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The Role of Environmental Accounting in Encouraging Corporate Sustainability: Literature Review

Mutmainah[1*], Suwedy[2]
[1]Mahasiswa Program Doktor Ilmu Ekonomi Universitas Tadulako, Palu
[2]Fakultas Ekonomi dan Bisnis, Universitas Muhammadiyah Palu

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ABSTRACT

This research aims to delve into the role of environmental accounting as a driver of corporate sustainability using a qualitative approach and literature review method. Secondary data is derived from relevant studies, and data analysis employs the liter-ature review prism with filtering based on title, feasibility, and inclusion criteria. Findings indicate that green innovation influences environmental management accounting (EMA), subsequently affecting corporate value. The study also high-lights the positive impact of using green accounting in incorporating environmental costs into the financial results of company operations. Furthermore, the relationship between coercive pressure and EMA adoption varies based on firm size, and envi-ronmental information disclosure has a direct positive impact on corporate financial performance. Implications of the research encompass both practical and conceptual recommendations. Practically, companies can leverage green innovation to reinforce environmental accounting and enhance corporate value. Additionally, understand-ing that firm size moderates the relationship between coercive pressure and EMA adoption can assist companies in tailoring their strategies to specific contexts. Con-ceptually, the study contributes to environmental accounting literature by affirming that the integration of green accounting can improve corporate financial perfor-mance.

Corresponding Author:

Mutmainah
Mahasiswa Program Doktor Ilmu Ekonomi Universitas Tadulako, Palu
Email: superprian@gmail.com

1. INTRODUCTION

Corporate sustainability is a crucial issue in this modern era, where environmental and social challenges are increasingly complex. Companies are slowly starting to realize that sustainability is not only a moral responsibility, but also a necessity for long-term business continuity. In this context, the role of environmental accounting emerges as a key element in supporting and encouraging corporate sustainability efforts. Environmental accounting is no longer just a tool for recording and reporting environmental aspects, but rather a strategic instrument that can help companies integrate environmental dimensions into their business decisions (Nguyen, Le, et al., 2020).

The phenomenon of global climate change and environmental degradation is increasingly disturbing. Climate change creates additional pressure on companies to adapt to changing ecological conditions, while environmental degradation raises serious concerns for the sustainability of ecosystems. Therefore, companies are faced with demands to actively contribute to maintaining environmental integrity and reducing its negative impacts (Jain et al., 2022).

The main issue that arises is the extent to which companies are able to manage and measure their environmental impact effectively. Many companies still view sustainable business practices as an additional burden rather than a strategic opportunity (Prayogo et al., 2023). In addition, there is an information gap between companies and external stakeholders regarding the company's environmental performance. Stakeholders, including investors and consumers, are increasingly demanding transparency regarding corporate sustainability practices, but not all companies are able to present adequate and reliable information

(Maharani & Syafruddin, 2023).

In responding to these phenomena and problems, environmental accounting emerges as a potential solution. Environmental accounting not only includes recording and reporting environmental impacts, but also involves integrating environmental factors into business decision making. The use of appropriate accounting metrics can help companies measure their environmental impact, identify potential risks and opportunities, and plan sustainability measures. However, challenges arise in implementing environmental accounting effectively and turning it into a strategic tool that can create added value for companies (Hristov et al., 2021).

In conducting a literature review of the role of environmental accounting, there is a deep understanding of its relevance in facing sustainability challenges. Environmental accounting is not only retrospective, reflecting environmental impacts that have already occurred, but is also proactive in providing information to design and measure environmental impacts that will occur in the future. So, the use of environmental accounting is not just an obligation to comply with regulations, but rather as a strategy that can help companies minimize environmental risks, increase operational efficiency, and strengthen the company's image in the eyes of stakeholders.

One of the key aspects of the role of environmental accounting is its ability to provide relevant and reliable information for company management in making decisions. With an accounting system capable of measuring and tracking environmental impacts, companies can more effectively plan sustainability measures. For example, using environmental costs as a parameter in cost accounting can help companies identify potential savings through energy efficiency, better waste management, and environmentally friendly technological innovations (Asiaei et al., 2022).

