International Journal of Management, Accounting and Economic Studies
Volume 2, Number 2, 2023

Implementation of Green Accounting in Corporate Competitive Advantage Strategy

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Abstract

Article history:
Received: July 13, 2023
Revised: August 26, 2023
Accepted: October 23, 2023
Published: December 30, 2023

Keywords:
Business Strategy,
Competitive Advantage,
Green Accounting,
Operational Efficiency,
Sustainability.

Identifier:
Zera Open
Page: 111-128
https://zeraopen.com/journal/ijmaes

This study aims to examine the implementation of green accounting as a strategy in creating a company's competitive advantage through a literature study approach. Green accounting is understood as an accounting approach that integrates environmental aspects into the company's reporting and decision-making system. By analyzing several scientific articles published, the study found that the implementation of green accounting has a positive impact on operational efficiency, company reputation, and sustainability-based innovation. In addition, green accounting has also proven to be an effective tool in supporting compliance with environmental regulations and attracting the attention of investors who focus on Environmental, Social, and Governance aspects. However, there are still implementation challenges, especially in terms of limited resources, technology, and technical knowledge, especially in the MSME sector. Therefore, policy support, education, and technology adoption are essential to optimize the role of green accounting in sustainable business strategies. The results of this study are expected to be a reference for companies and stakeholders in designing integrated sustainability policies and strategies.

1. Introduction

In an era of globalization and increasingly dynamic business competition, companies are not only required to make financial profits, but also to show concern for environmental sustainability. One of the approaches that has developed in this context is the implementation of green accounting or environmental accounting. This concept emerged in response to the increasing awareness of the importance of environmental conservation in business practices and the need for a more transparent reporting system on the ecological impact of the company's operational activities (Deswanto, 2022). Green accounting functions as a tool for measuring and reporting on the company's economic activities that have an impact on the environment. Through the application of this method, companies can identify and manage environmental costs, assess resource use efficiency, and improve the company's reputation and image in the eyes of the public.

In addition, green accounting also supports the achievement of long-term sustainability which can ultimately encourage greater company value creation (Erlangga et al., 2021). In line with increasing consumer expectations of social and environmental responsibility from companies, the existence of green accounting is becoming increasingly important. Companies that are able to combine sustainability strategies with a competitive advantage have a greater chance of surviving and thriving in market competition. The competitive advantage in question is not only in terms of price or product quality, but also in the company's ability to innovate and adapt to external changes such as environmental regulations and changing consumer preferences (Qiu et al., 2020). The implementation of green accounting is not just a trend, but a strategic necessity in responding to the challenges of sustainable development. In this context, companies are required to integrate environmental accounting principles into their strategic planning.

This includes calculating environmental costs, monitoring energy and resource efficiency, and reporting emissions and waste. Companies that do this well can reap various benefits such as increased operational efficiency, reduced legal and reputational risks, as well as attractiveness to investors who increasingly consider Environmental, Social, and Governance (ESG) factors in their investment decisions (Rachmawati & Karim, 2021). However, the implementation of green accounting in the company's strategy still faces various challenges. These challenges include a lack of managerial understanding of this concept, limited resources in environmental data collection, and the lack of standard and binding reporting standards. On the other hand, some companies have shown that with the commitment of leaders and the support of stakeholders, the implementation of green accounting can be effectively integrated into the company's accounting system and become part of its competitive advantage (Sari & Nugraha, 2021).

This research aims to systematically examine the implementation of green accounting in supporting the company's competitive advantage strategy. Using a literature review approach, this paper will discuss various theoretical concepts, empirical findings, and best practices that have been carried out by companies in implementing green accounting. Through this study, it is hoped that a deeper understanding of how green accounting can be used as a differentiation strategy that has a positive impact on the company's performance and competitiveness.

Furthermore, this study will also identify the factors that determine the success in the implementation of green accounting, including the role of organizational culture, accounting information systems, and stakeholder involvement. Thus, the results of this study are expected to be a reference for company management, regulators, and academics in formulating policies and strategies for the implementation of green accounting that are effective and oriented towards long-term competitive advantage.

