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Nguyen Van It

## Article

Increasing sustainable performance through green human resource management : the role of green supply chain management and corporate social responsibility

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## Kontakt/Contact

ZBW – Leibniz-Informationszentrum Wirtschaft/Leibniz Information Centre for Economics  
Düsternbrooker Weg 120  
24105 Kiel (Germany)  
E-Mail: [rights\[at\]zbw.eu](mailto:rights[at]zbw.eu)  
<https://www.zbw.eu/econis-archiv/>

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## INCREASING SUSTAINABLE PERFORMANCE THROUGH GREEN HUMAN RESOURCE MANAGEMENT: THE ROLE OF GREEN SUPPLY CHAIN MANAGEMENT AND CORPORATE SOCIAL RESPONSIBILITY

Van It Nguyen,  <https://orcid.org/0009-0003-9724-0691>

Ph.D., Ho Chi Minh City University of Industry and Trade, Vietnam

email: [itnv@hufi.edu.vn](mailto:itnv@hufi.edu.vn)

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**Abstract:** *In this research, the effect of green human resource management (green performance management and compensation, green hiring and training involvement, and green human health) on sustainable performance (economic performance, social performance, and environmental performance) is investigated, and the mediating effects of green supply chain management (external green supply chain management and internal green supply chain management) and corporate social responsibility (external corporate social responsibility and internal corporate social responsibility) are explored. The issue addressed in this study is that firms pay little attention to their products, which results in limited advantages for stakeholders. The study's originality has revealed the factors and offered remedies and tested a model of the variables influencing food enterprises in Vietnam. A total of 01 representative leaders are selected using a straightforward random sampling procedure to perform the empirical testing study by gathering data from a sample in each firm. A total of 449 food enterprises around the country received online survey questionnaires, which allowed the inclusion of enterprises at various management levels. The data were analysed using structural equation modelling (SEM), the squared approach, and covariance-based structural equation modelling (CB-SEM; covariance-based SEM) via Amos 22.0 software. According to the research findings, GHRM leads to long-lasting improvements in green supply chain management, corporate social responsibility, and products. When green human resource management positively affects products, green supply chain management positively affects goods, corporate social responsibility positively affects products, green supply chain management positively mediates the influence of green human resource management on products, and corporate social responsibility positively mediates the impact of green supply chain management on products' sustainable performance effects. This study adds significant value to the current combination of green human resource management, green supply chain management, and corporate social responsibility since it is the first empirical study to examine the influence of green human resource management on goods through the mediating role of green supply chain management and the corporate social responsibility of food enterprises in Vietnam. This research responds to calls that have recently been made to look at the combined effect of both practices on triple bottom lines of sustainability performance. The limits of the current research, managerial implications, and potential future research areas were then reviewed.*

**Keywords:** corporate social responsibility; human resources; supply chain; sustainable performance.

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**1. Introduction.** The effect of manufacturing companies on the environment is now more obvious than ever that corporations must address because of the expanding global interconnectedness. According to Diabat et al. (2013), Abdullah & Thurasamy (2015), and Hussain et al. (2018), enterprises must adapt to the requirements for sustainable operations in three areas: the environment, the economy, and society. As a result, organizations will undoubtedly need to develop and intensify efforts to balance economic, social, and environmental performance, particularly for businesses that are subject to criticism from the general public, rival businesses, and law (Ayuso et al., 2014; Russo & Fouts, 1997). Achieving this balance is a difficult and occasionally contentious issue (George et al. 2015; Haffar & Searcy, 2017). Some viewpoints contend that there is a conflict between the need for businesses to focus on controlling and assessing economic impact criteria and their efforts to enhance environmental performance and economic, environmental, and societal factors to support sustainability. According to a study by Lai et al. (2010), these issues may be solved by implementing green ideology cross-functionally rather than only through conventionally assigned departments (Wagner & Blom, 2011). Additionally, it is critical for businesses to adapt their cultural mentality by incorporating morally compliant green conduct into all corporate operations (Harris & Crane, 2002). This paper analyses how to most effectively apply green management to three crucial company areas: supply chain functions (Kumar & Chandrakar, 2012), corporate social responsibility (Van et al., 2022), and human resource functions (Daily & Huang, 2001).

As a result, internal green human resource management and external corporate social responsibility activities overlap. Additionally, some green human resource management research has focused exclusively on internal company factors, whereas corporate social responsibility has typically concentrated on external problems, such as local communities and the environment. Additionally, the parallels between these two organizational structures are reflected in the international standards that businesses use to verify their claims of sustainable performance. These environmental efforts, however, have a substantial influence on human resource results while not being a part of a human resource strategy; indeed, they can achieve sustainable success through employee involvement in human resource operations and job-related corporate social responsibility initiatives. Therefore, corporate social responsibility initiatives can help in nurturing, keeping, and inspiring employees who share the same values as those envisioned in these projects. These positive human resource outcomes will enhance corporate performance as well as performance sustainability.

