"Factors affecting the readiness for ESG reporting in Vietnamese enterprises"

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FACTORS AFFECTING THE READINESS FOR ESG REPORTING IN VIETNAMESE ENTERPRISES

Abstract

Countries around the world are taking further steps toward transparency and corporate sustainability. Environmental, social, and governance (ESG) reporting will be required for all firms listed on European exchanges as of 2026 according to the Corporate Sustainability Reporting Directive. Meanwhile, the companies' rate in Vietnam reporting and disclosing ESG information is still limited. There is an empirical gap between the theory and practices of ESG reporting in Vietnam. Therefore, this study aims to investigate the determinants affecting the readiness for ESG reporting in Vietnamese enterprises. Survey questionnaires and quantitative analysis are employed based on the structural models using SmartPLS4 software to analyze the sample of 169 manufacturing, commercial, and service enterprises in Vietnam. The findings show that accountant qualifications, management processes, women on management boards, and information technology systems positively affect Vietnamese firms' readiness to report ESG. The relationship between business executives' ESG awareness, public media pressure, governmental guidelines, and the readiness for ESG reporting is not statistically supported. Based on the research results, Vietnamese enterprises should increase women's participation on management boards, facilitate professional development and training for accountants, invest in information technology systems, and improve management processes to enhance the adoption of ESG reporting in Vietnam.

Keywords environmental, social, and governance reporting,

sustainability reporting, Vietnam

JEL Classification M14, M40, M41, Q56

INTRODUCTION

Nations worldwide have been currently facing global issues such as climate change, energy poverty, and resource depletion (European Commission, 2021). Businesses are proactively accessing the most popular international practices on environmental, social issues, and governance (ESG) to apply them in their businesses. ESG guides companies and other stakeholders in understanding how to manage risks and take advantage of opportunities in these three ESG aspects.

At the COP26 Climate Summit in Glasgow, Scotland, Vietnam declared its intention to achieve net zero emissions by 2050. Therefore, the Vietnamese government has prioritized issuing policy mechanisms, which is the first step in implementing this commitment. The Vietnam Business Council for Sustainable Development developed the Corporate Sustainability Index (CSI) with 130 indicators in 2022 (Ly, 2022). According to current regulations in Vietnam, only listed firms with revenue of over 100 billion VND are required to disclose ESG. However, to meet current market needs, especially export markets, many small and medium businesses in Vietnam are interested in and wish to apply ESG in production and business activities.

The report on Readiness for ESG Practices in Vietnam conducted by PwC (2022), one of the Big4 auditing companies in the world, shows that up to 80% of businesses have commitments or plan to practice ESG in the next 2-4 years. From the investor's viewpoint, VinaCapital, one of the leading investment funds in Vietnam, clearly indicates that they will assess the ESG performance of firms they consider investing in and include significant ESG concerns in financial analysis (VinaCapital, 2022). The companies with ESG integrated into the strategy would have been publicly traded at higher share prices and with lower capital costs (Chen et al., 2023). Therefore, implementing ESG reporting has become a necessary trend for businesses to develop sustainably. However, ESG is still a new topic that needs to be promoted in Vietnamese firms, especially in non-public companies, as well as small and medium enterprises (SMEs). Understanding the factors that affect the readiness for ESG reporting will help businesses and stakeholders proactively have action plans to accelerate the process of applying ESG in Vietnam.

1. LITERATURE REVIEW

The term "ESG" was first used in a report titled "Who Cares Wins" by the United Nations Global Compact in 2004 (United Nations, 2004). IFC (2021) defines ESG as a framework covering governance, social, and environmental aspects that investors and businesses take into account when making decisions about investments and managing their operations in terms of opportunities, risks, and impacts. ESG is typically a criterion and approach that investors employ to assess the companies' behavior and their potential financial performance (Weston & Nnadi, 2023).

