Cuadernos de Economía (2024) Volume 47, Issue 133, 43-53

Asociación Cuadernos de economía

Cuadernos de economía

www.cude.es

ARTÍCULO

Impact of Social Responsibility Disclosure between Implementation of Environmental Accounting, Green HRM, Energy Efficiency, and Sustainable Development: A Study of Vietnam

Luong Duc Thuan[1], Mai Thi Hoang Minh[2], Pham Quang Huy[3*]

[1]School of Accounting, University of Economics Ho Chi Minh City (UEH)
Email: thuanluongktkt@ueh.edu.vn
[2] School of Accounting, University of Economics Ho Chi Minh City (UEH)
Email: hminh@ueh.edu.vn
[3]School of Accounting, University of Economics Ho Chi Minh City (UEH)
Email: pquanghuy@ueh.edu.vn

**Corresponding Author: Email: pquanghuy@ueh.edu.vn*

Jel Codes:

Keywords:
Implementation of environmental accounting, green HRM, energy efficiency, social responsibilities disclosure, sustainable development

Abstract: Sustainable development has garnered worldwide attention because of environmental degradation, prompting the need for recent studies and regulatory action. This article delves into the effects of implementing environmental accounting, green human resource management (HRM), and energy efficiency on sustainable development in Vietnam. The research delves into the mediating role of social responsibility disclosure in the context of implementing environmental accounting, green HRM, energy efficiency, and SD in Vietnam. The article utilised questionnaires to collect data from employees of manufacturing firms focusing on environmental sustainability. The article utilised smart-PLS to examine the relationship between the variables. The results showed that the adoption of environmental accounting, green HRM, and energy efficiency is positively linked to SD in Vietnam. The results also revealed that the disclosure of social responsibilities plays a significant mediating role between green HRM, energy efficiency, and SD in Vietnam. The regulators have received guidelines from a study on achieving SD through the implementation of environmental accounting, green HRM, and energy efficiency.

Author Correspondence: pquanghuy@ueh.edu.vn

https://doi.org/10.32826/cude.v47i133.1305

Introduction

SD achievement is crucial for business firms to maintain their reputation in society, engage with the community, and stand out in the national and international markets. This becomes particularly urgent as social and environmental consciousness grows among individuals. Ensuring sustainable business development requires firms to operate their business processes in a way that does not disrupt the community's balance, harm social welfare, or degrade environmental quality. These companies conduct their operations with a focus on benefiting the environment and society (Ruggerio, 2021). Companies that prioritise social and environmental responsibility go beyond financial gains, considering their impact on society and the environment. The accomplishments of such businesses are considered significant as they contribute to the social and environmental well-being of the community in which the business operates, creating a conducive environment for long-term business growth.

Currently, the company faces strong competition in a market where consumers prioritise both meeting their needs and ensuring social and environmental responsibility from sellers (Sachs et al., 2019). Individuals prefer to engage with companies that prioritise quality, demonstrate care for social and environmental needs, and adhere to regulations set by governing bodies. John Elkington, the founder of the British consultancy "Sustainability," introduced the 'triple bottom line concept' to assess companies' sustainable development. The 'triple bottom line model' comprises three components: society, environment, and profits. A company generates sustainable development when it makes profits, demonstrates social responsibility, and protects the environment and its resources (Dantas et al., 2021).

SD's business success is driven by its focus on society, environment, and profits, as well as strategic concepts such as environmental accounting, energy efficiency, green human resource management (HRM), and social responsibility disclosure. Studying environmental accounting involves identifying, examining, and documenting the utilisation of natural resources, the environmental impact of the business, the company's sustainability efforts, and compliance with environmental laws. Environmental accounting promotes the conscientious utilisation of natural resources, adjustments in standard business procedures to minimise environmental impact, and safeguarding of social well-being. Enhancing the work environment, conserving natural resources for future generations, and safeguarding people's health. Therefore, the companies reference the study by Saud et al. (2020). Energy efficiency involves using less energy to achieve the same results in various processes. Improving energy efficiency leads to environmentally friendly enhancements in building infrastructure, business operations, production processes, and transportation, with firms avoiding environmental pollution.

By preserving the environment, firms contribute to society and promote sustainable development. Green HRM involves implementing policies, systems, and practices to promote environmentally friendly behaviour among employees, aiming to make the firm more environmentally conscious, resource-efficient, and socially responsible. Thanks to the adoption of green HRM, companies can work towards sustainable development goals by protecting the environment, meeting societal needs, and improving economic performance (Fonseca, Domingues, & Dima, 2020). Discussing social responsibility involves reporting on how a company addresses various societal obligations such as environmental stewardship, employee welfare, community support, and charitable contributions. It offers accurate insights into companies' positive impact on society. It fosters a reliable connection between the companies and their stakeholders. Therefore, it opens up possibilities for maintaining firm growth (Shah, 2019).

This study highlights the importance of environmental accounting, energy efficiency, green human resource management (HRM), and social responsibility disclosure in firms' sustainable development in the manufacturing industry of Vietnam. Vietnam is classified as a lower middle-income developing nation with a population of 101,678,753 individuals in 2022. The economy is oriented towards socialism. In 2023, Vietnam's estimated nominal GDP is $433.356 billion. Given its socialist-oriented market economy, the growth is dependent on the enhancement of environmental, social, and economic welfare through the activities of business firms in the society (Na & Kang, 2019). Vietnam's economy is predominantly driven by manufacturing firms, which significantly contribute to the country's GDP. Between 1994 and 2004, the Vietnamese manufacturing sector contributed to the nominal GDP at an average annual rate of 11.2%.

In 2022, Vietnam's manufacturing industry achieved a value exceeding 2.3 thousand trillion Vietnamese dong, representing 24.76 percent of the nation's GDP. Among the leading sectors in manufacturing are food processing, electronics, cigarettes and tobacco, chemicals, textiles, and footwear goods. These companies have experienced significant expansion according to Le (2020). Vietnam has managed to reduce its labour expenses due to its close location to China. For this purpose, Vietnam is becoming a new centre for manufacturing in Asia, especially for companies from Japan and Korea. Manufacturing firms in an economy have a significant impact on the natural cycle, environmental quality, health of the countrymen, and social welfare of people due to their utilisation of large infrastructure, extensive transportation practices, electric appliances, plants, machines, furnaces, and chemicals, etc. (Phan et al., 2019).

In Vietnam, manufacturing companies are demonstrating a strong commitment to social and environmental responsibility by implementing various measures to enhance sustainable development through improved social, environmental, and economic outcomes. Nevertheless, the results are disappointing; the manufacturing companies are contributing to pollution and not meeting sustainable development goals. There is a necessity to investigate methods to enhance manufacturing firms' SD (Canh et al., 2019). This study fulfils this need by examining companies' sustainable development. This study aims to investigate the impact of environmental accounting, energy efficiency, and green HRM on sustainable development. This study focuses on examining the relationship between social responsibility disclosure, environmental accounting, energy efficiency, and green HRM in sustainable development.

