



## Influence of Environmental Sustainability Orientation and Corporate Social Responsibility on Environmental Performance of Small and Medium Enterprises: The mediating effect of Green Capability

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**Abstract:** This study has shown that green competency does not have a moderating role in the connection between environmental performance, corporate social responsibility, and a focus on environmental sustainability orientation (ESO). Despite the increasing body of research exploring the relationship between corporate social responsibility (CSR) and environmental sustainability outcomes (ESO), there has been no improvement in environmental performance. The aim of this study was to find out the impact of above mentioned variables, where theory of resource-based-view (RBV) was employed to build a theoretical framework. The relationships between study variables have been confirmed from the current literature. Seven hypotheses of the current study are established. The population and sample size was set by using the determination of sampling technique Sekaran (2006). Adopted questionnaires were used to gather primary data. The data was gathered via a survey sent to top-level executives at Pakistani enterprises operating in the construction and manufacturing industries. For the aim of this study, a total of 377 questionnaires were used to collect data. The experts doing the inquiry used both Smart-PLS and SPSS. The technique of structural equation modeling (SEM) was used to assess the validity of the variables and the relationships between them. The results indicate a clear correlation between environmental performance, environmental social responsibility, and green competence. However, it is important to note that corporate social responsibility has a limited impact on improving environmental performance. ESO (environmental sustainability orientation) and CSR (Corporate Social Responsibility) are important aspects that have a substantial impact on environmental performance. Green capabilities may serve as a means to connect environmental social responsibility and environmental performance.

**Key words:** Environmental Sustainability Orientation, Corporate Social Responsibility, Environmental Performance, Small and Medium Enterprises, Green Capability

### 1. Introduction

The construction industry, the academic community, the research community, and the politicians responsible for environmental issues can all agree on one thing: several factors are contributing to the state of the environment today. Air pollution, increased energy consumption, depleted natural resources, the introduction of potentially dangerous items, rising levels of environmental pollution, shifting climatic patterns, and the introduction of potentially harmful materials all contribute to these issues (Kraus et al., 2020). As the world's environmental issues continue to grow at a frightening rate, humanity is confronted with its greatest task to yet (Akram et al., 2022). Reducing pollution, restoring resources, halting the use of hazardous products, and ceasing any activities that

negatively affect the environment are also essential for environmental sustainability. According to the findings, economic competitiveness increases in areas where environmental regulations are well-designed (Bresciani et al., 2021). According to Yong et al., key challenges including global warming, pollution, and waste affect both businesses and communities (2019). A few years ago, businesses and individuals believed that the environment did not affect them, despite their activities throughout the production process. According to Tang and Tang (2012) both legislators and practitioners may do their part to promote sustainable performance by working on corporate social responsibility (CSR), green, and environmental frameworks that help lessen an organization's environmental effect. Environmentally, small and medium-sized businesses (SMEs) have received surprisingly little attention from academics.

According to Amankwah et al. (2019), there is a lot of interest in ESO because of its positive effect on organizational performance. Since researchers focused mostly on ecological preference initiatives in established markets and for large organizations, there are less studies available that were conducted on SMEs or small and medium companies in developing nations. It has been said that SMEs are the driving force behind economic growth in developing countries (Yoshino, 2016). In spite of this, SMEs have a disproportionately large impact on environmental problems, such as worldwide warming and excessive energy use (Fawcett & Hampton, 2020). Researchers, policymakers, and government officials are now focusing on organizational sustainability because of the world's rapidly expanding population and the accompanying rise in the prevalence of serious issues like pollution, the reduction of normal possessions, climate change, and the use of hazardous materials. According to Xu et al., CSR has received considerable attention from researchers since it is seen as an important topic by both academics and practitioners. More than 8,000 companies in 160 economies have reportedly spent over \$4 trillion on CSR initiatives (Social Investment Forum, 2014).

Companies have a right to market and sell their wares to customers, but they must also behave ethically while doing so (Hou, 2019). According to Hickle (2017), the idea of corporate social responsibility (CSR) is expanding as it gains popularity among businesses throughout the globe. Additionally, companies value and acknowledge CSR because of modern society's emphasis on preserving the ecosystem. Because of their smaller size and perhaps lower capital availability, small and medium-sized enterprises (SMEs) may benefit greatly from corporate social responsibility (CSR) practices (Zhu et al., 2019). The researchers also barely touched on the difficulty of measuring the impact of SMEs in poor countries via CSR (Zhu et al., 2019).

