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Sustainability Accounting as an Instrument for Green Economy and the Achievement of SDGs

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Abstract

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This study aims to examine the role of sustainability accounting in supporting the green economy, achieving the Sustainable Development Goals, and enhancing social welfare. The research adopts a qualitative approach through a literature review of academic that discuss sustainability accounting, the Triple Bottom Line, and their connection to social and environmental issues. The findings reveal that the application of sustainability accounting based on Triple Bottom Line expands corporate accountability by reporting economic, social, and environmental impacts in a more transparent manner. Furthermore, this practice not only improves corporate reputation and legitimacy but also contributes positively to profitability and competitiveness. However, the main challenges remain in the high implementation costs, limited managerial capacity, and low awareness among small and medium-sized enterprises. Despite these obstacles, opportunities for development are growing through regulatory support, investor pressure, and the adoption of digital technologies in sustainability reporting. Sustainability accounting can be regarded as a strategic instrument that not only strengthens economic performance but also promotes social welfare and environmental preservation.

1. Introduction

The issue of sustainability has become an increasingly urgent global concern along with the increasing challenges of economic, social, and environmental development. The development model based on resource exploitation without regard to ecological balance is no longer considered relevant, because it produces serious consequences such as the climate crisis, environmental degradation, and increasing social inequality. Therefore, the global development paradigm has shifted towards a green economy and sustainable development principles that are integrated in the 2030 Sustainable Development Goals (SDGs). In this context, sustainability accounting is present as an important instrument to ensure transparency, accountability, and measurement of organizational impact more broadly, not only limited to financial aspects but also social and environmental aspects (Nicholls, 2020).

The paradigm shift from traditional accounting to sustainability accounting is driven by the need to assess organizational performance based on a triple bottom line (TBL) framework, which includes economic, social, and environmental dimensions. This approach focuses not only on profits, but also on the company's impact on society and ecosystems. Recent research shows that the implementation of TBL has a significant influence on sustainable economic development, where the social dimension contributes positively to community welfare, while the environmental dimension plays a role in maintaining the sustainability of resources (Nogueira et al., 2022). Thus, sustainability accounting is a key element in driving economic transformation towards a greener, fairer, and more inclusive direction.

The relationship between sustainability accounting and the green economy is very close because they both have the same goal, which is to create long-term value by integrating economic efficiency, social responsibility, and environmental conservation. The implementation of green accounting, for example, allows companies to measure environmental costs, internalize the impact of externalities, and increase investor and stakeholder awareness of sustainability. In addition, the existence of reporting standards such as the Global Reporting Initiative (GRI) and Environmental, Social, and Governance (ESG) has driven sustainability accounting practices more broadly, both at the international and national levels (Bosi et al., 2022).

The urgency of research on sustainability accounting is increasing due to its relationship to social welfare and the achievement of the SDGs. Modern social challenges such as poverty, inequality, and environmental degradation require accountability mechanisms that are able to ensure that companies and governments not only pursue economic growth, but also participate in creating collective well-being (Hariram et al., 2023). In Indonesia, this is also relevant to the increasingly stringent sustainable development policies and environmental regulations, including sustainability reporting obligations by public companies. Thus, the study of the role of sustainability accounting in supporting the green economy and social welfare is not only important for the academic literature, but also crucial in supporting public policy and corporate practice.

However, there are research gaps that still need to be answered. First, the extent to which the implementation of sustainability accounting in Indonesia really supports the transformation towards a green economy has not been studied in depth. Second, the contribution of sustainability accounting to improving social well-being is often measured in a limited way, while its long-term impact on reducing inequality and alleviating poverty remains unclear (Bilan et al., 2020). Third, the challenges of implementing sustainability accounting such as high costs, regulatory limitations, and low stakeholder awareness are still major obstacles to its adoption. Therefore, this research has several main objectives. First, examine the relationship between sustainability accounting and the implementation of the green economy, especially in the context of national development and the achievement of the SDGs. Second, assess the role of sustainability accounting in supporting social welfare through more comprehensive social impact measurement. Third, identify challenges and opportunities for the implementation of sustainability accounting in Indonesia, both in terms of regulations, costs, and awareness of business actors.

