

# The Effect of Corporate Social Responsibility and an Emphasis on the Sustainability of the Environment on Small and Medium-Sized Businesses' Ecological Sustainability: The Role of Green Capabilities as a Mediator

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## Abstract

Recent studies indicate that manufacturers Small and Medium Enterprises (SMEs) have become increasingly conscious of problems with the environment. Manufacturing companies play a crucial role in minimizing the adverse consequences of the changing climate through the implementation of sustainable practices and creating eco-friendly products. Few studies have concentrated on the concept of Corporate Social Responsibility (CSR) for issues related to the environment, despite the fact that CSR is currently a mainstream topic in global business regulation and is frequently used to validate an organization's financial results and image as a business. A questionnaire for surveys is used in this study for collecting data from 570 CEOs of Small and Medium-Sized Businesses (SMEs) in China. Evaluation of information and testing of assumptions are done with structural equation modelling. As evidenced by the present findings, ECSR increases EEP and GPDP. Consequently, in order to improve their overall performance in green management and attain sustainable management objectives, companies need to adopt the promotion of ECSR. Consequently, in order to improve their general efficiency in green management and attain sustainable management, businesses need to put into practice the promotion of ECSR. This research adds to the body of knowledge on environmental management and offers recommendations on how practitioners can improve organizational capacities to handle environmental problems through creative environmental campaigns.

**Keywords:** Enterprises, Innovative Green, EEP And GPDP, Environmental Issues, Organizational Capabilities, Sustainable Management, Chinese Small and Medium-Sized Enterprises (SMEs), Structural Equation Modelling, ECSR, Corporate Social Responsibility (CSR), Manufacturing Organizations, Environmentally-Friendly.

## Introduction

The conversation in ecologically responsible manufacturing is shifting to the company's environmental leadership. Managers of days have a clear understanding of how ecological problems are evolving and how they relate to business operations. To ensure the security of the environment, businesses are including strategies for maintaining and preserving the environment into their business plans [1]. The shift in business strategies has been impacted by a number of factors, including corporate policies pertaining to the environment, environmental regulations, consumers' comprehension of problems with the environment, and organizations' commitment to social responsibility. These advancements have compelled businesses to enhance operations and introduce innovative products with less adverse environmental impacts [1, 2].

ECSR encourages an organization's efforts to consider and minimize the environmental impact of its activities. It can help the environment by reducing greenhouse gas emissions, preserving resources, eliminating waste, and safeguarding ecosystems [2, 3]. It's important to keep in mind that the outcomes of ECSR might vary significantly depending on the specific policies and procedures that a company decides to use. Previous studies have focused on how ECSR approaches improve stakeholder relationships and responses while simplifying the retrieval of crucial resources.

An organization shows that it has committed itself to acting as a responsible corporate citizen when it incorporates sustainability into the operation of its company operations. By coordinating the company's activities and values with social and environmental issues, attracting and keeping customers, [3], and promoting business sustainability, the relationship between ECSR and GIC in corporate operations can boost green innovation.

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Companies may be reluctant to participate in environmental initiatives because of the necessity to balance environmental and economic performance, given the significance of the aforementioned challenges. Businesses are unlikely to embrace environmental engagement that raises expenses and lowers output [3, 4]. As such, companies just follow the law and outsource their environmentally reckless operations to other businesses. For instance, businesses are compelled to lessen their environmental footprints by environmental standards like the Toxic Releases Inventory in the United States and the National Polluting substances Releases Inventory in Canada [5]. Many businesses outsource their polluting operations as a result of these rules.

In order to help businesses comprehend the relevance of environmental orientation and to boost their desire to participate in environmental activities, scientific information on how it improves firm performance is needed. Environmental variables orientation has been the subject of numerous research that have looked into how it affects business success [5, 6]. Consider the correlation between environmental approach and business performance using 570 Hungarian enterprises as a sample. From an environmental perspective, Gigli demonstrated a cutting-edge system for recycling end-of-life automobile batteries [6].

An analysis that compares the environmental effects of three distinct textile fibre end-of-life scenarios. Likewise, a mathematical model demonstrating the influence of the surroundings. Nevertheless, research on the bivariate relationship between environmental orientation and business performance is limited; little is known about its impact on the Green Supply Chain Management (GSCM), [6, 7], which in turn impacts company performance.

Stakeholder theories state that two things drive firms to strengthen their surroundings orientation is resources and legitimacy. To satisfy the needs of the general public, governmental bodies, and customers, businesses must also assess and improve the sustainable development of their suppliers. To put it very simply, [7, 8], GSCM equips companies with the means to create a competitive advantage that will boost productivity and meet stakeholder expectations. Examining the relationship between environmental orientation, GSCM, and business achievement is the aim of this research. According to institutional and stakeholder theories, we argue that firms' attempts to manage, oversee, and collaborate with suppliers to enhance their green competence are primarily driven by two factors: resources and validity. Also, we conclude from the Resource-Based View (RBV), [7, 8], which defines a resource, that GSCM helps corporations outperform their rivals and provide value to their customers, two things that boost company performance.