Financial success was determined by looking at CSR's effectiveness over the course of many decades (Ali et al., 2020). Even though there have been a number of CSR and organisational performance studies, the problem continues to get considerable attention from academics. Additionally, the authors of this study advocate for more CSR studies to be conducted in the coming years. Notably, there is no correlation between CSR and financial performance (Galbreath, 2012). The number of studies that have looked at how CSR affects environmental performance is rather low. More so, the vast majority of academics did not find evidence that CSR substantially improves a company's success. While CSR is important, it has minimal impact on a company's bottom line (Kraus et al., 2020). Notably, there is no correlation between CSR and financial performance (Galbreath & Shum, 2012). Further, some academics have proposed a moderator or mediator to bridge the gap between CSR and business performance. Researchers mostly ignored the findings (Surroca et al., 2010). As a result, an additional variable is needed to provide a more complete explanation of the relationship. The capacity explanation is central to the natural resource-based view (RBV), which describes the connection between natural resources and sustainable performance. This research used green capacity as a moderator to explore this hypothesis (Hart, 1995). The ability to think and act in a sustainable manner is connected with economic success. Environmentalism, resource integration, and resource reconfiguration are all skills in this category (Qiu, 2020).

Important theoretical and practical implications stem from the recently concluded research. This research stands out from others because it combines environmental sustainability optimization environmental sustainability orientation (ESO), corporate social responsibility (CSR), green capability, and environmental performance into a unified inquiry. In Malaysia, ESO and CSR may be used by the owners and managers of manufacturing and construction SMEs to evaluate their green capability, leading to better environmental performance.

## **2. Review of Literature and Development of Hypotheses**

### **2.1 Underpinning Theoretical Support**

The resource-based-view (RBV) theory grips that a company's economic benefit is built on the strong point and rewards it has in terms of its resources and personnel (Barney, 1991). A theoretical framework is being created by

using the RBV theory that is present in nature. To evaluate sustainable performance, it is expected to examine the environmental resources and capabilities using the natural resource-based view (RBV) paradigm. The Resource-Based View (RBV) theory Rehman, Ashfaq et al. (2021) posits that while evaluating a company's environmental performance, it is indispensable to include the group's resources and capabilities. This research used Environmental, Social, and Governance (ESG) measures besides Corporate Social Responsibility (CSR) events to estimate the ecological efficiency of a corporation and regulate its most valuable resource. Both ESO and CSR are seen as vital assets.

## **2.2 Environmental Sustainability Orientation (ESO), Green Capability and Environmental Performance**

Based on environmental sustainability orientation (ESO) procedures, expertise, and dedication, it is given a score in this research. Published studies show that new worries and demands to act creatively inside organizations have arisen in response to the need for environmental sustainability (Cuerva et al., 2014). According to the natural RBV hypothesis, businesses may pursue environmentally responsible practises without sacrificing their competitive edge (Hart, 1995). Incorporating such a welcoming setting and introducing such goods may help businesses significantly boost productivity and gain a sustainable competitive advantage (Hart, 1995). One cannot overstate the significance of SMEs to the economic growth of a country (Afum et al., 2020). People start enterprises for four key reasons: to increase their market, income, social status, and their innate propensity to trade internationally (Jafari-Sadeghi et al., 2020). When a company gets rid of trash and recycles its materials, it improves its chances of gaining shareholder buy-in, which in turn boosts productivity. Furthermore, a company's capacity to develop a plan for environmental sustainability to overcome limitations imposed by natural surroundings would enable it to keep a competitive advantage for a considerable amount of time (Danso et al., 2019). We make an effort to close this knowledge gap by include ESO in natural RBV theory calculations of environmental performance, when it was previously ignored by scholars.

Higher levels of environmental sustainability orientation increase the likelihood that a small firm will be in a first-mover advantage situation and a tactical position for long-term growth (Hart & Dowell, 2011). In his study from 1995, Hart emphasized the significance of merchandise stewardship, contamination prevention, and sustainable development as strategic skills. He also spoke about how strategic abilities may provide a company an advantage in the market. The extent to which a business is strategic may be a significant indicator of its commitment to sustainability. In this case, it is reasonable since there are many ways to evaluate a company's green competence in terms of its practices, expertise, and dedication to protecting the environment and conserving natural resources. The importance of ESO and other intangible organizational assets in determining a company's capabilities is emphasized by the natural RBV hypothesis (Hart, 1995). New research looks at whether or not ESO has a green capacity to make up for previous neglect. The currently proposed theories are as follows.

H1. Environmental sustainability orientation ESO has a significant influence on environmental performance.

H2. Environmental sustainability orientation ESO has a significant influence on green capability.