First, environmental criteria evaluate issues related to businesses' influence on the living environment, such as greenhouse gas emissions, water and waste handling, raw material supply, and impacts from climate change. Second, social criteria evaluate issues related to businesses' diversity, equity, and inclusion internally and with stakeholders, such as labor management, security and confidentiality data, and community relations. Third, governance criteria evaluate issues related to corporate governance, business ethics, intellectual property rights protection, and compliance with legal regulations (EBA, 2021).

Several studies have shown that ESG reporting can enhance transparency, increase corporate reputation and customer loyalty, lower expenses, improve business performance, and strengthen competitive advantage (Ioannou & Serafeim, 2017; Ellili, 2022). Along with opportunities, ESG also brings many challenges to businesses, such as a lack of robust ESG data, concern about performance and sacrificing returns, and concerns over green-

washing (Henisz et al., 2019). ESG practices are increasingly becoming a mainstream strategy, even mandatory in some countries, as ESG investment in 2020 exceeded US\$35,000 billion (Bloomberg Intelligence, 2022). In addition, ESG is increasingly asserting its position in the world of investment, as only 13% of investors worldwide suppose ESG is a short-term movement. This shows that most investors view ESG as an inevitable trend in long-term investing (Ground, 2022). Furthermore, the European Banking Authority (EBA) indicates that ESG elements may positively or negatively impact the financial performance of an organization, sovereign, or a person (EBA, 2021).

A few main theories, such as stakeholder, signal, and institutional theories, have been employed to support the substantial increase in recent studies on ESG reporting. According to stakeholder theory, a company's success comes from meeting its stakeholders' needs (Freeman, 2010). Everyone interested in, connected to, or impacted by the company is considered a stakeholder in the ecosystem. This includes shareholders, employees, vendors, customers, government agencies, community, and others. ESG information is significant to a wide range of stakeholders. Based on stakeholder theory, corporate managers can determine which stakeholders are truly important to their companies when it comes to ESG reporting. Therefore, ESG information is released for strategic purposes to show that businesses are adhering to and supporting a variety of particularly influential stakeholders (Gray et al., 2003).

Signal theory posits that big firms disclose more information to users, which can help attract more investors, thereby increasing the value of the com-

pany's stock (Spence, 1973; Rezaee, 2016). ESG reporting serves as a mechanism for the voluntary disclosure of ESG performance metrics and information on sustainability initiatives (Lys et al., 2015). In practice, businesses utilize this voluntary non-financial disclosure to communicate their sustainability successes, validate their existence, and uphold their corporate reputation since it helps investors estimate economic profitability (Acs & Audretsch, 2010).

Institutional theory is a common framework used in the studies of ESG reporting (Campbell, 2007). This theory focuses on how social, political, and economic processes affect how businesses function and acquire legitimacy (Meyer & Rowan, 1977). Flammer et al. (2019) argued that companies with better ESG scores tend to apply sustainable activities and abide by sustainability standards. This theory provides a better understanding of the various institutional variables influencing an organization's ESG reporting (Higgins & Larrinaga, 2014). Businesses that operate in nations with comparable institutional systems typically adopt comparable behavioral patterns, such as moral behavior (Scott, 1995).

Based on signal theory, business executives' viewpoints on corporate organizational behavior can significantly influence firm performance. According to Huang et al. (2020), executives' environmental awareness positively impacted their firms' technological innovation, and they invested more in research and development to achieve higher technological green innovation. Previous studies analyzed the essential role of executive cognition in motivating green technology innovation (Tan & Zhu, 2022). Executives' ESG awareness can offer technology and resources to ensure enterprises' green innovation practices and raise their degree of green innovation.

Public media pressure affects companies' ESG reporting. According to Buniamin et al. (2018), the more urgent the public media interest, for example, time sensitivity or meeting stakeholder needs, the greater the engagement level of ESG reporting perceived by managers. When managers perceive ESG information as necessary and needing public media attention, they report their ESG activities to society. In contrast, companies' leaders think

that any ESG information damages companies, so they tend not to report it to outsiders.