For the sake of encouraging mindful of the environment corporate behaviour, several government agencies are implementing incentive programs and initiatives. In order to protect the environment, these departments have also increasingly adopted strict environmental laws. Stricter environmental protection laws have had a significant impact on the surroundings in the commercial sector [9]. Consequently, the protection of the environment is having a bigger effect on company strategy.

Talent and strategy are critical components for businesses seeking performance in the environment. The majority of businesses need to review and update their fundamental declarations, identifications, values, objectives, visions, structures, [10, 11], operating principles, and stakeholder interactions in order to address environmental ecology issues. For green management to obtain a competitive edge in this setting, the business's Green Shared Vision (GSV) will be crucial. Visions is the most powerful organizational instrument [12, 13].

Corporate Social Responsibility (CSR) has garnered increased attention from firms and scholars in the past several years. Highly successful companies have recognized Corporate Social Responsibility (CSR) as a way to promote sustainable development and consequently included it into their overarching vision to enhance their edge over rivals and give back to society. Businesses are becoming more aware of issues related to the environment and integrating safeguarding the environment into their company's social responsibility programs in order to optimize productivity and decrease waste and emissions. Furthermore, CSR covers a wide range of topics. The 2020 China Corporate Sustainability Recognition CSR study separates the CSR criteria into seven main groups, two of which pertain to business governance performance and the

sustainability of the company strategy and mission. Therefore, the focus of the current study was CSR in relation to sustainability issues [14, 15]. An increasing amount of research has focused on the causes of Corporate Ecological Citizenship and Responsibilities (ECSR) and how such factors impact company performance.

When it comes to how businesses engage with the Environment, Corporate Social Responsibility (ECSR) is crucial to building trust with external stakeholders and giving businesses a competitive edge. This draws interest from academic & corporate circles and elevates environmental planning to the status of a CSR component. Businesses are now using the promotion of sustainable development as a tactic to gain a competitive edge and the environmental accountability that modern society demands.

Furthermore, adherence to international standards—which developed economies promote—allows a company to enhance its impact on the environment or society. Giving academics a reference to better comprehend the differences between advanced and developing countries' social and economic features is the goal of this study. In order to explain employee sustainable performance & pro-environmental behaviour, many research analyse green HRM practices in relation to commitment from the organization, corporate green performance, and employee behaviour. When combined, [14], prior studies lay the foundation for thinking about Corporate Social Responsibility (CSR) as a Small & Medium-Sized Enterprise (SMEs) mediator.

As a result, through bringing together research on ES, CSR, and environmentally friendly human resources management practices, we establish a unique paradigm that names CSR as the mediators among green HRM practices and ES. In addition, [15], according to the Ability-Motivation-Opportunity (AMO) paradigm, green HRM improves employees' ability to reach ES. China is currently facing severe pollution to the environment issues. SMEs are thought to be the main contributors to environmental pollution. China is placed 142nd out of 180 nations in 2020 with an overall Environmental Performance Index (EPI) value of 33.1. Consequently, this work substantially advances the subject of green HRM & CSR. Additionally, this study contributes for comprehending by clarifying the possible relationship among environmentally conscious Human Resources Management & a Firm's environmentally outcome by utilizing CSR as an intermediate variable.

Furthermore, by contending that the indirect impact of green HRM though CSR is greater than its direct impact, we add to and expand upon previous research. Theoretically, by expanding our understanding of mediation and the link between independent variables, [16], this study analyses the conceptual framework and incorporates the theory of AMO into the setting of the environment. Therefore, this study looks at how CSR and green HRM practices affect an organization's environmental performance.

The trends and paths of multinational corporations are directly influenced by their surroundings. Considering environmental issues & their effects could provide a business a financial advantage. Therefore, the focus of the current study is on the standards by which EP is judged. Manufacturing businesses have an immediate impact on the surrounding environment, bringing many challenges and changes to light, [16, 17], such as air and water pollution, resource depletion, climate change, and more. Since industrial companies produce pollutants and waste that endangers the nearby ecosystems, it is imperative that environmental incentives be promoted. This idea has been extensively embraced in a number of places.

India is categorized as a developing country and its 6% annual increase in Carbon Dioxide (CO<sub>2</sub>) emission is a major worry for academics and practitioners alike. Prior eras saw the apex of greenhouse gas concentrations and the height of Carbon Dioxide (CO<sub>2</sub>) emissions. The main factors of significance found in the research investigations were social cohesion, economic growth, & concern for the environment.