## **2.3 CSR, Green Capability and Environmental Performance**

In order to compare to the influence of huge corporations Arend (2014) with small and medium businesses, it found more significant. The increasing customer demand for eco-friendly produces and facilities may excuse for the bigger academic interest in corporate social responsibility (CSR). Both academics and business leaders endorse CSR (Santoro et al., 2019). In order to flourish in the market, companies shall develop emerging strategies and implement policies that include the preferences and demands of customers. In this study, the aim is to assess Corporate Social Responsibility (CSR) by considering social, economic, and environmental variables. In prior studies, six scholars have examined the influence of corporate social responsibility (CSR) on financial performance of a corporation and reached the same conclusions that CSR is always beneficial for business. In contrast, the study of Kraus et al. (2020) suggested that CSR has no such contribution toward improvement in environmental performance of corporations. Due to these contradictions, more research work is required to confirm the association between CSR and environmental sustainable performance. On the other hand, another study of Crisan-Mitra (2020) argued that stakeholder should consider the input to assess the effectiveness of their CSR efforts.

Based on above facts, two more hypotheses have been established

H3. CSR has significant relationship and impact on environmental performance of corporation.

H4. CSR has significant relationship and impact on green capability of corporation.

### 2.4 Green Capability and Environmental Performance

Prior studies explored green capabilities, they have received far less attention than dynamic capabilities (Teece & Pisano, 2003). The concept of "green capacity" centres on the integration, development, and reconfiguration of internal and external resources in relation to environmental protection (Qiu et al., 2020). The results of this research suggest that increasing an organization's organisational skills has a considerable impact on that organization's success (Rehman, Bhatti, & Chaudhry, 2019). Green competence is highlighted as a potential indication for better environmental performance in the natural RBV theory (Hart, 1995). The study's authors uncovered that, in the context of Italy, ICTs considerably contribute to raising SMEs' innovation performance (Scuotto, Del Giudice, & Carayannis, 2017). Furthermore, the connection between inventiveness and the capacity to take in new information, ideas, and experiences was investigated. Green dynamic skills help businesses get an edge in the market (Qiu et al., 2020), yet assessing environmental performance is seldom discussed. This study was conducted to address such knowledge gap.

The currently proposed theories are as follows.

H5. The capacity to operate in a green manner has a substantial impact on environmental performance.

### 2.5 Green Capability as a Mediator

The Earth Science Organization (ESO) deliberately models its structure, methods, and activities after those of other organisations in an effort to lessen the negative impact of its operations on the planet (Roxas et al., 2017). In a very real way, ESO affects a business's bottom line (Roxas et al., 2017). Environmental sustainability is shown to improve firm performance, but only for companies of a certain age; the benefit was not seen in startups (Adomako et al., 2019). The research shows that ESO has dynamic properties that contribute to long-term success (Jantunen et al., 2005). (Hart, 1995). Due to the lack of evidence linking ESO to firm performance, a moderating factor is required. That's because connecting ESO with financial success in a firm isn't always clear. Moreover, CSR is an important business practise since it boosts productivity (Long et al., 2020). Moreover, few studies have shown the substantial effects of CSR on the success of businesses (Orazalin, 2020). The research shows, however, that CSR does not factor in environmental performance (Kraus et al., 2020). Further evidence is required, however, before CSR's relationship to environmental performance can be established. This connection has to be investigated further by include a variable that acts as a mediator between the two. Therefore, this research used green competence as a moderator between environmental performance and economic, social, and ecological accountability.

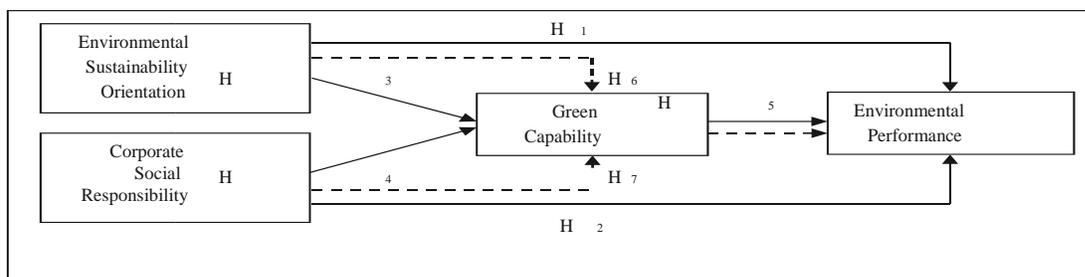


Figure 1: Research model

The most important reason being that ESO and CSR allow businesses to address environmental performance practices. As an added bonus, it is generally agreed that CSR and ESO play an equal role in assisting SMEs in developing robust green capabilities, which in turn boosts environmental performance. Based on above literature, two more hypotheses of the current study has established.