The topic of the current study has been drawn from previous literature and explored by numerous skilled researchers. Nevertheless, the research provides a noteworthy addition to the body of knowledge. First, environmental accounting, energy efficiency, and green HRM are the three primary business strategies. Several scholars in existing literature have explored the significance of environmental accounting, energy efficiency, and green HRM in sustainable development. Nevertheless, some researchers have examined environmental accounting, energy efficiency, and green HRM simultaneously to assess their impact on SD.

This study examines the effects of environmental accounting, energy efficiency, and green HRM on sustainable development. So, it adds to the existing body of literature. Furthermore, researchers have examined the direct correlation between social responsibility disclosure and environmental accounting, energy efficiency, green HRM, and SD. The social responsibility disclosure as a mediator between environmental accounting, energy efficiency, green HRM, and SD has received limited attention. This study expands the existing research by examining the role of social responsibility disclosure as a mediator among environmental accounting, energy efficiency, green HRM, and SD. Furthermore, this study stands out for its examination of social responsibility disclosure, environmental accounting, energy efficiency, and green HRM in the context of SD.
This study is structured into five fundamental sections: In the second part, the author references previous studies to explore the connections between environmental accounting, energy efficiency, green HRM, social responsibility disclosure, and SD. The third section includes a detailed explanation of the research methodology and an analysis of the research to evaluate the hypotheses. Afterward, the research findings are backed by the literary arguments of the previous author. The study concludes with the implications, final thoughts, and constraints.

Literature Review

Sustainable development has garnered worldwide attention because of environmental degradation, requiring focus from current research and policymakers. This article delves into the effects of implementing environmental accounting, HRM, and energy efficiency on sustainable development. It also explores how social responsibility disclosure mediates the relationship between these factors in Vietnam. SD has been a widely studied topic among scholars and researchers. Various researchers have explored the significance of environmental accounting, energy efficiency, and green HRM in social responsibility disclosure and sustainable development. However, these scholars hold contrasting perspectives. In the following paragraphs, past research is examined to form the hypotheses.
Companies that practise environmental accounting are aware of the environmental needs of stakeholders, the environmental impact of their business activities, and potential solutions to avoid breaching environmental laws. The growing awareness of environmental issues inspires business leaders to implement creative solutions to reduce harmful emissions. These companies cater to the customers' environmental and social needs, ensuring sustainability (Scarpellini et al., 2020). In a study by Ashibogwu (2023), the focus is on analysing the impact of environmental accounting on the progress of sustainability development. By employing the random sampling technique, the research selected oil and gas firms listed on the Nigerian Stock Exchange, including Total Nigeria Plc, Capital Oil Plc, CoinoilPlc, OndoPlc, and Seplat Energy Plc. The research utilised secondary data obtained from the financial statements of the chosen companies and the Central Bank of Nigeria.
data spans from 2009 to 2020. For the analysis, the study employs the OLS technique. The results showed that there is a positive connection between environmental accounting and sustainable development. Dhar, Sarkar, & Ayittey (2022) explore the influence of environmental accounting on social responsibility disclosure and sustainable development. The research data were collected from the yearly reports of 509 firms listed on the Dhaka Stock Exchange (DSE) in Bangladesh from 2010 to 2019. The chosen companies specialise in various industries such as thermal power, steel, coal, cement, dockyard, electrolytic aluminium, chemical, building materials, petrochemicals, textile, tanning, papermaking, pharmacy, fermentation, and mining. We performed descriptive statistics, correlation analysis, and regression analysis to examine the hypotheses. This research suggests that incorporating environmental accounting practices can positively impact the organisational environment by helping to conserve resources and promote sustainable firm development. Thus,
H1: Implementation of environmental accounting has a positive association with sustainable development.

Within the realm of energy efficiency, companies adjust their business strategies to address energy consumption and incorporate renewable energy sources. It helps decrease environmental pollution caused by energy consumption. Reducing pollution emissions creates a clean and healthy work environment for employees to be productive and for customers to make environmentally friendly purchase choices. Therefore, energy efficiency contributes to sustainability in firms' operational and marketing performance (Ostapenko, 2020). In a recent study, Zakari et al. (2022) explore the connection between energy efficiency and sustainable development. Secondary data was utilised for the research. Data on energy efficiency and SD were collected from specific companies in twenty AP countries using Data Envelopment Analysis (DEA) from 2000 to 2018. Utilising the Panel Correction Standard Error (PCSE) estimates and generalised method of moments (GMM) estimator to analyse the data.
The study elaborates on how companies' inclination towards implementing energy-efficient infrastructure, operational and production technologies, and logistics helps in reducing energy costs. The financial savings can be allocated to ecologically friendly projects and programmes for social well-being. In this scenario, the companies can attain Sustainable Development. In a recent study by Chen et al. (2021), they explore the connection between energy efficiency, technological innovation, and sustainable development. The research was conducted using secondary data. The data regarding energy efficiency, technological innovation, and SD were collected from Middle East and North African (MENA) countries for the period from 1990 to 2016. The second-generation methodological approaches were applied to the research. The study reveals that with the implementation of energy efficiency in routine business, environmental pollution is reduced, and SD can be achieved. Thus,
H2: Energy efficiency has a positive association with sustainable development.

The inexperienced HR managers adjust their policies. Arrangements are made for employee training to raise awareness of social accountability and environmental responsibilities linked to social welfare. In addition to promoting social and environmental consciousness, these training sessions help employees enhance various eco-friendly cognitive and physical work skills. As a result, the company's engagement with the environment, natural resources, and residents is enhanced. By focusing on social and environmental performance, companies can work towards achieving sustainable development goals (Saeed et al., 2019). In a study conducted by Pham, Hoang, & Phan (2020), they explore the impact of green HRM on sustainable development. The study is grounded in the examination of prior articles. Seventy-four articles were retrieved from the Scopus and Web of Science databases

for this study.
The results indicated that the implementation of green HRM leads to the development of a green organisational culture due to the environmentally conscious attitude and actions of the employees. The results are displayed as standard definitions of accomplishment. In a study by Malik et al. (2020), the focus is on analysing the impact of green HRM on sustainable development. The research suggests the use of quantitative data collection and analysis. Data sets were collected from manufacturing firms in Pakistan. This opportunity involves wooden furniture, agriculture, fruit processing, food and beverages, dairy, leather, plastic, textiles, and construction, selected from the SMEDA. Analysing the data was done using Smart PLS 3.2.9. The results showed that implementing green HRM enhances companies' capacity to achieve sustainable development.
H3: Green HRM has a positive association with sustainable development.

As environmental accounting is being implemented, there is an ongoing effort to identify environmental concerns, the expenses incurred by companies to address these issues, and the potential legal costs for environmental violations. Studying the environmental factors allows financial management to gauge the firms' social responsibilities and performance. Therefore, it is possible to disclose social responsibility (Almagtome, Khaghaany, & Önce, 2020). When companies engage in social responsibility disclosure, it encourages investors to trust them and invest significant amounts of money. Developing sustainability in firms and economic development can be achieved in this scenario. Therefore, social responsibility disclosure plays a crucial role in connecting environmental accounting and sustainable development The study conducted by Adel et al. (2019).
According to a study by Izzo, Ciaburri, & Tiscini (2020), tracking environmental costs can motivate companies to fulfil their social responsibilities towards the environment, employees, and community. In this scenario, the financial accounting and reporting management may collect information for implementing social responsibility and share the details with the public. Revealing social responsibility to stakeholders garners their backing for implementing sustainable practices. It plays a role in the Sustainable Development. Therefore, social responsibility disclosure acts as a mediator between environmental accounting and sustainable development.
H4: Social responsibility disclosure is a significant mediator between implementation of environmental accounting and sustainable development.