A thorough awareness of social-economic components and an assessment of the difficulties posed by these variables are prerequisites for managing a business efficiently. It is advised that scholars focus more on the subject of corporate social responsibility [18, 19]. Approximately 8000 multinational firms operating in 160 countries contributed almost four trillion dollars to the progress of Corporate Social Responsibility (CSR).

Organizations have the right to engage in retailing activities, but adhering to specific ethical standards is crucial.

Globally, CSR programs are widely recognized as an important part of corporate operations for many organizations. The idea of Corporate Social Responsibility (CSR) is crucial for organizations that must continuously take environmental issues into account. While financial advantages were the primary focus of businesses in the past, modern business practices require the addition of environmental issues as a crucial component. Researchers have surveyed businesses and trade associations to look at their incentives for corporate social responsibility over many years.

On the other hand, the investigation of environmental incentives in the context of corporate social responsibility has received scant attention. Furthermore, a small number of studies suggest that Corporate Social Responsibility (CSR) improves organizational incentives, whereas other studies demonstrate that CSR has no discernible impact on organizational rewards. The research on the Resource-Based Viewpoint (RBV) emphasizes the importance of an organization's incentive structure as a critical element. Based on current research, there is insufficient evidence to support the relationship between Corporate Social Responsibility (CSR) and organizational incentives. Numerous academics have emphasized the importance of mediation and moderating.

Thus, the purpose of this study is to investigate how two mediators—green competence and GTL—affect the connection between CSR & EP. According according to the Resource-Based View (RBV) framework, GI and ES integration play a critical role in determining sustainable performance. Therefore, GI must be taken into consideration while designing incentives to be given to businesses. Furthermore, it has been believed that the creation of GI projects is essential to achieving long-term advantages [18]. The researchers' assessment of GI's relevance to EP was not given enough priority.

This research project's main goal is to use GI to improve and regulate EP. Academics and professionals from business and academics have focused their emphasis on the analysis and application of environmentally friendly policies. The environmental strategy that is employed, which incorporates cutting-edge preventative measures and environmentally friendly activities, is directly related to the potential rewards and advantages for enterprises. The results of additionally the application of an advantageous environmental strategy are considered important when assessing numerous aspects of organizational success. The environmental approach of estimating EP is frequently overlooked by academics. This study was primarily motivated by the lack of scholarly attention that has been paid to the role that CSR plays in controlling the EP of large industries in India [19]. The purpose of this study is to investigate GC, GI, ES, & GTL's possible mediating roles in this situation. Therefore, the goal of this research project is to fill in these current knowledge gaps.

China currently has the world's largest growing market and second-largest economy. China is where the majority of the world's industry is done. Significant environmental pollution is a side effect of economic growth and industrialization, [20], and this issue has drawn a great deal of interest in Chinese society. Consequently, Chinese businesses and the government have stepped up their efforts to reduce the environmental impact of corporate operations. For example, the Chinese government has issued laws and guidelines requiring businesses to lessen the environmental damage their operations generate. Additionally, business organizations are working harder to apply GSCM and ISO 14001 [20, 21]. In addition to boosting economic benefits, GSCM helps to improve environmental performance by reducing energy and pollution. Given the growing relevance of environmental sustainability in the business sector, the importance of GSCM is very important for Chinese companies.

The manufacturing sector is a major source of trash that degrades the quality of the environment worldwide. Increasingly, stakeholders in the manufacturing sector—including consumers, society as a whole employees, or the government—are putting a lot of pressure on the sector to achieve sustainability in the environment through resource-efficient methods, or Corporate Social Responsibility (CSR). Regulations pertaining to the environment give the organization the chance to create a win-win scenario.

The natural rules preserve air quality while reducing waste material. In favour of this theory, the researcher demonstrates that corporate social responsibility, which refers to a company's sustainable economic unit, is still uncommon, particularly in developing countries. CSR is a well-liked idea that is fundamental to all businesses. But when it comes to its adoption, nations with inadequate infrastructure have received very little attention [21]. Like research, our study looks at the Chinese economy, when most firms have begun to understand corporate social responsibility. China's SMEs currently doing an excellent job of managing the resources required for the effective implementation of CSR. Following China's example, manufacturing companies in China are progressively moving toward socially conscious operations.

According to an analysis done in China's manufacturing sector, CSR initiatives have lessened environmental harm by cutting production waste, which lowers manufacturing costs. In fact, Corporate Social Responsibility (CSR) offers a sustainable, efficient, and environmentally conscious business model that recognizes the importance of the stakeholder—that is, the customers—in shaping the company's financial performance. Stakeholder orientation is emphasized in the literature as a prerequisite for sustainable performance within the framework of corporate social responsibility. In this case, the study examines the fundamental connection between CSR and stakeholders valuation of EVP and FP (such as employees, the community, and consumer). Notably, recent worldwide changes in climate has compelled nations to take action to ensure environmental safety.