H6. The relationship between ESO and corporate environmental is substantially mediated by green capacity.

H7. The relationship between corporate social responsibility and environmental performance is largely mediated by green capabilities.

## 3. Methodology

### 3.1 Questionnaire Development

The environmental sustainability orientation ESO was evaluated using 17 different tools, all of which were derived

from those developed by Roxas et al (2017). There are five things for learning, eight for doing, and four for loving that make up ESO. CSR ratings are broken down into three sections and are based on a total of 24 criteria (borrowed from Alvarado) (2008). There are nine separate components to the social dimension, eight parts to the economic dimension, and seven parts to the environmental dimension. The green talents were evaluated using seven distinct criteria culled from Pavlou and El Sawy (2011). In all, there are three origins for the seven parts that make up the environmental performance. Three of the reasons that were cited in the research conducted by Paillé et al. were a decrease in the environmental impact of the company's products and services; a reduction in the acquisition of non-renewable materials, chemicals, and components; and a reduction in waste and emissions from operations and components (2014). The phrase "helped raise the reputation of our business" can be taken from an article by Melnyk et al (2003). Together, Ilinitch and his team emphasised three main points: energy conservation, pollution mitigation, and water preservation (1998). Complete survey is included as a separate document attached at the bottom of this page.

### **3.2 Population and Sampling**

Within the purview of this investigation are the Pakistani construction and industrial firms. The researcher did not give enough weight to the manufacturing and construction companies' ESO, CSR, or green capabilities when selecting them for the study. Possible negative impacts on the environment were intended to be minimized. There are about five million micro, small, and medium-sized businesses in Pakistan. Up from a previous projection of 5.1% growth for this year, the publisher now expects real growth in the Pakistani construction sector of 7% in 2022. This follows real growth of 2.9% in 2021. Only constructs found in studies where variables were scored on a five-point Likert scale are relevant here (Elrehail et al., 2021; Khan et al., 2019). The researcher used a straightforward random sampling method all through data gathering. According to Sekaran and Bougie (2016), using a straightforward random selection technique gives each potential responder an equal opportunity to take part in the study. Few studies have shown that simply random sampling provides reliable findings (Rehman, Bhatti, & Chaudhry, 2019).

The purpose of this study is to investigate the state of environmental sustainability initiatives (ESO), green competence, corporate social responsibility (CSR), and environmental performance among Pakistani manufacturing and building firms. The information used in this study came from surveys of small and medium-sized manufacturing and building companies. Since they are either managers or owners, the responders know the most about the companies and the challenges at hand. Since the researcher has modified items from earlier studies, this study will conduct a pre-test to assess the instruments' content validity before beginning to collect data. There are six individuals chosen for this; three of them have professional experience in the sector, while the other three have academic qualifications. As can be seen from the results of the pretest, each item utilized to evaluate the various structures provides an accurate assessment of the respective components. After the first test, participants are interviewed to gather data for further analyses. Based on the findings of Krejcie and Morgan, the total number of samples is 384. (1970). Considering that the response rate is a more critical issue in social science research, the researchers decide to treble the sample size in an effort to boost response rates and minimise sampling error (Rehman, Bhatti, et al., 2020). A total of  $384 \times 3 = 1152$  surveys were sent out. Only 388 out of a possible 1052 surveys were returned, and 11 were disregarded because they included inaccurate information. Therefore, 377 questionnaires were utilised for the study's final tally. Only 33.7% of those polled provided an answer; of the 341 enterprises that do, 90.45% employ persons aged 5 to 49, 3.71 percent employ those aged 1 to 4, and 5.84 percent employ those aged 50 to 199.

### **3.3 Common Method Bias**

It is difficult to differentiate between endogenous and exogenous buildings due to the fact that data on both types of constructions was collected using the same survey instrument

It is possible, which always muddles the data (Kraus et al., 2020). Researchers must remember that the CMB problem is particularly prevalent in the field of behavioral research. Confounding by Measuring (CMB) is a potential problem in the field of behavioral research, and it refers to variation that might be attributed to a measurement process as opposed to a construct of interest (Podsakoff et al., 2003). Several methods are used to mitigate the issue of CBM (Podsakoff et al., 2012). According to the statistics, the overall variance should less than 50%.

#### 4. Statistical Analysis

In order to test hypotheses of the study, SEM-PLS a structural equation modeling was utilized. In first phase, measurement model was established and finally, structure model has been tested.

