprises (Dangelico & Pujari, 2010).

In recent years, there has been a discernible surge in interest in green management driven by an escalating recognition of the significance of environmentally friendly practices. As posited by Raharjo (2019), green management seeks to harmonize financial, social, and environmental benefits in the conversion of inputs into outputs. In contexts such as Pakistan, understanding facets, such as green input, processes, output, marketing, and regulatory compliance, assumes pivotal importance in augmenting sustainability. The adoption of green management enables businesses to discharge social responsibilities, mitigate environmental impacts, and attain profitability, thereby aligning with the principle of stakeholder maximization. Such an approach fosters sustainable practices that accrue benefits to both businesses and society at large.

During the economic transition from 1993 to 1998, Lízal and Earnhart (2002) scrutinized the nexus between economic and ecological performance and revealed that robust environmental performance can bolster profitability through cost minimization and revenue augmentation. However, Filbeck and Gorman (2004) found no significant correlation between economic and ecological performance, although their analysis focused on the electrical sector, which deviates structurally from most other sectors. Investigating the correlation between green disclosure and economic performance in relatively large companies, Stanwick and Stanwick (2000) discovered that companies with robust financial performance exhibit a stronger propensity towards policies and the articulation of environmental commitment than those with poorer economic performance.

Corporate Social Responsibility (CSR) entails societal obligations across economic, environmental, employee well-being, ethical, and operational domains, thereby shaping stakeholder perceptions and values (Servaes & Tamayo, 2013). In the contemporary competitive milieu, scholars have underscored the significance of firms' responsibilities towards stakeholders, consumers, and employees. The 21st century has accentuated the synergy between data analytics, digital transformation, and sustainable value creation (Mikalef et al., 2020). Despite debates regarding its efficacy, active engagement in CSR enhances corporate reputation, employee commitment, and financial performance (Martinez-Conesa et al., 2017; Malik et al., 2020; Rodriguez & Fernandez, 2016). Integrating CSR within Resource-Based View (RBV) theory, this study explores its direct impact on sustainable performance and its indirect influence through innovation pathways (Freeman, 1994).

Undoubtedly, green initiatives play an indispensable role in the sustainable performance of organizations. Nevertheless, the precise nature of their direct or indirect impact on sustainable performance remains inadequately understood, particularly in developing nations. Hence, this research endeavors to bridge this gap by investigating the

effects of green initiatives and corporate social responsibility on sustainable performance. This research is significant for the extant literature on green initiatives and sustainability. By quantifying the effects of green initiatives on sustainable performance, the findings of this research will provide valuable insights for management, strategists, and policymakers, augmenting their understanding of the importance of their endeavors in fostering the adoption, execution, and evaluation of green initiatives. Furthermore, this research will be instrumental in elucidating how these green initiatives impact domestic industries in Pakistan.

Considering the substantial proliferation of literature addressing green initiatives and organizational sustainable performance in recent years, particularly in developed nations, it is noteworthy that while numerous studies have scrutinized the impact of green initiatives on sustainable performance, few have concurrently examined corporate social responsibility (CSR) in relation to these variables, especially in emerging economies. Some studies contend that CSR exerts no discernible influence on enhancing organizational sustainable performance (Purnomo & Widianingsih, 2012), while others underscore its significant impact (Abbas et al., 2019). This study aims to fill this gap by investigating the influence of green initiatives (encompassing green innovation, management, and practices) and corporate social responsibility (CSR) on sustainable performance, with managerial support serving as a mediator. To achieve this objective, this study leverages the Resource-Based View (RBV) and Stakeholder Theory (ST) to emphasize the importance of business resources and the influence of stakeholder pressure in comprehensively implementing green initiatives and integrating CSR principles. This research endeavors to elucidate how green initiatives and CSR significantly impact the sustainable performance of organizations.