Apart from that, environmental accounting also plays a role in bridging the information gap between companies and external stakeholders, such as investors, customers and the community. Through sustainability reports based on environmental accounting information, companies can increase their transparency and accountability. This can help create trust among stakeholders, which in turn can strengthen the company's position in the market and provide easier access to financial resources (Le et al., 2019).

In this context, this research aims to explore more deeply the role of environmental accounting as a driver of corporate sustainability. Detailing the concepts and theories related to environmental accounting, this research is expected to contribute new thinking and in-depth insights in supporting corporate sustainability efforts in the future. Therefore, this research is aimed at providing a better understanding of how environmental accounting can be a major force in shaping the future of sustainable business.

Although a number of studies have revealed a positive relationship between environmental accounting and corporate financial performance, there are still several research gaps that need to be addressed. Rounaghi (2019) highlights the positive impact of green accounting on company operations, however, there has been no research that focuses on the role of Green GDP in measuring the impact of sustainability and government awareness of environmental issues. Wang et al. (2020) found that environmental information disclosure has a positive impact on company financial performance, but there has been no research that focuses on the role of analyst coverage and liquidity as mediators in this relationship. Olowookere et al. (2021) explored the positive impact of environmental accounting disclosures on the financial performance of cement companies in Nigeria, however, comparisons with different sectors or different economic contexts still need to be explored further. Dhar et al. (2022) revealed a relationship between the implementation of green accounting and the sustainable development capabilities of companies with high pollution impacts, but there has been no research evaluating the role of the quality of social responsibility information in modifying this relationship. Qudah et al. (2023) shows a positive relationship between government ownership and environmental information disclosure in Indonesia, but the impact of differences in federal and regional government ownership in the context of environmental information disclosure needs to be further investigated. Therefore, future research can fill this gap to provide deeper insights into the role of environmental accounting in promoting corporate sustainability in various global contexts.

2. THEORETICAL STUDY

Environmental Accounting Theory is an important conceptual foundation in understanding the role and impact of accounting on environmental issues. This theory includes various views and approaches that discuss how environmental information can be recorded, measured and reported in the context of corporate sustainability (Scarpellini et al., 2020). One of the famous figures in developing Environmental Accounting Theory is R.H. Gray, an Australian academic who has made significant contributions to the development of concepts and frameworks in this field.

Environmental Accounting Theory generally aims to understand and provide solutions to environmental challenges faced by companies. One of the main approaches in this theory is the concept of "externalization" or externalities. Externalities refer to the impact of a company's activities that are not reflected in the company's internal costs, such as environmental pollution. R.H. Gray emphasizes that traditional accounting often fails to reflect these external costs, so a more holistic accounting system is needed (Gray & Bebbington, 2000).

Within the framework of Environmental Accounting Theory, there are several key concepts that need to be understood. First, the Full Cost Accounting (FCA) concept proposes that companies should include all costs, including environmental costs, in their financial reports. The FCA aims to provide a more complete picture of the economic impact of business activities on society and the environment. This is in accordance with the view that companies are responsible not only to shareholders, but also to all stakeholders (Iheduru & Chukwuma, 2019).

Second, R.H. Gray also contributed the concept of Social and Environmental Accounting (SEA), which describes efforts to incorporate social and environmental dimensions into company accounting systems. SEA not only involves measuring financial environmental impacts, but also seeks to communicate information about a company's social and environmental impacts to stakeholders. This includes transparent and relevant disclosure of information in corporate sustainability reports (Taïbi et al., 2020).

Environmental Accounting Theory also explores psychological and social aspects in decision making related to environmental accounting. Gray emphasizes the important role of factors such as social pressure, corporate reputation, and social norms in shaping corporate behavior regarding environmental issues. This creates a theoretical foundation that considers aspects of human behavior and external factors in the context of environmental accounting (Gray & Bebbington, 2000).

However, like every other theory, Environmental Accounting Theory is also not free from criticism. Some critics point out that the practical implementation of the concepts in this theory is still inconsistent across companies. There are challenges in quantitatively measuring several environmental and social aspects, and there are still differences of opinion in determining objective measurement standards. Therefore, there is a need to continuously develop and adapt this theory according to the dynamics of business development and global environmental issues (Ma et al., 2019).