2. Literature Review

2.1. The Concept of Green Accounting and Its Relevance in the Business World

Green accounting, or environmental accounting, is an extension of the conventional accounting system that not only records economic transactions, but also considers the impact of the company's activities on the environment. This concept includes measuring and reporting on environmental costs, the use of natural resources, and the company's contribution to environmental pollution and damage (Damayanti & Astuti, 2022). Green accounting aims to provide a more holistic picture of a company's performance by including sustainability parameters, which include economic, social, and environmental aspects. In practice, green accounting is used to record costs such as waste management, recycling, energy conservation, and compensation for environmental damage. This information is critical for stakeholders such as investors, regulators, and the public, in assessing corporate sustainability and social responsibility.

According to Kusumawardhany (2022), the implementation of green accounting allows companies to make strategic decisions that consider environmental aspects, thereby reducing the risk of negative externalities and potential environmental litigation. In the era of industry 4.0 towards society 5.0, the existence of green accounting is becoming increasingly relevant as pressure from the public and government increases on responsible business practices. Companies that adopt green accounting demonstrate their commitment to sustainable development, which is not only important in terms of business ethics, but can also strengthen their competitive position in the global market (Dhar et al., 2022). Green accounting also supports the achievement of the Sustainable Development Goals (SDGs), especially those related to responsible consumption and production as well as action on climate change.

2.2. Competitive Advantage and Sustainability-Based Business Strategies

Competitive advantage is defined as a company's ability to create value that is unique and difficult for competitors to replicate. In the context of sustainability, these advantages can be achieved through environmentally friendly innovations, energy efficiency, good waste management, and compliance with strict environmental regulations (Erlangga et al., 2021). This advantage is not only in the form of cost efficiency, but also in brand reputation, consumer loyalty, and ease of access to markets or financing. According to Qiu et al. (2020), the implementation of green accounting can function as a catalyst in the formation of competitive advantage strategies. This is because green accounting allows companies to identify areas of resource waste and environmental impact that can be minimized, thereby improving operational efficiency.

Furthermore, the information generated from the green accounting system can be used to develop more environmentally friendly product innovations, which ultimately increases added value for customers and the market. Sustainability-based differentiation strategies are increasingly becoming a concern in the modern business landscape. Companies that are able to demonstrate that they are managing their environmental impact well will be more trusted by consumers and investors. As revealed by Rachmawati & Karim (2021), companies with good environmental performance tend to have a higher market value and are more resilient to reputational crises. Therefore, green accounting is not only a managerial and reporting tool, but also an integral part of a sustainability-based competitive strategy.

2.3. Empirical Study on the Implementation of Green Accounting in Supporting Competitive Advantage

Several empirical studies have shown a positive link between the implementation of green accounting and the achievement of competitive advantage. For example, research by Katherine and Dahlia (2019) using the Material Flow Cost Accounting (MFCA) approach in the manufacturing industry shows that companies are able to reduce production costs and increase efficiency by identifying unproductive material flows. These results reinforce the argument that green accounting is not an additional burden, but can instead be a sustainable efficiency strategy. Another study by Sari & Nugraha (2021) highlights the role of business ethics in mediating the relationship between green accounting and competitive advantage.

In this context, companies that apply green accounting principles based on ethics and social responsibility have proven to be more able to create long-term value than companies that only focus on short-term profits. This shows that green accounting is not only related to reporting, but also reflects the cultural values of the organization. In the micro, small, and medium enterprises (MSMEs) sector, Kusumawardhany (2022) also noted that understanding and concern for the concept of green accounting can strengthen the image and competitiveness of businesses. Although resource constraints are often an obstacle, the application of simple green accounting principles such as waste reduction, material reuse, and energy efficiency has had a positive impact on business sustainability. This shows that the implementation of green accounting is scalable and can be adapted by various types of organizations.

3. Method

This study uses a literature review approach as the main method in analyzing the implementation of green accounting in the company's competitive advantage strategy. This method was chosen because it provides flexibility and depth in exploring various academic perspectives and empirical findings that have been published over the past five years. The main focus of this research is to synthesize scientific articles that discuss the concept, implementation, and influence of green accounting on the performance and competitive advantage of companies from various industrial sectors.

Data is collected through a scientific article selection process obtained from reputable databases from Google Scholar. The inclusion criteria used in the selection process include: (1) articles written in Indonesian or English; (2) published in the last five years; (3) explicitly discuss green accounting, competitive advantage, and/or the sustainability of the company; and (4) the article is open access or fully accessible in PDF form.