## 2 LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

The Resource-Based View (RBV) framework in strategic management emphasizes understanding a company's internal strengths and weaknesses to enhance its competitiveness (Barney et al., 2011). RBV posits that a company's unique resources drive its competitive advantage. These resources, including capabilities, processes, and knowledge, are valuable, rare, inimitable, and non-substitutable (Barney, 1991). Integrating Green Initiatives (GI) within the RBV can improve competitiveness and sustainability, provided the company has the necessary resources (Sarkis et al., 2011). Management support and environmental investments are crucial resources for implementing GI (Gavronski et al., 2011). The RBV is widely used by industry managers to assess the link between organizational resources and financial performance, aiding strategic decision-making and resource optimization (Hansen et al., 2004).

This study relies on the stakeholder theory, which asserts that businesses must consider the interests of both internal and external stakeholders in their decision-making processes to ensure long-term success. Stakeholders, as defined by Freeman (1984), encompass entities with the ability to influence organizational objectives. In today's context, stakeholder pressures for environmentally responsible practices are particularly salient because of global concerns such as climate change and greenhouse gas emissions. Consequently, firms are compelled to undertake green initiatives to mitigate the environmental harm. These pressures emanate from various sources, including government regulations, consumer preferences for eco-friendly products, employee expectations for environmentally responsible workplaces, and investor interest in sustainable businesses. Thus, the integration of stakeholder demands into corporate strategies has become imperative for companies striving to navigate the complex landscape of sustainability, while maintaining competitiveness in the global market (Freeman, 1984).

### 2.1 Green Initiatives

Green initiatives, as articulated in the Corporate Environmental Management (CEM) literature, denote measures implemented by businesses to mitigate environmental impacts across product lifecycles. As highlighted by Albertini (2013), CEM encompasses environmentally conscious management practices. In this study, green innovation, management, and practices are considered key components of green initiatives. These initiatives are critical for addressing pressing environmental challenges, such as climate change, pollution, biodiversity loss, and resource depletion. They are often driven by governments, businesses, non-profit organizations, and individuals, aiming to mitigate environmental degradation and create a more sustainable future for future generations. Numerous scholarly studies have emphasized the importance of green initiatives in tackling environmental issues and achieving sustainable development goals. For instance, Zhou et al. (2019) highlighted the significant role of renewable energy initiatives in reducing greenhouse gas emissions and mitigating climate change. Similarly, Henry et al. (2020) underscored the effectiveness of waste management initiatives in minimizing environmental pollution and promoting circular economy principles. These scholarly findings provide valuable insights into the benefits and effectiveness of green initiatives,

guiding policymakers, businesses, and communities to implement sustainable practices and foster environmental stewardship.

## 2.2 Green Innovation and Sustainable Performance

Our study examines the impact of green innovation on sustainable performance in enterprises. Green Initiatives (GI) are utilized to mitigate environmental impacts and are categorized into process and product innovation (Li et al., 2017; Xie et al., 2019). Efficiency and flexibility in Sustainable Performance (SP) relies on workforce knowledge and advanced technologies (Lopes et al., 2017; Schaltegger et al., 2012). Cutting-edge eco-friendly technologies offer commercial and economic benefits, promoting environmentally responsible products (Albort-Morant et al., 2016). Hence, we propose the following hypotheses:

Hypothesis (H1). Green innovation (GI) significantly and positively affects sustainable performance (SP).

## 2.3 Green Management and Sustainable Performance

Examining the relationship between green management practices and sustainable performance reveals a nuanced interplay often overlooked in the business literature. Although traditional views suggest that green practices may harm business performance, recent studies contradict this notion. Evidence suggests that embracing environmentally friendly processes not only improves financial performance, but also reduces costs, minimizes environmental impact, and fosters energy efficiency (Abdullah et al., 2023). Moreover, Studies with evidence from European Union SMEs state reductions in waste, raw material expenses, water usage, and energy consumption through eco-friendly operations (Majid et al., 2023). These practices also create opportunities for emerging eco-related industries, driven by motivations such as environmental stewardship and corporate reputation enhancement (Namkung and Jang, 2013). Consequently, it is evident that green management plays a crucial role in bolstering an organization's sustainable performance, supporting the following hypothesis:

Hypothesis (H2). Green management (GM) significantly and positively affects sustainable performance (SP).