When it comes to energy efficiency, tools, technologies, or infrastructure are utilised to consume less energy while achieving the same results as traditional methods. By reducing energy consumption, many environmental and social issues can be addressed, aligning with the principles of corporate social responsibility. Implementing energy efficiency leads to improved social responsibility disclosure outcomes. When companies excel in disclosing social responsibility and provide accurate information about their commitment to social responsibilities, they can establish strong relationships with stakeholders and pave the way for sustainable development achievement (Paramati, Shahzad, & Doğan, 2022).
In a study by Khoshnava et al. (2020), it is stated that business firms that implement energy efficiency do not just stick to old technologies and traditional processes. They are willing to invest in innovation to reduce energy consumption and make it more environmentally friendly. This enhances the work environment for the employees and helps them carry out their responsibilities more effectively. Here, the social responsibility disclosure by firms provides precise and favourable information regarding the firms' social concerns. An efficient disclosure of social responsibility can attract stakeholders' attention and facilitate the fulfilment of SD plans. Connecting social responsibility disclosure with energy efficiency and SD. In Vanegas Cantarero's study (2020), the author explores the connection between energy efficiency, social responsibility disclosure, and SD. This research emphasises how the organisational environment, employees' performance, and business preferences influence social responsibility disclosure. When companies implement energy efficiency measures, they can improve their social responsibility disclosures, leading to SD.
H5: Social responsibility disclosure is a significant mediator between energy efficiency and sustainable development.

Green HRM involves fostering green capabilities in employees and encouraging them to adopt eco-friendly practices. When individuals receive proper training and put in their best effort, they can effectively address environmental challenges. Meeting environmental obligations through green HRM enhances social responsibility disclosure, leading to SD achievement. The study conducted by Valls Martínez, Cruz Rambaud, & Parra Oller (2019). In a study conducted by Roscoe et al. (2019), they explore the connection between green HRM, green organisational culture, firm environmental performance, and SD. Online surveys were utilised to gather data. The research sample consisted of employees from the manufacturing industry in China, specifically from Shanghai, Zhejiang Province, Jiangsu Province, and Anhui Province. The research employed a covariance-based structural equation modelling (CB-SEM) approach to analyse the multi-construct conceptual model and utilised SPSS version 22 for additional analysis.
The results showed that implementing environmentally friendly HRM practices enhances social responsibility disclosure, leading to improved sustainability for firms. In Chaudhary's study (2020), the author explores the connection between green human resource management, social responsibility disclosure, and SD. This study is based on a questionnaire survey and utilises quantitative data. 311 employees from the Indian automobile industry participated in the survey. We utilised hierarchical regression analysis to examine the proposed research model within a cross-sectional research methodology. This research suggests that implementing green HRM practices can help organisations fulfil their social responsibilities, and disclosing positive social responsibility practices can enhance SD. So,
H6: Social responsibility disclosure is a significant mediator between green HRM and sustainable development

Research Methods

This article delves into the effects of implementing environmental accounting, green HRM, and energy efficiency on SD. It also explores how social responsibility disclosure mediates the relationship between these factors in Vietnam. The article utilised questionnaires to collect data from employees of manufacturing firms focusing on environmental sustainabilit. A variety of questions were used to measure the variables, including six questions about the implementation of environmental accounting (Chaudhry & Amir, 2020), six items about green HRM (Tang et al., 2018), four questions about energy efficiency (Zhang et al., 2019), nine questions about social responsibility disclosure (Waheed & Yang, 2019), and six questions about SD (Gericke et al., 2019). The dimensions are displayed in Table 1.

Table 1: Scale of the Variables.

Items	Statements	Sources
Implementation of Environmental Accounting		
IEA1	Our company's accounting system recording all physical inputs and outputs such as energy, water, materials, wastes, and emissions.	(Chaudhry & Amir, 2020)
IEA2	Our company's accounting system can carry out product environmental impacts analyses.	
IEA3	Our company using environmental performance targets for physical inputs and outputs.	
IEA4	Our company accounting system can estimate environmental-related costs and liabilities.	
IEA5	Our company's accounting system can create and use of environmental-related cost accounts.	
IEA6	Our company's accounting system can allocate environmental-related costs to products.	
Green HRM		
GHRM1	We attract green job candidates who use green criteria to select organizations.	(Tang et al., 2018)
GHRM2	We use green employer branding to attract green employees.	
GHRM3	Our firm recruits employees who have green awareness.	
GHRM4	We develop training programs to increase environmental awareness of employees.	
GHRM5	We have integrated training to create the emotional involvement of employees in environment management.	
GHRM6	We have green knowledge management (link environmental education and knowledge).	
Energy Efficiency		
EE1	I intend to purchase energy efficient household appliances in my next purchase.	(Zhang et al., 2019)
EE2	I would like to purchase energy efficient household appliances.	
EE3	I would like to consider purchasing energy efficient household appliances first.	
EE4	I would like to recommend others to purchase energy efficient household appliances	
Social Responsibility Disclosure		
SRD1	Existence of corporate policies on environmental issues.	(Waheed & Yang, 2019)
SRD2	Employee involvement in environmental activities.	
SRD3	Environmental friendly practices in the value chain.	
SRD4	Employee involvement in environmental activities.	
SRD5	Environmental friendly practices in the value chain.	
SRD6	Environment auditing.	
SRD7	Promotion of environmental technology and good environmental practices.	
SRD8	Energy consumption and conservation.	
SRD9	The production of environmental friendly commodity goods.	
Sustainable Development		
SD1	Reducing water consumption is necessary for SD.	(Gericke et al., 2019)
SD2	Preserving nature is not necessary for SD.	
SD3	SD demands that we humans reduce all sorts of waste.	
SD4	Preserving the variety of living creatures is necessary for SD.	
SD5	SD requires a shift to renewable natural resources.	
SD6	For SD, people need to be educated in how to protect themselves against natural disasters.	

The article focused on employees of manufacturing firms who work on promoting a sustainable environment. The researchers used simple random sampling to select participants and distributed surveys to them by visiting their workplaces. Out of 476 surveys distributed, 291 valid responses were received, resulting in a response rate of approximately 61.13%. Additionally, the study utilised smart-PLS to analyse the relationships between the variables. This tool is a powerful resource for analysing primary data and handling intricate models (Hair, Howard, & Nitzl, 2020). The article incorporated three predictors including the implementation of environmental accounting (IEA), green HRM (GHRM), and energy efficiency (EE). Additionally, the paper utilised one mediating variable, social responsibility disclosure (SRD), and one predictive variable, sustainable development (SD). Figure 1 displays these variables within a framework.