Previous studies indicated a positive correlation between board gender diversity and ESG disclosure and reporting (Bear et al., 2010). Considering stakeholder theory, Arayssi et al. (2016) found a connection between companies' good citizenship and the representation of women on corporate boards. Kamaludin et al. (2022) confirmed that women on the board would be a catalyst to get businesses to prioritize ESG disclosure and sustainability activities. Hillman et al. (2002) found that women directors took into account the interests of companies' various stakeholders. There was a greater awareness of sustainability issues among women who served on boards (Bear et al., 2010). Wang and Coffey (1992), Williams (2003), and Post et al. (2011) stated that companies with a higher proportion of female board members tended to be more philanthropic and charitable, and they also appeared to support more environmental efforts. Furthermore, women were typically associated with nurturing qualities and greater care for social issues (Arayssi et al., 2016; Bear et al., 2020). Having women on boards shows the social awareness of gender diversity in companies (Kathy Rao et al., 2012; Kiliç et al., 2015; Velte, 2016). Peng and Chandarasupsang (2023) found that female directors are significantly and positively associated with ESG practices, especially in firms operating in less developed regions.

ESG reporting guidelines have arisen as institutional rules to address what content and methods are acceptable for disclosing sustainability information (Xenitidou & Edmonds, 2014; Gutiérrez-Ponce, 2023). These governmental guidelines give businesses a proper framework for disclosing sustainability information (Romito & Vurro, 2020). Darnall et al. (2022) found that Japanese firms applying ESG guidelines disclose 39% more sustainability information than those that do not adopt ESG reporting frameworks for their sustainability reports. Helfaya et al. (2023) demonstrated that the GRI had a significant impact on the full disclosure of ESG initiatives in Europe. According to institutional theory, organizational structures and activities are shaped by pressures from institutions such as governments, professional bodies, and the society surrounding organizations

(DiMaggio & Powell, 1983). Local authorities have policies to encourage the implementation of ESG, and state management agencies have issued documents to sanction environmental violations in the operation of enterprises.

Information technology (IT) was the most critical driver of organizational innovations and changes. IT had taken over the whole firm's activities (Granlund & Mouritsen, 2003). IT systems are essential for embedding ESG strategies into daily business operations and making strategic decisions. IT architecture driven by its ESG strategy is the backbone of an organization in facilitating measurement, management, and visualization of strategic and operational processes (Delloite, 2023). Phornlaphatrachakorn (2019) identified that information technological innovation influences the successful adoption of strategic management accounting in Thai organizations. Su et al. (2023) supposed that digital technology is environmentally friendly in green development to lower energy loss and raise operational effectiveness.

Companies' management processes also affect the readiness for ESG reporting. Suppose the company has clearly and thoroughly defined and implemented the ESG management process, including environmental quality standards, social responsibility, and data management. Sun and Saat (2023) found that intelligent manufacturing improves the quality of the corporate information system and ESG practices by saving the data in the safe data platform, forming electronic copies, and providing them to the data requester. Niu et al. (2022) and Nguyen et al. (2023) empirically found that ESG management strategies can enhance organizational sustainability and reporting.

Professional accountants significantly minimize environmental harm and ensure social responsibility is central to enterprises' sustainable development strategies. Manoj and Mini (2022) supposed that international certificated accountants like Certified Management Accountants (CMAs) play a vital role in the ESG application process since they can cooperate with experts in diverse fields like technical or legal, given the highly interdisciplinary nature of ESG integration. Ramadhan et al. (2023) also found that accountants play a significant role in ensuring more sustainable and eco-

friendly operations and projects. According to Krasodomska et al. (2020), higher education and professional institutions could make accounting curriculums more practical in the contemporary business environment. Nguyen et al. (2019) stated that accountant qualifications have a favorable impact on the evolutionary stages of management accounting practices in Vietnamese firms.