The contribution of this research is expected to be useful both academically and practically. From the academic side, this study enriches the literature on the relationship between sustainability accounting, green economy, and social welfare by referring to the triple bottom line approach. From a practical perspective, the results of this research can provide strategic recommendations for companies in improving sustainability practices, for the government in formulating more effective regulations, and for the public to increase awareness of the importance of sustainability. Thus, this research is strategically positioned to answer academic and practical needs in facing global and national sustainability challenges.

2. Literature Review

2.1. Sustainability Accounting and the Triple Bottom Line

Sustainability accounting emerged as a response to the limitations of traditional accounting that overemphasizes the financial aspect. In the modern context, organizations are required to account not only for economic performance, but also for their social and environmental impacts. This concept is rooted in the triple bottom line (TBL) paradigm which assesses a company's success based on three pillars: profit (economic), people (social), and planet (environmental). A number of recent studies confirm that the implementation of TBL has increased corporate accountability and transparency, as well as contributed to sustainable long-term value creation (Jayashree et al., 2021). In practice, TBL allows companies to balance the interests of shareholders with other stakeholders such as society, employees, and the government. Research by Nogueira et al. (2022) shows that the social dimension of TBL contributes positively to economic development through improving people's quality of life.

Meanwhile, the environmental dimension has a significant impact on preserving natural resources that are the foundation of economic activities. The implementation of TBL-based sustainability accounting is also considered important in increasing the legitimacy of the organization in the eyes of the public, especially in the midst of increasing consumer awareness of sustainability issues (Bilan et al., 2020). Thus, TBL-based sustainability accounting is not only a trend, but a strategic need in the green economy era. The integration of economic, social, and environmental aspects in the organization's financial statements is believed to strengthen the company's position in the increasingly competitive global market, as well as support the achievement of sustainable development goals.

2.2. Green Economy dan Sustainable Development Goals (SDGs)

The concept of green economy has become the center of global attention in an effort to overcome the environmental crisis while answering social welfare challenges. Green economy refers to economic development that is low-carbon, resource-efficient, and socially inclusive. In relation to sustainability accounting, the green economy encourages the need for accounting instruments that are able to measure the costs and benefits of economic activities on the environment and society. Research by Rounaghi (2019) shows that the implementation of sustainability accounting provides a transparent framework for companies to integrate green economy principles in their business strategies. In line with that, the link between the green economy and the achievement of the Sustainable Development Goals (SDGs) is also increasingly real.

The Hariram et al. (2023) study confirms that the implementation of TBL through sustainability accounting can accelerate the achievement of the SDGs, especially related to poverty alleviation (SDG 1), decent work and economic growth (SDG 8), and climate action (SDG 13). In addition, companies that adopt green accounting tend to have better financial performance due to increased investor and stakeholder trust. Not only the private sector, but also the public sector plays an important role. Bosi et al. (2022) found that the implementation of sustainability reporting in the government sector is able to increase fiscal accountability while supporting SDGs targets. This shows that the green economy and sustainability accounting cannot be separated from sustainable development strategies, both at the global and national levels.

2.3. Implementation Challenges and Opportunities

Although the relevance of sustainability accounting is increasingly recognized, its implementation still faces a number of challenges. One of the main obstacles is the high cost required to adopt a reporting system that complies with international standards. Small and medium-sized companies often struggle to meet Global Reporting Initiative (GRI) or Environmental, Social, and Governance (ESG) standards. In addition, low managerial awareness and commitment are also obstacles in integrating sustainability accounting into business practices. However, implementation opportunities are also increasingly open. The application of circular economy concepts and material flow cost accounting, for example, can help companies reduce production costs while improving resource use efficiency (Huang et al., 2019).

In addition, increasing pressure from investors and consumers on ethical and environmentally friendly business practices is encouraging companies to take sustainability accounting more seriously. The study of Aramburu and Pescador (2019) shows that corporate social responsibility aligned with TBL principles can improve reputation and competitiveness in the global market. Furthermore, digitalization and modern accounting technology also provide opportunities for more effective implementation of sustainability accounting. With strong regulatory support and collaboration between stakeholders, sustainability accounting has the potential to become a key instrument in driving the green economy while improving social welfare in the modern era.

3. Methods

This study uses a qualitative approach with a literature review method. This approach was chosen because the focus of the research is to understand the conceptual relationship between sustainability accounting, green economy, triple bottom line, and social welfare. According to Nicholls (2020), qualitative approaches are relevant for examining complex and multidimensional phenomena, particularly in the context of sustainability accounting that involves not only quantitative data but also social, ethical, and environmental interpretations. Literature studies provide space to identify patterns, research gaps, and opportunities for theory and practice development. The data sources for this research come from indexed international and national journal articles, academic books, and official policy documents related to sustainability accounting, green economy, and sustainable development. Secondary data were selected to gain an in-depth understanding of the latest theoretical and practical developments.