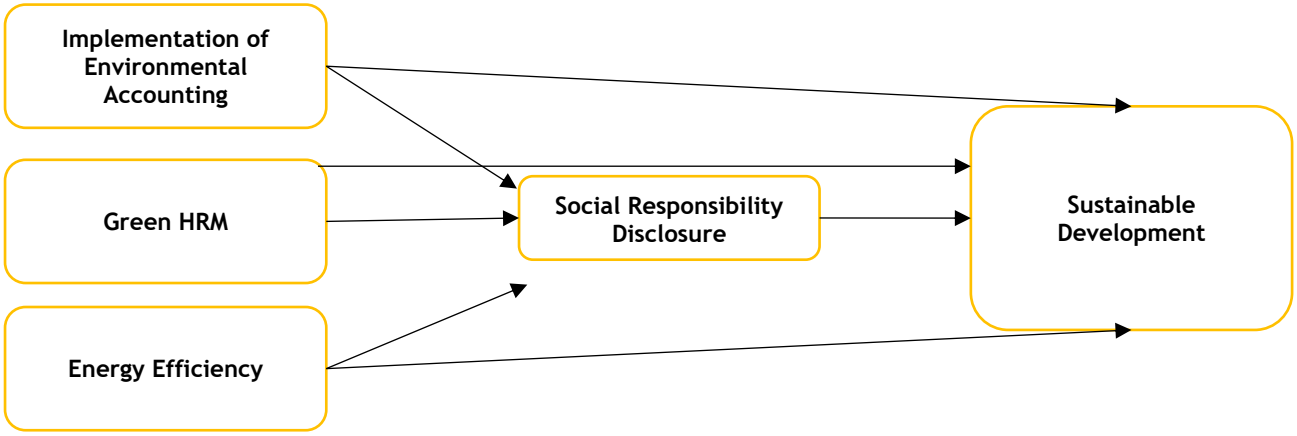

Figure 1: Theoretical Model.

Research Findings

This article delves into the effects of implementing environmental accounting, HRM, and energy efficiency on sustainable development. It also looks at how social responsibility disclosure plays a role in this relationship in the context of Vietnam. The research examines the convergent validity by revealing the relationship between items. Factor loadings are examined, and results show that the values are at least 0.50. In addition, the data was verified using Alpha, and the results showed that the values were greater than 0.70. In addition, the data is verified using average variance extracted (AVE), and the results show that the values exceed 0.50. After conducting the analysis, the results were verified using composite reliability (CR) and it was found that all values exceeded 0.70. The results revealed a strong correlation between the items. Table 2 displays the following data.

Table 2: Convergent Validity.

Variables	Items	Loadings	Alpha	CR	AVE
Energy Efficiency	EE2	0.732	0.781	0.766	0.522
	EE3	0.677			
	EE4	0.757			
Green HRM	GHRM1	0.796	0.857	0.894	0.585
	GHRM2	0.704			
	GHRM3	0.825			
	GHRM4	0.846			
	GHRM5	0.692			
	GHRM6	0.710			
Implementation of Environmental Accounting	IEA1	0.883	0.806	0.861	0.557
	IEA2	0.797			
	IEA3	0.676			
	IEA4	0.672			
	IEA6	0.682			
Sustainable Development	SD1	0.714	0.817	0.863	0.515
	SD2	0.643			
	SD3	0.634			
	SD4	0.714			
	SD5	0.801			
	SD6	0.786			
Social Responsibility Disclosure	SRD1	0.775	0.917	0.933	0.638
	SRD2	0.914			
	SRD3	0.718			
	SRD5	0.869			
	SRD6	0.726			
	SRD7	0.887			
	SRD8	0.645			
	SRD9	0.817			

The research examines the discriminant validity by exploring the relationship between variables. After conducting the Fornell Larcker analysis, it was found that the first figure is not lower than the other figures in the same column. These results revealed a low correlation between variables. Here are the figures displayed in Table 3.

Table 3: Fornell Larcker.

	EE	GHRM	IEA	SD	SRD
EE	0.723				
GHRM	0.509	0.765			
IEA	0.372	0.752	0.747		
SD	0.471	0.705	0.690	0.718	
SRD	0.531	0.682	0.460	0.567	0.799

The research examines the discriminant validity by exploring the relationship between variables. It is verified through cross-loadings, and the results showed that the values indicating the relationship with the construct itself are not lower than those indicating the relationship with other variables. The results revealed a weak correlation between the variables. Here are the figures displayed in Table 4.

The research examines the discriminant validity by exploring the relationship between different variables. Checked using the Heterotrait Monotrait (HTMT) ratio, the results show that the values are less than 0.90. The results revealed a weak correlation between the variables. Table 5 displays the following data.

Table 4: Cross-loadings.

	EE	GHRM	IEA	SD	SRD
EE2	**0.732**	0.337	0.228	0.282	0.336
EE3	**0.677**	0.188	0.127	0.224	0.267
EE4	**0.757**	0.491	0.376	0.448	0.486
GHRM1	0.415	**0.796**	0.443	0.483	0.643
GHRM2	0.355	**0.704**	0.652	0.637	0.415
GHRM3	0.486	**0.825**	0.414	0.502	0.619
GHRM4	0.463	**0.846**	0.492	0.518	0.646
GHRM5	0.281	**0.692**	0.434	0.514	0.340
GHRM6	0.304	**0.710**	0.593	0.595	0.413
IEA1	0.341	0.704	**0.883**	0.698	0.433
IEA2	0.279	0.566	**0.797**	0.660	0.358
IEA3	0.298	0.600	**0.676**	0.396	0.310
IEA4	0.219	0.400	**0.672**	0.311	0.246
IEA6	0.237	0.487	**0.682**	0.341	0.336
SD1	0.312	0.390	0.367	**0.713**	0.452
SD2	0.339	0.327	0.309	**0.638**	0.367
SD3	0.262	0.428	0.319	**0.634**	0.363
SD4	0.399	0.606	0.633	**0.718**	0.464
SD5	0.367	0.669	0.720	**0.803**	0.448
SD6	0.322	0.476	0.422	**0.784**	0.322
SRD1	0.430	0.678	0.428	0.556	**0.774**
SRD2	0.467	0.545	0.367	0.480	**0.914**
SRD3	0.348	0.437	0.295	0.383	**0.719**
SRD5	0.496	0.508	0.337	0.396	**0.869**
SRD6	0.425	0.618	0.443	0.506	**0.725**
SRD7	0.398	0.517	0.327	0.445	**0.887**
SRD8	0.372	0.536	0.418	0.427	**0.645**
SRD9	0.425	0.411	0.253	0.343	**0.817**

Table 5: Heterotrait Monotrait Ratio.