A several selected scientific articles were used as the main source in the literature synthesis process. The analysis step begins with comprehensively reading all selected articles, then coding relevant themes, such as the definition and dimensions of green accounting, its effect on operational efficiency, its relationship with Corporate Social Responsibility (CSR), and its integration into sustainable business strategies. Content analysis techniques are used to identify patterns, relationships, and contradictions in previous research findings. Each article is analyzed not only in terms of research results, but also the methodology used, the relevance of the industry context, and the novelty of the approach applied.

The validity of the results of the literature study is maintained by ensuring triangulation of sources, where data from articles with a quantitative approach are compared with articles using a qualitative approach or case studies. In addition, cross-references between articles are used to assess the consistency of findings and provide a complete picture of the position of green accounting in supporting the company's competitive advantage. As a literature study, this study does not involve the collection of primary data from the field. Nevertheless, the strength of this approach lies in its ability to summarize and integrate various empirical findings in one systematic theoretical narrative. Therefore, the results of this research are expected to be the initial foundation for further research, both quantitative and qualitative, as well as a strategic guide for companies in formulating effective green accounting policies.

4. Results

The results of this literature study show that the implementation of green accounting is consistently associated with increasing operational efficiency, strengthening company image, and establishing a sustainable competitive advantage. In general, green accounting not only functions as a reporting tool, but also as a strategic instrument in managing resources, reducing environmental risks, and improving company performance both financially and non-financially. One of the standout results of various studies is that green accounting is able to provide clarity in identifying and measuring environmental costs that were previously hidden or undetected in conventional accounting systems. In the research conducted by Riyadh et al. (2020), it is stated that green accounting encourages transparency in reporting waste costs, carbon emissions, and energy consumption. Companies that accurately present this information are able to anticipate increasingly stringent environmental regulations, as well as gain higher trust from investors who are now increasingly considering sustainability factors in their investment decisions.

Research by Qiu et al. (2020) added that the implementation of green accounting has an indirect effect on improving managerial performance through strategic management accounting mediation. This shows that the benefits of green accounting are not only limited to cost savings, but also drive improvements in decision-making, inter-division coordination, and more efficient resource allocation. On the other hand, the role of internal control also strengthens the impact of green accounting on company performance by ensuring that environmental processes are carried out consistently and measurably. The results of the study also show that companies that implement green accounting tend to be more responsive to environmental and social issues. Research by Sari and Nugraha (2021) found that the integration of green accounting with green marketing strategies and green product development produces significant added value in strengthening the company's competitive position. Business ethics play an important mediating role in this process, as the company not only complies with regulations but also operates with the principles of sustainability embedded in its organizational culture.

At the technical implementation level, Katherine and Dahlia (2019) explain that the Material Flow Cost Accounting (MFCA) approach, which is part of green accounting, provides a clear visual map of the flow of materials in the production process. This allows companies to identify loss of non-value-added materials and take concrete remedial steps. Thus, MFCA not only improves efficiency but also reduces environmental impacts, such as solid waste or air pollution, which ultimately strengthens competitive advantage through cost efficiency and process innovation.

Furthermore, a study by Deswanto (2022) emphasizes that green accounting does not stand alone, but is part of the transformation towards sustainable accounting in the context of industry 4.0 and society 5.0. In this context, green accounting is enriched by the use of technologies such as the Internet of Things (IoT) for real-time emission measurement, as well as Enterprise Resource Planning (ERP) systems that integrate environmental data into the company's accounting system. With digital transformation, environmental data management becomes more accurate, transparent, and fast, thus supporting data-driven decision-making.

In the Small and Medium Enterprises (MSMEs) sector, Kusumawardhany (2022) revealed that although the level of reporting formality is still low, business owners who understand the principles of green accounting show a tendency to implement environmentally friendly practices such as material reuse, energy efficiency, and simple waste management. This shows that green accounting can be inclusive and adaptive to different business scales. Furthermore, a study by Dhar et al. (2022) states that education and training on green accounting need to be improved, especially in the informal sector, so that sustainability practices can be expanded and have a systemic impact on the environment and local economy.