The outer model, or measurement, includes four distinct tests to evaluate introspective notions including item reliability, internal consistency reliability, convergent validity, and discriminant validity. It was found that the cutoff value is 0.50, with factor loadings ranging from 0.513 to 0.977. Table 1 displays these findings (2014). This need for dependable goods was therefore met. When calculating the variables' composite reliability (CR), we approximated and evaluated their internal consistency reliability. In light of the research of Hair et al., it is likely that the CR value is higher than 0.60. (2014). Within the realm of exploratory research, a CR score of 0.60–0.70 is regarded as adequate, while a CR score of 0.70–0.90 is seen as excellent. The CR value over 0.95 should raise red flags. Table 1 shows that both the minimum and maximum CR values exceed the suggested threshold of 0.60 by Hair et al (2014). So, confidence in the internal consistency is not in question. The third criteria, convergent validity, is assessed by using the extracted average variance (AVE). Convergent validity refers to the extent to which all of the research variables assess the same concept (Rehman, Mohamed, & Ayoup, 2019). According to Hair et al., the AVE must be more than 0.50 in order to be considered acceptable (2014). Table 1 displays the range of AVE values, from the minimum of 0.501 to the maximum of 0.855. Accordingly, the AVE requirements may be met by this investigation.

Once the measurement model has been calculated, the discriminant validity is the last step. Studies such as comparing the square root of the AVE to the correlational values or the AVE to the squared correlational values are examples of the types of analyses that fall under the category of "discriminant validity." When scientists find two signs that need approaches, they use both of them. statically shift and change (Rehman, Bhatti, & Chaudhry, 2019). In 1981, Fornell and Larcker created a standard test to assess discriminant validity. When the variations between factor loadings are modest, such between 0.65 and 0.85, the conventional measure of discriminant validity fails to perform as well. The conventional discriminant validity standard is assessed using two criteria. The heterotrait-monotrait correlation (HTMT) was offered as an alternative method of assessing discriminant validity by Henseler et al. (2015). According to Henseler et al recommendations, 's the HTMT cutoff for distinguishable variables should be set at 0.85, while the cutoff for comparable variables should be set at 0.90. (2015). In this case, the requirement for discriminant validity was not fulfilled since the HTMT was more than 0.85 across all constructs. Table 2's numbers prove that the research ticked all the boxes for the HTMT.

Table 1: Discriminant validity (HTMT)

Variables	VIF	CSR	ES	ECP	SOP
CSR	1.692				
Environmental performance	–	0.543			
ESO	1.784	0.673	0.767		
Green capability	1.289	0.410	0.536	0.457	

Table 2: Hypotheses Results

Assumptions	Relationship	Coefficient	t	p	lower	upper	Remarks
H1	ESO ! EP	0.175	3.072	0.000	0.646	0.806	Supported
H2	ESO ! GRC	0.329	4.961	0.000	0.194	0.448	Supported
H3	CSR ! EP	0.003	0.072	0.943	0.082	0.091	Not supported
H4	CSR ! GRC	0.192	2.900	0.004	0.057	0.331	Supported
H5	GRC ! EP	0.150	3.616	0.000	0.071	0.228	Supported
H6	ESO ->GRC--- ->EP	0.048	2.932	0.003	0.023	0.086	Partial mediate

H7	CSR---→GRC-- --→EP	0.028	2.116	0.033	0.033	0.061	Full mediate
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#### 4.1 Empirical Results

When the outer model is complete, the next step in the study will be to test the assumptions stated there. The findings of (t-value = 3.072, p 0.01, and = 0.175) in Table 3 show a positive relationship between ESO and environmental performance. This finding supports the first hypothesis. Moreover, both green capacity and supported H2 are positively correlated with ESO (t-values = 0.329 and 4.961, respectively; p 0.01). Hypothesis H3 is not supported since there is no correlation between CSR and environmental performance (= 0.003, p > 0.05, and t-value = 0.072). Additionally, CSR supported H4 and significantly benefited green capabilities (t-value = 2.900, = 0.192, p 0.01). There is strong evidence that increasing green capacity boosts environmental performance and H5 (= 0.150, p 0.01, t-value = 3.616).

The present study used a variance-explained-differences method to investigate the impact of green capacity as a mediator between corporate social responsibility (CSR), environmental sustainability outcomes (ESO), and environmental performance (VAF). According to the findings of Hair et al., there will be no mediation if the VAF value is under 20%, partial mediation if the value is between 20% and 80%, and full mediation if the value is above 80%. (2014). Data in Table 4 show that the VAF values are 20%-80% lower when green capacity is used to mitigate the effects of ESO. In addition, green capability acts as a robust mediator between CSR and environmental performance at a VAF value of larger than 80%. This lends solid backing to the 6 and 7 suppositions.