	EE	GHRM	IEA	SD	SRD
EE					
GHRM	0.646				
IEA	0.475	0.806			
SD	0.617	0.804	0.732		
SRD	0.673	0.742	0.512	0.633	

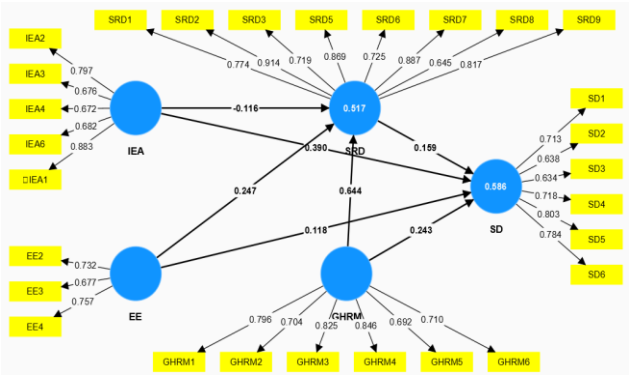

Figure 2: Measurement Model Assessment.

This article delves into the effects of implementing environmental accounting, HRM, and energy efficiency on SD, while also exploring the mediating role of social responsibility disclosure in Vietnam. The results showed that environmental accounting, green HRM, and energy efficiency are positively linked to sustainable development in Vietnam, confirming hypotheses 1, 2, and 3. At last, the results revealed that the disclosure of social responsibilities plays a significant role in linking green HRM, energy efficiency, and sustainable development in Vietnam, confirming H5 and H6. Table 6 displays these figures.

Table 6: Path Analysis.

Relationships	Beta	Standard deviation	T statistics	P values
EE -> SD	0.118	0.051	2.297	0.022
GHRM -> SD	0.243	0.099	2.457	0.014
IEA -> SD	0.390	0.057	6.791	0.000
SRD -> SD	0.159	0.058	2.726	0.006
EE -> SRD -> SD	0.039	0.018	2.213	0.027
GHRM -> SRD -> SD	0.103	0.037	2.777	0.006
IEA -> SRD -> SD	-0.018	0.012	1.573	0.116

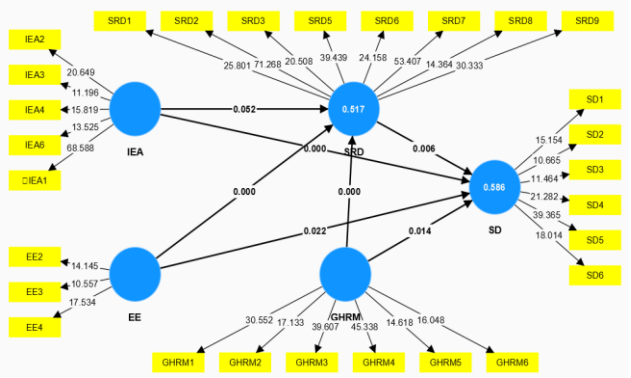

Figure 3: Structural Model Assessment.

Discussions

This article delves into the effects of implementing environmental accounting, HRM, and energy efficiency on SD. It also explores the role of social responsibility disclosure in relation to these factors in Vietnam. The results indicated a positive connection between environmental accounting and SD. The findings align with the research by Sokil et al. (2020), emphasising the importance of firms incorporating environmental detection and recording functions to address issues and costs, fostering accountability to stakeholders. These companies manage environmental concerns while conducting business operations. Enhancements in firms' environmental performance contribute to achieving sustainable development goals. The findings are backed by Mondal, Akter, & Polas (2023), who examine the impact of environmental accounting on sustainable development. According to the research, implementing environmental accounting involves estimating waste emissions during business operations and allocating funds to manage the waste. Controlling waste emissions is essential for reducing environmental pollution and cutting down on expenses.

Therefore, sustainability can be achieved through the application of environmental accounting. The findings align with Bebbington & Unerman (2020), who discuss the implementation of environmental accounting and the firm administration's environmental initiatives. In this scenario, the business practices are carried out without impacting environmental quality. This results in enhancing the production quality and maintaining the business processes. Therefore, there is an update to SD.

The results indicated a positive correlation between energy efficiency and SD. The findings align with a study by Santika et al. (2020) that focuses on the importance of energy efficiency in sustainable development. It is suggested that business firms need to engage in various technological activities on a regular basis, requiring the use of energy resources. When companies implement energy efficiency measures, they aim to reduce energy consumption while maintaining business operations and production levels. Due to reduced energy consumption, there is a focus on environmental preservation and a higher chance of achieving sustainable development. These findings are backed by Zhao et al. (2022).

When technologies promoting energy efficiency are implemented, there is a significant reduction in energy consumption across various business units. Controlling the release of harmful substances from energy use and waste creation from energy combustion is achieved through managing energy consumption. Therefore, companies that prioritise energy efficiency can achieve long-term economic growth. The findings align with the research conducted by Soleimani et al. (2022), emphasising the positive impact of energy efficiency technologies on environmental preservation, social well-being, and economic success in contributing to SD.

The results indicated a positive relationship between green HRM and SD. The findings align with the study by Chams & García-Blandón (2019) discussing the impact of green HRM on attaining SD goals. The research indicates that incorporating environmental considerations into HRM policies can lead to practices where workers perform in a manner that reduces or eliminates environmental pollution from firm operations. Successful firms effectively manage environmental pollution, ensuring smooth economic performance and SD. The findings are backed by a study conducted by Amrutha & Geetha (2020), indicating that when green HRM is functioning well, employees receive social support and contribute to the firm's environmental performance.

Therefore, the company SD can be attained. These findings are consistent with the study by Mousa & Othman (2020). In this prior research, the authors emphasise the implementation of green HRM for sustainable development. The authors discuss how firms that incorporate environmentally friendly practices into their HR strategies ensure that employees possess green working

capabilities. These employees oversee the business practices to ensure they do not impact environmental quality and contribute to social well-being. It speeds up the SD card.

The results indicated that social responsibility disclosure plays a crucial role as a mediator between environmental accounting and SD. These findings are backed by Lu et al. (2021). The study suggests that the incorporation of environmental accounting involves analysing environmental costs and strategies to address environmental challenges. The environmentally conscious practices and the resulting community satisfaction enable the sharing of social responsibility information effectively. Companies' commitment to social responsibilities helps gain stakeholder support for implementing sustainability initiatives. Therefore, the disclosure of social responsibility through environmental accountability helps in achieving sustainable development. The results align with a study by Ye et al. (2020) that emphasises the importance of environmental accountability in firms.

It suggests that by incorporating environmental practices, firms can assess employees' performance in eco-friendly initiatives. Implementing eco-friendly practices and minimising environmental impact for both employees and the public can showcase achievements in social responsibility, ultimately contributing to sustainable development. Thus, the disclosure of social responsibility creates a connection between environmental accounting and sustainable development. The findings align with Adams, Druckman, & Picot (2020), who also discuss how environmental and social practices are tracked and documented in environmental accounting. Enhancing the social responsibility disclosure contributes to enhancing SD.

The results indicated that social responsibility disclosure plays a crucial role as a mediator between energy efficiency and SD. The results align with a study conducted by Nundy et al. (2021) that examines the impact of energy efficiency on sustainable development. The research emphasises the impact of enhancing social responsibility disclosure through energy efficiency implementation on business firms, potentially leading to improvements in SD. The findings are backed by a study from Hjort et al. (2019), highlighting the negative impact of energy overuse, particularly from fossil fuels, on the environment and the well-being of community residents and organisation employees.