Articles used are limited to the last 5 years of publication to ensure relevance to contemporary issues. For example, Jayashree et al (2021) research discusses the impact of triple bottom line on financial reporting, while Boar et al. (2020) reviews the relationship of TBL to the SDGs. Thus, an analytical framework is constructed from the current literature that reflects global dynamics. The research stage begins with the process of identifying the literature. The author uses keywords such as sustainability accounting, green economy, triple bottom line, and social welfare through the Google Scholar database and other credible academic journals. After that, an article selection was carried out based on inclusion criteria, namely: (1) published between last five years, (2) directly discussing the theme of sustainability, accounting, green economy, or SDGs, and (3) available in full-text form. Articles that do not meet the criteria, such as non-peer-reviewed publications or that only address the technical aspects of accounting with no relevance to sustainability, are excluded from the analysis.

Next, a content analysis process is carried out. This technique is used to interpret key findings in the literature, group research results based on major themes (sustainability accounting, green economy, and social welfare), and identify research gaps. According to Torelli et al. (2020), content analysis is the right method in sustainability studies because it is able to uncover the relationships between concepts that are not always seen in quantitative analysis. This analysis also allows for the formulation of theoretical arguments that are consistent with the development of global practice.

To improve the validity of the study, the authors used the source triangulation strategy. The literature obtained is compared with each other to ensure the consistency and reliability of the information. For example, the findings regarding the relationship between green accounting and financial performance (Ye & Dela, 2023) were verified with similar research results from Aramburu and Pescador (2019). In this way, bias in interpretation can be minimized, while strengthening the study's conclusions. Finally, the results of the literature analysis are compiled in the form of a descriptive narrative that explains how sustainability accounting supports the green economy and social welfare, what are the challenges of its implementation, and its contribution to the SDGs. This qualitative approach through the literature study allows the author to present a comprehensive mapping of the latest developments while making theoretical and practical contributions.

4. Results

The results of this literature study-based research show that sustainability accounting practices have undergone significant development in both global and national contexts. At the international level, more and more companies are adopting reporting standards such as the Global Reporting Initiative (GRI) and the Sustainability Accounting Standards Board (SASB). This reflects a paradigm shift from traditional accounting that focuses solely on financial performance to a more comprehensive approach to measuring economic, social, and environmental impacts. Harvey's (2023) confirms that the triple bottom line (TBL) approach in sustainability accounting is able to provide a “ripple effect” on financial statements by internalizing social and environmental costs that have often been ignored. Thus, reporting no longer simply reflects financial conditions, but also presents a clear picture of a company's contribution and risks to society and ecosystems.

In the context of Indonesia, the development of sustainability accounting is also increasingly visible even though it still faces a number of obstacles. The Financial Services Authority (OJK) has required public companies to prepare sustainability reports as part of corporate accountability. This implementation has had a positive impact, especially in the energy sector which is one of the largest emitters. Research by Ye and Dela (2023) shows that energy companies that implement green accounting, green intellectual capital, and corporate social responsibility (CSR) not only improve financial performance, but also strengthen investor confidence. However, the same results have not been fully reflected in small and medium enterprises (SMEs) which are often constrained by costs, limited knowledge, and low managerial awareness. This is in line with the findings of Qian et al. (2021) who identified that the main obstacle to the implementation of sustainability accounting in developing countries lies in limited resources and low understanding among corporate decision-makers.

Furthermore, the integration of sustainability accounting with public policy is also an important factor in the effectiveness of its implementation. A study by Izzo et al. (2020) conducted in Italy shows that the public sector can use sustainability reporting to improve fiscal accountability while supporting the achievement of the Sustainable Development Goals (SDGs). If a similar model is consistently adopted in Indonesia, then sustainability accounting practices will not only benefit private companies, but can also be an instrument for the government in strengthening the legitimacy of sustainable development policies and national competitiveness. Thus, it can be concluded that both the public and private sectors have an equally important role in realizing sustainability practices through accounting instruments.