According to several academics (Jabbour & de Sousa Jabbour, 2016; Fisher et al., 2010), recent research (Menon, 2012) has also examined the proliferation of green management in diverse activities or companies and recognized linkages between various functions that result in parallel consequences (Jabbour & de Sousa Jabbour, 2016; Pagell & Shevchenko, 2014). Putting things in perspective, Tasnim (2020) notes that the COVID-19 crisis has made issues with the food supply chain in underdeveloped nations worse. The purpose of this essay is to relate green human resource management to Product by studying the roles of green supply chain management and corporate social responsibility, utilizing companies in the food sector as a field of empirical research, in addition to the aforementioned reasons. Additionally, green human resource management should receive increased attention because it is acknowledged as crucial for developing products in all areas. The food supply chain is susceptible to environmental changes, which is also recognized (Godde et al., 2021). Instead, climate change significantly affects both society and the environment (Adams et al., 2023). Additionally, because food enterprises in emerging economies frequently originate from homes, their conventional methods of operation considerably contribute to environmental issues (Le, 2022). According to these trends, companies must focus on their CSR from both internal and external perspectives. Given the aforementioned justifications, additional investigations are needed to properly comprehend the circumstances surrounding food industry entrepreneurship in emerging economies. This study focuses on increasing sustainable performance through green human resource management: the role of green supply chain management and corporate social responsibility in the Vietnamese food industry. The following four research inquiries were therefore examined:

RQ1. How does green human resource management affect the sustainable performance of enterprises?

RQ2. How does green supply chain management play a mediating role in the relationship between green human resource management and sustainable performance in emerging markets?

RQ3. How does corporate social responsibility play a mediating role in the relationship between green human resource management and sustainable performance in emerging markets?

Three unique contributions are presented in this work. *First*, it is necessary to provide food businesses, especially those in emerging economies, with more insight into how to increase sustainable performance. *Second*, we offer fresh findings on the mediating roles played by GHRM and CSR in the relationship between GHRM and sustainable performance. With this strategy, businesses can overcome resource restrictions and

enhance their output by implementing green human resource management and corporate social responsibility as a realistic, sustainable solution. This approach increases the understanding of the still little-discussed systems that enable sustainable production and consumption in the food industry in developing nations. By illustrating how companies and stakeholders can adopt sustainable practices to fulfil changing requirements owing to environmental uncertainties, such as the pandemic and other changes, this study expands the social and theoretical understanding of these issues. *Third*, this study reinforces resource-based view (RBV) theory by portraying green human resource management and corporate social responsibility practices adopted by internal and external stakeholders as unique, challenging-to-imitate, and nonsubstitutable resources. This demonstrates that the resource-based view not only concentrates on the internal strengths and weaknesses of the enterprise but also takes into account all of the stakeholders in the supply chain to foster competitive advantage and seize opportunities; additionally, threats emerge and are defeated.

This paper is composed of six major sections. Subsequently, section 1 presents the introduction. Section 2 provides the literature review. Next, section 3 describes the methodology and research methods. Section 4 presents the results. Finally, section 5 provides a discussion and conclusions.

**2. Literature Review.** This study uses stakeholder theory (Freeman, 1984), and businesses need to understand that concentrating on environmental sustainability concerns will aid in their long-term development. Organizations have long recognized the value of resource management in gaining a competitive edge and boosting long-term success. The idea behind effective resource management to accomplish performance, according to Barney (1991), is founded on the tenet of the RBV. The RBV highlights the significance of resource commitment as well as how companies may stand out from their rivals and acquire a competitive advantage by efficiently managing their resources. When environmental and technical advancements are at the core of the contemporary corporate environment, it can be difficult to maintain a competitive edge or develop continuous performance. Sustainable performance, according to Latan et al. (2018), describes an organization's attempts to increase performance without hurting the environment. Sustainable performance, according to Nizam et al. (2019), is the use and management of a company's resources in a way that optimizes benefits for the environment, economy, and society:

- Environmental performance is the capacity to safeguard vital environmental elements and natural resources.
- Social effectiveness is the capacity to assess the degree of stakeholder involvement, contentment, and trust.
- A company's financial performance and profitability are directly related. All the authors, including Di Fabio (2017) and Rehman et al. (2021), underline the significance of human factors in resource conservation and sustainable development. According to Zaid et al. (2018), a greater focus on social responsibility and sustainable performance has given rise to new objectives that go beyond monetary benefit, such as commitment to social issues and society and the environment.

Since the mid-1990s, the significance of human resource management participation in enhancing environmental performance has been recognized (Milliman & Clair, 1996), and positive outcomes are anticipated. Research on its effects on environmental performance has increased over time (Jackson & Seo, 2010; Wagner, 2013). A variety of human resource practices that are believed to be effective at disseminating green ideas and philosophies have promoted the adoption of green management initiatives and green practices (Jabbour & Santos, 2008a, 2008b). According to Renwick et al. (2013), mandating that businesses comply with and move toward green human resource management in the future will improve eco-performance by integrating environmental principles and values across the whole organization. In other words, green human resource management activities aid firms in becoming greener. This study acknowledges that green human resource management is a collection of interrelated human resource activities that have an impact on the performance of manufacturing companies through the following steps:

- green hiring;
- green training and involvement;
- green performance management and compensation. These practical measures must be carried out by individuals in charge of team leadership since their major objective is to encourage environmentally friendly attitudes at work (Kim et al., 2017). Three topics, green engagement, green performance management, green compensation, and green hiring and training, are the subjects of this study. This finding concurs with the conclusions of Renwick et al. (2013), who demanded additional research into the relationship between green human resource management packaging methods and business outcomes. In the past, green human resource management research has focused mostly on the impact of environmental variables, although few studies have evaluated the connection between green human resource management practices and sustainable performance.