Energy efficiency involves minimising energy consumption and replacing energy resources with environmentally friendly sources to reduce environmental pollution and lessen environmental issues for people. It demonstrates companies' commitment to social welfare and fulfilling social obligations. It promotes a strong emphasis on social responsibility disclosure, impacting various stakeholders. When companies incorporate energy-saving practices and provide transparent social responsibility reports, they can attain sustainable development. These findings align with research by Dabbous & Tarhini (2021), indicating that implementing energy efficiency strategies in business firms leads to increased employee satisfaction, positive feedback, and improved relationships. It allows companies to fulfil social responsibilities and present an accurate image of the company through transparent social responsibility reporting. Companies that prioritise social responsibility have developed strategies to achieve sustainable development. Therefore, the disclosure of social responsibility acts as a mediator between energy efficiency and SD.

The results indicate that social responsibility disclosure plays a crucial role as a mediator between green HRM and SD. The results align with the study by Gunawan, Permatasari, & Tilt (2020), which emphasises the importance of green HRM practices in training employees to be accountable to society and fulfil environmental responsibilities. Throughout these training sessions, employees also cultivate environmentally friendly skills, leading to an enhanced relationship between the firm and the environment. As a result, when the company makes a positive social responsibility disclosure. The company's exceptional social and environmental performance contributes to sustainable development. The results are supported by the research carried out by Tsalis et al. (2020). According to research, companies that effectively implement green HRM provide employees with social support. After individuals undergo appropriate training and have their areas of improvement taken care of, they can efficiently complete the given tasks. Improving the disclosure of social responsibility helps in reaching sustainable development objectives. The results are in line with a study conducted by ElAlfy et al. (2020), highlighting the beneficial effects of green HRM on social responsibility disclosure and sustainable development.

Implications

This study provides valuable insights for scholars with its innovative contributions to economic literature. The primary focus of the study is to raise awareness for achieving sustainable development goals. This study discusses a comprehensive approach to explore the impact of contemporary business strategies such as environmental accounting, energy efficiency, and green HRM on sustainable development for companies and the economy. Past research has shown limited exploration of social responsibility disclosure as a mediator among environmental accounting, energy efficiency, green HRM, and sustainable development. This study examines how social responsibility disclosure mediates the relationship between environmental accounting, energy efficiency, green HRM, and sustainable development. This study provides a valuable contribution by examining the impact of environmental accounting, energy efficiency, and green HRM on sustainable development within the manufacturing sector in Vietnam.

This article is significant for developing economies like Vietnam due to its focus on sustainable development. The study provides recommendations for firms on achieving sustainable development. The study suggests that the company's policies should incorporate environmental accounting alongside traditional accounting to attain sustainable development. The study indicates that company administrators, along with their subordinates, implement energy efficiency measures across various business departments. This would facilitate companies in achieving sustainable development. Business firms should implement green HRM practices to train employees for eco-friendly outcomes and meet sustainable development requirements. The study suggests that business firms need to effectively implement environmental accountability.

By doing so, companies can enhance their social responsibility reporting and work towards achieving sustainable development. It has been suggested that firms should prioritise energy efficiency in their business practices. Enhancing social responsibility disclosure can help firms achieve sustainable development goals. Furthermore, the research suggests that company executives should incorporate environmental strategies into their human resource management practices. Implementing social responsibility disclosure could aid in firms' achievement of sustainable development. The regulators have obtained guidelines from a study on achieving sustainable development through environmental accounting, green HRM, and energy efficiency.

Conclusion

The article delves into the effects of implementing environmental accounting, HRM, and energy efficiency on sustainable development. It also investigates the mediating role of social responsibility disclosure in Vietnam regarding environmental accounting, green HRM, energy efficiency, and sustainable development. The authors focused on the firms' attainment of sustainable development. The study aimed to investigate the impact of environmental accounting, energy efficiency, and green HRM on sustainable development. The study aimed to investigate the relationship between social responsibility disclosure, environmental accounting, energy efficiency, green HRM, and SD. The study relies on primary data collection and analysis, with data gathered through a questionnaire survey from Vietnam's manufacturing industry. The study results indicate a positive correlation between environmental accounting, energy efficiency, green HRM, and sustainable development. The results showed that firms with financial administrators and officers practicing environmental accounting monitor environmental issues, penalties for breaching regulations, and expenses for reducing environmental impacts.

In this scenario, the companies demonstrate improved environmental performance, resulting in the attainment of Sustainable Development. Similarly, the study findings showed that firms achieve equivalent economic results by adopting energy efficiency measures, leading to a cleaner environment for employees and stakeholders. It is probable that the standard deviation will be achieved in this scenario. The study indicated that incorporating green practices into HRM can enhance employees' skills and help reduce the environmental impact of business processes. Therefore, companies can support economic growth. Furthermore, the research found that social responsibility disclosure acts as a mediator among environmental accounting, energy efficiency, green HRM, and SD. Implementing environmental accounting, energy efficiency, and green HRM enhances the disclosure of social responsibility. The companies' disclosure of social responsibility helps them achieve sustainable development.

Limitations

The current study has limitations that future researchers can address to enhance its implications. The current study primarily examines sustainable development within individual firms, rather than providing insights into sustainable development at the national level. Future research should investigate sustainable development at both the firm and country level. The research framework's scope is limited as the authors only examined the role of environmental accounting, energy efficiency, and green HRM in sustainable development. Various factors such as green technologies, waste management, and green investment impact sustainable development. Future researchers should further investigate and enhance the research framework by incorporating additional factors. In this study, the analysis focused on the mediator discussing social responsibility disclosure among environmental accounting, energy efficiency, green HRM, and SD. In the future, researchers should consider introducing moderators to enhance the study's implications.

Author Contributions

MHM: Conceptualization; Project administration; Funding acquisition and Review draft. LDT: Data curation; Formal analysis; Investigation; Methodology; Resources; Software; Validation; Visualization; Roles/Writing - original draft and Writing - review & editing. PQH: Supervision and Manuscript Formatting.

Declaration of Competing Interest

The authors declare that they have no conflict of interest.

Acknowledgement

The study received funding from the University of Economics Ho Chi Minh City (UEH).

References

Adams, C., Druckman, P., & Picot, R. (2020). *Sustainable Development Goals Disclosure (SDGD) Recommendations*. Association of Chartered Certified Accountants.