In summary, the prior research results show many factors influencing ESG reporting. However, recent studies in Vietnam mainly focus on determinants affecting ESG information disclosure, such as firm size, profitability, foreign ownership ratio, state ownership ratio, board structure, pressure from stakeholders, operation fields, and development opportunities of businesses (Khanh & Tuan, 2018; Luc & Phuoc, 2019; Tran & Nguyen, 2021; Nguyet & Hai, 2023). Vietnamese businesses are currently learning how to apply ESG, so research on ESG reporting in Vietnam is still limited.

Therefore, the purpose of this study is to determine the factors impacting the readiness for ESG reporting in Vietnamese companies, providing further empirical evidence on sustainability development in emerging markets. Based on the relevant theories and literature review, the following hypotheses are proposed:

- H1: Business executives' ESG awareness positively affects the readiness for ESG reporting.
- H2: Public media pressure positively affects the readiness for ESG reporting.
- H3: Women's participation on management boards positively affects the readiness for ESG reporting.
- H4: Governmental guidelines positively affect the readiness for ESG reporting.
- H5: Information technology systems positively influence the readiness for ESG reporting.
- H6: Management processes positively influence the readiness for ESG reporting.
- H7: Accountant qualifications positively influence the readiness for ESG reporting.

2. METHOD

The primary data were collected via a survey using questionnaires. This survey aimed to collect information about the opinions of managers and employees on ESG reporting and the influential factors on the readiness for ESG reporting in Vietnamese companies. A sample size of 169 respondents was collected. The sampling method was convenient, utilizing an online questionnaire distributed to members of the board of management, board of directors, department managers, accountants, and employees working in manufacturing, commercial, and service companies in Hanoi and its surrounding areas through Google Forms.

Table 1 describes the sample characteristics such as working position, enterprise age, ownership, total assets, and listing status. Out of the 169 respondents in the survey, 76 individuals (45%) work in the service sector. Other respondents work in multi-industry, commercial, and manufacturing sectors. Nearly half of the survey participants (48.5%) are employed at enterprises with assets of over VND 100 billion, of which most work at unlisted firms (over 82%).

Table 1. Sample characteristics

Characteristics	Frequency	Percent				
Industry						
Multi sectors	35	20.7				
Services sector	76	45.0				
Manufacturing sector	24	14.2				
Commercial sector	34	20.1				
Working p	ositions	_				
Board of Management	37	21.9				
Board of Directors	10	5.9				
Employees	55	32.6				
Department Managers	67	39.6				
Firm	Age					
Less than ten years	60	35.5				
Ten years or more	109	64.5				
Owne	rship					
Non-State-owned	137	81.1				
State-owned	32	18.9				
Total A	ssets	_				
Less than VND 20 billion	53	31.4				
From VND 20 billion to VND 50 billion	18	10.7				
From VND 50 billion to VND 100 billion	16	9.5				
Above VND 100 billion	82	48.5				
Listing Status						
Non listed companies	139	82.2				
Listed companies	30	17.8				
Total	169	100.0				

The seven independent variables include executives' ESG awareness, public media pressure, women's participation in boards, governmental guidelines, information technology systems, management process, and accountant qualifications in ESG. The measurement of independent variables is provided in Table A1, Appendix A. To investigate these determinants' impact on ESG reporting readiness, a questionnaire used a five-point Likert scale. The analysis was conducted using SmartPLS 4 software, encompassing two fundamental models: measurement and structural. The measurement model, tested in SmartPLS, aims to uncover relationships between the variables. This process involves evaluating the measurement models, considering the quality of observed variables, the scale's reliability, convergence, and discriminant validity.

Based on the theoretical framework and the literature review, ESG reporting readiness is measured as whether the company has built an ESG reporting plan, prepared a budget and technology information system for ESG reporting, regularly paid attention to stakeholders to implement ESG, and reviewed periodically stakeholders' expectations of ESG reporting. In other words, the company is ready to show a good understanding of ESG practices and prepare the necessary conditions to enhance ESG reporting.