## 2.4 Green Practices and Sustainable Performance

The relationship between green practices and sustainable performance is pivotal, as outlined by Clair et al. (1996) and Renwick et al. (2013), who emphasize the importance of establishing an environmental vision, educating employees, and fostering a green organizational culture. These practices not only enhance profitability but also contribute to socially responsible workplaces by aligning corporate policies with environmental agendas (Suharti & Sugiarto, 2020). The positive impact of green practices on sustainable performance is evident in their ability to promote employee engagement, support environmentally friendly behavior, and improve overall well-being (Temminck et al., 2015). Hence, the following hypothesis is proposed:

Hypothesis (H3). Green practices (GP) significantly and positively affect sustainable performance (SP).

## 2.5 CSR and Sustainable Performance

An examination of the impact of corporate social responsibility (CSR) on sustainable performance reveals its pivotal role in enhancing an organization's societal contributions and environmental stewardship. Rooted in ethical, economic, and advantageous business practices, CSR fosters a symbiotic relationship among companies, stakeholders, and the community. This commitment, as highlighted by Abbas et al. (2019) and Lee et al. (2019), not only garners favorable perceptions, but also aligns with consumer preferences, elevating public awareness. Major corporations' adoption of CSR initiatives, driven by societal expectations and environmental consciousness, underscores their relevance in fostering economic and ecological performance, as noted by Ismail (2009). Cho et al. (2019) emphasize CSR's multifaceted nature, integral to fulfilling social, ethical, and legal obligations, while empirical evidence consistently supports its positive correlation with both social and economic outcomes, as demonstrated by Anser et al. (2020) and Sila and Cek. (2017). Paillé and Boiral's (2013) research further validates CSR's favorable impacts on sustainable performance. Thus, we propose the following hypothesis:

Hypothesis (H4). Corporate social responsibility (CSR) significantly and positively affects sustainable performance (SP).

## 2.6 Mediation of Managerial Support

Managerial support is crucial for businesses to establish competitive advantages through resource optimization, particularly in navigating challenges related to sustainability (Sirmon et al., 2007). With contemporary emphasis on

environmental stewardship, companies prioritize Corporate Social Responsibility (CSR), recognizing its importance for societal and environmental well-being (Banerjee, 2002). Management decisions significantly impact environmental practices, making their support vital for sustainable performance amid technological advancements and environmental challenges (Oliver, 1997; Ilyas et al., 2020). Managers' commitment to CSR aligns with pro-environmental conduct, further enhancing sustainable business performance (Wood, 1991; Collier & Esteban, 2007). Based on the importance of managerial support, the following hypothesis is developed:

Hypothesis (H5). Managerial support mediates the relationship between green initiatives (GI) and sustainable performance (SP).

Hypothesis (H6). Managerial support mediates the relationship between corporate social responsibility (CSR) and sustainable performance (SP).

Figure 1 displays the variables examined in this study, including green innovation, green management, green practices, and CSR. These factors were found to have a significant positive correlation with sustainability performance. Managerial support was identified as a mediator of this relationship.