Leaders are becoming more aware of the significance of considering green practices while performing human resource management duties because human resource management practices encourage the creation and maintenance of environmental management systems, aiding businesses in achieving better environmental performance (Jabbour & Santos, 2008b). In actuality, green human resource management is crucial for successful green development and expansion in businesses (Nejati et al., 2017). In addition to obvious environmental advantages, implementing green initiatives will increase the appeal of talent retention (Patel, 2014). Additionally, increasing work performance is said to support company success since team quality is a result of internal green work processes (Epstein & Roy, 2001; Turban & Greening, 1997). Hiring processes should take into account green credentials in exchange, or at the very least, for an interest in the environment to draw in more competent staff that will compete for a company's stellar environmental record (Linnenluecke & Griffiths, 2010; Ramus & Steger, 2000, Van Nguyen 2023). Increasing employee retention, improving skills and motivation, and other outcomes that result in better jobs are all beneficial for encouraging employees' environmental interests and behaviour (Wagner, 2013, 2015). Mehta & Chugan (2015) cite enhanced social life, understanding of employee responsibility, and recruiting and retaining talent as additional advantages that should be recognized. In reality, there is proof that companies that engage in social responsibility see significant increases in consumer and staff satisfaction as well as recruiting, according to Wagner (2013). Additionally, an organization's sustainable performance may be enhanced by employee creativity and excellence. The study makes the following recommendation based on the aforementioned justification and the practices of food businesses in Vietnam:

H1: Green human resource management positively affects sustainable performance.

HRM procedures, in accordance with Barney (1991), have an effect on organizational performance since they elevate people into distinctive, valuable, and exceptional resources. unique and challenging to duplicate. Depending on whether a company uses its resources more efficiently, organizational goals can be enhanced (Ray et al., 2004). Businesses may accomplish their objectives, according to Chen et al. (2009), by gathering and utilizing internal and external resources to enhance supply chain operations. Additionally, talented personnel in supply chain management enhance the performance of the supply chain, developing a sustainable competitive advantage (Ellinger and Ellinger, 2014). According to Hohenstein et al. (2014), interactions between various resources can truly provide an edge in the marketplace. As a result, green human resource management is crucial to the efficient use of green supply chain management methods (Jabbour et al., 2017). In other words, the supply of environmentally conscious managed employee facilities might be hampered by a lack of human resource management strategies (Jabbour & de Sousa Jabbour, 2016). This study explores the influence of sustainability performance to further the related empirical research. In reality, green human resource management plays a significant role in society by encouraging the recruitment of qualified and committed employees as well as distributing information about the environment, beliefs, and spiritual standards. Supply chain skills are developed by business operations depending on the environment and norms.

Green et al. (2012) and Diabat et al. (2013) both found a favorable connection between green supply chain management and sustainable performance. Customers and suppliers are attempting to cut costs and limit unsustainable practices to be more environmentally friendly, which will positively affect the goods that companies produce (De Sousa et al., 2017; Diabat & Govindan, 2011; Simpson et al., 2007). Recent experimental studies in developing nations have shown that when green supply chain management and SP techniques are combined, businesses gain a competitive advantage (Ganeshkumar & Mohan, 2015; Younis et al., 2016). Organizations may improve scientific efficiency and use fewer resources by concentrating on locally suitable green supply chain management and establishing a welcoming manufacturing environment, which will result in total cost reductions. Gimenez et al. (2012); Rao & Holt (2005). According to Koh et al. (2012), cutting waste and employing resources more effectively lowers costs and enhances an organization's output. Additionally, the use of dangerous materials is minimized, and environmental contamination is decreased by removing or discarding unnecessary product elements. Differentiating benefits that favorably affect organizational, sales, and revenue sectors can be advantageous for businesses that indirectly influence their sales and goods revenues (Porter & Kramer, 2006). The empirical data that are now available indicate that environmentally friendly activities frequently consider social purposes, including fostering consumer loyalty, improving business image, offering health care, and ensuring equal opportunity. Green supply chain management and product practices are related in terms of things such as equality, secure jobs and goods, adherence to the law and moral conduct. Green supply chain management activities serve as a link between green human resource management activities and sustainable performance interactions, claim Longoni et al. (2018). One may methodically elucidate the relationship between green human resource management (GHRM) green supply chain management activities and sustaining performance by demonstrating the

connection between the efficiency and sustainability results of these green activities. By utilizing RBV's theoretical viewpoint. We investigate and create the following theory based on the aforementioned empirical study, in addition to the present state of food enterprises in Vietnam:

H2: Green human resource management positively affects green supply chain management.

H3: Green supply chain management positively affects sustainable performance.

H4: Green supply chain management has a mediating role in the effect of green human resource management on sustainable performance.