Adel, C., Hussain, M. M., Mohamed, E. K. A., & Basuony, M. A. K. (2019). Is corporate governance relevant to the quality of corporate social responsibility disclosure in large European companies? *International Journal of Accounting & Information Management, 27*(2), 301-332. doi: https://doi.org/10.1108/IJAIM-10-2017-0118

Almagtome, A., Khaghaany, M., & Önce, S. (2020). Corporate governance quality, stakeholders' pressure, and sustainable development: An integrated approach. *International Journal of Mathematical Engineering and Management Sciences, 5*(6), 1077-1090. doi: http://doi.org/10.33889/ijmems.2020.5.6.082

Amrutha, V. N., & Geetha, S. N. (2020). A systematic review on green human resource management: Implications for social sustainability. *Journal of Cleaner Production, 247*, 119131. doi: https://doi.org/10.1016/j.jclepro.2019.119131

Ashibogwu, K. N. (2023). Environmental Accounting and Sustainable Development in Oil and Gas Industry in Nigeria. *Advance Journal of Management, Accounting and Finance, 8*(6), 1-9. Retrieved from https://aspjournals.org/ajmaf/index.php/ajmaf/article/view/57

Bebbington, J., & Unerman, J. (2020). Advancing research into accounting and the UN Sustainable Development Goals. *Accounting, Auditing & Accountability Journal, 33*(7), 1657-1670. doi: https://doi.org/10.1108/AAAJ-05-2020-4556

Canh, N. T., Liem, N. T., Thu, P. A., & Khuong, N. V. (2019). The Impact of Innovation on the Firm Performance and Corporate Social Responsibility of Vietnamese Manufacturing Firms. *Sustainability, 11*(13), 3666. doi: https://doi.org/10.3390/su11133666

Chams, N., & García-Blandón, J. (2019). On the importance of sustainable human resource management for the adoption of sustainable development goals. *Resources, Conservation and Recycling, 141*, 109-122. doi: https://doi.org/10.1016/j.resconrec.2018.10.006

Chaudhary, R. (2020). Green Human Resource Management and Employee Green Behavior: An Empirical Analysis. *Corporate Social Responsibility and Environmental Management, 27*(2), 630-641. doi: https://doi.org/10.1002/csr.1827

Chaudhry, N. I., & Amir, M. (2020). From institutional pressure to the sustainable development of firm: Role of environmental management accounting implementation and environmental proactivity. *Business Strategy and the Environment, 29*(8), 3542-3554. doi: https://doi.org/10.1002/bse.2595

Chen, M., Sinha, A., Hu, K., & Shah, M. I. (2021). Impact of technological innovation on energy efficiency in industry 4.0 era: Moderation of shadow economy in sustainable development. *Technological Forecasting and Social Change, 164*, 120521. doi: https://doi.org/10.1016/j.techfore.2020.120521

Dabbous, A., & Tarhini, A. (2021). Does sharing economy promote sustainable economic development and energy efficiency? Evidence from OECD countries. *Journal of Innovation & Knowledge, 6*(1), 58-68. doi: https://doi.org/10.1016/j.jik.2020.11.001

Dantas, T. E. T., de-Souza, E. D., Destro, I. R., Hammes, G., Rodriguez, C. M. T., & Soares, S. R. (2021). How the combination of Circular Economy and Industry 4.0 can contribute towards achieving the Sustainable Development Goals. *Sustainable Production and Consumption, 26*, 213-227. doi: https://doi.org/10.1016/j.spc.2020.10.005

Dhar, B. K., Sarkar, S. M., & Ayittey, F. K. (2022). Impact of social responsibility disclosure between implementation of green accounting and sustainable development: A study on heavily polluting companies in Bangladesh. *Corporate Social Responsibility and Environmental Management, 29*(1), 71-78. doi: https://doi.org/10.1002/csr.2174

ElAlfy, A., Palaschuk, N., El-Bassiouny, D., Wilson, J., & Weber, O. (2020). Scoping the Evolution of Corporate Social Responsibility (CSR) Research in the Sustainable Development Goals (SDGs) Era. *Sustainability, 12*(14), 5544. doi: https://doi.org/10.3390/su12145544

Fonseca, L. M., Domingues, J. P., & Dima, A. M. (2020). Mapping the Sustainable Development Goals Relationships. *Sustainability, 12*(8), 3359. doi: https://doi.org/10.3390/su12083359

Gericke, N., Boeve-de Pauw, J., Berglund, T., & Olsson, D. (2019). The Sustainability Consciousness Questionnaire: The theoretical development and empirical validation of an evaluation instrument for stakeholders working with sustainable development. *Sustainable Development, 27*(1), 35-49. doi: https://doi.org/10.1002/sd.1859

Gunawan, J., Permatasari, P., & Tilt, C. (2020). Sustainable development goal disclosures: Do they support responsible consumption and production? *Journal of Cleaner Production, 246*, 118989. doi: https://doi.org/10.1016/j.jclepro.2019.118989

Hair, J. F., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research, 109*, 101-110. doi: https://doi.org/10.1016/j.jbusres.2019.11.069

Hjort, M., Skobelev, D., Almgren, R., Guseva, T., & Koh, T. (2019). Best Available Techniques and Sustainable Development Goals. *International Multidisciplinary Scientific on Earth and Geosciences. SGEM Green, 19*(4), 185. doi: https://doi.org/10.5593/sgem2019V/4.2/S06.025

Izzo, M. F., Ciaburri, M., & Tiscini, R. (2020). The Challenge of Sustainable Development Goal Reporting: The First Evidence from Italian Listed Companies. *Sustainability, 12*(8), 3494. doi: https://doi.org/10.3390/su12083494

Khoshnava, S. M., Rostami, R., Zin, R. M., Kamyab, H., Abd Majid, M. Z., Yousefpour, A., & Mardani, A. (2020). Green efforts to link the economy and infrastructure strategies in the context of sustainable development. *Energy, 193*, 116759. doi: https://doi.org/10.1016/j.energy.2019.116759

Le, T. (2020). The effect of green supply chain management practices on sustainability performance in Vietnamese construction materials manufacturing enterprises. *Uncertain Supply Chain Management, 8*(1), 43-54. doi: https://doi.org/10.5267/j.uscm.2019.8.007

Lu, J., Liang, M., Zhang, C., Rong, D., Guan, H., Mazeikaite, K., & Streimikis, J. (2021). Assessment of corporate social responsibility by addressing sustainable development goals. *Corporate Social Responsibility and Environmental Management, 28*(2), 686-703. doi: https://doi.org/10.1002/csr.2081

Malik, S. Y., Cao, Y., Mughal, Y. H., Kundi, G. M., Mughal, M. H., & Ramayah, T. (2020). Pathways towards Sustainability in Organizations: Empirical Evidence on the Role of Green Human Resource Management Practices and Green Intellectual Capital. *Sustainability, 12*(8), 3228. doi: https://doi.org/10.3390/su12083228

Mondal, M. S. A., Akter, N., & Polas, M. R. H. (2023). Factors influencing the environmental accounting disclosure practices for sustainable development: A systematic literature review. *International Journal of Financial, Accounting, and Management, 5*(2), 195-213. doi: https://doi.org/10.35912/ijfam.v5i2.1365

Mousa, S. K., & Othman, M. (2020). The impact of green human resource management practices on sustainable performance in healthcare organisations: A conceptual framework. *Journal of Cleaner Production, 243*, 118595. doi: https://doi.org/10.1016/j.jclepro.2019.118595

Na, K., & Kang, Y.-H. (2019). Relations between Innovation and Firm Performance of Manufacturing Firms in Southeast Asian Emerging Markets: Empirical Evidence from Indonesia, Malaysia, and Vietnam. *Journal of Open Innovation: Technology, Market, and Complexity, 5*(4), 98. doi: https://doi.org/10.3390/joitmc5040098

Nundy, S., Ghosh, A., Mesloub, A., Albaqawy, G. A., & Alnaim, M. M. (2021). Impact of COVID-19 pandemic on socio-economic, energy-environment and transport sector globally and sustainable development goal (SDG). *Journal of Cleaner Production, 312*, 127705. doi: https://doi.org/10.1016/j.jclepro.2021.127705

Ostapenko, O. (2020). Estimation of energy-ecological-economic efficiency of energy supply systems with cogeneration heat pump installations in Ukraine, in the concepts of green logistics and sustainable development. In B. Gechbaia (Ed.), *Institutional Development Mechanism of the Financial System of the National Economy* (pp. 52-66). Batumi, GEORGIA.