Meanwhile, research by Rachmawati and Karim (2021) highlights that green accounting supports resource efficiency as part of a sustainability strategy. Companies that implement energy and material savings and reduce emissions, show improvements in operational performance and reduced long-term business risk. Resource efficiency is not only related to cost reduction, but also to improving the quality of the production process and the company's reputation in the eyes of consumers and business partners.

Furthermore, a study by Rakesa and Werastuti (2022) shows that green accounting positively contributes to corporate sustainability. In the textile and garment industry sector, which is known to have a high environmental burden, the implementation of green accounting through the measurement and control of liquid waste, water consumption, and carbon emissions has been proven to have a significant impact on improving the company's sustainability. Companies that actively measure and manage environmental impacts also show improved long-term financial performance because they manage to reduce externality costs that were previously not taken into account.

Research by Yuliana and Sulistyawati (2021) provides additional evidence that understanding and concern for green accounting can foster managerial awareness to innovate in a more environmentally friendly business model. In a case study on the Catfish Soy Sauce Factory in some country, it was found that the involvement of top management is a key factor in the successful implementation of green accounting. Top-level management's commitment creates a culture of sustainability that encourages the adoption of green technologies, improvements in production processes, and increased transparency of environmental reporting to stakeholders.

The results of the literature review indicate that the implementation of green accounting has a multidimensional positive impact on the company. These dimensions include: (1) operational efficiency through environmental cost management, (2) reputation enhancement through transparent sustainability reporting, (3) creation of environmentally friendly product and process innovations, and (4) strengthening relationships with stakeholders through compliance and ethical commitment to sustainability. Companies that successfully integrate green accounting into their business strategies demonstrate better resilience to regulatory pressures, social demands, and market changes. Finally, these results confirm that green accounting is not only an environmental reporting tool, but is an important pillar in a company's competitive advantage strategy. The implementation of green accounting accompanied by a deep understanding and strong organizational support will create sustainable added value and have a wide impact, not only for the company, but also for society and the environment as a whole.

5. Discussion

The results of this literature study clearly show that green accounting is not just an administrative or reporting tool, but has developed into a strategic instrument in supporting the company's competitive advantage. These findings are in line with previous literature that states that a company's success in creating value no longer depends solely on cost efficiency or product differentiation, but also on how far the company is able to integrate sustainability into its business model (Erlangga et al., 2021). The implementation of green accounting helps companies identify hidden environmental costs, assess operational risks related to environmental issues, and utilize this information to make strategic decisions that support efficiency and innovation. In this context, green accounting is an important foundation for companies to build business models that are adaptive to regulatory demands and social expectations. The success of green accounting implementation is largely determined by the organization's capacity to manage environmental data, the commitment of company leaders, and the integration of sustainability reporting systems into broader managerial processes.

However, these results also show that the challenges of implementing green accounting are still quite significant, especially in the context of MSMEs and labor-intensive industrial sectors. As pointed out by Kusumawardhany (2022), there are still limitations in the technical understanding and financial capabilities to implement a comprehensive environmental accounting system. Therefore, the role of the government and training institutions is very important in providing education and incentives so that green accounting can be widely applied, not only in large companies but also in the medium and small business sectors. The discussion also highlighted the importance of the linkage between green accounting and other dimensions of business strategy, such as green marketing, sustainable product development, and Corporate Social Responsibility (CSR). In this case, green accounting acts as a bridge between social responsibility and economic value creation. This integration not only improves efficiency and reputation, but also forms a future-oriented corporate identity, which is increasingly appreciated by consumers and investors alike.

Digital transformation is also a driver in strengthening the implementation of green accounting. The adoption of technologies such as IoT and ERP enables real-time collection and analysis of environmental data, which improves reporting accuracy and enables fast and informed decision-making. However, this transformation also requires the readiness of human resources who understand both the technical and conceptual aspects of green accounting. Therefore, investment in training and human resource development is an important prerequisite for the successful implementation of a green accounting strategy. By paying attention to these complexities, it can be concluded that a successful implementation of green accounting requires a systemic and collaborative approach, where aspects of regulation, technology, organizational culture, and stakeholder participation interact with each other. In this context, green accounting not only contributes to short-term efficiency, but also to the long-term sustainability of the company. Therefore, the integration of green accounting into the company's strategy is a step that is not only economically rational, but also ethical and future-oriented.

