

DOES ENVIRONMENTAL MANAGEMENT ACCOUNTING ASSOCIATED WITH SUSTAINABILITY REPORT DISCLOSURE?

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Abstract

Introduction/Main Objective: This study examines the relationship between Environmental Management Accounting (EMA) and Sustainability Report Disclosure (SRD) in energy sector firms. **Background Problem:** As businesses face increasing environmental challenges, understanding how EMA enhances transparency in sustainability reporting is crucial. **Novelty:** Despite prior research on EMA and SRD individually, limited empirical evidence links their direct association. This study introduces Monetary Environmental Management Accounting (MEMA) and Physical Environmental Management Accounting (PEMA) alongside the Eco-Efficiency Index (EEI) to assess financial-environmental performance balance. **Research Methods:** Using multiple regression analysis on 75 IDX-listed energy firms in 2023. EMA and EEI were tested for their impact on SRD. **Findings:** it confirms that EMA and EEI positively associated with SRD, supporting the role of environmental accounting in enhancing corporate transparency. This study advances legitimacy and stakeholder theories by linking EMA practices to sustainability disclosures. **Conclusion:** The study contributes to environmental accounting literature and provides insight for firms and policymakers to improve sustainability disclosures. Future research should explore broader industries and qualitative EMA evaluations.

Keywords: Eco-efficiency Index; Environmental Management Accounting; Sustainability Report Disclosure.

Introduction

Sustainable development is firm responsibility to improve societal welfare. It is a world agenda aimed at fostering human peace and prosperity while addressing environmental challenges without compromising future development needs (Somantri & Sudrajat, 2023). The paradigm shift in corporate objectives emphasize that firms should not only seeking for profit, but also focus on environmental sustainability and social responsibility. This reinforces the concept of long-term development for societal well-being. In practice, firms can demonstrate their environmental

commitment through sustainability report disclosure (SRD) (Simbolon & Odang, 2024).

SRD is a firms practice in disclosing information about their performance in terms of economic, environmental, and social sustainability (Syahputra et al., 2019). The general reporting framework used in conducting SRD in Indonesia is divided into Global Reporting Initiative (GRI) and the Financial Services Authority Regulation (POJK) indexes which includes information on sustainability strategies, products, services and business activities, association membership, capacity development, organizational adjustments,

risk management, governance, and standard operating procedures in accordance with the principles of implementing sustainable reporting.

According to Freeman (2010), stakeholders are individuals who influence an organization in achieving its objectives and ensuring long-term business sustainability. Modern companies are not solely profit-driven (Odang, 2021; Odang & Sidabutar, 2024) but also focus on maintaining sustainable operations. Stakeholder theory emphasizes that businesses must create positive impacts for stakeholders rather than acting solely in their own interests (Andrian & Yvonne, 2021). This theory links directly to environmental performance, as companies can enhance their environmental initiatives based on stakeholder expectations, while stakeholders, in turn, play a role in influencing and managing corporate environmental performance (Solovida & Latan, 2017). Effective management and strategic planning are essential for businesses to maintain strong stakeholder relationships. Meanwhile, legitimacy theory, introduced by Dowling and Pfeffer (1975), asserts that companies must align their activities with societal norms to gain acceptance. By adhering to socially accepted values, businesses demonstrate their commitment to ethical and responsible operations (Nkundabanyanga et al., 2021). This theory suggests that organizations must function within the established societal framework to maintain legitimacy (O'Donovan, 2002). A company's accountability to the community reinforces its corporate responsibility, which, when strategically managed, can also enhance financial performance.

In practice, the concept of sustainable development requires supporting tools in the field of accounting that used to measure the implementation of environmental-based accounting. Therefore, firms can apply the concept of Green Accounting (GA). GA appears as one of the elements that contribute to improving the firms' economy

without ignoring the environmental conditions around the company (Nabila, 2021). GA is an activity of collecting, analyzing, and preparing reports on environmental responsibility in financial data with the aim of reducing environmental damage costs (Cohen & Robbins, 2011). Firms need to implement GA in their operational activities to be reported in sustainability report. This is also a proof that firms pay attention to environmental sustainability in carrying out their operational activities (Odang et al., 2024).

Within the framework of GA concept, one type of environmental accounting is Environmental Management Accounting (EMA). This term combines environmental and economic information by determining resource consumption and costs associated with the firms' economic impact on the environment (Wang et al., 2022). EMA covers management aspects such as environmentally based decision making, environmental risk management, and the implementation of sustainable practices (Mosaoy, 2023). This makes it easier to provide more transparent information about environmental impacts, allowing stakeholders to assess how well the firms are paying attention to its environmental responsibilities. With a more detailed understanding of environmental impacts, firm management can design more sustainable business strategies, minimize environmental risks, and increase resource efficiency (Hashfi, 2024).