In responding to these criticisms and challenges, Environmental Accounting Theory remains an important basis for researchers, practitioners and policy makers in managing environmental and social aspects in a business context. Further research that deepens understanding of the psychological, social, and economic factors that influence the application of environmental accounting would be an important step in advancing this theory. Along with changing business dynamics and the global need for sustainability, Environmental Accounting Theory remains relevant and acts as a guide to direct companies towards more sustainable business practices (Zyznarska-Dworczak, 2020).

Furthermore, the concept of sustainability has become the center of attention in the business context, changing the corporate paradigm from focusing only on financial profits to considering their long-term impact on the environment, social and economic. A prominent figure who has devoted his attention to the concept of sustainability is John Elkington, a business and environmental thinker who introduced the term Triple Bottom Line (TBL) (Fan & Chang, 2023).

The concept of sustainability in the corporate context involves efforts to create balanced long-term value for stakeholders, which includes economic, environmental and social aspects. Basically, companies that adopt the concept of sustainability are committed to not only achieving financial profits, but also to minimizing their negative impacts on the environment and society while increasing their contribution to economic sustainability (Virgiawan Ramadhan & Chaerul, 2023).

John Elkington introduced the term Triple Bottom Line (TBL) to describe this approach. TBL shows that corporate sustainability must be measured not only based on financial performance (first bottom line) but also social and environmental performance (second and third bottom line). By considering these three aspects in a balanced manner, companies can achieve sustainable long-term growth (Nurhidayat et al., 2020).

The economic aspect of the sustainability concept includes the company's responsibility to generate stable and fair profits. This involves ethical business practices, compliance with legal rules, and responsible financial management. Meanwhile, environmental aspects encourage companies to minimize their negative impact on the ecosystem and adopt environmentally friendly business practices. This includes waste management, efficient use of energy, and use of sustainable raw materials. The social aspect includes the company's responsibility towards community welfare, human rights and employee diversity (Aslaksen et al., 2021).

Adopting the concept of sustainability not only provides benefits at an ethical level, but can also improve a company's image, attract investors who care about the environment, and strengthen relationships with consumers who are increasingly concerned about social and environmental issues (Bartolacci et al., 2020). However, challenges arise in implementing the concept of sustainability. Companies need to find the right balance between the three bottom lines, and there is often tension between sustainability goals and short-term profit goals (Nguyen, Anh, et al., 2020). Therefore, the concept of sustainability requires cultural change and structural transformation in the way companies operate.

In facing this challenge, companies can take inspiration from the sustainability practices that have been implemented by pioneer companies in this field (Gong et al., 2022). Companies such as Unilever, Patagonia, and Interface have shown that sustainability is not only a social responsibility, but can also lead to innovation, operational efficiency, and competitive advantage.(Sesha Bhargavi et al., 2023).

3. METHODOLOGY

This research adopts a qualitative approach using a literature review method. The data used is secondary data originating from relevant research that has been carried out previously. A literature review approach was used to detail and interpret the findings in the literature related to "The Role of Environmental Accounting in Encouraging Corporate Sustainability."

The data collection process was carried out through literature searches on various information provider platforms, such as scientific journals, books and research databases. Relevant data was taken from previous research which discussed the role of environmental accounting in the context of corporate sustainability.

Data analysis was carried out using the prism of a literature review, where data was filtered taking into account several indicators, including title, eligibility, and inclusion. This filtering aims to ensure that the data used in research has relevance and high quality.

The way data analysis works begins with collecting information about the author, title, research methods used, and the results of the research that has been carried out. After that, the data will be organized and presented in a systematic framework, revealing findings relevant to the role of environmental accounting in promoting corporate sustainability.

Implementing this method, this research will be able to explore in-depth understanding from various points of view through literature analysis. In addition, the literature review approach will provide a solid foundation for detailing the conceptual framework and formulating arguments related to the role of environmental accounting in supporting corporate sustainability.

