Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 3, Issue 12 (2025)

Online ISSN 3007-3197
Print ISSN 3007-3189

http://amresearchreview.com/index.php/Journal/about

Building Green Structural Capital in Pakistani Textile Made -Up for Environmental Performance with the Mediating Role of Green Value Co Creation

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ABSTRACT

SME environmental performance is vital in today's eco-aware market. In developing countries like Pakistan, combining economic expansion with environmental responsibility is difficult. The service dominant logic theory is used to examine the relationship between green structural capital (GSC) and environmental performance in Pakistan's textile-based SME's. The researcher examined value creation's mediation role in this link. A survey is utilized to collect data from textile-related SME's in Multan's industrial zone. GSC's mediating effects on environmental performance were examined using Smart Pls-SEM. Data supported all hypotheses statistically. These findings may help Pakistani textile SMEs strengthen their environmental strategies and succeed. Further study may be needed to see whether other businesses or countries have comparable findings. Further research employing more trustworthy sampling procedures may increase generalizability.

Keywords: Green value co-creation (GVCC), Environmental performance (EP),

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Green structural capital (GSC).

Introduction

The textile industry is the backbone of the Pakistani economy since it imports and exports the most finished products (Rehman & Siddiqui, 2023). Pakistan is the ninth-largest textile exporter, accounting for 60% of total exports (International Finance Corporation, 2022). However, environmental concerns about its traditional practices are developing. Traditional manufacturing processes may squander, pollute, and deplete resources (Rehman et al., 2024). These issues threaten the sector's environmental performance and Pakistan's environment (Rehman et al., 2024). Given these challenges, Pakistani textile SMEs must implement environmental performance. Green structural capital includes environmental aspects into core decision-making to mitigate environmental impacts and maintain economic viability (Sroufe & Kaehler, 2020). Environmental performance may lead to cheaper costs owing to resource efficiency, brand recognition among eco-conscious consumers, and access into new markets with stronger environmental rules (Rehman & Siddiqui 2024). Green structural capital (GSC) is crucial for textile producers to embrace sustainable business practices for long-term success (Sroufe & Kaehler, 2020). Making good use of the company's intangible assets like capital creates green structural capital. This is structural. Although structural capital has received less attention, scholars emphasize on human capital as the most important intangible capital for green products and services and environmental performance. Many scholars argue that green structural capital and its components improve environmental performance and value. Today, "value" is employed to evaluate outcomes observed by numerous value generators. Products and market share are concrete outputs used to operationalize and analyze value (Sroufe & Kaehler 2020).

Green structural capital textile SMEs aim to create value for all stakeholders. Focusing on direct and mediated value cocreation in green structural capital is key. Thus, value for green structural capital firms should be examined from the viewpoint of cocreation rather than product form since value is formed during resource exchange among stakeholders. While employing Service-Dominant Logic, value is created by optimizing operant resources, which are sometimes transmitted via operand resources or commodities. Systems, databases, patents, and protocols

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constitute operational resources. These might be ecosystem residents or organizations. Our reasoning supports the S-DL view that value is always chosen by the recipient but collectively created by structural capital, workers, customers, business partners, and other entities linked with specific exchanges (Vargo et al., 2008). Together, value network stakeholders assess the importance of active collaboration.

This research examines how structural capital affects value creation and how green value co-creation and structural capital affect environmental performance. As a result, value creation, green structural capital, and environmental performance affect a firm's long-term textile made-up environmental performance (Sroufe & Kaehler, 2020).

This research may also interest textile policymakers and investors since it suggests that concentrating on green structural capital and environmental performance to create a green textile brand leads to profitability and value.

Literature Review

Green Structural Capital

Patents, trademarks, hardware, software, databases, organizational culture, and competencies that cannot be taken away when personnel go are examples of organizational capital, also known as structural capital. Human capital is supported by structural capital (Bontis, 1999). When employees go, knowledge stays with the company (Roos et al., 1998). Human capital is supported by structural capital (Bontis, 1999). When employees go, knowledge stays with the company (Roos et al., 1998).

The value of intellectual capital depends on the firm's structural capital (Stewart, 1997). According to Cohen and Kaimenakis (2007), structural capital encourages individuals to invest in their knowledge by embodying, empowering, and supporting human capital. Physical means of transmitting and storing intellectual material are included in organizational capability (Edvinsson & Malone, 1996).