China prioritizes green innovation due to the high danger of environmental hazards it faces today. By incorporating environmentally conscious methods (such as green innovation) into their business operations, companies can meet the social demands of those who depend on them (i.e., a safe environment) through Corporate Social Responsibility (CSR) efforts. Businesses may achieve significant growth by using Green Innovation (GI), [22, 23], a strategy that helps them save energy, reduce pollution, and recycle trash. Integrating organizational innovation (technological, managerial) into a company's strategy is what GI is all about. It involves updated products and procedures. One of the most important factors impacting a company's performance is GI. By enhancing GI's technical aspects, we can boost EVP and reach ecological sustainability. Companies can achieve substantial economic gains through environmentally friendly growth supported by GI, which guarantees solid EVP. To counteract the worsening environmental crisis, a more holistic view of environmental sustainability (i.e., CSR) is required. More and more, businesses are concentrating their efforts on their socio-ecological practices in response to this pressing need [23]. On the other hand, Chinese SMEs are only starting off when it pertains to implementation. Negative outcomes have an impact on business performance due to China's burgeoning economy. Stakeholders must work together to achieve sustainable on all fronts—economic, social, and ecological—if they are to fulfil that commitment.

## Objectives of the Study

- Research the effects of Corporate Social Responsibility (CSR) programs on decisions and actions made by small and medium-sized businesses.
- Determine out how Small to Medium-Sized Businesses' (SMBs') attempts to be environmentally sustainable are impacted by the creation and implementation of green capabilities.
- Investigation into how green capabilities help small and medium-sized businesses turn their CSR pledges into real environmental results.
- Recommend actions that lawmakers, trade groups, and other interested parties might take to assist small and medium-sized businesses (SMBs) in becoming more environmentally sustainable.

## Literature Review

(Wen, J., 2022) [24] New studies indicate that manufacturing SMEs have become increasingly mindful of environmental concerns. While some investigation has shown the importance of green HRM practices and

CSR in countries that are emerging, the majority of studies have failed to find this correlation. This study seeks to investigate the relationship between sustainable human resource management and Environmental Sustainability (ES) in SMEs in the nation of Pakistan, specifically looking at how CSR mediates this relationship. This study examines the impact of sustainable human resources management on ES through CSR in the setting of Small and Medium-Sized Enterprises (SMEs) in Pakistan. It uses a cross-sectional design. The authors gathered data gathered from three hundred and twenty Small and Medium-Sized Manufacturing Enterprises (SMEs) and analysed it using the PLS-SEM method to find out how different factors were related to their interactions.

(Bonsu, M. O. A., 2020) [25] The connection between CSR and ecological sustainability of Ghanaian manufacturing enterprises is investigated in this research by looking at the mediating function of innovative green technologies. The research polled production business executives and focused on developing markets in Africa. The authors use multiple regression methods using mediation models to evaluate the nexus among the study's variables, with 301 questions qualifying for the final analyses. There is strong indication from the results that innovative green technology and corporate social responsibility both significantly improve the performance of the environment. Green innovation is a manner in which Corporate Social Responsibility (CSR) improves the environment's performance, according to the authors. This suggests that companies can improve the environment's performance by enhancing their sustainability-related innovation and dynamic resources abilities.

(Chang, T. W., 2020) [26] Although CSR is currently a hot topic in global corporate governance circles, much research has concentrated on how it affects environmental concerns, rather than how it helps validate the financial performance of a business or public image. This study introduces an unfamiliar idea that draws on expectation value and signal theories to determine the effect of the Green shared Vision (GSV) on Employee Environment's Performance (EEP) and Green's Development of Products Performance (GPDP). This could help in further investigating the GSV-Environmental CSR (ECSR) connections.

(Li, W., Bhutto, M. Y., Waris, 2023) [27] Manufacturing businesses play a crucial role in mitigating the negative effects of climate change by implementing sustainable practices and creating eco-friendly products. Businesses focus on green innovative goods, Green Intellectual Capital (GIC), and support for sustainable Business Practices (BUS) as part of their environment Corporate Social Responsibility (ECSR). The purpose of the current study is to analyse how organizational GIC and ECSR affect BUS and Green Innovation (GIN). Partial Least Square Structural Equation Modelling was used to analyse the data for 237 participants from the Manufacturing Firms (PLS-SEM). The study's findings demonstrated the importance of ECSR and GIC for GIN and BUS.