4. RESULT AND DISCUSSION

The author has described the literacy study carried out by the author through the following prism:

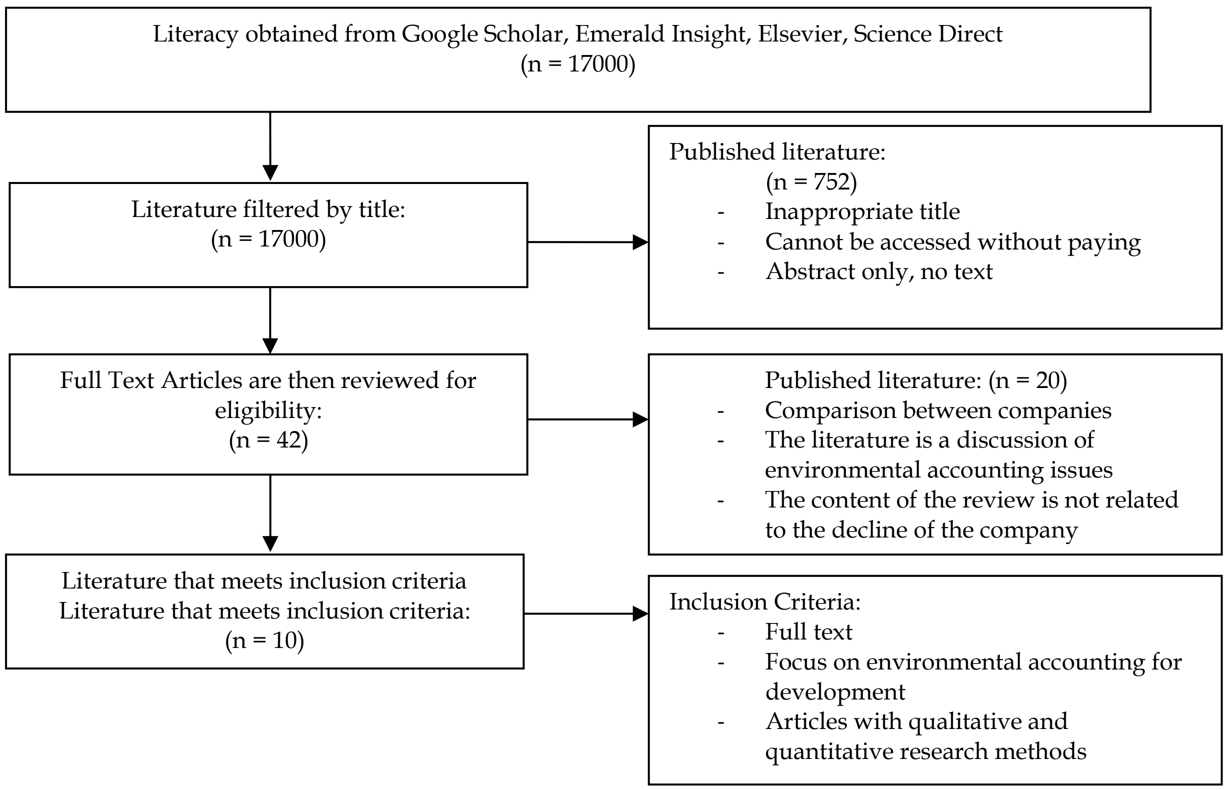

Figure 1. Literature Review Prism

Meanwhile, detailed results from the prism of the literature review can be seen as follows:

Table 1. Literature Review Data

No	Author and Title	Method	Research Results
1	Dian Agustia, Tjiptohadi Sawarjuwono, dan Wiwiek Dianawati The Mediating Effect of Environmental	Quantitative research	Research results show that green innovation (GI) influences environmental management accounting (EMA). Furthermore, EMA has been proven to influence firm value (FV),