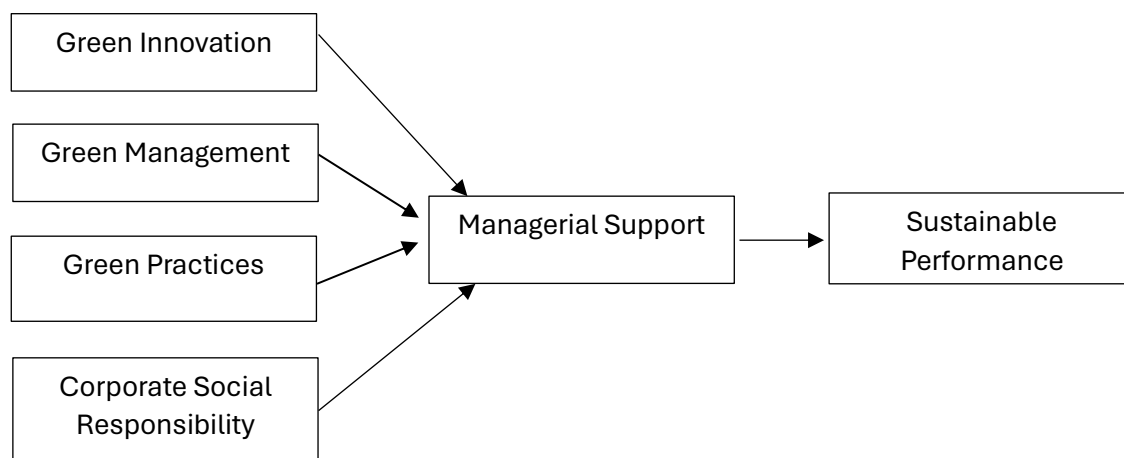


Figure 1. Research Model of the Study

### 3 RESEARCH METHODOLOGY

This study employs a quantitative approach because of its clear definition of variables and well-developed hypotheses, aligning with the positivist perspective that emphasizes a single measurable reality. This approach views design as fixed and deductive, facilitating a descriptive analysis to measure the impact of green initiatives and corporate social responsibility (CSR) on sustainable performance. Utilizing correlational analysis, we explored the strength of the relationship between these variables. Quantitative research, as described by Creswell (2014), involves testing objective speculations through data collection, analysis, and result presentation, allowing for generalizability of the results. By monitoring events in a non-contrived setting and following the natural flow of organizational processes, this study adheres to Sekaran and Bougie's (2016) definition of research conducted in natural environments where work unfolds naturally.

#### 3.1 Sampling Techniques

This study employed non-probability sampling because of its inability to ascertain the exact population size. Specifically, convenience sampling from the service sector in Punjab, Pakistan, was utilized, with participants selected based on their willingness and availability. The target population comprises lower, middle, and high-level managers. Hair et al. (2018) proposed selecting a variable from a questionnaire with the highest number of items and multiplying it by ten. For example, in the present study, sustainable performance was found to have the maximum number of items, for example, 15. Although 150 participants were deemed sufficient based on their guidelines, data from 506 participants were collected to ensure reliability. Managers are chosen as the units of analysis because of their pivotal role within organizations and their insight into their firm's initiatives, aligning with Hair et al.'s (2018) recommendation to select variables with a high number of items for the reliability of questionnaire results.

### 3.2 Measurements

In this study, a questionnaire survey with closed-ended questions and a Likert scale was selected for simplicity, convenience, and cost-effectiveness. This allows for the collection of quantitative and qualitative data from diverse sample groups, enabling standardized data collection for statistical analysis (Bickman & Rog, 1998; Bryman, 1988; Shajahan, 2005). This study used a questionnaire consisting of two sections. The first gathered ordinal data such as age, gender, education, organization, designation, and experience, while the second used a Likert scale across three parts for responses. The first part encompasses inquiries pertaining to independent variables: green innovation (comprising eight items, four related to product innovation and four to process innovation as used by Zhang et al., 2018), green management (including six items from Shu et al., 2016), green practices (with eight items from Yousaf, 2021; González-Benito and González-Benito, 2006), and CSR (consisting of three items from Malik et al., 2021). The second part incorporated 12 items concerning managerial support (sourced from Wassem et al., 2019; Palomo et al., 2010), while the final part assessed sustainable performance (from Malik et al., 2021), encompassing economic performance (with five items), environmental performance ( five items), and social performance ( five items). A 5-point Likert scale was utilized, with approximately 800 questionnaires and surveys distributed to employees across diverse service sector industries. The collected data were evaluated using the SPSS version 20 software.