(Li, L., Li, G., Tsai, 2019) [28] Several research investigations have been conducted on the impact of the practice of Corporate Social Responsibility (CSR) on innovations in technology and products. Still, not much is known about the connection between CSR and innovative services. Researchers looked at the relationship between service innovation performance and environmental and community Corporate Social Responsibility (CSR), as well as the potential mediation factor. We created a model that utilizes the theories of social capital and dynamic capability, which shows how CSR enhances service innovation performance by giving it a more sophisticated dynamic capability to deal with quickly changing environments. Using a data collection of 298 Chinese small- and medium-sized businesses, we tested the mathematical framework using the techniques of structural equation modelling and hierarchy regression analysis.

(Liu, Y., Chen, Y., 2021) [29] This study investigated the relationship between CSR (Corporate Social Responsibility) and technological innovation performance, taking into account the mediating role of Company Social Capacity (CSC) and the dampening impact of market rivalry intensity. The study was rooted in the social capital and shareholder theories. Additionally, as environmentalism has intensified, the long-term effects of environmental accountability on technological innovation are investigated. The non-linear impact of CSR on technical innovation performance is first examined using Poisson panel regression and data from 277 Chinese manufacturing companies between 2013 and 2018. According to our findings, at a specific critical level, CSR effectively promotes technical innovation performance and has an inverting U-shaped effect upon it.

(Shahzad, M., Qu, Y., 2020) [30] The purpose of this study is to examine how employees' Knowledge Absorptive Capacity (KAC) affects companies' CSR practices with the goal to achieve their Corporate Sustainability Performing (CSP) goals by applying the ability to absorb information and green theory. This is due to the increasing awareness of sustainable development among a variety of stakeholders. Convenience sampling was used to gather data from 587 ISO-certified Manufactured Multinational Corporations (MNCs) in the Asia Pacific area, which included companies from the nations of China, Malaysia, Pakistan, the region known as the Middle East, and other countries. Fuzzy Set Quantitative Comparison Analysis (fsQCA) and partial least-squares structural equation modelling of structural equations were used for analysis.

(Guo, Y., Wang, L., 2019) [31] According to open theories of innovation, acquiring external knowledge is essential to obtaining a competitive edge. The purpose of this study was to investigate how the success of SMEs (small and medium-sized businesses) and other knowledge acquisition and innovations in the environment are related to each other. This study analyses this theoretical framework using environmental innovation as a mediator, splitting the external knowledge acquisition of businesses into two categories: outside technical understanding acquisition and international market intelligence acquisition. Empirical findings using a sample of 416 Chinese SMEs showed that SMEs' success was strongly correlated with high levels of technical and market knowledge development. The acquisition of technical knowledge mostly exhibits itself in economic performance, while the acquisition of market intelligence primarily manifests itself in performance in the environment.

(Xing, X., Liu, T., 2020) [32] Using data from 355 Chinese manufacturing companies, this study creates a multiple mediator model to investigate the relationship between environmental regulations and financial performance using green dynamic capacity and sustainability exploration/exploitation innovations. The relationship among the regulation of the environment and economic achievement can be mediated by green dynamic capability as well as sustainable exploration/exploitation, according to empirical findings. Furthermore, our results show that two different mediation pathways—green adaptive capacity along with sustainability exploitation innovation, as well as green dynamic capacity and sustainability exploration innovation—can be used by regulatory agencies to enhance the performance of the economy.

(Renwick, D. W., Redman, T., 2013) [33] The paper advocates in favour of integrating the field of environmental management (EM) and HRM (human resource management) study literatures, which are now mostly distinct from the others. The Ability–Motivation–Opportunity (AMO) theory is used in this research to classify research, highlighting the part that Green Human Resource Management (GHRM) procedures play in people-management practice. The paper's achievements are found in its gathering of the body of current research in the discipline, its mapping of the field's topography, its identification of certain gaps in the literature, and its recommendations for some potentially productive future study directions. The review's conclusions imply that knowledge of how GHRM practices affect workers' drives to engage in environmentally friendly behaviour's lags behind knowledge of how businesses foster green capacities and give workers chances to participate in EM initiatives at the company.

(Hofman, P. S., Moon, J., 2017) [34] In the seemingly oxymoronic setting of Chinese "authoritarian capitalism," the concept of Corporate Social Responsibility (CSR) is introduced in this article. The article begins with a brief introduction to the rise of authoritarian capitalism and then uses Matten and Moon's framework to analyse the expansion of corporate social responsibility (CSR) in the Chinese mainland. This framework demonstrates CSR development in terms of both the traditional structures of a business system and the effects of new institutionalization on businesses as a result of societal pressures in their local and global surroundings. There are two types of Corporate Social Responsibility (CSR) in China, which reflects the "multiplicity" of its business system. One type is found in the corporate, mostly State-Owned Enterprise (SOE) sector and is concerned with local reputation. The other type is found in the small and medium-sized business sector, which is primarily owned by family members.