	Management Accounting on Green Innovation - Firm Value Relationship		and green innovation (GI) also influences firm value (FV) (Agustia et al., 2019).
2	Mohammad Mahdi Rounaghi Economic Analysis of Using Green Accounting and Environmental Accounting to Identify Environmental Costs and Sustainability Indicators	Qualitative-theoretical research	The research results show that the use of green accounting has a positive impact in involving environmental costs into the financial results of company operations. Additionally, Green GDP calculations can contribute to raising awareness of sustainability concerns among national governments or policymakers, who tend to focus on the rapid economic development of their countries (Rounaghi, 2019).
3	Sami Salem Elhossade, Hafez Abdo, dan Abdulsalam Mas'ud The Impact of Institutional and Contingent Factors on Adopting Environmental Management Accounting Systems: The Case of Manufacturing Companies in Libya	Quantitative research	The research results show that the relationship between coercive pressure and EMA adoption varies as a function of firm size. This indicates that when firms face stress, how they respond depends on the circumstances and firm-specific characteristics, such as firm size. The implication is that firm size has a moderating role in the relationship between coercive pressure and EMA adoption (Elhossade et al., 2020).
4	Shanyong Wang, Hualong Wang, Jing Wang, dan Feng Yang Does Environmental Information Disclosure Contribute to Improve Firm Financial Performance? An Examination of The Underlying Mechanism	Quantitative research	The research results show that disclosure of environmental information has a direct positive impact on the company's financial performance. In addition, the findings also indicate that environmental information disclosure also has an indirect impact on a company's financial performance through analyst coverage (number of analysts and number of reports) and liquidity. Analyst coverage and liquidity act as mediators in the relationship between environmental information disclosure and financial performance, while institutional ownership has no mediating effect (Wang et al., 2020).
5	Min Hong, Zhenghui Li, dan Benjamin Drakeford Do The Green Credit Guidelines Affect Corporate Green Technology Innovation? Empirical Research from China	Quantitative research	The empirical research results show three main findings. First, green credit guidance can promote enterprise green technology innovation as a whole. Second, the guiding mechanism of green credit in limiting enterprises' green technology innovation is identified. Green credit guidelines largely limit green technology innovation through reduced debt financing, rather than through general financing restrictions. Third, the impact of green credit guidelines on green technology innovation is heterogeneous. Green credit guidelines have a significant effect on the green technology innovation of state-owned and large-sized enterprises, but have no effect on the green technology innovation of non-state-owned and small-sized enterprises (Hong et al., 2021).
6	Hutham Falih Chichan, Hussein Kareem Mohammed, dan Tariq Tawfeeq Yousif Alabdullah Does Environmental Management Accounting Matter in Promoting	Quantitative research	The findings of this research indicate that industrial companies in Iraq have awareness of the concept of Environmental Management Accounting (EMA). In addition, EMA provides information that contributes to the promotion of sustainable

	Sustainable Development? A study in Iraq		development. Therefore, research recommends the need to implement Environmental Management Accounting (EMA) in Iraqi industrial companies, considering its important role in providing information that can reduce negative environmental impacts arising from the practices of these companies (Chichan et al., 2021).
7	Muhamad Taqi, Aam Slamet Rusydiana, Nanik Kustiningsih, dan Irman Firmansyah Environmental Accounting: A Scientometric Using Biblioshiny	Quantitative research	The research results show that the number of publications discussing the development of the role of research related to environmental accounting has increased significantly. The most common type of document for analyzing environmental accounting is a journal article. The most popular author is Wood R, who throughout the research period consistently conducted research on this theme. The most popular keywords in this research are energy, environment, and assessment (Taqi et al., 2021).
8	Johnson Kolawole Olowookere, Abiodun Adeniran Taiwo, dan Ayuba Olatunde Onifade Environmental Accounting and Financial Performance of Listed Family-Owned Companies in Nigeria	Quantitative research	The research results show that environmental accounting disclosures have a positive and significant impact on the financial performance of cement companies listed in Nigeria. The research concludes that there is a significant positive impact of environmental accounting disclosure on return on equity (ROE) and return on assets (ROA) of cement companies. The implication is that environmental accounting disclosures contribute positively to the financial performance of cement companies in Nigeria (Olowookere et al., 2021).
9	Bablu Kumar Dhar, Sabrina Maria Sarkar, dan Foster K. Ayittey Impact of Social Responsibility Disclosure Between Implementation of Green Accounting and Sustainable Development: A Study on Heavily Polluting Companies in Bangladesh	Quantitative research	The research results show that the effective implementation of green accounting can improve the sustainable development capabilities of companies with high pollution impacts. There is a significant positive correlation between the quality of social responsibility information and the sustainable development capabilities of these companies. Furthermore, research results also show that the quality of social responsibility information can positively modify the relationship between the implementation of green accounting and the sustainable development capability of companies with high pollution impacts (Dhar et al., 2022).
10	Mohammad Radwan Mohamad Qudah, Abdul Razak Munir, Muhammad Sobarsyah, Sabbar Dahham Sabbar, Shahid Bashir, Mursalim Nohong, and Arifuddin Mannan Enhancing Environmental Accounting Information Disclosure in Indonesian Enterprises: The Role of Environmental	Quantitative research	The research results show that there is a positive relationship between government ownership and environmental information disclosure (IER) in Indonesia. Notably, the relationship is stronger with federal government ownership than with local government ownership. The implication is that government policy has a significant impact on the level of disclosure of environmental information by companies

