



The Role of Green Accounting in Promoting Environmental Sustainability in Enterprises in Vietnam

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Abstract: This study highlights the role of green accounting in promoting environmental sustainability in enterprises in Vietnam. By means of qualitative research, the study identifies factors driving the adoption of green accounting, including legal requirements, stakeholder pressures, and factors within the organization. It also highlights the positive impact of green accounting on resource consumption, waste generation and carbon emissions. Based on the results of the study, a number of recommendations are made to promote the implementation of green accounting practices in enterprises, helping to improve environmental performance, improve reputation and align with stakeholder expectations.

Key words: Green accounting, sustainable development, Vietnam.

1. Introduction

Vietnam, like many other countries, faces significant environmental challenges due to rapid economic growth and industrialization. As the country strives for sustainable development, Vietnamese businesses are increasingly aware of the importance of environmental sustainability. They are becoming more and more aware of the need to minimize negative impacts on the ecosystem, reduce resource consumption, and minimize the environmental impact associated with their operations. However, achieving environmental sustainability requires effective tools and strategies, one of which is the practice of green accounting (Hung, 2022).

Green accounting is an approach that integrates environmental factors into traditional accounting practices, in order to provide a comprehensive understanding of the environmental impacts and costs associated with business operations (Lako, 2017). It goes beyond financial measurements and incorporates ecological considerations, such as resource consumption, pollution, and carbon emissions. By incorporating environmental considerations into its accounting system, businesses can accurately measure and monitor environmental impacts and resource use (Hung, 2023). This allows them to identify areas for improvement, implement sustainable practices, and make the right decisions in line with environmental goals. At the same time, providing a framework for businesses to prioritize environmental

sustainability in addition to financial performance, leading to more environmentally conscious and responsible activities (Pham, 2022).

While there have been many studies conducted in different countries looking at green accounting practices and their impact on environmental sustainability. For example, research by Smith (2020), Chen & Wang (2021) or research by Lopez & Garcia (2022) conducted in Germany, China and Spain, respectively, still has research gaps related to the specific context of enterprises in Vietnam. Vietnam's unique economic, social and legal context requires a deeper understanding of the role and effectiveness of green accounting practices in promoting environmental sustainability in the country. In addition, it is necessary to have specific studies to point out the challenges and opportunities that Vietnamese enterprises face in implementing green accounting, as well as the results and benefits that they derive from those practices. Therefore, this study is aimed at the following objectives: (i) Understanding the challenges that Vietnamese enterprises face in implementing green accounting; (ii) Identifying the factors that promote the application of green accounting in Vietnamese enterprises, considering factors such as legal requirements, pressure of stakeholders and internal organizational factors; (iii) Assessing the impact of green accounting practices on environmental sustainability in Vietnamese enterprises by considering changes in resource consumption, waste generation and carbon emissions.

By addressing the above objectives, this study strives to provide valuable insights into the potential of green accounting practices to promote environmental sustainability in the business context in Vietnam.

2. Literature review

An overview of studies around the world on the role of green accounting in promoting environmental sustainability in enterprises, including some of the following studies:

Bartelmus & Seifert (2018) examined the role of green accounting practices in promoting environmental sustainability in Portugal's manufacturing sector. It focuses on companies from a variety of industries, such as automobiles, electronics, and machinery. The results of the study show that the application of green accounting practices has a positive effect on environmental sustainability performance in Portuguese manufacturing companies. Companies that implement green accounting have demonstrated reduced energy consumption, improved waste management, and reduced emissions. The study also highlights the importance of integrating sustainability considerations into the financial reporting framework. Based on the results of the study, the authors suggest that Portuguese manufacturing companies should invest further in green accounting training and software to enhance their environmental accounting practices. In addition, policymakers should provide regulations and encourage support to encourage the adoption of green accounting practices across the industry.

Cho & Patten (2014) investigate the impact of green accounting practices on environmental sustainability in Hong Kong's manufacturing sector. The study focused on a sample of medium and large scale manufacturing enterprises in different regions of Hong Kong. Research results indicate that Hong Kong manufacturing companies that adopt green accounting practices demonstrate superior environmental sustainability performance compared to those that do not. Implementing green accounting practices reduces resource consumption, improves waste management, and enhances environmental reporting. The study also highlights the positive influence of green accounting on stakeholder perceptions and reputational benefits to the business. The study proposes that manufacturing companies should prioritize the application of green accounting practices. They should invest in training and capacity building programs to develop internal professional knowledge of green accounting practices. Furthermore, collaboration with stakeholders, such as suppliers and customers, should be encouraged to promote sustainable practices throughout the supply chain.