#### 4.2 Predictive Relevance of the Model and Effect Size

Some research suggests that Q2 must be determined before concluding that the model is predictive (Geisser, 1974; Stone, 1974). SmartPLS employs a "blindfold" method to determine Q2. As stated by Chin (1998), Q2 should be greater than zero. According to Cohen et al., a Q2 value between 0.02 and 0.015 indicates a little influence, while a Q2 value between 0.15 and 0.35 indicates a moderate effect, and a Q2 value more than 0.35 indicates a larger predictive significance (2013). Green competence and environmental performance were shown to have medium predictive significance (Q2 = 0.257 and 0.2199, respectively) in this investigation.

Table 3: VAF Result for Mediating (EP)

Variable	Outcome	Mediator	Effect-Indirect	Effect-Total	VAF (%)
E-S-O	E-P	G-R-C	0.059	0.233	12.88%
C-S-R	E-P	G-R-C	0.019	0.1231	89.49%

TABLE 5 Effect size

	E-P	G-R-C
C-S-R	0.125	0.037
E-S-O	0.776	0.079
Green-Capability	0.111	–

### 5. Discussion and Conclusion

#### 5.1 Discussion of the Findings

As a result of the this investigation, the researcher have come to the conclusion that green competence does not play a moderating role in the connection that exists between environmental performance, corporate social responsibility, and a focus on environmental sustainability (ESO). The environmental performance has not improved despite the growing body of research that analyzes the relationship between corporate social responsibility and environmental sustainability. The aim of this study was to find out the impact of above mentioned variables, where theory of resource-based-view (RBV) was employed to build a theoretical framework.

The relationships between study variables have been confirmed from the current literature. Seven hypotheses of the current study are established. The population and sample size was set by using the determination of sampling technique Sekaran (2006). Adopted questionnaires were used to gather primary data. In this connection, information was gathered via the use of a questionnaire that was sent to the highest level of management at manufacturing and construction companies in Pakistan. These companies were active in the construction and manufacturing industries. This study project used a total of 377 questionnaires in order to collect data for the aim of the investigation. Smart-PLS 3.2.8 and SPSS 25.0 were both used by the specialists who were responsible for performing the investigation. For the purpose of determining the validity of the variables and the route correlations, the method that is often referred to as structural equation modeling (SEM) was used. Based on the results, there is a clear connection between environmental performance and environmental social responsibility as well as green competence. On the other side, there is no substantial boost in environmental performance for businesses that engage in corporate social responsibility. Both environmental social responsibility (ESO) and corporate social responsibility (CSR) are important issues that have a substantial impact on environmental performance. Utilizing green capabilities is one method that may be used to bridge the gap that exists between environmental social responsibility and sustainable environmental performance.

### **5.2 Theoretical Implications**

To make a significant theoretical contribution, researchers need to draw a certain kind of conclusion about a phenomena that is widely believed to be critical to increasing a company's value. This study adds a new perspective to the literature by analyzing study constructs using actual data. Many potential takeaways from this research are applicable to practitioners, policymakers, and scholars. This study found that ESO, CSR, and environmental performance are all interconnected, with green capacity as a mediator between the three. Therefore, the current study represents a substantial contribution to the aforementioned academic fields. Environmental performance, green competence, corporate social responsibility, and sustainability have never before been studied under a unified framework before, and this study is the first to do so to the best of the researcher's knowledge. Since ESO, CSR, and green capacity jointly predicted 65.6% of environmental performance, the findings of this study suggest that greater investigation into these factors is warranted. However, despite CSR's lack of direct impact on environmental performance, management finds it impossible to ignore this fact due to the relevance it has proven in previous research. This research contributes to the existing literature by, among other things, laying the groundwork for a link between exogenous and endogenous constructions within the context of the natural RBV theory. By supporting the RBV hypothesis in nature, this provides a useful framework for study.

The present research contributes to the expanding body of information on environmental performance by investigating the approaches used by manufacturing organizations to measure environmental performance using ESO, CSR, and green capabilities. However, the study acknowledges that industrial firms' ESO, CSR, and green capabilities are crucial to achieving environmental success. However, the research found different outcomes for CSR and environmental performance when green capacity was present. It is difficult for managers of manufacturing firms to disregard CSR as a component of assessing environmental performance, since it has been demonstrated to have a major effect on company performance in a number of earlier studies. When gauging environmental performance, management and future academics should look to sustainability, CSR, and green skills as key indicators.