According to Jones et al. (2019), human resource management is crucial for boosting CSR because it helps businesses better match their social and economic objectives with commercial performance. Engaged staff members develop into strategic stakeholders and significantly enhance business success. Employees are the primary stakeholders in corporate social responsibility implementation (Aguinis & Glavas, 2012; Franzoni et al., 2021). Therefore, to execute their rules and control systems, companies need the assistance of their employees (Mossholder et al., 2011). According to Jamali et al. (2015), all functional departments must engage in CSR implementation, and no organization can carry out CSR initiatives without human resource management's active involvement. Tajfel (1982) asserts that SIT helps staff members determine their duties. Researchers (Jones et al., 2019; Coles et al., 2013) assert that the importance of CSR may be attributed to its crucial role in advancing cultural influence and environmental concerns. The use of corporate social responsibility is frequently linked to long-term organizational and individual performance as well as human resource management. One way that corporate social responsibility efforts assist in sustainability performance is by working to enhance corporate perception. Internal factors such as the workforce are the major emphasis of human resource management. According to Senyucel (2009), human resource management entails management strategies and rules that acknowledge workers as assets and promote the development and upkeep of a motivated workforce equipped with the abilities needed to achieve the organization's objectives.

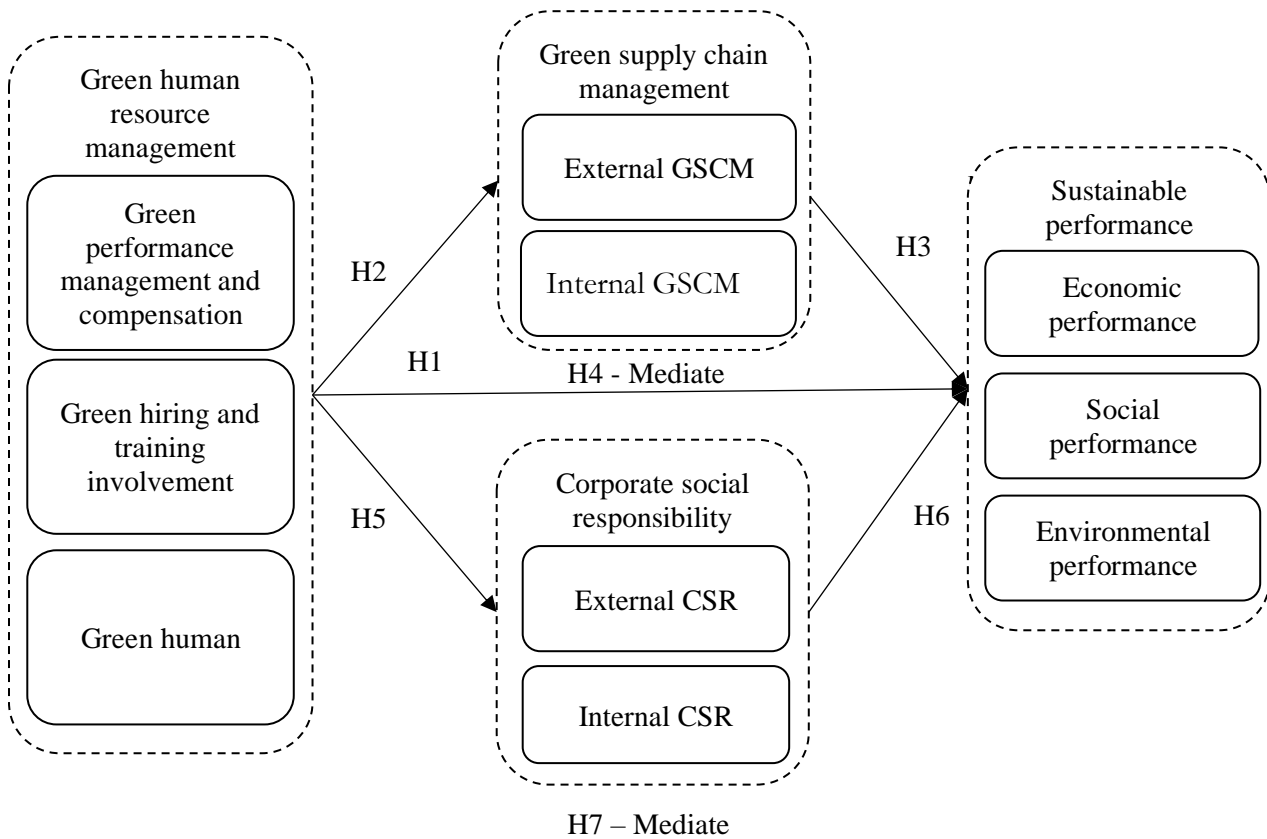
Corporate social responsibility has a considerable impact on organizational design and sustainable performance, according to Shahzad et al. (2020). The business is well known for developing and carrying out environmental projects. According to global adaptability, this induction is advantageous for an organization's development and performance (Franzoni et al., 2021). According to Font & Lynes (2018), CSR aids in the sustainability of corporate operations. Recent research (Longoni et al., 2018) has added additional evidence on the relationship between CSR and sustainable performance. Similarly, Zhou et al. (2018) contend that socially responsible businesses should anticipate superior outcomes, particularly in terms of performance in terms of social and ecological sustainability. Golini et al. (2014) examined the social and environmental practices of several organizations worldwide and discovered that participating in CSR-related activities improved corporate performance. Voegtlin & Greenwood (2016) provide a theoretical assessment of research that demonstrates the connection between human resource management, corporate social responsibility, and sustainable performance. Despite these studies attempting to explore the influence of corporate social responsibility practices on the link between human resource management and sustainability performance (Alikaj et al., 2017), the justification and underlying causes of this association remain unclear. The effect of human resource management on long-term performance has also not been well studied (Asah et al., 2015). Therefore, by seeing such acts as a method of rapprochement, the case is made for how the accomplishment of corporate social responsibility initiatives will result in long-term sustainable repercussions. Research on the relationship between CSR and performance has contrasted, with some finding a favorable link (Margolis et al., 2009) and others proposing that financial loss is a result of CSR (Leonidou & Skarmas, 2017). Additionally, empirical studies linking human resource management and sustainable performance in the context of corporate social responsibility as a mediator are needed in the literature (Franzoni et al., 2021). As a result, the following hypotheses are proposed in this study:

H5: Green human resource management positively affects CSR.

H6: Corporate social responsibility positively affects sustainable performance.

H7: Corporate social responsibility has a mediating role in the effect of green human resource management on sustainable performance.

This research makes recommendations based on RBV background theory, the benefits and drawbacks of the aforementioned empirical investigations, consultations with experts, and data from food enterprises in Vietnam. The suggested model is represented in Figure 1.



**Figure 1.** Research model

Note(s): GSCM = green supply chain management; CSR = corporate social responsibility.

Source: Developed by the author.

**3. Methodology and research methods.** The following are some examples of how research techniques such as qualitative and quantitative approaches are utilized to accomplish this study objective. Focus groups are used for qualitative research. These groups are divided into two categories. To select and calibrate the study model and variables, groups 1 and 2 consist of three specialists with doctorates in economics and five people who are now directors of food enterprises in Vietnam. On the basis of earlier empirical investigations, observational measurements of green human resource management, green supply chain management, corporate social responsibility, and sustainable performance components at food firms have been presented. Among them, 11 observed variables measuring green human resource management are adapted from Guerci et al. (2016), Longoni et al. (2018), and Zaid et al. (2018); the 15 observed variables are adapted from Abdullah & Thurasamy (2015), Zhu et al. (2013), Younis et al. (2016), Zaid et al. (2018), Wibowo et al. (2018), Sharma et al. (2017), and Van Nguen (2023) for green supply chain management; and corporate social responsibility is designed with 10 scales from the research of Farooq et al. (2017), Turker (2009), Le (2023), and Van Nguyen et al. (2022). Finally, 15 variables were observed to measure sustainable performance on the basis of Zhu et al. (2013); Green & Inman (2005); De Giovanni (2012) Abdullah & Thurasamy (2015); and Govindan (2018). The 8 observed variables were adapted from the research work. Members of the focus group were given explicit explanations of the ideas in the suggested study model as well as the variables that had been observed and assessed, notably, green human resource management, green supply chain management, corporate social responsibility, and SP, so that they could voice their opinions and engage in conversation. The findings of the focus group discussion indicate that most of the participants agreed with the suggested paradigm. After obtaining input from experts, the survey questionnaire was finalized with 51 items (observed variables) assessing 4 level 2 concepts and scale-designed demographic observation factors. 5-point Likert scale (where 1 represents an utter disagreement and 5 represents an utter agreement).

The quantitative research process has two steps. For the initial step of the Cronbach's alpha analysis, a sample size of 51 was used to examine the reliability of the observed variables, and a cut-off of 0.70 was employed. The findings for all the observed variables fit the established criteria; however, if the Cronbach's alpha is below a set level, the variable will be ignored and not used in further studies. Surveys will be utilized to test hypotheses and evaluate observable variables during the official period from July 1 to August 30, 2023.

Participants in the survey agreed that all the information about them, including opinions, impressions, and demographic information, would be anonymized, encrypted, kept private, and only used for purposes that are open to the general public. study the topic. This declaration was made at the start of the survey, was printed on paper, and was distributed to survey participants. The research builds on the theories of Hair et al. (2018) to calculate the sample size needed to satisfy the criterion of at least 5 samples for the observed variable; hence, the minimum number of observations necessary is  $5 \times 51 = 255$  observations. A survey with 51 items was utilized to evaluate the suggested research model. Five hundred firms in total decided to take part in the survey as a consequence. Each company provided a survey, and 19 surveys were examined after 21 surveys were disqualified because more than 10% of the data were missing. Each question has two levels, and 11 questions are chosen at random from the questionnaire by one individual who answers them all at the same level; the rate reached 89.8%. The steps of Cronbach's alpha analysis, exploratory factor analysis (EFA), confirmatory factor analysis (CFA), linear structural model analysis (SEM), bootstrapping with 5,000 samples, and ANOVA processing were used to test the qualitative variables, and the results are displayed in the research results section.