3. RESULTS

This study assesses the scale's reliability through Cronbach's Alpha and composite reliability. As shown in Table 2, the outer loading factors are greater than or equal to 0.6, demonstrating the observed variables are acceptable (Hair et al., 2014). Next, the results show Cronbach's Alpha coefficients varying from 0.857 to 0.97 and composite reliability coefficients ranging from 0.903 to 0.976. The threshold of 0.7 is acceptable for both Cronbach's Alpha and composite reliability (Devellis, 2012; Henseler et al., 2015; Bagozzi & Yi, 1988). In addition, the average variance extracted (AVE) values of the variables are 0.739, 0.659, 0.75, 0.825, 0.76, 0.76, 0.7, and 0.892, respectively, which are more than 0.5, indicating that convergent validity is relevant.

Table 2. Cronbach's Alpha and composite reliability

Items	Factor loading			Average Variance Extracted (AVE)				
	AW – B	usiness exec	utives' ESG	awareness				
AW1	AW1 0.831							
AW2	0.882							
AW3	0.821	0.912	0.934	0.739				
AW4	0.895							
AW5	0.868							
		PR – Public r	media press	ure				
PR1	0.759							
PR2	0.846							
PR3	0.857	0.874	0.906	0.659				
PR4	0.816							
PR5	0.777							
	WM -	Women on	manageme	nt boards				
WM1	0.797							
WM2	0.878		•					
WM3	0.891	0.916	0.937	0.75				
WM4	0.89							
WM5	0.869							
	G	U – Governn	nental guide	elines				
GU1	0.947							
GU2	0.862							
GU3	0.933	0.057	0.966	0.825				
GU4	0.88	0.957						
GU5	0.919							
GU6	0.903							
	IT – I	nformation	technology	systems				
IT1	0.888							
IT2	0.848	*						
IT3	0.915	0.921	0.94	0.76				
IT4	0.828							
IT5	0.876							
	N	л ЛР – Manage	ement proce	esses				
MP1	0.898							
MP2	0.872							
MP3	0.855	0.921	0.94	0.76				
MP4	0.88							
MP5	0.852							
	A	C – Accounta	nt qualifica	tions				
AC1	0.873							
AC2	0.859	0.857	0.903	0.7				
AC3	0.886	0.657	0.903	0.7				
AC4	0.718							
		ESG report	ing readine	ss				
ESGR1	0.947							
ESGR2	0.951							
ESGR3	0.946	0.97	0.976	0.892				
ESGR4	0.935	935						
ESGR5	0.943							

It is recommended that differentiation be ensured when the square root of the average variance extracted (AVE) for every latent variable is greater than all correlations between them (Fornell & Larcker, 1981). Discriminant validity shows the degree of non-correlation between an indicator set for measuring one concept and an indicator set for measuring another concept. Table 3 indicates all the distinguishing variables have the square root of AVE higher than the corresponding correlation coefficient.

Table 3. Discriminant validity test

	AC	AW	ESGR	GU	ΙT	MP	PR	WM
AC	0.837							
AW	0.32	0.86						
ESGR	0.798	0.435	0.944					
GU	0.217	0.077	0.219	0.908				
ΙΤ	0.404	0.223	0.48	0.13	0.924			
MP	0.596	0.406	0.767	0.163	0.29	0.872		
PR	0.368	0.608	0.432	0.062	0.279	0.36	0.812	
WM	0.593	0.302	0.724	0.083	0.341	0.55	0.278	0.866

Note: AW – Business executives' ESG awareness; PR – Public media pressure; WM – Women on management boards; GU – Governmental guidelines; IT – Information technology systems; MP – Management processes; AC – Accountant qualifications; ESGR – ESG reporting readiness.