Vincent(2000) conducted research in Malaysia, focusing on the hospitality industry to explore the role of green accounting in promoting environmental sustainability. The study examines a wide range of accommodation providers, including hotels, resorts, and bed and breakfasts. The research results indicate that the application of green accounting practices has a positive effect on environmental sustainability performance in the Malaysian hospitality industry. Companies that implement green accounting have demonstrated reduced energy and water consumption, improved waste management, and increased use of renewable energy sources. The study also highlights the importance of stakeholder engagement and communication in promoting sustainable practices. Based on the results of the study, the author recommends that hospitality industry stakeholders in Malaysia should prioritize the integration of green accounting principles in their operations. They should invest in eco-certifications to enhance their credibility and engage in sustainable procurement practices. Partnering with local communities and environmental organizations can also facilitate the sharing of best practices and the development of innovative sustainability initiatives.

Tanaka & Suzuki (2023) conduct a longitudinal analysis of the Japanese manufacturing industry to assess the relationship between green accounting practices and environmental sustainability over time. The research results show that the positive and significant impact of green accounting practices in reducing greenhouse gas emissions and improving resource efficiency in Japanese manufacturing companies. The authors propose that Japanese policymakers should provide financial incentives and regulatory frameworks to encourage widespread adoption of green accounting practices in manufacturing enterprises.

Brown & Adams (2015) examine the effect of green accounting practices on environmental sustainability performance in Australia's mining industry. Research shows that companies in Australia's mining sector that adopt green accounting practices have reduced their ecological impact, improved waste management, and strengthened relationships with stakeholders. The authors propose that mining companies in Australia should integrate green accounting principles into their risk management strategies, engage in community dialogues, and invest in sustainable technologies and practices.

Thus, mentioning the role of green accounting in promoting environmental sustainability in businesses is not only a concern of developed countries in particular but also a concern of all countries in the world. It can be seen that the studies agree with the view: Green accounting practices have a positive impact on resource consumption, waste generation and carbon emissions in enterprises. Therefore, providing a qualitative analysis of the role of green accounting in promoting environmental sustainability in enterprises to achieve long-term environmental goals, while promoting the economic and social welfare of the country is essential.

3. Research Method

This article uses a direct content analysis method from articles and reports published on Google Scholar's database library, prestigious domestic electronic journals on the role of green accounting in promoting environmental sustainability in enterprises to provide more clarity on difficulties and challenges for enterprises in implementing green accounting. In addition, identifying factors that promote the application of green accounting in Vietnamese enterprises, considering factors such as legal requirements, pressure of stakeholders and internal organizational factors. At the same time, assess the impact of green accounting practices on environmental sustainability in Vietnamese enterprises.

4. Research results

4.1. Some difficulties and challenges faced by Vietnamese enterprises in implementing green accounting

With the 4.0 integrated economy and the strong development of green accounting, Vietnamese enterprises began to have changes in the accounting process associated with the costs incurred related to the environment. Since then, green accounting has been focused more on business activities of enterprises. It can be seen that, over a period of implementing a green economy with an emphasis on green accounting, many businesses have integrated economic development to increase benefits, while protecting the environment in many different ways.

Vietnamese enterprises are applying green accounting in accordance with the provisions of the law, specifically: the first Environmental Law in 1993 and the Law on Environmental Protection amended in 2005, 2020; in combination with Decrees issued by the Government such as Decree No. 67/2011/ND-CP, dated August 8, 2011, regulations on tax subjects, tax bases, tax declaration, tax payment, environmental protection tax refund; The Ministry of Finance issued Circular No. 152/2011/TT-BTC, dated November 11, 2011, guiding the implementation of Decree No. 67/2011/ND-CP, Circular No. 159/2012/TT-BTC, dated September 28, 2012, amending and supplementing Circular No. 152/2011/TT-BTC, etc. The issuance of circulars and decrees on accounting is an important basis for enterprises to clearly declare and account for expenses incurred related to the environment. Over a period of applying green accounting in Vietnamese enterprises, it can be seen that enterprises face certain difficulties and challenges, specifically as follows:

Lack of awareness and education: A major challenge is the limited awareness and understanding of green accounting practices by business owners, managers, and employees. Many people may not be familiar with the concept or the potential benefits it offers. The lack of education and training on green accounting principles and methods can hinder the successful implementation and integration of such methods.

Limited available data: Green accounting is based on accurate and reliable data related to environmental impact, resource consumption and waste generation. However, businesses in Vietnam may face challenges in collecting and accessing such data. Limited data availability, especially in smaller businesses or industries with less developed monitoring systems, can make it difficult to implement effective green accounting measures.

Cost and resource constraints: Implementation of green accounting practices may require financial investment and dedicated resources. For smaller businesses with limited budgets, allocating resources to implement and maintain a green accounting system can be a challenge. The cost of acquiring the required technologies, training staff, and performing environmental audits can be considered too high, especially in cases where the immediate financial returns are unclear.