6. Conclusion

This research confirms that the implementation of green accounting is a strategic element that can increase the company's competitive advantage. Through a literature review approach, it was found that green accounting not only functions as an environmental impact reporting system, but also as a managerial instrument to improve the efficiency, transparency, and sustainability of company operations. The implementation of green accounting has been proven to be able to uncover previously invisible environmental costs, improve decision-making systems, and increase compliance with regulations and market expectations that lead to sustainability. In addition, the integration of green accounting with business practices such as CSR, green marketing, and digital technology has been proven to expand its positive impact in shaping a responsible and innovative company image.

Companies that actively apply green accounting principles tend to have an advantage in creating added value that is difficult for competitors to replicate, as well as being more adaptive to market changes and the external environment. However, the implementation of green accounting still faces challenges, especially in terms of technical understanding, human resources, and information system readiness, especially in the MSME sector. Therefore, collaboration between companies, regulators, academics, and the public needs to be strengthened so that green accounting can be implemented widely and effectively. Thus, green accounting deserves to be placed as part of the company's core strategy towards a sustainable and competitive business in an increasingly environmentally conscious global era.

References

Damayanti, A., & Astuti, S. B. (2022). Pengaruh Green Accounting Terhadap Kinerja Perusahaan. *Relevan: Jurnal Riset Akuntansi*, *2*(2), 116-125.

Deswanto, V. (2022). Literature Review: Green Accounting Era 4.0 Menuju Society 5.0. *Jurnal Riset Akuntansi Dan Manajemen Malahayati*, *11*(2), 42-48.

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.

Erlangga, C. M., Fauzi, A., & Sumiati, A. (2021). Penerapan green accounting dan corporate social responsibility disclosure terhadap nilai perusahaan melalui profitabilitas. *Akuntabilitas*, *14*(1), 61-78.

Katherine, G. A., & Dahlia, L. (2019). Analisis Penerapan Environmental Management Accounting dengan Material Flow Cost Accounting untuk Meningkatkan Keunggulan Kompetitif Perusahaan (Studi Kasus PT. IPT). *E-Prosiding Akuntansi*, *1*(01).

Kusumawardhany, S. I. (2022). Strategi green accounting sebagai bagian penerapan etika bisnis pada UMKM. *Jurnal Akuntansi Dan Bisnis*, *2*(2), 25-32.

Qiu, L., Jie, X., Wang, Y., & Zhao, M. (2020). Green product innovation, green dynamic capability, and competitive advantage: Evidence from Chinese manufacturing enterprises. *Corporate Social Responsibility and Environmental Management*, *27*(1), 146-165.

Rachmawati, W., & Karim, A. (2021). Pengaruh Green Accounting Terhadap Mfca Dalam Meningkatkan Keberlangsungan Usaha Serta Resource Efficiency Sebagai Variabel Moderating (Studi Kasus Pada Perusahaan Peraih Penghargaan Industri Hijau). *Tirtayasa Ekonomika*, *16*(1), 59-82.

Rakesa, P. R. C., & Werastuti, D. N. S. (2022). Pengaruh Penerapan Green Accounting Dan Material Flow Cost Accounting Terhadap Corporate Sustainability: Studi Empiris Pada Perusahaan Tekstil Dan Garmen Yang Terdaftar Di Bursa Efek Indonesia. *JIMAT (Jurnal Ilmiah Mahasiswa Akuntansi) Undiksha*, *13*(04), 1141-1152.

Riyadh, H. A., Al-Shmam, M. A., Huang, H. H., Gunawan, B., & Alfaiza, S. A. (2020). The analysis of green accounting cost impact on corporations financial performance. *International Journal of Energy Economics and Policy*, *10*(6), 421-426.

Sari, N. P., & Nugraha, D. A. D. (2021, December). Peran Etika Lingkungan Bisnis Dalam Memediasi Pengaruh Green Product, Green Marketing Dan Green Accounting Terhadap Keunggulan Bersaing Pascapandemi Covid-19. In *Prosiding Seminar Nasional Dan Call For Papers Fakultas Ekonomi Universitas Kristen Immanuel* (pp. 120-132).

Yuliana, Y. K., & Sulistyawati, A. I. (2021). Green accounting: pemahaman dan kepedulian dalam penerapan (studi kasus pada Pabrik Kecap Lele di Kabupaten Pati). *Solusi*, *19*(1), 45-59.