The two main components used in measuring EMA are monetary environmental management accounting (MEMA) and physical environmental management accounting (PEMA) (Burrirt et al., 2002). MEMA is related to the environmental impact on the firm finances while PEMA is related to the firm environmental control over the environmental impacts resulting from the firms' operations and their environmental aspects in physical units. Both approaches are used by firms to integrate environmental considerations into business decisions,

improve resource efficiency, and reduce the environmental footprint of the firms' operational activities.

This study aims to analyze the implementation of EMA and SRD in energy sector firms listed in Indonesia. This study offers novelty with a unique approach in analyzing the implementation of EMA in energy sector firms. Also, this research provides a fresh perspective by investigating the relationship between EMA and SRD, focusing on whether EMA is positively associated with SRD. While previous studies have examined EMA implementation and SRD separately, there is still limited empirical evidence analysing the direct linkage between these two concepts, especially in the energy sector. By shifting the research question to explore the positive association between EMA and SRD, this study offers a novel contribution to environmental accounting literature, bridging the gap between accounting practices and sustainability reporting.

The assertion that empirical studies directly linking EMA implementation to the quality and extent of SRD are limited is supported by existing literature. While numerous studies have explored EMA's impact on various aspects of corporate sustainability, few have specifically examined its direct relationship with SRD. For instance, Solovida and Latan (2017) investigated the relationship between environmental strategy, EMA, and environmental performance, highlighting EMA's mediating role between environmental strategy and performance. However, their study did not directly address the link between EMA implementation and SRD quality. Similarly, Pratiwi, Meutia, and Syamsurijal (2020) examined the effect of EMA on corporate sustainability in Indonesian companies, focusing on environmental and social factors. Although their findings suggest a positive influence of EMA on corporate sustainability, the study did not specifically analyse EMA's impact on SRD. Furthermore, Schaltegger (2018) reflected

on the missing links between EMA and sustainability, noting that while EMA aims to support environmentally beneficial decision-making, explicit discussions connecting EMA to global ecological sustainability issues are often lacking. These studies underscore the need for empirical research directly examining how EMA practices influence the quality and extent of SRD, addressing a gap in the current literature. For example, Solovida and Latan (2017) who studied the association of EMA with environmental performance. In addition, Pratiwi, Meutia, and Syamsurijal (2020) studied the implementation of EMA using EEI proxy and firms sustainability using GRI Index. Also, Odang et al. (2025) found that EEI and tax aggressiveness has a negative association while SRD strengthens their relationship. To the best of our knowledge, we filled the gap of some similar research (Al-Mawali et al., 2018; Bibi & Narsa, 2022; Rahman et al., 2024) by using Burritt, Hahn, and Schaltegger (2002) measurement for MEMA and PEMA.

A key aspect of this study's novelty is the in-depth examination of EMA using its two main components, MEMA and PEMA. Many prior studies focus on general EMA implementation without distinguishing between these two aspects. However, this study highlights how MEMA, which deals with financial impacts, and PEMA, which deals with environmental resource efficiency, contribute to SRD. The research will provide new insights into whether firms that actively implement MEMA and PEMA are more transparent and comprehensive in their sustainability reporting.

Additionally, this study integrates the Eco-Efficiency Index (EEI) as an analytical tool to assess the balance between financial benefits and environmental impacts (Ichimura et al., 2009). While EEI has been used in sustainability performance assessments, its application in evaluating the EMA-SRD relationship remains underexplored. By incorporating EEI, this research provides a more holistic analysis of how firms manage environmental costs and

resource efficiency while improving their sustainability disclosures. By considering these factors, this study not only re-examines the EMA-SRD relationship in a different context but also provide new insights into how contextual factors moderate their relationship. This is essential for understanding the effective implementation of EMA in a business environment with unique challenge and characteristics.

This study also adds practical value by focusing on energy sector firms in Indonesia, a critical industry facing intense scrutiny due to its environmental footprint. Given the regulatory environment and sustainability challenges in developing countries, the findings will offer valuable insights for policymakers, business leaders, and investors. For firms, understanding how EMA influences SRD can help improve environmental strategies, enhance resource efficiency, and reduce operational risks associated with sustainability issues. For policymakers, the findings can support the development of more effective sustainability regulations that encourage transparency and accountability. Investors can also benefit from this research by gaining insights into how EMA implementation affects a company sustainability performance, helping them make more informed investment decisions.