Anything that supports corporate workers, or human capital, is considered structural capital, according to Kavida & Sivakoumar (2009). Organizational image, information systems, and databases are examples of structural capital, together with business structure, processes, patents, and brands. Through organizational and physical structure, enterprise structural capital facilitates the transfer of knowledge

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and human capital. It comprises internal process capital as well as R&D and innovation capital. The quality of the company's processes, goods, and services is linked to internal process capital, which gives it a competitive edge. Innovative product and technology development is financed by R&D financing (Ciprian et al., 2012).

Environmental Performance

According to Judge and Douglas (1998), environmental performance may be defined as "the effectiveness of a company in meeting and exceeding the expectations of society with regard to concerns for the natural environment." According to Laosirihongthong et al. (2013), environmental sustainability may be defined as the capacity of an organization to minimize air emissions, energy consumption, hazardous material, material utilization, and compliance with environmental requirements.

According to Asadi et al.'s research from 2020, environmental performance is influenced by the company's capacity to reduce emissions and waste creation, as well as the decrease of hazardous and toxic compounds, and also by a lower level of environmental incidents. According to Elkington (1997), environmental performance refers to the reduction of environmental harms and the preservation of resources from having their resources exploited. According to Pipatprapa et al. (2018), the term "green performance" refers to the extent to which certain operations carried out by a company are environmentally friendly.

Green Value Co Creation

Value co-creation is the process by which a company and its stakeholders work together to create value with the intention of producing or consuming it. This cooperation may occur at any stage of the procedure. The phrase describes the practice of actively sharing knowledge and ideas in order to generate fresh solutions. The Service-Dominant (S-D) Logic contends that all stakeholders participate in the value creation process and that no one organization has exclusive responsibility for value creation (Vargo and Lusch, 2014).

"Value co-creation" is a business approach that seeks to promote and support a company's participation in consumer demands and value in order to meet those desires. It is often stated from the customer's point of view. Pargar et al. (2019) claim

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that value co-creation, which includes businesses, makes it simple for consumers to receive what they desire.

"Green value co-creation" refers to the exchange of environmental ideas between a company and its customers. This exchange may include consumer participation in both the manufacturing and consumption stages with the goal of enhancing the value co-creation process (Chou et al., 2022; Guo et al., 2020). It is possible that consumer engagement will be included into this transaction. Yousaf (2021) defines it as a phrase that characterizes innovations that actively exchange environmental concepts with partners involved in one or more production or consumption stages in order to jointly produce environmentally beneficial aspects. According to Ranjan and Read (2016), "green value co-creation" refers to the active exchange of environmental ideas between a firm and its partners as well as involvement in one or more phases of production or consumption in order to produce value. This is an innovative concept that is proposed in this research. According to Ranjan and Read (2016), the idea of green value co-creation may be divided into two separate parts: green co-production and green value-in-use.

According to one definition, green co-production is the collaborative process that takes place between companies as they create green innovations. Green co-production consists of three elements: interaction, equality, and knowledge exchange. In addition to adding value, information sharing between a company and its partners helps to improve competency throughout the development process. Equity in co-creation activities refers to the willingness to share control with others. The interface between two parties is the interaction between a company and its partners. The green co-production process is just one aspect of the idea of green value-in-use. The term "green value-in-use" describes the experiences that companies or customers have as they learn how to utilize, maintain, and repair green product innovation. Chang (2019) asserts that the experience, personalization, and connection are the three elements that make up green value-in-use. Experience is seen in the business sector as a company that creates value for its partners. Edvardsson et al. (2022) state that even during the testing phase, partners co-create value via use experience. The uniqueness of the co-creation process itself is referred to as customization. A connection is formed via the active exchange of information

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and participation between firms. A company and its partners engage in a two-way dialogue when it comes to the application of green value.

Green Structural Capital and Environmental Performance

Green structural capital has several components in textile-based SMEs. Green structural capital helps a small and medium-sized firm (SME) obtain green knowledge and build organizational skills, which improves processes and systems. GSC must be properly managed to help businesses comply with environmental performance regulations, boost their brand, and attract environmentally conscientious consumers and investors. Investing too much in environmentally friendly resources without good returns may be harmful. Ideal equilibrium matters. Studies show that companies with strong GSCs are more likely to adopt new environmental-friendly practices (Li et al., 2023).