**4. Results.** After removing replies that did not provide enough information or answered similar questions, 449 responses were retained for data analysis. Table 1 provides demographic information. With a survey sample of 449, each business was directly surveyed, representing each sample and demonstrating coverage across the entire territory, including 63 provinces and cities in 3 regions that are considered typical of the whole country of Vietnam. The North region includes 25 provinces with a total sample size of 150, accounting for 33.41%. had even distributions in each province, with 6 samples, corresponding to 1.34%. The central region includes 19 provinces with 95 samples, equivalent to 21.16%, and 5 samples are evenly distributed to each province, accounting for 1.11%. The South includes 19 provinces with 204 qualified samples, accounting for 45.43% of the sample. Ho Chi Minh City has 42 samples, accounting for 9.35%. Because this is the largest city in the country, the remaining samples are divided equally between each group, with 9 acres in the province, accounting for 2.00%.

**Table 1.** Respondent profile

Construct	Categories	# of cases	%
Size of business (people)	Small (<50)	89	19.82
	Medium (50-99)	201	44.77
	Large ( $\geq 100$ )	159	35.41
Business seniority	Less than 5 years	75	16.70
	From 5 to 10 years	246	54.79
	More than 10 years	128	28.51
Working position	Managers	255	56.79
	Owners	194	43.21

Note: N = 449

Source: Developed by the author.

The criteria for examining the next stages were met by processing findings with a Cronbach's alpha greater than 0.7 and an AVE value greater than 0.5. Therefore, there is a correlation between the hypotheses of the suggested model. By analysing a number of indices, including CMIN/DF, GFI, TLI, CFI, and RMSEA, this study was carried out. Table 2 displays the data from this investigation that met the acceptability standards established by Hair et al. (2018). In general, this model is suitable and reliable. The next step is to use p values to establish the link between the model's variables. P values, which range from 0 to 1, are used to indicate statistical significance; a p value of less than 0.05 indicates statistical significance. All variables in this study are statistically significant and have a significant association because the p values are all less than 0.05 and positive. This indicates that the study's hypotheses are all valid. The standardized regression coefficients all have positive signs, indicating that they all work favourably, as shown in Table 2.

With a sample size of  $n=5000$ , the linear structural model was tested using the bootstrapping method. The median calculated findings demonstrated that, while bias does occur, it is quite small. A p value  $> 5\%$  is implied by the crucial value's absolute value, CR 1.96. Therefore, it may be said that the study model's estimations are trustworthy. All seven possibilities are therefore accepted. The investigation also used an ANOVA test. The variance test findings revealed that all Sigs were above the significance level of 0.05, demonstrating that there was no difference in variance across groups. The demographic factors are identical

throughout the importance of green supply chain management and corporate social responsibility in enhancing sustainable performance through green human resource management.

**Table 2.** Results of structural model analysis (hypothesis testing)

Hypotheses	Relationships	$\beta$	t	p	f <sup>2</sup>	R <sup>2</sup>	Q <sup>2</sup>	Decision
H1	GHRM -> SP	0.813	10.23	0.000	0.69	0.51	0.31	Supported
H2	GHRM -> GSCM	0.471	6.76	0.000	0.36	0.59	0.53	Supported
H3	GSCM -> SP	0.765	11.96	0.000	0.58	0.44	0.34	Supported
H4	GHRM -> GSCM -> SP	0.538	7.75	0.000	0.41	0.61	0.49	Supported
H5	GHRM -> CSR	0.692	9.78	0.000	0.43	0.68	0.52	Supported
H6	CSR -> SP	0.690	8.98	0.000	0.56	0.63	0.52	Supported
H7	GHRM -> CSR -> SP	0.659	7.88	0.000	0.67	0.59	0.57	Supported

Notes: GHRM = green human resource management; GSCM = green supply chain management; CSR = corporate social responsibility; SP = sustainable performance; t – t-values; p – p-values.

Source: Developed by the author based on CB-SEM output.

**5. Discussion.** The study's proposed hypotheses, which are listed in Table 2 above, are supported by the statistical findings. The correlations between green human resource management and green supply chain management and between corporate social responsibility and sustainable performance are both substantial and favourable according to the statistical findings. The results demonstrate that these three criteria seek to be environmentally friendly, align stakeholder interests, and serve as an integrated source of intangible assets for a corporation to increase its competitive edge. As a result, businesses will be in a better position to gain market share, target the high-end market, charge premium prices, expand their customer base, increase business efficiency by cutting costs, and boost profits, all of which will eventually result in a longer period of sustainable performance enhancement. These findings confirm the findings of other research showing that green supply chain management and corporate social responsibility regulate the association between green human resource management and sustainable performance. This finding particularly bolsters the claims of Ishaq et al. (2023) that the nexus of human resource management, corporate social responsibility, and sustainable performance as well as Zaid et al. (2018) that the impact of green human resource management and green supply chain management practices on sustainable performance. Similarly, Saeidi et al. (2015) suggested that "examining a direct relationship between corporate social responsibility and sustainable performance appears to be spurious and imprecise because it actually examines to truly understand the effect of corporate social responsibility on sustainable performance, it is crucial to add elements that encourage green human resource management for certain situations. Stakeholder theory, RBV theory, and social identity theory were used as supporting theories in this study. It is crucial that corporate social responsibility be viewed in this research as a strategy for sustainable development that balances advantages for the economy, society, and the environment. As a result, sustainable performance is favourably and competitively enhanced. This is in line with the current movement toward sustainability in emerging economies (Nguyen et al., 2021). Additionally, this outcome defies earlier studies claiming that a link between an organization's supply chain management expenditures and financial performance exists. Additionally, these findings are in line with those of earlier studies; however, despite the favourable correlation between green supply chain management and firm performance (Wang et al., 2020), those studies examined only firm performance and neglected to discuss sustainable performance. Furthermore, it is certain that elements such as more ethical supplier selection, monitoring procedures, and supplier involvement can eventually negatively affect financial performance. Geng et al. (2017) claim that as firms in investment-related industries are more interested in obtaining research inputs, they prefer to work with suppliers that have created ecologically sound corporate practices. Second, the results of this study, which are in line with recent findings from Nejati et al. (2017), Longoni et al. (2018), and Teixeira et al. (2016), show that green supply chain management not only directly influences sustainable performance but also mediates the interaction between green human resource management and sustainable performance. According to Teixeira et al. (2016), firms may help remove obstacles to green supply chain management adoption by utilizing the link between human resource management and green management based on the RBV (Hart & Dowell, 2011). The study's results substantially corroborate the claim made by the research team that green human resource management and green supply chain management processes require cross-functional design and management. Adopting human resource management techniques is crucial for firms to become greener since they lower the barriers to implementing green supply chain management. In