Lastly, Indonesia's commitment to achieving Sustainable Development Goals (SDGs) and carbon neutrality by 2060 highlights the importance of SRD in tracking progress toward these goals. By investigating how EMA support SRD, this study contributes to both national and international sustainability agendas, ensuring that firms adopt more responsible business practices.

Based on the theoretical foundations and identified research gaps, the study formulates the following hypotheses:

H₁: EMA (MEMA and PEMA) is positively associated with SRD.

H₂: EEI is positively associated with SRD.

Research Method

This study uses a quantitative and explanatory method. This study was conducted on public companies in the energy sector listed on the Indonesia Stock Exchange in 2023. The sub-sectors consist of oil and gas (A11), coal (A12), oil, gas and coal supporting industries (A13), alternative energy equipment (A21), and alternative fuels (A22). The data collection techniques used in this study are literature and documentation studies. The data collected are the annual report (AR) and sustainability report (SR) of energy sector firms in 2023.

Independent variable in this research is EMA. EMA is measured by disclosure information through MEMA and PEMA. MEMA and PEMA information disclosure items are searched and collected from SR. We follow MEMA and PEMA measurement from Burritt, Hahn, and Schaltegger (2002). Besides, we measure EMA on financial ratio by calculating EEI. EEI measures the efficiency of resource use in a process or activity by examining the output produced relative to the input used (Ichimura et al., 2009). EEI is obtained from the comparison between net benefit and environmental performance (Hur et al., 2003). Hur et. Al (2003) categorizes EEI into 3 criteria. If $EEI > 1$, the firm is considered affordable and sustainable. If EEI is in the range of 0-1, the firm is in the affordable and not sustainable criteria. If $EEI < 1$, the firm is considered not affordable and not sustainable.

Dependent variable for this research is SRD. Coding and scoring are used to measure the disclosure index on SR with POJK 51 index. The coding given is code 0 for SR items that are not disclosed and code 1 for items that are disclosed. Then, scoring is carried out and filled in according to the information listed in the annual sustainability report to see how the firms' real condition is in fulfilling economic, social, and environmental aspects. Scoring is calculated by the percentage comparison

of the number of disclosure items that are fulfilled with the maximum number of item scores (Beck et al., 2010).

We performed multiple regression analysis for data analysis technique. Hypothesis testing is performed using the following model estimates:

$$SRD = \alpha + \beta_1 EMA_i + \beta_2 EEI_i + \varepsilon \quad (1)$$

Where:

SRD = sustainability report disclosure

EMA = environmental management accounting (MEMA and PEMA disclosure)

EEI = eco-efficiency index

IFAC (International Federation of Accountants) defines EMA as management performance environment and economy through implementation systems and practices accountancy related environment (Ichimura et al., 2009). In improving environmental performance, firms must carry out environmental management, but it is not quite enough to answer their environmental preservation as consequence. EMA focuses on integrating environmental aspect information to firms' management system (Gerged et al., 2024; Wang et al., 2022).

Results and Discussion

Table 1. Descriptive Statistics

Panel A: Descriptive Statistics by Subsectors					
	N	%			
Subsector A11 Oil and Gas	16	21.3			
Subsector A12 Coal	41	54.7			
Subsector A13 Oil, Gas and Coal Supporting Industries	15	20			
Subsector A21 Alternative Energy Equipment	3	4			
Total	75	100			
Panel B: Descriptive Statistics by Research Variables					
	N	Minimum	Maximum	Mean	Std. Deviation
EMA	75	.00	.90	.4680	.26209
EEI	75	.00	5.33	.7403	1.00489
SRD	75	.00	.99	.3163	.42749

Source: SPSS 25 (2024)

Table 1 present descriptive statistics of the main variables in this study. Panel A describes the subsectors in energy sector firms in the sample. There are four subsectors that we observed in this study. A12 Coal is subsector with the most sample (54.7%) followed by A11 Oil and Gas (21.3%). Panel B describes the descriptive statistics of each variable. The results show that EMA is at moderate level (0.4680) with standard deviation (0.26209). EEI shows an average value of 0.7403 with a standard deviation of 1.00489. the average value of SRD is 0.3163 with a standard deviation of 0.42749.

Table 2. Correlation Analysis

		1	2	3
1	SRD	1		
2	EMA	.547**	1	
3	EEI	.587**	.497**	1

Note: N = 75. ** indicate that significances is at 1% level. 1 = SRD; 2 = EMA; 3 = EEI.