GSC is necessary for EP. EP was most strongly linked to GSC traits after the dimension-based investigation. Even if the correlation is weak, it emphasizes the need of encouraging employee behavior that promotes environmental management innovation. EP benefits from this, notably in terms of firm economic performance and operational cost efficiency. A successful corporation improves well-being and energy generation. (2022 Nawangsar) As small and medium-sized firms (SMEs) take crucial choices, they need a well-planned budget and strategic work plan to combine well-being and environmental protection.

Building on previous studies, we have a hypothesis: GSC positive effect on EP.

Green Structural Capital and Green Value Co- Creation

GSC includes the infrastructure and resources needed to expand GVCC inside textile-related small and medium-sized businesses (SMEs). This includes the strategies, processes, and organizational structures in charge of supporting and encouraging environmentally conscious management and practices inside small and medium-sized businesses (SMEs). GSC is crucial in today's very competitive market, where businesses must contend with heightened levels of rivalry. To remain competitive and sustain their business, the company's management must recognize that relying just on physical resources is no longer sufficient. Instead, they must use the GSC at their disposal. Given that competitors may not always own intellectual property, GSC not only provides the company a competitive advantage but also adds

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value. By enabling the effective and efficient execution of operational tasks, the Global Supply Chain (GSC) boosts productivity. According to Widyastuti et al. (2021), prior studies show that GSC positively affects growth, financial performance, and company value. In order to bolster the existing corpus of scholarly work, we propose the following hypothesis:

H2: GSC has a positive effect on GVCC.

Green Value Co Creation And Environmental Performance

Chang (2019) and Yousaf (2021) define "green value co-creation" as innovations that actively share environmental concepts with partners who take part in one or more phases of production or consumption in order to jointly produce green values. The term "propensity for greening" describes how customers participate in completing logistical tasks in order to achieve environmental performance. Lun et al.'s 2015 study. According to Wang and Juo 2021, the investigation of the mediating function of green innovation was conducted in order to quantify the effect of green intellectual capital on economics and green performance. The management was strongly encouraged to encourage partners to collaborate in order to take advantage of opportunities that they otherwise could not have pursued alone.

Value co-creation and the impact of goods and services taxes on sustainable logistic performance (SLP) are the subjects of a study conducted by Fernando and Chukai (2018). According to the study's results, the sustainable performance of logistic service providers is positively correlated with all forms of value co-creation. This study differs from others in that it involves the customer in their operations to accomplish the environmental objectives.

In order to bolster the existing corpus of scholarly work, we propose the following hypothesis:

H3: GVCC has positive impact on EP.

Mediating role of GVCC between green intellectual capital and environmental performance.

According to the suggestions given by Farzaneh et al. (2022) about environmental performance, it is advised that organizational factors and exogenous variables be examined in the future. Investigating the elements that serve as mediators between sustainability and green intellectual capital is advised in light of

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the results of another study (Yusliza et al., 2019). Finding an underlying mechanism that explores how environmental initiative could be converted into environmental performance while accounting for both internal and external factors is essential to improving our understanding (Isaak, 2017). It's a dynamic capability that responds to the external natural environment while concurrently addressing environmental possibilities, according to Makhloufi et al. (2022). According to the report, future research should focus on small and medium-sized businesses (SMEs) and examine the opinions of various stakeholders. To increase the impact of green intellectual capital on business environmental performance, this would need looking at the many viewpoints of possible stakeholders besides the management (Asiaei et al., 2021). "Mediating role of environmental management accounts measure among green intellectual capital and EP."

In order to bolster the existing corpus of scholarly work, we propose the following hypothesis:

H4: GVCC mediates the relationship among GSC and EP.