(Li, E. L., Zhou, L., 2017) [35] The majority of earlier research focuses on understanding the viewpoints of buyers in sustainable supply-chain partnerships, giving insufficient consideration to the upstream sellers' strategic role. This research, that employs a market-oriented approach to environmental responsibility,

looks at the processes and enabling variables that export suppliers from developing countries use to leverage their strategic objectives and build knowledge integration capability in order to achieve better export performance. The findings from a sample of Chinese exporters demonstrate that the commercial effect of market-oriented environmentally friendly practices is mediated by the relationship capacity for information integration, and that this mediation procedure for leaning is further enhanced by the engagement of foreign buyers.

(Yu, Y., & Choi, Y. 2016) [36] The purpose of this research investigation is to figure out what inspires Chinese companies to implement Corporate Social Responsibility (CSR) initiatives. The study's hypothesis, which is in line with the stakeholder theory, is that the adoption of corporate social responsibility (CSR) procedures by Chinese enterprises has been benefited by stakeholder demands. Research on the connection between Corporate Social Responsibility (CSR) procedures & stakeholder pressure has yielded contrasting findings. This study investigates the mediating function of a CSR-oriented corporate culture in the relationship between pressure from stakeholders and the implementation of CSR practices in an effort to find the missing pieces amid those ambiguous outcomes.

(Seman, N. A. A., Zakuan, N., 2012) [37] An environmentally friendly invention that incorporates ecological issues into the administration of supply chains is called "green supply chain management," or "GSCM." GSCM is growing more and more well-liked among academics and professionals. The paper's goals are to identify the emerging path for this developing discipline and to provide a quick overview of the most recent GSCM work. To organize the information and determine the research's research path, an in-depth investigation takes place. The review focuses on how GSCM is developing in both established and developing nations, and it encompasses all researchers who have anything to do with supply chain management, operation management, and sustainability for society and the environment. It demonstrates the dearth of studies looking at the uptake and application of GSCM approaches, particularly in newly industrialized countries like the nation of Malaysia.

#### *Hypothesis*

**H1:** *Benefits of Green Sharing Vision on Employee Ecological performance.*

**H2:** *ECSR has been beneficially affected by Green Shared Vision.*

**H3:** *Greens Product Development Productivity is positively impacted by Green Shared Vision.*

**H4:** *Employee Ecological Performance is positively impacted by environment and CSR.*

**H5:** *The performance of Green Product Development is positively impacted by environment-CSR.*

**H6:** *The relationship between Employee Environmental Performance and the Green Shared Vision is mediated by Environment-CSR.*

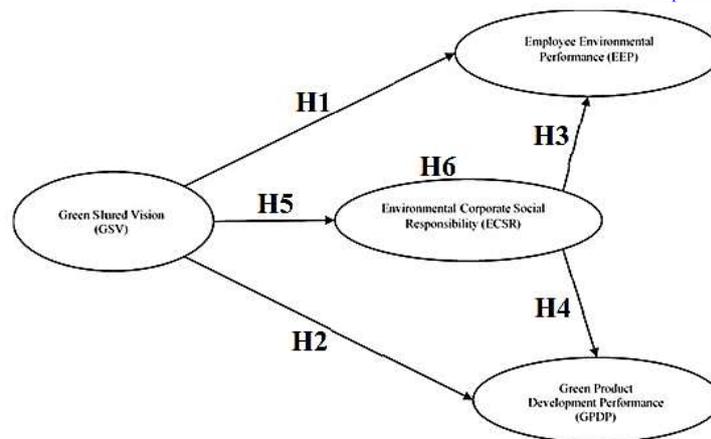


Fig. 1. Research Framework

## Methodology

### *Collecting Information and Sampling*

Sales and Research and Development (R&D) levels were used as metrics for analysis in this study. Furthermore, a questionnaire was used to validate the research hypotheses and the manufacturing sector framework in China. The following factors led to the survey's industrial themed:

The "China Company List" served as the randomized source for the questionnaire sample used in the present investigation. Telephone calls were made to the staff members of the companies that were selected or department that dealt with sales, inviting them to take part in the research project [38]. The companies were also requested to indicate whether they were currently working on any R&D or sales initiatives linked to green product developments.

Respondents from various departments, employment levels, or sectors helped contribute to the study's reduction of common method variance. 570 genuine answers to the 986 questionnaires that were issued to the companies were found (effective rate of response = 58.94%).

Table 1. Distribution of Samples According to Industry Categorization.