Management and Government Ownership	(Qudah et al., 2023).

First, research from Agustia et al. (2019) which revealed that green innovation has a positive impact on environmental management accounting (EMA) and firm value (FV) provides an important contribution to the understanding of the complex relationship between environmental innovation and corporate performance. These findings illustrate that the adoption of green innovation not only provides benefits at the level of the company's internal environmental management, as reflected in the EMA, but also has direct implications for the market assessment of the company's value. Therefore, companies can view green innovation as a strategic investment that can improve operational efficiency and generate long-term value.

Furthermore, the conclusion that the adoption of green innovation (GI) has a direct impact on firm value (FV) provides a foundation for more sustainable corporate strategies. The positive influence of green innovation on EMA and firm value creates opportunities for companies to explore further integration between environmental accounting practices and innovation policies. Thus, companies can develop a holistic approach to sustainability, viewing green innovation as a key driver for achieving balanced environmental and financial goals. These implications could pave the way for a paradigm shift in business strategy that prioritizes positive impacts on the environment and corporate value.

Second, research from Rounaghi (2019) which highlights the positive impact of using green accounting on the integration of environmental costs into company operational financial results provides a valuable perspective on the involvement of the financial sector in sustainability efforts. The adoption of green accounting practices not only reflects a company's environmental responsibility, but also has direct implications for measurable financial performance. These findings underline that green accounting principles can be an effective instrument in synchronizing financial and sustainability goals.

Furthermore, the contribution of Green GDP calculations in increasing awareness of sustainability among national governments and policy makers shows the need for a holistic measuring tool in assessing economic growth. These results create an opportunity for governments to strengthen their understanding of the environmental implications of rapid economic policy. Using Green GDP, governments can monitor and evaluate the impact of economic policies on the environment, creating a basis for more sustainable policies and taking ecological aspects into account in economic decision making. These implications create a path towards establishing policies that are more holistic and support economic growth in line with sustainability principles.

Third, research from Elhossade et al. (2020) which presents variations in the relationship between coercive pressure and EMA adoption as a function of firm size opens new insights into the complexity of firms' responses to external pressures. These findings highlight that company size is not only a limiting factor in dealing with pressure, but also a catalyst in determining the extent to which companies are willing to adopt EMA. The implication is that there is no one-size-fits-all approach to dealing with coercive pressures, and company policies should be more contextual in accommodating company size dynamics.

Furthermore, this research provides insight into the moderating role of firm size in the context of EMA adoption in response to pressure. The implication is that firm size may be a key differentiator in determining the effectiveness of EMA adoption in response to coercive pressures. Exploring the interplay of firm size and response to pressure, this research provides a foundation for the development of more tailored and effective strategies for integrating EMA in response to external pressure. These implications create an avenue for companies to increase their responsiveness to coercive pressures by optimizing their internal structures and resources according to the company's specific size and characteristics.

Fourth, research from Wang et al. (2020) which states that disclosing environmental information has a direct positive impact on a company's financial performance provides an in-depth understanding of the contribution of environmental transparency to company value. These findings reflect that open reporting of environmental initiatives not only creates a positive image of companies, but also has a positive effect on their financial health. The implication is that transparency in disclosing environmental information is key in building stakeholder trust in the company's financial performance.