Methodology

The research methodology The research being undertaken here is of an empirical and interpretative nature, and the study itself is designed applying a quantitative technique. The partial least squares structural equation modeling (PLS-SEM) approach was employed for the aim of putting the study's hypotheses to the test, and the SamrtPLS 4.0 software was applied for the analysis. According to Hair et al. (2010), this approach was chosen because it is appropriate for the explanatory nature of the current study. PLS should be favored when the sample size is modest and the model is finished, according to Hair et al. (2014), who indicated that this is the case. PLS-SEM has been recommended by a number of scholars, such as Chin (1998a, b) and Chin and Newsted (1999), since it is appropriate for identifying future causes. To begin with, the assumption of an ordinary distribution is not required for the PLS-SEM approach. Secondly, it is among the best ways to deal with several independent and dependent variables on the same scale at the same time. PLS-SEM is able to manage relatively small sample sizes and multicollinearity difficulties among independent variables, which takes us to our third argument. Measurements for constructs, data analysis, and data and sample size are the three subsections that

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make up the methodology part.

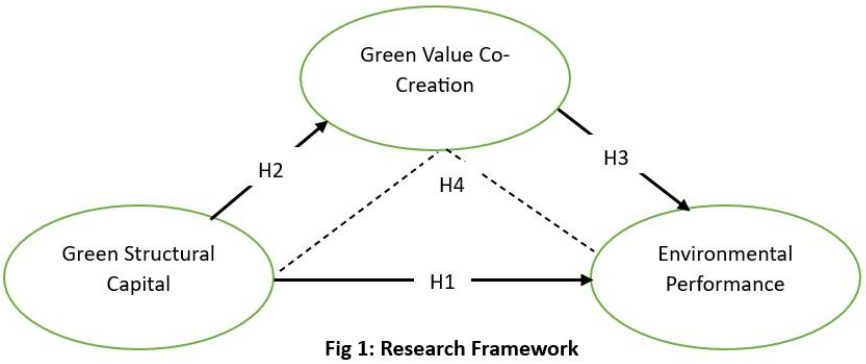

Fig 1: Research Framework

Data And Sample Size

A questionnaire was sent to small and medium-sized textile companies in Multan City, Pakistan, in order to collect responses for study. Purposive sampling was the technique used to collect data from the Pakistani city of Multan. Some small and medium-sized businesses (SMEs) in the textile manufacturing industry inside the Multan zone were targeted. These industries included the creation of clothing, towels, and spinning and weaving. Given their size and the quantity of pollution they cause in the environment, it was determined to use these industries as the sample for the data collection. The Chamber of Commerce and Industry supplied the list of small and medium-sized businesses (SMEs) in these sectors. As a result, we distributed our questionnaire to 750 textile manufacturing SMEs in our targeted industrial zones, which included both registered and unregistered SMEs. A process called random sampling was used to gather data for this study. Random sampling was considered to be the most appropriate sample technique (Secker et al., 1995). Every unit has an equal probability of getting chosen, which explains this. After the survey was completed, 470 questionnaires were returned, and it was found that 446 of them could be used (Yamane, 1967). This amount of reaction implies that percentage, which is 59.5 percent, which is considered an effective rate of response. The purpose of this research was to collect data from Multan, Pakistan's textile-made small and medium-sized companies (SMEs)' upper and middle management. These people actively participate in the SMEs' strategic decision-making process. Throughout our investigation, we have considered Pakistan's small and medium-sized textile manufacturing companies. Questionnaires were mainly sent to partners

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(owners), general managers, chief marketing managers, chief production managers, chief operation managers, chief financing managers, and managers involved in the decision-making process of the textile-made up sector of small and medium-sized enterprises (SMEs) in Pakistan because these individuals have extensive and first-hand knowledge and information regarding green practices and the current state of the company.

Measures for Constructs

Scales from earlier research were used to assess the factors. Following the completion of the compilation, the questions were arranged on a Likert scale with five points, with one indicating a strong disagreement and five indicating a strong agreement. The use of updated measurements from previous study has shown the content's validity (Trochim 2016). Thirteen items adapted from (C. H. Chang, 2019; Ranjan & Read, 2016; H. H. Tian et al., 2022) are used to test the GVCC. Four objects that have been modified from the scales created by Z. Han & Huo (2020) and Li (2022) are used to test the EP. Eight items that have been modified from Chen (2008) are used to calculate the GSC.