### **5.3 Managerial Implications**

The results of this research have significant ramifications for anyone working in management and government. The primary objective of this study is to develop a framework for evaluating the effect of ESO, CSR, and green capabilities on environmental performance for industrial organizations. There has been a lot of focus on environmental performance in recent years from both professionals and researchers in the field of environmental science. They may also apply the study model of environmental performance in emerging countries to cut down on pollution, save energy, lessen waste and emissions, improve the company's image, save water, and decrease the use of nonrenewable materials.

### **5.4 Policy Recommendation**

Organizational policy is developed by management with an eye on achieving strategic goals. The aim here is improved environmental performance for the company. In order to improve the company's environmental

performance, management must establish policies outlining the steps that will be taken to lessen the company's impact on the environment. These include cutting back on pollution and waste while increasing recycling and conservation efforts, as well as cutting back on the use of nonrenewable resources like chemicals and other materials. This study argues that ESO, CSR, and green capacity should be prioritized by academia and industry when evaluating environmental performance. In spite of the fact that CSR did not provide positive outcomes, the study recommended the following.

### 5.5 Limitations and Future Research

Despite the study's contributions and findings, there are certain gaps in coverage that might be remedied by future studies. Due to the cross-sectional nature of the study, it is unclear to the researchers whether or not ESO, CSR, and green capability in business organizations have similar benefits over a longer period of time. Therefore, next scholars may replicate this study's methodology and observe whether their findings differ from the present studies. Data for this study came from SMEs; however, in the future, researchers may also gather data from large organisations for a comparative analysis. Additional metrics utilized in this analysis to evaluate a company's environmental performance include environmental social responsibility (ESR) and green competence. Using environmental management system and green management of human resources as a moderator effect between corporate social responsibility and environmental performance, future research will be able to evaluate whether or not it is considerably effective. The Pakistani SMEs studied here are typical of the country's business culture. This will be refined in the future, and the same study design may be employed in both developed and developing countries in the future for the sake of comparison.

### References

- Adomako, S., Amankwah-Amoah, J., Danso, A., Konadu, R., & Arend, R. J. (2014). Social and environmental performance at SMEs: Considering motivations, capabilities, and instrumentalism. *Journal of Business Ethics*, 125(4), 541–561. <https://doi.org/10.1007/s10551013-1934-5>
- Arrive, T. J., Feng, M., Yan, Y., & Chege, S. M. (2019). The involvement of telecommunication industry in the road to corporate sustainability and corporate social responsibility commitment. *Corporate Social Responsibility and Environmental Management*, 26(1), 152–158. <https://doi.org/10.1002/csr.1667>
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. <https://doi.org/10.1177/014920639101700108>
- Bos-Brouwers, H. E. J. (2010). Corporate sustainability and innovation in SMEs: Evidence of themes and activities in practice. *Business Strategy and the Environment*, 19(7), 417–435. <https://doi.org/10.1002/bse.652>
- Bresciani, S., Puertas, R., Ferraris, A., & Santoro, G. (2021). Innovation, environmental sustainability and economic development: DEA-bootstrap and multilevel analysis to compare two regions. *Technological Forecasting and Social Change*, 172, 121040. <https://doi.org/10.1016/j.techfore.2021.121040>
- Briones Peñalver, A. J., Bernal Conesa, J. A., & de Nieves Nieto, C. (2018). Analysis of corporate social responsibility in Spanish agribusiness and its influence on innovation and performance. *Corporate Social Responsibility and Environmental Management*, 25(2), 182–193. <https://doi.org/10.1002/csr.1448>
- Chin, W. W. (1998). Commentary: Issues and opinion on structural equation modeling. *JSTOR*, 22(1), 7–16. <https://www.jstor.org/stable/>
- Danso, A., Adomako, S., Amankwah-Amoah, J., Owusu-Agyei, S., & Konadu, R. (2019). Environmental sustainability orientation, competitive strategy and financial performance. *Business Strategy and the Environment*, 28(5), 885–895. <https://doi.org/10.1002/bse.2291>
- Elrehail, H., Rehman, S.-U., Chaudhry, N. I., & Alzghoul, A. (2021). Nexus among cyberloafing behavior, job demands and job resources: A mediated-moderated model. *Education and Information Technologies*, 26, 4731–4749. <https://doi.org/10.1007/s10639-021-10496-1>
- Fawcett, T., & Hampton, S. (2020). Why & how energy efficiency policy should address SMEs. *Energy Policy*, 140, 111337. <https://doi.org/10.1016/j.enpol.2020.111337>
- Hou, T. C. T. (2019). The relationship between corporate social responsibility and sustainable financial performance: Firm-level evidence from Taiwan. *Corporate Social Responsibility and Environmental Management*, 26(1), 19–28. <https://doi.org/10.1002/csr.1647>
- Ilinitch, A. Y., Soderstrom, N. S., & Thomas, T. E. (1998). Measuring corporate environmental performance. *Journal of Accounting and Public Policy*, 17(4–5), 383–408. [https://doi.org/10.1016/S0278-4254\(98](https://doi.org/10.1016/S0278-4254(98)