The structural model test begins with the consideration of the variance inflation factor (VIF) (which should be less than 5), p-values (less than 0.05), and R-square of every latent variable to consolidate the prediction of the structural model. As shown in Table 4, the VIF results show that the indicators of the independent variable are all less than 5, so multicollinearity is unlikely to occur. Besides, business executives' ESG awareness, governmental guidelines, and public media pressure variables have p-values of 0.27, 0.294, and 0.368, respectively, which are more significant than 0.05, so the impact of these three variables is insignificant and will not affect ESG reporting readiness. The results show that accountant qualifications, information technology systems, management processes, and women on management boards positively affect ESG reporting readiness, respectively; *p*-values are significant and less than 0.05.

Table 4 shows the original sample results of beta values of four variables, accountant qualifications, information technology systems, management processes, and women on management boards, of 0.355, 0.123, 0.335, and 0.256, respectively. Thus, regarding the impact level from strong to weak on ESG reporting readiness, the ranking of the above four variables is accountant qualifications,

Table 4. p-values and original sample results

Path	Beta	Standard Deviation (STDEV)	t-statistics	p-values	VIF
$AC \rightarrow ESGR$	0.355	0.05	7.137	0.000	2.04
AW → ESGR	0.053	0.048	1.104	0.270	1.704
$GU \rightarrow ESGR$	0.044	0.041	1.051	0.294	1.062
IT → ESGR	0.123	0.036	3.389	0.001	1.249
MP → ESGR	0.335	0.054	6.235	0.000	1.837
PR → ESGR	0.040	0.044	0.901	0.368	1.704
WM → ESGR	0.256	0.041	6.28	0.000	1.744

Note: R2 = 0.835. AW - Business executives' ESG awareness; PR - Public media pressure; WM - Women on management boards; GU - Governmental guidelines; IT - Information technology systems; MP - Management processes; AC - Accountant qualifications; ESGR - ESG reporting readiness.

management processes, women on management boards, and information technology systems. The *R2* adjusted value is 0.835, so the independent variables can explain 83.5% of the ESGR's variability.

4. DISCUSSION

The study results show that women's participation on management boards, information technology systems, management processes, and accountant qualifications positively affect the readiness for ESG reporting. However, business executives' ESG awareness, public media pressure, and governmental guidelines have no impact on ESG reporting readiness.

First, H1 is rejected. The business executives' ESG awareness does not positively influence the readiness for ESG reporting in Vietnam (*p*-value = 0.270 more than 0.05). This outcome contrasts with Huang et al. (2020), who stated that the environmental awareness of the leaders positively affects the technological innovation of companies. However, these findings agree with PwC (2022) that the barriers to implementing ESG in Vietnam are the lack of knowledge and government guidance, not the awareness of firm leaders.

Second, H2 is rejected. Public media pressure does not affect the readiness for ESG reporting in the surveyed enterprises (*p*-value = 0.368 more than 0.05). This finding contrasts with Buniamin et al. (2018), who found that public media interest increases the engagement level of ESG disclosure. Vietnamese companies might think that ESG information may damage them, so they tend not to report it to outsiders.

Therefore, ESG reporting and disclosure are not affected by pressure from the public media.

Third, H3 is accepted. Women's participation on management boards positively impacts the readiness for ESG reporting (p-value = 0.000 less than 0.05). The number of women on the director and management boards improved the ESG disclosure levels in Vietnamese enterprises. The women's board participation positively influences ESG disclosure since women encourage companies to concentrate on sustainability activities and disclosure. In addition, having women on the board represents a socially responsible organization aware of gender diversity. This finding also confirms that female directors are positively correlated with the performance of ESG. This result aligns with Bear et al. (2010), Kiliç et al. (2015), Arayssi et al. (2016), and Kamaludin et al. (2022), who highlighted the influential role of women in boards on the ESG implementation.