Data Analysis

PLS-SEM requires two steps to be completed before it can be used. The first stage is to measure the model, and the second step is to assess the connection between the latent variables. Both of these steps play an important role in the process. It was necessary to complete these two steps in order to ensure the reliability and validity of the measurements before moving on to the next step, which was to calculate the structural connection of the model.

PLS-SEM requires two steps to be completed before it can be used. The first stage is to measure the model, and the second step is to assess the connection between the latent variables. Both of these steps play an important role in the process. It was necessary to complete these two steps in order to ensure the reliability and validity of the measurements before moving on to the next step, which was to calculate the structural connection of the model.

Measurement Model Results

It is crucial to confirm a model's validity and reliability before beginning any form of study. This study assessed many approaches to ascertain the reliability and validity

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of the results. For each item, factor loadings more than 0.5 are considered acceptable, whereas factor loadings greater than 0.7 are considered desirable, according to the general criterion put forward by Hair et al. (2010). The reliability of the things was confirmed in the present examination since all of the items had item loadings greater than 0.5. Similarly, the composite dependability (CR) statistic must be more than 0.7 in accordance with the general guideline put forward by Hair et al. (2014). The coefficient of determination (CR) for each construct in this study was determined to be more than 0.7. Furthermore, it was discovered that the model's internal reliability—which may be used in place of Cronbach's α—was higher than 0.7, meeting the rule of thumb. The average variance extracted (AVE) was used to assess the presence of convergent validity. Fornell and Larcker (1981) state that all constructs must have an AVE greater than 0.5 to satisfy convergent validity. The AVE in this study was higher than 0.5 for every construct that was examined.

Figure 2 provides a thorough description of the measurement model, and Table I presents the measurement model's evaluation. Additionally, Table II displays each variable's descriptive statistics. The results of descriptive statistics explain three variables: GVCC (mean 2.694), EP (mean 2.932), and GI (mean 3.096). To verify the discriminant validity, two distinct approaches were assessed. The first technique that was looked at was cross-loading. Cross-loading requires that the indicator loading of one construct be greater than the loadings of other constructs, according to Hair et al. (2014). The findings of cross-loading in this model demonstrated that discriminant validity was really present, as shown in Table III. The second method was the criteria developed by Fornell and Larcker (1981). According to this criteria, each construct's square root of the AVE must be higher than its inter-correlation with the other constructs in the model. Discriminant validity was assessed using these criteria as a result of the results for the present model (see Table IV). It has been shown that the first two approaches do not provide fully reliable detects for discriminant validity scenarios (Hensler et al., 2015).

Assessment of the Structural Model

Once the validity of the model's measurement findings was confirmed, the structural model was evaluated. The investigation's results showed that the model explains 84.4 percent of the variation in environmental performance, with an R2 value of

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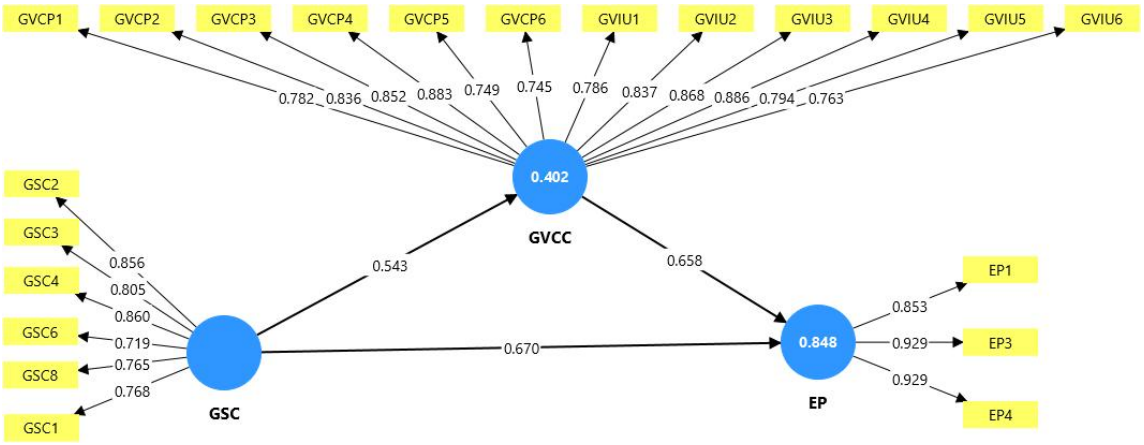
0.848. Similarly, R2 was 0.402, meaning that 40.2% of the variation in GVCC data can be explained by the model. In accordance with Stone (1974) and Geisser (1975), Stone–Geisser Q2 (cross-validated redundancy) was used to assess the model's ability to predict the indicators of each latent component. This method is used to assess further model fit assessment. The blindfolding method in SmartPLS4 was used to determine the predictive relevance. A Q2 value larger than 0 may be regarded as the model's predictive significance, according to Chin (2010). It may be concluded that the model has a particularly high predictive significance since the Q2 value in this study was 0.382, which is more than zero.