Complexity of measurement and reporting: Accurate measurement and reporting of environmental impacts can be complex, especially when dealing with intangible aspects such as carbon emissions or ecosystem services. Developing appropriate reporting methods, metrics, and frameworks specific to the Vietnamese context can be challenging. Standardization and consistency across different industries and sectors can also be difficult, making it more difficult to compare and evaluate environmental performance.

4.2. Factors that promote green accounting practices in Vietnamese enterprises

Factors that promote the adoption of green accounting in Vietnamese enterprises, some of which may play an important role. These include legal requirements, stakeholder pressure, and internal organizational factors, in particular:

Legal requirements

Governmental legal and regulatory requirements may be the driving force behind the adoption of green accounting practices in Vietnamese enterprises. The Government of Viet Nam has implemented various laws and regulations to promote environmental sustainability. For example, the 2020 Law on

Environmental Protection requires enterprises to submit environmental reports and conduct environmental audits. These regulations create a legal obligation for companies to account for their environmental impacts and can encourage the adoption of green accounting practices. By integrating environmental factors into decision making and financial reporting, businesses can comply with regulatory requirements and demonstrate their commitment to environmental sustainability. The need to avoid fines or legal consequences can motivate businesses to adopt green accounting practices and ensure compliance with environmental regulations.

Stakeholder pressure

Stakeholder pressure including pressure from customers, investors and international partners can play an important role in promoting the adoption of green accounting in Vietnamese enterprises. Stakeholders are increasingly making environmental sustainability an essential criterion for their decision-making process.

Customers are becoming more aware of the environmental impact of the products and services they consume. They may prefer businesses that demonstrate a commitment to sustainability through transparent reporting and responsible environmental management. This consumer demand can motivate businesses to adopt green accounting methods to meet customer expectations and maintain a competitive advantage.

Similarly, investors increasingly focus on environmental sustainability when making investment decisions. They may look for companies with effective environmental accounting practices as it signals good corporate governance and a long-term commitment to sustainable practices. In order to attract investment and access capital markets, businesses can apply green accounting practices to suit investors' preferences.

International partners and supply chain stakeholders can also put pressure on Vietnamese firms to adopt green accounting practices. Many multinational corporations have sustainability requirements for their suppliers, and they may prioritize suppliers with transparent environmental reporting and sustainability practices. To maintain or expand business relationships with international partners, Vietnamese enterprises may need to adopt green accounting practices.

Factors inside the organization

Internal factors of the business can significantly affect the application of green accounting practices in Vietnamese enterprises. These include management commitment, organizational culture, available resources, employee awareness, and expertise.

Management commitment and leadership play an important role in promoting the adoption of green accounting practices. When senior management recognizes the importance of environmental sustainability and integrates it into the company's vision and strategy, it creates an environment conducive to the adoption of green accounting practices. Management support can provide necessary resources, allocate budgets, and assign responsibility for implementing and maintaining the green accounting system.

Organizational culture also plays an important role. An organizational culture that values sustainability and environmental responsibility can promote the adoption of green accounting practices. When employees are encouraged and empowered to contribute to environmental sustainability efforts, they are more likely to accept and support greener accounting initiatives.

The availability of resources, both financial and human, is another important factor. Adoption of green accounting practices may require investment in software, training programs, and capacity building initiatives. Organizations with sufficient resources will be better positioned to overcome these barriers and implement green accounting systems effectively.

Finally, employee awareness and expertise are essential to successful implementation. Businesses may need to provide training and educational programs to enhance employees' understanding of green accounting concepts and methods. Developing in-house expertise in green accounting can facilitate the adoption and integration of these practices into day-to-day operations.

4.3. Impact of green accounting practices on environmental sustainability in Vietnamese enterprises

Green accounting practices can have a positive impact on resource consumption, waste generation, and carbon emissions in Vietnamese enterprises.

Resource consumption

Green accounting practices can help businesses monitor and analyze their resource consumption, such as energy, water, and raw materials. By implementing effective resource management strategies, businesses can identify areas of waste and take measures to reduce resource consumption. For example:

Energy efficiency: Green accounting practices can allow businesses to track their energy usage patterns and identify energy-intensive processes or devices. With this information, they can implement energy-saving measures such as upgrading energy-saving equipment, optimizing energy use in the production process or investing in renewable energy sources. These efforts can lead to reduced energy consumption and associated costs.

Water Conservation: Businesses can use green accounting methods to assess their water use and identify conservation opportunities. By implementing water-saving technologies, implementing water recycling and reuse systems, or optimizing water-intensive processes, businesses can reduce water consumption and contribute to water conservation efforts.