Industry	No. of firms	% of sample	Capitals	No. of samples	% of samples	Size of firms	No. of samples	% of samples
Electronic-info-related industries	167	29.6%	<10 Million	204	36.9%	<10 Million	164	42.8%
Info. Services	120	18.9%						
Machinery and equipment manufacturing	140	44.6%	10-50 Million	221	39.8%	10-50 Million	241	39.8%
Department stores	52	6%	100 Million	41	8%	100 Million	38	14%
Leisure	31	1.9%	>1 million	59	14.4%	>1 million	59	9.4%
Others	60	36.9%	> million	48	9.8%	> million	68	8.9%
Total	570	100.00%	Total	570	100.00%	Total	570	100.00%

*Measurement and Definitions for the Structures*

Four parameters for measurement were included in the study surveys: GPDP, ECSR, EEP, and GSV. The survey's items were assessed on a 7-point Likert scale, with values ranging from 1 (strongly disapproving) to 7 (strongly agree), and it was designed to reflect the recommendations of pertinent scholars (Appendix A). By ticking the appropriate boxes on the questionnaire, the respondents gave the items a rating [38, 39]. The present research used surveys created by pertinent academics, which may nevertheless contain relevant flaws. For this reason, principal component analysis, rotational orthogonal with varimax, and exploratory factor analysis with validation were employed.

**Table 2.** Bartlett's Test, Kaiser-Meyer-Olkin, Or KMO, Findings, And Rotated Components the Matrix.

<b>KMO and Bartlett's Test Results</b>						
<b>Kaiser-Meyer-olkin (KMO) measure of sampling adequacy</b>					0.874	
<b>Bartlett's Test of Spehercity</b>					<b>Approx. (chi-Square)</b>	9867.08
					<b>Degrees of freedom (df)</b>	154
					<b>Significant (sign)</b>	0.000
<b>Rotated Competent Matrix Results</b>						
<b>Components</b>	<b>Items</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
1	(ECSR) 1	0.896				
	(ECSR) 2	0.419				
	(ECSR) 3	0.946				
	(ECSR) 4	0.846				
	(ECSR) 5	0.958				
2	(GPDP) 1		0.941			
	(GPDP) 2		0.948			
	(GPDP) 3		0.641			
	(GPDP) 4		0.986			
	(GPDP) 5		0.948			
3	(GSV) 1			0.841		
	(GSV) 2			0.940		
	(GSV) 3			0.941		
	(GSV) 4			0.961		
	(GSV) 5			0.952		
4	(EEP) 1				0.841	
	(EEP) 2				0.886	
	(EEP) 3				0.968	
	(EEP) 4				0.958	

**Results and Discussion***Measurements Model Results*

Table 3 presents all of the study framework's component parts' median, standard deviation, Average Variance Extracted (AVE), root mean square, and coefficients of correlation results.

**Table 3.** The Constructs' Means, Deviations from Average, And Correlates.

Constructs	Mean	Std. Dev	A (0.894)	B	C	D
ECSR	5.85	0.845	0.964**			
GSV	4.18	0.84	0.842**	(0.874)		
GPDP	5.81	0.816	0.896**	0.418**	(0.841)	
EEP	5.14	0.9	0.875**	0.394**	0.966**	(0.846)

The study's components have strong discriminative validity, as seen by Table 4, where all of the constructs' HTMT proportions are less than 0.85.

**Table 4.** The Researcher's Heterotrait–Monotrait (Htmt) Analysis.

Constructs	ECSR	EEP	GPDP
ECSR	0.845		
EEP	0.964	0.840	
GPDP	0.846	0.894	0.847

The statistically significant variable load ( $\lambda$ ) for each of the four surfaces is displayed in Table 5 [40, 41]. The findings showed that each questionnaire item had strong individual item reliability in this case, and the measurement model's individual item component load ( $\lambda$ ) was  $>0.7$ . Furthermore, the Cronbach alpha and composite reliability ratings were both greater than 0.7, indicating that the questionnaire had a high degree of internal reliability.

**Table 5.** The Proposed Model's Standardised Impacts Are Direct, Indirect, And Overall Effects.

Constructs	Items No.	Factor Loading	Cronbach's	(CR)	AVE	$\sqrt{AVE}$
<b>GSV</b>	(GSV) 1	0.964**	0.98	0.845	0.595	0.849
	(GSV) 2	0.54**				
	(GSV) 3	0.846**				
	(GSV) 4	0.849**				
	(GSV) 5	0.842**				
<b>EEP</b>	(EEP) 1	0.842**	0.946	0.846	0.975	0.986
	(EEP) 2	0.949**				
	(EEP) 3	0.849**				
	(EEP) 4	0.845**				
	(EEP) 5	0.964**				
<b>ECSR</b>	(ECSR) 1	0.125**	0.482	0.976	0.976	0.548
	(ECSR) 2	0.175**				
	(ECSR) 3	0.944**				
	(ECSR) 4	0.974**				
	(ECSR) 5	0.964**				
<b>GPDP</b>	(GPDP) 1	0.84	0.416	0.896	0.648	0.869
	(GPDP) 2	0.974**				
	(GPDP) 3	0.549**				
	(GPDP) 4	0.847**				
	(GPDP) 5	0.95				