Results and Discussion

The relationships between green structural capital, green value-added capital, and environmental performance in Pakistani small and medium-sized textile businesses (SMEs) are examined in this study. It significantly advances theory and practice. The information provide thorough support for the previously proposed theories. The analysis found that there is a positive correlation between green structural capital, GVCC, and EP, as expected. This is in line with the theoretical underpinnings of the study and supports the results of previous studies that emphasized the vital role that green structural capital plays in advancing EP. Scholars interested in green innovation and environmental issues have paid close attention to the growing environmental degradation. Due of these concerns, manufacturers are now under a great deal of pressure worldwide. However, despite this, only a tiny percentage of Pakistani SMEs are integrating environmental issues into their business approaches. The goal of this study was to determine what motivates Pakistani small and

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medium-sized businesses (SMEs) to implement green value co-creation. The results of this study have been found to support Hypotheses 1, 2, and 3 (see Table VI).

Table I: ***Measurement Model Evaluation***

Items Loadings, Average Variance Extracted and Composite Reliability

Constructs	Items	Loadings	Cronbach's alpha	Composite reliability (rho_c)	Average variance extracted (AVE)
Green value co creation (GVCC)	GVCP1	0.782	0.888	0.863	0.646
	GVCP2	0.836			
	GVCP3	0.852			
	GVCP4	0.883			
	GVCP5	0.749			
	GVCP6	0.745			
	GVIU1	0.786			
	GVIU2	0.837			
	GVIU3	0.868			
	GVIU4	0.886			
	GVIU5	0.794			
	GVIU6	0.763			
	GVIU7	0.727			
Environmental performance (EP)	EP1	0.853	0.809	0.834	0.635
	EP3	0.929			
	EP4	0.929			
Green structural Capital (GI)	GSC1	0.768	0.840	0.861	0.595
	GSC2	0.856			
	GSC3	0.805			
	GSC4	0.86			
	GSC6	0.719			
	GSC8	0.765			

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Table II: ***Results Of Descriptive Statistics***

Construct	N	Minimum	Maximum	Mean	Std. Dev
GVCCmean	446	1.00	5.00	2.6942	0.87201
EPmean	446	1.00	5.00	2.9330	0.91928
GSCmean	446	1.00	5.00	3.0961	0.91579

Table III: ***Cross-Loading Test For Discriminant Validity***

	EP	GI	GVCC
EP1	**0.853**	0.284	0.183
EP3	**0.929**	0.647	-0.002
EP4	**0.929**	0.632	-0.009
GI1	0.428	**0.768**	-0.085
GI2	0.466	**0.856**	-0.023
GI3	0.457	**0.805**	-0.084
GI4	0.497	**0.860**	-0.071
GI6	0.39	**0.719**	-0.027
GI8	0.718	**0.719**	-0.042
GVCP1	0.08	-0.011	**0.782**
GVCP2	0.034	-0.046	**0.836**
GVCP3	0.023	-0.069	**0.852**
GVCP4	0.066	-0.065	**0.883**
GVCP5	0.046	-0.036	**0.749**
GVCP6	0.07	-0.024	**0.745**
GVIU1	0.062	-0.077	**0.786**
GVIU2	0.06	-0.026	**0.837**
GVIU3	0.051	-0.064	**0.868**
GVIU4	0.075	-0.063	**0.886**
GVIU5	0.014	-0.036	**0.794**
GVIU6	0.059	-0.011	**0.763**

Table IV: ***Fornell And Larcker's Criterion Test For Discriminant Validity***

	EP	GSC	GVCC
EP	**0.746**		
GSC	0.636	**0.712**	
GVCC	0.069	-0.056	**0.615**

By using these strategies, companies may also improve their reputation, which will help them draw in more customers. However, our results show that "going green" is more than just a way for companies to reactively meet government regulations. In order to sustain and enhance their skills and performance, businesses may also use green value co-creation to proactively develop new rules of the game. Increasing a

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company's capacity for eco-friendly innovation might provide managers a new tactical tool.