## 4 RESULTS AND ANALYSIS

Table 1 presents a comprehensive analysis of various psychological characteristics and aspects, elucidating their minimum, maximum, mean, and standard deviation values. Notably, green initiatives exhibited a mean score of 3.9661, indicating an organizational emphasis on environmentally sustainable practices. Corporate social responsibility, with an average score of 4.0204, underscores community expectations regarding ethical, economic, and legal conduct. Managerial support, averaging 3.9209, signifies the management's role in motivating employees towards organizational objectives.

Table 1. Descriptive Statistics of Variables

	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Green Initiatives	2.73	5.00	3.9661	0.46137	0.022	0.466
CSR	2.00	5.00	4.0204	0.46622	-0.784	4.240
Managerial support	1.00	5.00	3.9209	0.53861	-1.578	8.130
Sustainable performance	2.06	5.00	3.9782	0.42435	-0.908	4.961
Economic performance	1.40	5.00	3.8953	0.53667	-1.238	4.564
Environmental performance	1.80	5.00	4.0040	0.48988	-1.086	4.982
Social performance	2.60	5.00	4.0356	0.45328	-0.124	1.789

Sustainable performance, encompassing the economic, environmental, and social dimensions, reflects a mean score of 3.9782, with an economic performance of 3.8953, environmental performance of 4.0040, and social performance of 4.0356. Skewness analysis reveals left-skewed distributions for all variables except green initiatives, implying a concentration of observations towards higher values. Positive kurtosis values across all variables (ranging from 0.466 to 8.130) indicate distributions with heavier tails or heightened peaks than a normal distribution. These findings echo previous studies on green initiatives and corporate social responsibility, highlighting their relevance in understanding organizational behavior and performance (Zhang et al., 2018; Shu et al., 2016; Yousaf, 2021; Malik et al., 2021; Wassem et al., 2019).

The reliability analysis results, detailed in Table 4.2, demonstrate the internal consistency of various variables that measure sustainable performance. Notably, product innovation, green management, green practices, managerial support, economic performance, environmental performance, and social performance exhibited strong internal consistency, as evidenced by their Cronbach's alpha values ranging from 0.753 to 0.935. These values confirm the reliability and consistency of the assessment criteria across the respective variables. While corporate social responsibility shows acceptable internal consistency, there is room for improvement in variables, such as green initiatives and CSR. However, these metrics collectively exhibit reasonably high internal consistency, indicating their reliability in assessing sustainable performance, with managerial support playing a pivotal mediating role. These findings resonate with prior research that emphasizes the importance of factors such as green innovation, managerial support, and CSR in understanding and promoting sustainable practices (Yousaf, 2021; Shu et al., 2016; Zhang et al., 2018; Wassem et al., 2019; Malik et al., 2021).

Table 2. Reliability Analysis of the Variables

Constructs	Cronbach's Alpha	No. of Items
Product innovation	.822	4
Process innovation	.753	4
Green management	.881	6
Green practices	.920	8
Corporate social responsibility	.727	3
Managerial support	.935	12
Economic performance	.912	5
Environmental performance	.899	5
Social performance	.896	5

The correlation coefficients presented in Table 3 reveal the interplay between the various factors in sustainability management. Sustainable performance demonstrated a moderate to strong positive correlation with green innovation (0.487), green practices (0.551), corporate social responsibility (0.619), and green management (0.607), while showing a weaker positive association with managerial support (0.361). Similarly, green innovation displays positive correlations with all the aforementioned factors, except for managerial support, where it exhibits a negligible correlation (0.169). Green practices exhibited moderate to high positive correlations with sustainable performance (0.551), green innovation (0.643), and green management (0.714) and a lower positive correlation with corporate social responsibility (0.484). Corporate is also positively correlated with sustainable performance (0.619), green innovation (0.552), and green management (0.578), with a somewhat weaker association with green practices (0.484).