Paramati, S. R., Shahzad, U., & Doğan, B. (2022). The role of environmental technology for energy demand and energy efficiency: Evidence from OECD countries. *Renewable and Sustainable Energy Reviews, 153*, 111735. doi: https://doi.org/10.1016/j.rser.2021.111735

Pham, N. T., Hoang, H. T., & Phan, Q. P. T. (2020). Green human resource management: a comprehensive review and future research agenda. *International Journal of Manpower, 41*(7), 845-878. doi: https://doi.org/10.1108/IJM-07-2019-0350

Phan, A. C., Nguyen, H. A., Trieu, P. D., Nguyen, H. T., & Matsui, Y. (2019). Impact of supply chain quality management practices on operational performance: empirical evidence from manufacturing companies in Vietnam. *Supply Chain Management: An International Journal, 24*(6), 855-871. doi: https://doi.org/10.1108/SCM-12-2018-0445

Roscoe, S., Subramanian, N., Jabbour, C. J. C., & Chong, T. (2019). Green human resource management and the enablers of green organisational culture: Enhancing a firm's environmental performance for sustainable development. *Business Strategy and the Environment, 28*(5), 737-749. doi: https://doi.org/10.1002/bse.2277

Ruggerio, C. A. (2021). Sustainability and sustainable development: A review of principles and definitions. *Science of The Total Environment, 786*, 147481. doi: https://doi.org/10.1016/j.scitotenv.2021.147481

Sachs, J. D., Schmidt-Traub, G., Mazzucato, M., Messner, D., Nakicenovic, N., & Rockström, J. (2019). Six Transformations to achieve the Sustainable Development Goals. *Nature Sustainability, 2*(9), 805-814. doi: https://doi.org/10.1038/s41893-019-0352-9

Saeed, B. B., Afsar, B., Hafeez, S., Khan, I., Tahir, M., & Afridi, M. A. (2019). Promoting employee's proenvironmental behavior through green human resource management practices. *Corporate Social Responsibility and Environmental Management, 26*(2), 424-438. doi: https://doi.org/10.1002/csr.1694

Santika, W. G., Urmee, T., Simsek, Y., Bahri, P. A., & Anisuzzaman, M. (2020). An assessment of energy policy impacts on achieving Sustainable Development Goal 7 in Indonesia. *Energy for Sustainable Development, 59*, 33-48. doi: https://doi.org/10.1016/j.esd.2020.08.011

Saud, S., Chen, S., Haseeb, A., & Sumayya. (2020). The role of financial development and globalization in the environment: Accounting ecological footprint indicators for selected one-belt-one-road initiative countries. *Journal of Cleaner Production, 250*, 119518. doi: https://doi.org/10.1016/j.jclepro.2019.119518

Scarpellini, S., Marín-Vinuesa, L. M., Aranda-Usón, A., & Portillo-Tarragona, P. (2020). Dynamic capabilities and environmental accounting for the circular economy in businesses. *Sustainability Accounting, Management and Policy Journal, 11*(7), 1129-1158. doi: https://doi.org/10.1108/SAMPJ-04-2019-0150

Shah, M. (2019). Green human resource management: Development of a valid measurement scale. *Business Strategy and the Environment, 28*(5), 771-785. doi: https://doi.org/10.1002/bse.2279

Sokil, O., Zvezdov, D., Zhuk, V., Kucherkova, S., & Sakhno, L. (2020). Social and environmental costs: the impact of accounting and analytical support on enterprises' sustainable development in Germany and Ukraine. *Economic Annals-XXI, 181*(1/2), 124-136. doi: https://doi.org/10.21003/ea.V181-11

Soleimani, H., Chhetri, P., Fathollahi-Fard, A. M., Mirzapour Al-e-Hashem, S. M. J., & Shahparvari, S. (2022). Sustainable closed-loop supply chain with energy efficiency: Lagrangian relaxation, reformulations and heuristics. *Annals of Operations Research, 318*(1), 531-556. doi: https://doi.org/10.1007/s10479-022-04661-z

Tang, G., Chen, Y., Jiang, Y., Paillé, P., & Jia, J. (2018). Green human resource management practices: scale development and validity. *Asia Pacific Journal of Human Resources, 56*(1), 31-55. doi: https://doi.org/10.1111/1744-7941.12147

Tsalis, T. A., Malamateniou, K. E., Koulouriotis, D., & Nikolaou, I. E. (2020). New challenges for corporate sustainability reporting: United Nations' 2030 Agenda for sustainable development and the sustainable development goals. *Corporate Social Responsibility and Environmental Management, 27*(4), 1617-1629. doi: https://doi.org/10.1002/csr.1910

Valls Martínez, M. d. C., Cruz Rambaud, S., & Parra Oller, I. M. (2019). Gender policies on board of directors and sustainable development. *Corporate Social Responsibility and Environmental Management, 26*(6), 1539-1553. doi: https://doi.org/10.1002/csr.1825

Vanegas Cantarero, M. M. (2020). Of renewable energy, energy democracy, and sustainable development: A roadmap to accelerate the energy transition in developing countries. *Energy Research & Social Science, 70*, 101716. doi: https://doi.org/10.1016/j.erss.2020.101716

Waheed, A., & Yang, J. (2019). Effect of corporate social responsibility disclosure on firms' sales performance: A perspective of stakeholder engagement and theory. *Corporate Social Responsibility and Environmental Management, 26*(3), 559-566. doi: https://doi.org/10.1002/csr.1701

Ye, N., Kueh, T.-B., Hou, L., Liu, Y., & Yu, H. (2020). A bibliometric analysis of corporate social responsibility in sustainable development. *Journal of Cleaner Production, 272*, 122679. doi: https://doi.org/10.1016/j.jclepro.2020.122679

Zakari, A., Khan, I., Tan, D., Alvarado, R., & Dagar, V. (2022). Energy efficiency and sustainable development goals (SDGs). *Energy, 239*, 122365. doi: https://doi.org/10.1016/j.energy.2021.122365

Zhang, L., Fan, Y., Zhang, W., & Zhang, S. (2019). Extending the Theory of Planned Behavior to Explain the Effects of Cognitive Factors across Different Kinds of Green Products. *Sustainability, 11*(15), 4222. doi: https://doi.org/10.3390/su11154222

Zhao, J., Sinha, A., Inuwa, N., Wang, Y., Murshed, M., & Abbasi, K. R. (2022). Does structural transformation in economy impact inequality in renewable energy productivity? Implications for sustainable development. *Renewable Energy, 189*, 853-864. doi: https://doi.org/10.1016/j.renene.2022.03.050