Table VI: *Path Coefficient And Hypothesis Testing*

Sr #	Hypothesis	Std β	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
H1	GSC -> EP	0.670	0.405	0.025	27.466	0
H2	GSC-> GVCC	0.543	0.553	0.028	21.864	0
H3	GVCC -> EP	0.658	0.645	0.024	26.506	0
H4	GSC-> GVCC -> EP	0.436	0.335	0.024	16.853	0

The results of the hypothesis H4 show an extension of the work done by previous researchers addressing the role of green value co-creation as a mediator since they only show the direct relationship between green structural capital and green environmental practice. These results indicate that the GVCC channel is the only way that GSC and environmental performance are related. This finding implies that the relationship between GSC and environmental performance is fully mediated by the GVCC channel. Environmentally friendly practices must be integrated into the operations of small and medium-sized businesses (SMEs). The strict environmental regulations that companies must adhere to in order to implement green initiatives may make it difficult for them to access new markets (Barrett, 1991). In their 2016 paper, Ranjan and Read make the case that under GVCC, companies collaborate with other organizations to create value across the whole production and consuming process. This kind of cooperation might be direct or indirect, and it entails involvement in various production or consumption phases as well as the exchange of environmental ideas. The most crucial element influencing a company's ability to successfully supply products and services is value co-creation. Additionally, (Rehman & Siddiqui 2023) note that green activities improve textile firms' brand image. For example, they clarified how government initiatives like offering financial incentives, technical assistance, pilot projects, and training courses encourage small and medium-sized businesses (SMEs) to embrace environmentally friendly practices. In addition, small and medium-sized enterprises (SMEs) are encouraged to adopt green value chain chain (GVCC) by the government in the form of financial incentives or subsidies, as well as by banks via easy lending systems (EIO, 2011; Hojnik and

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Online ISSN 3007-3197
Print ISSN 3007-3189

http://amresearchreview.com/index.php/Journal/about

Ruzzier, 2016).

Conclusion Policy Implications

This study builds on earlier research on value co-creation (see Vallaster and Von Wallpach 2013 for more details). The study's conclusions show that customers highly regard businesses that consider their needs and have established a value co-creation structure. Given this, in addition to green environmental performance, co-creating green value is a crucial step in the process of connecting green practices and green innovation. This study created a link between environmental problems and corporate environmental concerns so that practical management may focus on attaining green innovation via green practices, green dynamic capabilities, and green value co-creation. Using green practices and communicating that they are adopting green innovations is crucial for practical management to address the essential difficulties. In actuality, management must pay the right amount of attention to stakeholder expectations about their goals for "Green Technology and Green Products." Green value co-creation is a major source of inspiration for spearheading green innovation, according to the research's results. With these abilities, environmental performance and management should be completely prepared. The fact that this study emphasizes the function of green innovation as a mediator is another important contribution to the realm of practical management. The businesses are entirely dependent on a vast number of consumers, and the preferences of these customers have a direct impact on the businesses' performance. It is imperative that managers have the capacity to create value for their clients via the value chain process. There will be more passion if these value co-creations are started via ecologically conscious activities.

Limitations and Future Research

A survey using a cross-sectional design was conducted for this inquiry, and the hypotheses were analyzed within the framework of Pakistan. The results of the study could alter if a longitudinal survey were conducted for other emerging countries. Furthermore, only small and medium-sized businesses (SMEs) in the manufacturing sector were included in this study; further research is necessary to have a greater understanding of this important topic for SMEs that are neither manufacturing or service-oriented.

Annual Methodological Archive Research Review
http://amresearchreview.com/index.php/Journal/about
Volume 3, Issue 12 (2025)

Online ISSN 3007-3197
Print ISSN 3007-3189

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