Furthermore, the finding that analyst coverage and liquidity act as mediators in the relationship between environmental information disclosure and financial performance indicates that environmental information not only influences financial analysts' perceptions but also impacts aspects of a company's liquidity. The implication is that when companies prioritize the disclosure of environmental information, this can increase their attractiveness in financial markets through increased analyst coverage and increased liquidity. However, interestingly, the research results show that institutional ownership does not have a mediating effect, indicating that this impact is more direct and involves a more direct relationship between environmental information disclosure and financial performance. The implication is that companies can optimize their environmental information disclosure strategies to support financial performance, without depending significantly on institutional ownership as an intermediary.

Fifth, research from Hong et al. (2021) have the results of this empirical research highlight three main findings that make important contributions to the understanding of the effects of green credit guidance on corporate green technology innovation. First, the finding that green credit guidelines can encourage corporate green technology innovation as a whole confirms the positive role of green policies in stimulating the business sector to innovate towards more sustainable technologies. The implication is that government efforts to provide incentives in the form of green credit guidelines can be an important catalyst for transformation towards more environmentally friendly business practices. Second, the finding that green credit guidance mechanisms do more to limit green technology innovation through reducing debt financing provides unique insights into the role of financial structures in guiding sustainable innovation. The implication is that firms tend to respond better to green credit guidance when their debt funding is reduced, indicating the need for financial structure changes to optimize the positive impact of green credit guidance. Third, the finding that the impact of green credit guidelines is heterogeneous, more significant on state-owned and large-sized companies, presents a challenge for governments and regulators in ensuring green policies achieve equitable effects across sectors. The implication is that green credit guidelines need to be designed and adapted to the unique characteristics of different types of companies in order to motivate green technology innovation effectively and equitably.

Sixth, research from Chichan et al. (2021) highlighted the strong awareness of Environmental Management Accounting (EMA) concepts among industrial companies in Iraq. These findings indicate that the industrial sector in the country has identified the importance of taking environmental impacts into account in managing their operational activities. The fact that the EMA provides information that contributes to the promotion of sustainable development suggests that the implementation of environmental accounting practices can bring positive benefits to sustainable development efforts in Iraq.

Recommendations for implementing Environmental Management Accounting in Iraqi industrial companies reflect the need to better integrate environmental aspects in the business management framework. The implementation of EMA is expected to provide more accurate and relevant information about a company's environmental impact, thereby enabling more sustainable decision making. These recommendations also emphasize the important role of EMA in reducing negative environmental impacts that may arise from companies' business practices. Thus, this research provides a strong foundation for improving sustainable business practices in the Iraqi industrial sector through the integration of Environmental Management Accounting.

Seventh, research from Taqi et al. (2021) reflects a significant increase in the number of publications discussing the role of environmental accounting-related research. This phenomenon indicates a growing interest in the academic literature regarding this concept. The use of journal articles as the main type of document for analyzing environmental accounting provides an overview of an in-depth scientific approach in exploring related issues. The focus on journal articles shows that researchers tend to choose peer-reviewed platforms that can provide reliability and credibility of information.

This research also identifies Wood R as the most popular author, highlighting his consistent contribution over the research period to the development of knowledge in the field of environmental accounting. This consistency reflects Wood R's important role in shaping research direction and providing valuable insights into energy, the environment, and valuation.

The most popular keywords, such as energy, environment, and valuation, reflect the main focus in the environmental accounting literature. These findings illustrate key trends in research, highlight crucial issues that are receiving academic attention and may reflect current issues in business practice and environmental policy. So, the results of this research provide a holistic picture of the dynamics and development of research related to environmental accounting.

Eighth, research from Olowookere et al. (2021) revealed the positive and significant impact of environmental accounting disclosures on the financial performance of cement companies in Nigeria. The implication is that this disclosure not only meets the demands of transparency, but also makes a real positive contribution to the company's return on equity (ROE) and return on assets (ROA). These findings emphasize the importance of sustainability aspects in financial reports as a factor that influences the evaluation of a company's financial performance.