other words, to increase business productivity, green supply chain management must place greater emphasis on green training initiatives (Sarkis et al., 2010; Lin & Ho, 2011).

This study's analysis of the relationship between green human resource management, corporate social responsibility (external corporate social responsibility, internal corporate social responsibility), and sustainable performance utilized commercial firms in the nation's real estate industry as part of an integrative framework. The term "first generation of Vietnam" refers to "currently significant low-income earners". This paper's conclusion is that green human resource management (green performance management and compensation, green hiring and training involvement, green human) considerably and favourably improves corporate social responsibility (external corporate social responsibility, internal corporate social responsibility), thus encouraging sustainable performance. This finding is in line with a recent group of research headed by Ishaq et al. (2023), who observed that although new to the area, experience has shown a relationship between green supply chain management, corporate social responsibility, and sustainable performance, green human resource management was formerly referred to as sustainable performance. By Wang et al. (2020), Le et al. (2021), Valdez-Juárez et al. (2018), and My friend very phat hello, this article is the primary tale. Although Kholaf and Ming (2023) contend that businesses must restrain CSR development to attain long-term sustainability, these results are also the most consistent. The economy is likewise doing poorly, much like COVID-19 was. Businesses in developing nations are subject to more stakeholder and institutional pressure from green human resource management, green supply chain management, corporate social responsibility policies, and information disclosure (Kim & Kim, 2019). This demonstrates how sustainability is becoming more prevalent in industrialized nations while continuing to be prioritized in emerging nations. However, rising nations are increasingly changing their comprehensive values toward sustainability in the context of integration and globalization on the premise of balancing economic, social, and environmental advantages. As a result, this research is an important and relevant addition to sustainable business practices.

**6. Conclusions** This study clarifies how green human resource management supports sustainable performance for food companies serving emerging markets. The study's objectives to comprehend the mechanism underlying the mediating roles played by green supply chain management and CSR in encouraging higher sustainable performance were met by these findings. These data suggest that to encourage greater sustainable performance, company executives must recognize the significance of green human resource management. Additionally, this study showed that green supply chain management and corporate social responsibility mediate the link between green human resource management and sustainable performance. This entails changing the way businesses operate to be more environmentally friendly to protect stakeholder interests and advance sustainable performance in the context of developing nations' global integration, particularly in the food industry. offering goods and services that pertain to society in general and human health in particular. In conclusion, the findings of this study provide unbiased, factual answers to all three of the aforementioned research topics. This research has produced a number of management implications that have a large impact on how organizations build their strategy. It also has substantial implications for how workers, consumers, the government, and society as a whole will benefit, and attaining environmental protection objectives is also crucial.

This paper has a number of excellent theoretical applications. *First*, this study asserts that through corporate social responsibility, firms meet their obligations to balance economic, social, and economic advantages, supporting stakeholder theory (Freeman, 1984). advantages to the environment that matter to stakeholders. The next step is to impact clients' perspectives by helping them have a favourable impression of green supply chain management, corporate social responsibility, and green human resource management. Sustainable performance is increased as a result of this. *Second*, this study supports the RBV hypothesis (Barney, 1991) by claiming that green human resource management, green supply chain management, and corporate social responsibility linking activities as a resource for a corporation help to build competitive advantage. From there, strengthen and promote sustainable performance. *Additionally*, this study asserts that customer views of green supply chain management and corporate social responsibility authenticity are significant, which is in line with Tajfel's (1982) social identity theory. This implies that the business will see improved sustainable performance outcomes by encouraging customers to become devoted to such outcomes.

Based on the research results, some management implications are given as follows:

- First, this study offers empirical proof that green human resource management is crucial for improving sustainable performance through the intermediary roles of green supply chain management and corporate social responsibility. As a result, corporate leaders should concentrate on investing in the crucial element of green human resource management, which is the company's long-term strategic objective. This affiliation

aims to promote unpaid employee involvement in the creation of environmentally friendly programs. By nurturing talent from the workforce into management, businesses may use a management style that is environmentally responsible as a result of these activities. Managers may utilize human resource management as a reference to highlight closely related green human resource management investments, including initiatives that increase employee motivation and knowledge. Therefore, attracting, hiring, training, and keeping employees is the cornerstone of marketing a corporation to increase both current and future sales.