10012-1

- Lefebvre, E., Lefebvre, L. A., & Talbot, S. (2003). Determinants and impacts of environmental performance in SMEs. *R&D Management*, 33(3), 263–283. <https://doi.org/10.1111/1467-9310.00297>
- Orazalin, N. (2020). Do board sustainability committees contribute to corporate environmental and social performance? The mediating role of corporate social responsibility strategy. *Business Strategy and the Environment*, 29(1), 140–153. <https://doi.org/10.1002/bse.2354>
- Orlitzky, M., Siegel, D. S., & Waldman, D. A. (2011). Strategic corporate social responsibility and environmental sustainability. *Business & Society*, 50(1), 6–27. <https://doi.org/10.1177/0007650310394323>
- Owusu-Agyei, S. (2019). Environmental sustainability orientation and performance of family and nonfamily firms. *Business Strategy and the Environment*, 28(6), 1250–1259. <https://doi.org/10.1002/bse.2314>
- Paillé, P., Chen, Y., Boiral, O., & Jin, J. (2014). The impact of human resource management on environmental performance: An employee-level study. *Journal of Business Ethics*, 121(3), 451–466. <https://doi.org/10.1007/s10551-013-1732-0>
- Pavlou, P. A., & El Sawy, O. A. (2011). Understanding the elusive black box of dynamic capabilities. *Decision Sciences*, 42(1), 239–273. <https://doi.org/10.1111/j.1540-5915.2010.00287.x>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903.
- Rehman, S.-U., Ashfaq, K., Bresciani, S., Giacosa, E., & Mueller, J. (2021). Nexus among intellectual capital, interorganizational learning, industrial internet of things technology and innovation performance: A resource-based perspective. *Journal of Intellectual Capital*. <https://doi.org/10.1108/JIC-03-2021-0095>
- Rehman, S.-U., Bhatti, A., & Chaudhry, N. I. (2019). Mediating effect of innovative culture and organizational learning between leadership styles at third-order and organizational performance in Malaysian SMEs. *Journal of Global Entrepreneurship Research*, 9(1), 1–24. <https://doi.org/10.1186/s40497-019-0159-1>
- Roxas, B., & Coetzer, A. (2012). Institutional environment, managerial attitudes and environmental sustainability orientation of small firms. *Journal of Business Ethics*, 111(4), 461–476. <https://doi.org/10.1007/s10551-012-1211-z>
- Santoro, G., Bresciani, S., Bertoldi, B., & Liu, Y. (2019). Cause-related marketing, brand loyalty and corporate social responsibility: A crosscountry analysis of Italian and Japanese consumers. *International Marketing Review*, 37(4), 773–791. <https://doi.org/10.1108/IMR-112018-0310>
- Tang, Z., & Tang, J. (2012). Stakeholder–firm power difference, stakeholders' CSR orientation, and SMEs' environmental performance in China. *Journal of Business Venturing*, 27(4), 436–455. <https://doi.org/10.1016/j.jbusvent.2011.11.007>
- Wong, S. K. S. (2013). Environmental requirements, knowledge sharing and green innovation: Empirical evidence from the electronics industry in China. *Business Strategy and the Environment*, 22(5), 321–338. <https://doi.org/10.1002/bse.1746>
- Xu, X., Zeng, S., & Chen, H. (2018). Signaling good by doing good: How does environmental corporate social responsibility affect international expansion? *Business Strategy and the Environment*, 27(7), 946–959. <https://doi.org/10.1002/bse.2044>
- Zhai, Y.-M., Sun, W.-Q., Tsai, S.-B., Wang, Z., Zhao, Y., & Chen, Q. (2018). An empirical study on entrepreneurial orientation, absorptive capacity, and SMEs' innovation performance: A sustainable perspective. *Sustainability*, 10(2), 314. <https://doi.org/10.3390/su10020314>