Research by Olowookere et al. (2021) provides a deeper understanding of how environmental accounting disclosures can be a strategic instrument in supporting the financial performance of cement companies. Given evidence that openness regarding environmental issues can have a positive impact, companies in this sector may benefit from investing in better environmental accounting practices. These results can also be a reference for similar companies in the cement sector or other industries to improve their reporting regarding environmental issues, with the hope of improving overall financial performance.

Corporate engagement in environmental accounting disclosures is not only an ethical obligation, but also an investment that may have a positive impact on investor perception, public trust, and, most importantly, the company's financial health. Thus, the results of this research provide an in-depth view of the positive relationship between environmental accounting disclosure practices and the financial performance of cement companies in the Nigerian context.

Ninth, research from Dhar et al. (2022) provide important insights regarding the positive impact of implementing green accounting in the context of companies with high pollution impacts. It was found that green accounting practices were effective in improving the sustainable development capabilities of these companies. The significant positive correlation between the quality of social responsibility information and sustainable development capabilities indicates that quality information about social responsibility can provide a strong foundation for sustainable development efforts.

More interestingly, the research results reveal that the quality of social responsibility information has a positive modifying role on the relationship between green accounting implementation and sustainable development capabilities. This indicates that a deep understanding of social responsibility can optimize the benefits of green accounting practices in encouraging sustainable development. The implication is that companies with high pollution impacts can gain greater benefits in sustainability efforts by improving the quality of their social responsibility information.

Thus, the results of this research provide a comprehensive view of how green accounting practices and social responsibility information can support each other to achieve progress in sustainable development. These findings have significant practical relevance for companies with a high environmental impact, providing a basis for companies to combine green accounting with improving the quality of social responsibility information as an integral strategy in achieving sustainability. Ten, Qudah et al. (2023) revealed a significant relationship between government ownership and environmental information disclosure (IER) in Indonesia. These results show that government ownership, especially the federal level, plays an important role in increasing the level of environmental information disclosure by companies. The implication is that government policy has a significant impact on the practice of disclosing environmental information by companies in Indonesia.

Research highlights that a stronger relationship with federal government ownership indicates that companies are more likely to disclose environmental information under the influence of regulations or incentives from the central government. Thus, companies are more responsive to directives and policies issued by the federal government, which may be more stringent in regulating environmental practices.

In this context, the research results contribute to the understanding of the factors that influence environmental information disclosure practices in Indonesia. This conclusion can help the government in designing and implementing more effective policies to encourage companies to disclose environmental information more transparently. Therefore, this study has important relevance for stakeholders, government and companies in the context of environmental information management in Indonesia.

5. CONCLUSIONS, IMPLICATIONS, RECOMMENDATIONS, AND LIMITATIONS

From the results of this research, it can be concluded that green innovation has a positive effect on environmental management accounting (EMA) and company value (FV). The use of green accounting also has a positive impact in integrating environmental costs into the financial results of a company's operations, and calculating Green GDP can increase awareness of sustainability concerns among policy makers. Additionally, the relationship between coercive pressure and EMA adoption was found to vary by firm size, with firm size moderating the relationship.

The practical implication of this research is that companies can utilize green innovation to strengthen environmental accounting and increase their value. Understanding that firm size plays a moderating role in responses to coercive pressures can help firms adapt their strategies to specific contexts. Conceptually, this research contributes to the environmental accounting literature by confirming that the integration of green accounting can improve company financial performance.

Future research recommendations include further exploration of how green innovation can be optimized to support environmental accounting and corporate value. Further studies could also explore the moderating role of firm size in the context of coercive pressure and EMA adoption. Meanwhile, further research could evaluate the impact of green credit guidelines on green technology innovation by considering firm variability based on ownership and size. Finally, research could involve further surveys in Iraq's industrial sector to better understand the level of awareness and implementation of Environmental Management Accounting (EMA).

The limitations of this research include the limitations of secondary data which may not fully cover certain aspects of the research topic. In addition, the existence of methodological variations between the studies used in this research may affect the consistency of the analysis. Nevertheless, this research provides valuable insights into the role of environmental accounting in supporting corporate sustainability and provides a basis for further research in this area.

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