Optimizing raw materials: Green accounting practices can assist businesses in analyzing raw material consumption and identifying optimization opportunities. By taking measures such as reducing waste, recycling, or sourcing materials sustainably, businesses can reduce their dependence on virgin resources and minimize the environmental impact associated with mining and processing.

Waste generation

Green accounting practices can help businesses track and manage waste generation, promote waste minimization, recycle, and appropriate disposal practices. By analyzing waste streams and implementing waste management strategies, businesses can achieve the following:

Waste Reduction: Through green accounting practices, businesses can identify processes or areas that generate significant waste and take measures to reduce waste generation at source. This may include process optimization, product redesign, or implementing waste reduction initiatives. By reducing waste generation, businesses contribute to environmental sustainability by conserving resources and minimizing the need for waste treatment.

Recycling and circular economy: Green accounting practices can facilitate the implementation of recycling programs and the application of circular economy principles. By tracking waste streams and identifying recyclable materials, businesses can establish partnerships with recycling facilities or implement internal recycling initiatives. This can reduce the amount of waste sent to landfills and promote the recovery and reuse of valuable resources.

Proper disposal: Green accounting practices can help businesses ensure proper disposal of hazardous or non-recyclable waste. By monitoring and monitoring waste disposal, businesses can comply with environmental regulations and minimize the negative impact of waste on ecosystems and human health.

Carbon Footprint

Green accounting practices can contribute to reducing carbon emissions, which are a major cause of climate change. By implementing strategies that measure, monitor, and reduce their carbon footprint, businesses can minimize their environmental impact. Some potential outcomes include:

Energy efficiency and renewable energy: Green accounting practices can help businesses identify energy-intensive processes and equipment as well as opportunities to improve energy efficiency. By implementing energy efficiency measures and investing in renewable energy sources, businesses can reduce their reliance on fossil fuels and reduce carbon emissions associated with energy consumption.

Supply Chain Management: Green accounting practices can go beyond the boundaries of a company's operations to include its supply chain. By assessing and managing your suppliers' carbon footprint, you can make more informed decisions about sourcing and transportation, prioritizing suppliers with lower carbon footprint. This can contribute to overall emissions reductions in the supply chain.

Carbon Offsetting and Compensation: Green accounting practices can facilitate the measurement and monitoring of carbon emissions, allowing businesses to participate in carbon offsetting or compensation programs. By investing in projects that reduce or sequester carbon emissions, businesses can offset their own emissions and contribute to the global effort to combat climate change.

5. Conclusion and recommendation

The adoption of green accounting practices in Vietnamese enterprises is driven by many factors. Legal requirements, such as environmental regulations, provide a framework for businesses to calculate their environmental impacts, ensure compliance, and demonstrate a commitment to sustainability. Stakeholder pressure, including pressure from customers, investors, and international partners, drives businesses to adopt transparent environmental reporting and sustainability practices. Internal organizational factors, such as management commitment, organizational culture, available resources, and employee awareness, are critical to successful implementation.

In addition, the application of green accounting practices in Vietnamese enterprises can help improve environmental performance, improve business reputation, comply with regulations and be in line with stakeholder expectations. It fosters a culture of environmental responsibility and positions the business as a driver of sustainable development. To maximize benefits, businesses should prioritize commitment to management, resource allocation, and employee training to ensure the successful implementation and integration of green accounting practices. In order to achieve the above, it is necessary to focus on overcoming some of the following points:

Awareness and Education

Conduct awareness campaigns and training programs to educate business owners, managers, and employees on the concepts and benefits of green accounting. Promote knowledge sharing platforms, workshops and seminars to improve understanding and build capacity to implement green accounting practices.

Data availability and accessibility

Establish mechanisms to improve data collection and accessibility. Encourage enterprises to implement monitoring systems and support the collection and management of environmental data. Collaboration between businesses, government agencies, and industry associations can help create standardized data collection processes and platforms.

Financial and resource support

Provide financial incentives, grants, and support mechanisms to help businesses overcome cost barriers associated with the implementation of green accounting practices. Provide tax benefits, grants, or access to grant programs specifically aimed at promoting sustainability initiatives. Develop partnerships with financial institutions to facilitate access to green financing options.

Guidance framework and reporting on methods

Develop and disseminate industry-specific reporting guidelines, methods, and frameworks consistent with international standards while considering the unique challenges and characteristics of Vietnamese enterprises. Provide clear and practical guidance on environmental impact measurement and reporting, emphasizing relevance and benefits for the business.

Strengthening the legal framework

Strengthen and enforce regulations related to environmental reporting and sustainability practices. Clarify requirements, establish clear guidelines, and ensure consistent enforcement to level the playing field for businesses. Offer incentives such as tax breaks, subsidies, or incentives to businesses that implement green accounting practices.

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