Fourth, H4 is rejected. Governmental guidelines do not positively affect the readiness for ESG reporting in Vietnam (p-value = 0.294 more than 0.05). Companies do not suppose that government guidelines affect ESG reporting in Vietnam. The reason may be that the Vietnamese government recently promulgated various policies to encourage green projects and a circular economy (Ha, 2023). However, the interpretation of these guidelines is not fully provided in practice. This finding could not confirm the research results of Darnall et al. (2022) and Romito and Vurro (2020), who found that governmental guidance is a proper framework employed by companies to disclose their sustainability information publicly.

Fifth, H5 is accepted. Information technology systems positively influence the readiness for ESG reporting in Vietnamese enterprises (*p*-value = 0.000 less than 0.05). IT systems are essential for implementing ESG strategies into daily business operations and making decisions. Information technology systems play a crucial role in making ESG more effective and efficient. This finding aligns with Su et al. (2023) and Delloite (2023), indicating that information technology systems play an essential role in organizational innovations and changes in ESG.

Sixth, H6 is accepted. Management processes positively influence the readiness for ESG reporting (*p*-value = 0.000 less than 0.05). Intelligent manufacturing in production and operation improves the quality of businesses' information environment and ESG performance. This finding aligns with the conclusions drawn by Niu et al. (2022) and Nguyen et al. (2023), underscor-

ing the positive influence of the management process on ESG.

Lastly, H7 is accepted (p-value = 0.000 less than 0.05). Accountant qualifications in ESG positively influence the readiness for ESG reporting in Vietnam. Accountants are the people who are directly involved in preparing ESG reports, so they significantly ensure the social responsibility of enterprises' sustainable development strategies. Internationally certified accountants play a crucial role in ESG reporting practices since they can cooperate with foreign experts and international standards in diverse fields, given the highly interdisciplinary nature of ESG integration. Moreover, accountants help businesses follow ESG principles integrated into their financial reporting. This finding aligns with the conclusions drawn by Manoj and Mini (2022) and Ramadhan et al. (2023), highlighting accountants' contribution to ESG reporting.

CONCLUSION

The purpose of this study was to explore the determinants influencing the readiness for ESG reporting in Vietnamese enterprises. The study results show that accountant qualifications, management processes, women on management boards, and information technology systems positively and significantly affect ESG reporting readiness in enterprises. First, this study emphasizes how important gender diversity is in corporate governance. Increasing women's involvement on management boards can foster sustainability initiatives and transparent disclosure practices within organizations. Second, these findings underscore the critical role of accountants in sustainability reporting efforts. Therefore, facilitating professional development and training for accountants can significantly enhance a company's preparedness for ESG reporting. Third, the significant influence of information technology systems and well-defined management processes suggests that Vietnamese companies should invest more in information technology systems and improve their management processes to enhance the adoption of ESG reporting. However, this study could not confirm the relationship between ESG readiness and business executive awareness, public media pressure, and governmental guidance. Despite the common belief in the critical role of executive awareness and public media pressure in other countries, this study shows that these two factors do not significantly influence ESG reporting readiness in Vietnam.

These findings provide insightful information on the dynamics of ESG reporting readiness within Vietnamese enterprises. By addressing the critical factors identified in this study, companies can strengthen their sustainability initiatives, improve transparency, and meet the evolving expectations of stakeholders and investors in an increasingly ESG-conscious business landscape. However, this study still has several limitations. First, the survey sample size of 169 companies is relatively small; there may be differences in ESG reporting practices between small, medium, and large-sized companies. Second, there may be other internal and external factors influencing ESG reporting in enterprises. Therefore, future research can expand the survey sample and explore new factors to obtain more in-depth research results.