Table 3. Correlation

Constructs	SP	GI	GP	CSR	GM	MS
SP	1					
GI	.487**	1				
GP	.551**	.643**	1			
CSR	.619**	.552**	.484**	1		
GM	.607**	.691**	.714**	.578**	1	
MS	.361**	.169**	.205**	.393**	.388**	1

Green management demonstrated positive correlations with all factors except managerial support, with which it showed a lower positive correlation (0.388). Managerial support displays negligible correlations with all factors except corporate social responsibility, with which it has a low positive correlation (0.393). These findings align with prior research on sustainability management and underscore the significance of factors such as green practices, innovation, and managerial support in achieving sustainability outcomes. Additionally, they echo the importance of managerial support in driving sustainability initiatives, as evidenced by previous studies (Yousaf, 2021; Shu et al., 2016; Zhang et al., 2018), along with the critical role of corporate social responsibility and its impact on sustainable performance (Malik et al., 2021; Wasseem et al., 2019).

Table 4. Hypotheses Testing

Hypothesis	Beta	t-value	p-value	Results
H1: GIn → SP	-.019	-.393	.695	Accepted
H2: GM → SP	.229	4.189	.000	Accepted
H3: GP → SP	.207	4.348	.000	Accepted
H4: CSR → SP	.361	8.634	.000	Accepted
H5a: GIn → MS → SP	.038	2.923	.000	Accepted
H5b: GM → MS → SP	.051	4.496	.000	Accepted
H5c: GP → MS → SP	.040	6.231	.000	Accepted
H6: CSR → MS → SP	.049	7.248	.000	Accepted

The regression presented in the table indicate significant associations between the independent variables (green innovation, green management, green practices, and corporate social responsibility) and the dependent variable (sustainable performance). The beta coefficients serve as indicators of the strength and directionality of these associations, with positive coefficients suggesting favorable relationships and negative coefficients indicating adverse relationships. While green innovation demonstrates a negative beta value, signifying a detrimental link with sustainable performance, all the other variables exhibit positive correlations. This underscores the salutary impact of green

management, practices, and corporate social responsibility on sustainable performance. Furthermore, the p-value, elucidating the likelihood of observing results under the null hypothesis, and t-values, gauging the significance of the beta coefficients, provide additional insights. The last column of the results, hinging upon the significance level, discerns whether the null hypothesis is rejected. In essence, this analysis accentuates the overarching positive influence of the aforementioned variables on sustainable performance despite the observed contrasting relationship with green innovation. Notably, while the impact of green innovation on managerial support is quantified at 0.1695, its significance is partially affirmed by a p-value of 0.05 (i.e., 0.0001). Nevertheless, green innovation demonstrates a clear positive correlation with sustainable performance, with managerial support mediating 3.82% of its effect. Similarly, green management exerted a substantial influence on both managerial support (44.12%) and sustainable performance (5.11%) through mediation by managerial support. Similarly, green practices and corporate social responsibility display significant correlations with managerial support and sustainable performance. Through managerial support mediation, these factors exhibited varied impacts on sustainable performance, with direct effects ranging from 38.43% to 51.40%. Despite the partial significance in certain relationships, the overall findings underscore a positive and statistically significant link between green initiatives and sustainable performance when managerial support is involved. These results align with those of previous research by Yousaf (2021), Shu et al. (2016), Zhang et al. (2018), Malik et al. (2021), and Wassem et al. (2019), among others.