- Second, business executives believe that a green supply chain management strategy must be integrated since this research's purpose is to shed light on how external green supply chain management, internal green supply chain management, external corporate social responsibility, and internal corporate social responsibility are formed and incorporated into the primary business strategy of the company to attain consistency. Managers should also continue to make considerable investments in supply chain management to create cross-functional strategies for green management. The study's conclusions also offer managerial advice for those looking to boost sustainable performance at the same time. Therefore, it is expected that the coordination of internal and external green supply chain management operations has a positive effect on long-term success.

As a result, effective company leaders have policies that optimize corporate social responsibility while balancing their interests, those of their clients, those of other stakeholders, the environment, and society. This increases competitiveness, which in turn strengthens sustainable performance. Based on this knowledge, companies should consider stakeholder concerns when creating and implementing plans that are open to stakeholders, consistent in their words and deeds, and consider social issues. society and environment, rapidly responding to social challenges, consistently improving the quality and features of goods and services to quickly fulfil social needs, and enhancing the system for managing customer relationships. Go green to enable real-time contact with clients so that you can react quickly and consider the welfare and professional advancement of your staff. The study's findings also suggest that managers in the Vietnamese food sector should consider human resource management practices to motivate all staff to take part in CSR initiatives, particularly because every business has to have them. There will be particular strategies and challenges associated with implementing CSR because the resources and size of each organization will differ. *In addition*, there are currently many food businesses in Vietnam with a challenging emerging economy, facing many challenges after the COVID-19 pandemic in the context of global integration and increased competition. Moreover, many businesses from large corporations invest in the country, the market has a wide range of options, and consumer demands are increasingly increasing the quality of goods and services, in addition to customer choice. Businesses that adopt open corporate social responsibility and have strong green supply chain management are given preference. This highlights the significance of considering the relationship between green human resource management, green supply chain management, and corporate social responsibility as a tactic to strengthen sustainable performance.

This work has made significant contributions, but it also has some shortcomings that can be addressed in future research. *First*, this study must specifically focus on food enterprises in Vietnam, a developing industry. To find comparable and dissimilar results, future research should take into account other fields or research in other developing country contexts in the same region. The findings of the study will then become more broadly applicable. *Second*, the majority of the methods used in this study were quantitative; hence, future studies may consider including alternative approaches to determine similarities and differences. *Additionally*, for future research, more respondents from the target audience should be considered, how qualitative variables differ should be analysed, and social desirability bias should be measured by utilizing the Marlowe-Crowne Social Desirability Short Form C Scale (Anderson et al., 2009) to determine whether respondents were biased in their responses.

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**Ван Іт Нгуєн**, Ph.D., Університет промисловості та торгівлі міста Хошимін, В'єтнам

**Підвищення сталої конкурентоспроможності компанії через зелений менеджмент людськими ресурсами: роль зеленого ланцюга постачання та корпоративної соціальної відповідальності**

У статті досліджено вплив зеленого управління людськими ресурсами (управління продуктивністю та компенсаціями, працевлаштування та рівень здоров'я з урахуванням принципів зеленого розвитку) на сталий розвиток (економічний розвиток, соціальний розвиток та екологічний розвиток) компанії. Також визначено медіаційний ефект управління зеленим ланцюгом постачання (зовнішнє та внутрішнє управління зеленим ланцюгом) і корпоративної соціальної відповідальності (зовнішня та внутрішня корпоративна соціальна відповідальність). Для проведення емпіричного тестування обрано 449 лідерів серед підприємств харчової промисловості В'єтнаму. Згенеровану вибірку дослідження було проаналізовано за допомогою моделювання

структурних рівнянь (SEM), моделювання структурних рівнянь на основі коваріацій (CB-SEM) з використанням програмного забезпечення Amos 22.0. Згідно результатів дослідження, зелене управління людськими ресурсами призводить позитивно впливає на ефективність управління зеленим ланцюгом поставок, корпоративної соціальної відповідальності. Обґрунтовано, що управління зеленим ланцюгом поставок також позитивно впливає на взаємозв'язок між зеленого управління людськими ресурсами та продукцією, а корпоративна соціальна відповідальність позитивно впливає на взаємозв'язок між управлінням зеленим ланцюгом поставок та сталою конкурентоспроможністю. Авторами наголошено, що дана стаття є емпіричним дослідженням, що вивчає вплив зеленого управління людськими ресурсами на продукцію компанії за допомогою посередницької ролі управління зеленим ланцюгом поставок та корпоративної соціальної відповідальності підприємств харчової промисловості В'єтнаму. Результати цього наукового дослідження допомагають сформулювати рекомендації щодо підвищенні ефективності діяльності компанії відповідно до концепції потрібного критерію. Тобто це означає, що при прийнятті рішень менеджери компаній повинні враховувати не лише фінансові показники, але й брати до уваги явні та неявні соціальні та екологічні ефекти. У статті сформовано обмеження цього дослідження та визначено потенційні напрямки майбутніх.

**Ключові слова:** корпоративна соціальна відповідальність; людські ресурси; ланцюжок поставок; стійке виробництво.