AUTHOR CONTRIBUTIONS

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APPENDIX A

Table A1. Measurement of variables and sources of reference

Variables	Sources of reference		
AW – Business executives' ESG awareness			
AW1. The senior management understood and participated in the ESG implementation process.			
AW2. The company has a professional team that implements ESG.	Huang et al. (2020), Helfaya et al. (2023)		
AW3. The company organizes training courses on ESG implementation for senior leaders.			
AW4. Senior management organizes sharing sessions on ESG implementation.			
AW5. The senior management is truly determined and fully supports the ESG implementation process.			
PR – Public media pressure on ESG			
PR1. Media pressure drives the implementation of ESG reporting.			
PR2. Shareholder pressure drives the implementation of ESG reporting.			
PR3. Local authority/community pressure drives the implementation of ESG reporting.	Buniamin et al. (2018)		
PR4. Pressure from employees drives the implementation of ESG reporting.			
PR5. Pressure from external stakeholders such as customers, suppliers, and banks drives the implementation of ESG reporting.			
WM – Women on management boards			
WM1. Women on the Board of Directors or Board of Management pay more attention to the stakeholders'			
interests in the company.	Bear et al. (2010); Kathy		
WM2. Women on the Board of Directors/Board of Management are more sensitive to environmental	Rao et al. (2012); Kiliç et al. (2015); Arayssi et		
protection issues.	al. (2016); Kamaludin		
WM3. Women on the Board of Directors/Board of Directors are more sensitive to environmental protection issues.	et al. (2022); Velte (2016); Peng and		
WM4. Women on the Board of Directors/Board of Management, with their personalities and perspectives, contribute to more effective corporate governance.	Chandarasupsang (2023)		
WM5. The increase in the number of women on the Board of Directors/Board of Management helps increase the level and effectiveness of ESG disclosure.	(2020)		
GU – Government guidance			
GU1. State agencies have issued specific instructions on implementing environmental standards in the field of			
business operations.			
GU2. State agencies have provided specific instructions on implementing social standards in business operations.	Xenitidou and Edmonds (2014); Darnall et al.		
GU3. State agencies have provided specific instructions on implementing corporate governance standards in	(2022); Helfaya et al. (2023)		
business operations.	(2025)		
GU4. Professional associations have specific guidelines for implementing ESG in business operations. GU5. Local authorities have policies/documents to promote businesses' implementation of ESG.			
GU6. State agencies have issued documents sanctioning environmental violations in business operations.			
IT – Information technology systems			
IT1. The company has an infrastructure system in place to store and process ESG data.			
IT2. The company has software available to support ESG activities.	Granlund and		
IT3. Software related to corporate governance is updated regularly.	Mouritsen (2003); Su et		
IT4. The company is implementing/improving automation processes in its production and business activities.	al. (2023)		
IT5. The company has a cybersecurity system in place to ensure that ESG is implemented.			
MP – Management processes			
MP1. The company has clearly defined and implemented its ESG process.			
MP2. The company has built a set of environmental quality and data management standards.	Niu et al. (2022); Sun		
MP3. The company has built a set of standards on social responsibility.	and Saat (2023)		
MP4. The company has built quality standards, and corporate governance is always updated.			
MP5. The company has regular meetings to evaluate ESG performance.			
AC – Accountant qualifications			
AC1. The company's chief accountant has been trained in ESG.	Krasodomska et al.		
AC2. Accountants are regularly updated on ESG.	(2020) ; Manoj and Mini		
AC3. The expertise and skills of the chief accountant are sufficient to support ESG implementation.	(2022); Ramadhan et al.		
AC4. The chief accountant and accountants hold professional bodies' certificates.	(2023)		
ESGR – ESG reporting readiness			
ESGR1. The company has set initiatives to develop ESG reporting in the future.			
ESGR2. The company has prepared the budget for the implementation of ESG reporting.			
ESGR3. The company has clearly identified technology applications to implement ESG reporting.	Nguyen et al. (2023)		
ESGR4. The company has paid attention to the behavior of stakeholders when implementing ESG reporting.	5 , ()		
ESGR5. The company has regularly paid attention to the stakeholders' expectations when developing ESG			
reporting.			