## 5 DISCUSSION AND CONCLUSION

The purpose of this research is to explore the impact of environmentally friendly initiatives, such as green innovation, green management, green practices, and corporate social responsibility (CSR), on sustainable business performance, with a particular focus on the role of managerial support. The first hypothesis (H1) investigates the influence of green innovation on sustainable performance. Green innovation has gained substantial attention owing to its potential benefits, including environmental friendliness, waste reduction, and improved organizational performance. Notably, approximately 20% of recent publications have emphasized the tangible advantages of green innovation. Organizations are increasingly adopting sustainable business practices to align with green innovation mandates, as highlighted by Gluch et al. (2009). The period between 2016 and 2018 saw a surge in green innovation driven by factors, such as the demand for eco-friendly products and services. Stakeholder pressure, as indicated by Kawai et al. (2018), can impede green innovation performance, whereas increased financing, as suggested by Saunila et al. (2018), can support it. Additionally, Asadi et al. (2020) and Yousaf (2021) demonstrate a positive correlation between green innovation and sustainable performance, supporting H1. Hypothesis 2 (H2) examined the effect of green management on sustainable performance. Businesses are increasingly adopting green management practices that involve the promotion of environmentally friendly technologies. Shu et al. (2016) argued that green management drives product and process innovation, ultimately enhancing sustainable performance. Therefore, H2 was accepted. Hypothesis 3 (H3) assessed the impact of green practices on sustainable performance, focusing on employee-related activities aimed at environmental preservation. Yousaf (2021) and Yong et al. (2020) found that green practices positively influence sustainable performance across various dimensions, thus supporting H3. Hypothesis 4 (H4) aimed to determine the effects of CSR on sustainability. Despite ongoing debates regarding its effectiveness, CSR has been shown to have a positive relationship with sustainable performance, as evidenced by Abbas et al. (2019) and Anser et al. (2020). Therefore, H4 is supported. Hypothesis 5 (H5) explores the mediating role of managerial support between green initiatives and sustainable performance. Shahzad et al. (2022) and Malik et al. (2021) demonstrated the positive impact of green innovation and green practices on sustainable performance through the mediation of managerial support. Hence, H5 is accepted. Hypothesis 6 (H6) investigates the relationship between CSR and sustainable performance. Malik et al. (2021) found that CSR influences sustainable performance directly and indirectly through managerial support, thus supporting H6. In summary, the study's findings support all hypotheses (H1-H6), highlighting the importance of managerial support in linking green initiatives and CSR to sustainable performance. These results are consistent with prior research on green innovation, management, and practices, emphasizing the significance of investigating managerial support and CSR in this context. These results are consistent with those of previous studies on environmentally friendly innovation, management, and practices (Yousaf, 2021; Shu et al., 2016; Zhang et al., 2018). Similarly, in the context of managerial support, sustainable performance, and corporate social responsibility, the findings of Malik et al. (2021) and Wassem et al. (2019) are relevant to this study's findings.

### 5.1 Research Implications

This study addresses a notable gap in the understanding of the impact of corporate social responsibility (CSR) and green initiatives on sustainable performance in developing nations, specifically Pakistan. By exploring the role of



managerial support, this study sheds light on the mechanisms by which CSR and green efforts influence sustainability. Drawing on a sample of 506 responses, predominantly from the Punjab region, this study provides valuable insights for managers, strategists, and policymakers in Pakistani industries. These findings underscore the importance of managerial support in fostering the adoption, implementation, and assessment of green initiatives while also highlighting the profound influence of green innovation, management, and practices on local industries' sustainable performance.

## 5.2 Limitations and Future Directions

In addition to green initiatives and corporate social responsibility (CSR), other factors, such as organizational citizenship behavior (OCB) can be leveraged to assess the sustainable performance of companies in the service industry. Economic considerations play a pivotal role in analyzing corporate sustainability. While this study focuses on the service sector due to budget and time constraints, future research could expand to include manufacturing firms, SMEs, NGOs, and other entities to enrich the understanding of sustainable practices across diverse sectors. To enhance the applicability of the findings beyond specific contexts, such as Pakistan, future scholars should undertake cross-cultural investigations. Longitudinal research tracking green initiatives over time would provide valuable insights into the dynamics of sustainable performance, aiding policymakers in refining interventions, and adapting strategies to evolving societal and environmental landscapes.

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