The relationship between sustainability accounting, the green economy, and the SDGs also seems to be getting closer. According to Rounaghi (2019), sustainability accounting provides a measurable framework for assessing the transformation of the green economy. With transparent reporting on social and environmental impacts, companies can increase public legitimacy while ensuring alignment of business activities with low-carbon development principles. The Boar et al. (2020) study emphasizes that the application of TBL principles in sustainability accounting directly supports the achievement of the SDGs, especially in the aspects of poverty alleviation (SDG 1), decent work and economic growth (SDG 8), and climate action (SDG 13). This proves that sustainability accounting is not just a reporting tool, but an important strategy to achieve global development goals. In line with that, Bilan et al. (2020) research found that the relationship between social, economic, and environmental dimensions in TBL is mutually reinforcing and has a real impact on sustainable development.

In practice, the implementation of sustainability accounting also shows a positive relationship with the company's financial performance. Empirical studies on Indonesia's energy sector prove that green accounting and CSR not only improve reputation, but also promote profitability. These results confirm that sustainability is not only an ethical obligation, but a business strategy that can strengthen a company's competitive advantage in the global market. Furthermore, Sharma (2019) show that social responsibility aligned with TBL principles can improve a company's reputation in the eyes of stakeholders, ultimately expanding market opportunities. In other words, sustainability accounting not only affects financial performance, but also determines long-term competitiveness.

However, the challenges of implementing sustainability accounting are still quite large. Cost barriers are becoming a dominant factor, especially in the context of medium and small-scale companies. The costs required to compile sustainability reports, build adequate information systems, and engage external consultants, are often considered additional burdens that provide no immediate benefits. This is exacerbated by low managerial awareness, where most business leaders still consider sustainability accounting to be an administrative obligation, rather than a long-term business strategy (Torelli et al., 2020).

However, the opportunity for implementation remains wide open. The application of the concept of circular economy and material flow cost accounting has been proven to be able to reduce costs while increasing the efficiency of resource use. The study of Huang et al (2019) shows that this practice can help companies not only in reducing environmental impact, but also in strengthening competitiveness through sustainable production process innovation. In addition, increasing pressure from global investors and consumers who are increasingly aware of sustainability issues is also a major driver. Investors are now more interested in companies that are committed to environmental, social, and governance (ESG), so sustainability accounting can be a determining factor in access to capital.

Furthermore, the results of the literature also show the direct impact of sustainability accounting on social welfare. The application of TBL principles allows companies to not only pursue profits, but also improve the quality of life of the community through measurable CSR programs. For example, contributions to education, health, and poverty alleviation can be reported transparently so that the public can evaluate the extent to which the company is making a positive impact. According to Nogueira et al. (2022), the social dimension of TBL has been proven to make a real contribution to economic development by reducing inequality and improving the welfare of local communities. In line with that, Qian et al. (2021) emphasize that good sustainability reporting can strengthen corporate social value and expand legitimacy in the eyes of society.

In addition, the development of digital technology also provides new opportunities for sustainability. Innovations in accounting systems based on big data, artificial intelligence (AI), and blockchain allow for more accurate, transparent, and real-time reporting. With this technology, companies can minimize the risk of data manipulation while increasing public trust. If this trend continues to evolve, sustainability accounting has the potential to become a new standard in global accounting practice. The results of the study show that sustainability accounting has a strategic role in supporting the green economy, achieving the SDGs, and improving social welfare. Despite the challenges of cost, managerial awareness, and regulatory limitations, opportunities to optimize these practices are increasingly open with the support of technology, investor pressure, and societal demands. Therefore, sustainability accounting can be seen not only as an obligation, but as a strategic investment for business sustainability and common welfare.

5. Discussion

The results of this study confirm that sustainability accounting has an important role in driving transformation towards a green economy and supporting the achievement of the Sustainable Development Goals (SDGs). The application of the triple bottom line (TBL) principle has been proven to be able to expand the scope of corporate accountability by assessing not only financial performance, but also social and environmental impact. This is in line with the findings of Harvey (2023) which shows that TBL integration has a positive impact on financial reporting while increasing corporate awareness of social responsibility. Thus, sustainability accounting can be seen as an instrument that bridges economic interests with social and ecological goals. This discussion also underlined the close link between sustainability accounting and the green economy. According to Nicholls (2020), sustainability accounting allows companies to assess their contribution to the low-carbon economic transition in a more transparent and measurable manner. This transparency is important because it increases the legitimacy of the company in the eyes of the public and investors. In addition, research by Ye and Dela (2023) shows that the implementation of green accounting not only impacts reputation, but also strengthens financial performance. In other words, sustainability accounting is not only an ethical obligation, but also a business strategy that provides added value.