When one appears in the 95% confidence intervals, the mediation effect is not meaningful. However, in this case, the mediating impact was significant since [42]. Table 6 shows that each indirect effect's lower and higher 95% assurance intervals didn't include a zero. H6a and H6b was therefore likewise supported. Consequently, ECSR's intermediate role has been verified by the present intermediary model.

**Table 6.** The Outlined Model's Standard Impact Categories and Overall Effects.

	Point Estimate	Product of Coefficients		Bootstrapping			
				95% CI %		Bias –Corrected 95% CI %	
		S.E.	Z	Lower	Upper	Lower	Upper
<b>SDE</b>							
EEP-GSV	0.795	0.096	25.940**	0.978	0.968	0.849	0.948
GPDP-GSV	0.896	0.280	15.649**	0.489	0.284	0.986	0.548
<b>SIE</b>							
EEP-GSV	0.489	0.041	3**	0.074	0.148	0.081	0.948
GSV-GPDP	0.09	0.148	3.189**	0.089	0.945	0.396	0.218
<b>STE</b>							
GSV-EEP	0.580	0.158	34.585**	0.879	0.849	0.894	0.84
GPDP-GSV	0.965	0.214	31.850**	0.896	0.478	0.694	0.96

The full strategy results are presented in Table 7. Significantly advantageous results have been established by all six pathways, confirming H1, H2, H3, H4, H5, and H6. Thus, using ECSR, GSV can raise EEP and GPDP. Furthermore, there is an upward correlation between GSV and EEP and GPDP, and ECSR has a partly mediating affect. However, this partial mediating impact deviates from signal theory in certain ways, requiring the receiver to communicate the idea of knowledge through a signaler. This study does not include governors or managers; instead, it just examines ECSR. Future research could examine and clarify the link between governors and their managers as well as validate the conceptual framework.

**Table 7.** The Proposed Model's Standardized Impacts Are Direct, Indirect, And Overall Effects.

Hypothesis	Path Coefficient	Outcome
H1	0.496**	Supported
H2	0.418**	Supported
H3	0.648**	Supported
H4	0.948**	Supported
H5	0.511**	Supported
H6	0.614**	Supported

## Conclusion

As SMEs becomes increasingly conscious of the importance of the management of the environment, they discover a link between environmental incompetence and subpar environmentally conscious human resource management regarding environmental projects. In general, our study aimed to connect the CSR and ES nodes with the green HRM literature. Additionally, this study found a noticeable void in the body of knowledge regarding CSR mediating within the specified conceptual structure. The study's results support the AMO and offer useful insights into situations in which there is a high correlation between green human resources management and the effective application of green practices.

The primary staff members of Taiwan's departmental stores, gastronomy and leisure businesses, and electronic-information-related enterprises' R&D and sales departments were the subject of this study. Therefore, this study has three drawbacks. First, the study's findings showed that GSV has partial intermediary effects that are in addition to its direct and ECSR-mediated effects on GPDP. The only aspect of these conclusions that did not follow signal theory was the intermediary that which is required to pass the electrical signal from the signaler to the receiver.

However, because green absorptive capacity was used as the standard for intermediate functions in the present study, the data showed that GSV had no discernible impact on GPDP. The outcomes as of right now, nevertheless, remain consistent. GPDP is significantly impacted by GSV. Furthermore, the present investigation employed green citizenship behavior in organizations as an intermediary position perspective;

hence, variations in the examination of distinct benchmarks for intermediate role perspective might continue.

Lastly, organizations need to develop their own sustainable growth strategic plan. Comparatively speaking, listed and over-the-counter corporations possess greater resources than small and medium-sized businesses. In order to enhance EEP and GDP, corporate managers need to actively distribute money and resources while leveraging the agility and quick turnover of small and medium-size enterprises. The study's findings show that, in addition to EEP and GDP, ECSR acts as a mediator in GSV. Thus, to support an organization's overall green leadership achievement in response to environmental problems and constraints, a company's GSV formulation should be created in line with the organization's structure and work characteristics. The study's conclusions have led to the following recommendations being made for encouraging sustainability for the environment in Chinese. In particular, it comprises of these key elements: In order to achieve more economic growth in China, it is first important, from the standpoint of environmentally friendly innovation, to encourage businesses that significantly affect the surrounding environment to adhere to sustainable practices.

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