However, the implementation of sustainability accounting is inseparable from challenges. Cost barriers and low managerial awareness are often holding back, especially in developing countries. Torelli et al. (2020) emphasize that many small and medium-sized companies still consider sustainability reporting to be an administrative burden, rather than a strategic investment. This condition shows that there is an urgent need for stricter regulations and government support in the form of incentives and technical assistance so that sustainability practices can be adopted more widely. In addition, the integration of sustainability accounting with public policy is also an important issue. The study of Izzo et al. (2020) shows that the public sector can leverage sustainability reporting to increase fiscal accountability and strengthen the achievement of the SDGs. This is relevant in the Indonesian context, where the government seeks to balance economic growth with environmental commitments. With collaboration between the public and private sectors, sustainability accounting can be a key pillar in supporting sustainable development.

In terms of opportunities, the development of digital technology paves the way for the adoption of more effective sustainability accounting. Innovations such as big data, artificial intelligence, and blockchain can improve accuracy, transparency, and speed of reporting. This is in line with the global trend where investors increasingly demand information disclosure related to environmental, social, and governance (ESG). Pressure from the global capital market that emphasizes the importance of green investment is also a strong driving factor for companies to immediately adopt sustainability accounting (Sharma, 2019). Furthermore, the impact of sustainability accounting on social welfare cannot be ignored. The social dimension of TBL encourages companies to contribute to improving the quality of life of the community, for example through CSR programs in the fields of education, health, and local economic empowerment. Research by Nogueira et al. (2022) shows that the implementation of TBL has a positive correlation with reducing inequality and improving community well-being. Thus, sustainability accounting is not only company-oriented, but also has a wide impact on the community and the surrounding environment.

This discussion also emphasized the existence of research gaps that still need to be followed up. Although many studies prove the benefits of sustainability accounting, research on its implementation in Indonesia is still limited. In particular, the direct contribution of sustainability accounting to social welfare has not been fully measured. In addition, the challenges of implementation costs and low managerial awareness still require practical solutions that are more applicable. Therefore, further research is needed to identify implementation models that are appropriate to the local context, especially in resource-constrained SMEs. This discussion emphasized that sustainability accounting has great potential in supporting the green economy, achieving the SDGs, and improving social welfare. However, the realization of this potential requires a joint commitment from companies, governments, and the community. Regulatory support, managerial capacity building, and the use of digital technology are key factors to ensure that sustainability accounting can be implemented effectively. Thus, the discourse on sustainability accounting is not only an academic topic, but also an important part of global and national development strategies.

6. Conclusion

Based on the results of the research, it can be concluded that sustainability accounting is a strategic instrument that is able to answer the challenges of economic, social, and environmental development in the modern era. Unlike traditional accounting which only focuses on financial statements, sustainability accounting places economic, social, and environmental aspects in a balanced manner through a triple bottom line framework. With this approach, the company not only pursues financial profits, but also ensures that its business activities provide benefits to the community while preserving the environment. The link between sustainability accounting and the green economy is also becoming clearer. The application of sustainability accounting principles is able to support the transformation towards low-carbon development, resource use efficiency, and encourage companies to be more transparent in reporting the impact of their operational activities. This makes sustainability accounting play a role not only as a reporting mechanism, but also as a business strategy that is relevant to global and national demands. In addition, the existence of sustainability accounting makes a real contribution to the achievement of the Sustainable Development Goals, especially in the fields of poverty alleviation, improving social welfare, and combating climate change.

However, the implementation of sustainability accounting still faces a number of obstacles. High costs, limited managerial capacity, and low awareness among companies, especially small and medium enterprises, are obstacles that need to be overcome immediately. However, development opportunities remain wide open in line with increasing investor demands, the development of digital technology, and regulatory support from the government. This condition shows that sustainability accounting has the potential to become a new standard in modern accounting practices that are more inclusive and fair. Sustainability accounting has a dual role, namely strengthening the company's competitiveness while making a real contribution to social welfare and environmental sustainability. Maximizing these benefits requires collaboration between the government, the private sector, and the community, as well as a commitment to building a transparent, accountable, and sustainability-oriented reporting system.

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