Source: SPSS 25 (2024)

H₁ (H₂) investigates whether EMA (EEI) is positively associated with SRD. Table 3 presents the results of the regression analyses. Based on the results of the hypothesis testing, the findings indicate that EMA has a significant positive association with SRD, as evidenced by a coefficient of 0.177 with a t-value of 3.732 at a

statistically significant level ($p < 0.00$). This suggests that firms implementing EMA are more likely to enhance their sustainability disclosures, reinforcing the argument that EMA contributes to increased corporate transparency and accountability (Pratiwi et al., 2020; Wardaningtyas & Poerwati, 2024).

The results of data processing also show that there is a correspondence between EMA disclosure through MEMA and PEMA with SRD. This is in line with the research of Samosir, Sondakh, and Tirayoh (2024) which states that the application of EMA is in accordance with SRD which uses information disclosure through GRI standards. The findings obtained from this study also show that the implementation of EMA information disclosure is in line with SRD, where if low EMA disclosure indicates low SRD and vice versa. *Sustainability corporate reports* should also be considered by stakeholders to accurately assess the value of the firms; this also helps achieve broader sustainable development goals.

Table 3. Hypothesis Testing

Model	1
Dependent Variable	SRD
Environmental Management Accounting	.177*** 3.732
Eco-efficiency Index	.046** 2.633
Adjusted r-squared	.343
N	75

Note: This model used multiple regression. *** and ** indicate significance at 0% and 1% levels.

The eco-efficiency index also shows a significant positive relationship with SRD, with a coefficient of 0.046 and a t-value of 2.633 ($p < 0.01$). This suggests that firms with higher eco-efficiency—those that successfully balance financial performance with environmental responsibility—tend to disclose more comprehensive sustainability reports (Dura & Suharsono, 2022; Ichimura et al., 2009). A possible explanation for this

finding is that firms committed to eco-efficiency often recognize the importance of transparency in communicating their sustainability efforts to stakeholders (Gerged et al., 2024). By integrating eco-efficient strategies, such as optimizing resource use and reducing waste, firms are not only enhance their financial performance but also reduce their environmental footprint, making them more inclined to highlight these achievements in their disclosures (Dangelico et al., 2017; Demirel & Kesidou, 2019; Küçükoğlu, 2018).

This also in line with Paramastri et al. (2019) research finding. Although business entities have implemented systems to process waste which is an aspect of EMA, but the level of eco-efficiency is still relatively low. High disclosure in EMA does not always reflect good practice of environmental management. There is a possibility that firms focus on detailed reporting but lack of a deep understanding of how to integrate EMA with operational strategies to improve efficiency.

The research findings are reinforced by the theoretical foundation and real-world phenomena surrounding EMA and SRD. According to stakeholder theory, firms are responsible for addressing stakeholder concerns, particularly regarding environmental sustainability (Freeman, 2010). Companies that effectively implement EMA can enhance transparency and accountability, leading to improved SRD. The study's results, which show a significant positive relationship between EMA and SRD, align with this theory, confirming that firms respond to stakeholder expectations by integrating environmental and financial disclosures. This supports previous findings that companies with strong sustainability initiatives gain greater legitimacy and stakeholder trust (Solovida & Latan, 2017).

Furthermore, legitimacy theory explains why firms engage in sustainability disclosures. Businesses must align their activities with societal norms to maintain

legitimacy (Dowling & Pfeffer, 1975). The study's empirical evidence suggests that firms implementing MEMA and PEMA tend to have more extensive sustainability reporting, demonstrating their commitment to environmental responsibility. These findings correspond with prior studies indicating that greater transparency in environmental reporting helps companies meet societal expectations and regulatory requirements (O'Donovan, 2002).

These results also support the theoretical framework that EMA serves as a tool for improving sustainability disclosure by systematically incorporating environmental and financial data into corporate decision-making. The findings align with previous research emphasizing the role of EMA in promoting sustainability (Schaltegger, 2018). However, the relatively modest coefficient for EMA suggests that while it positively impacts SRD, other factors such as regulatory pressure, stakeholder expectations, and corporate governance mechanisms may also be crucial in driving sustainability disclosures (Derchi et al., 2023).

Furthermore, firms with strong eco-efficiency performance may feel a greater obligation to disclose sustainability-related information due to regulatory pressures and stakeholder expectations (Maama & Appiah, 2019). Investors, customers, and business partners increasingly demand accountability regarding environmental impacts, and firms that adopt eco-efficiency practices can use sustainability reports to strengthen their corporate reputation and attract responsible investments (Thomas et al., 2022). Additionally, firms that actively engage in eco-efficiency tend to integrate sustainability into their overall business strategy (Hashfi, 2024), aligning financial and environmental disclosures (Ferreira et al., 2020; Nabila, 2021) through structured reporting frameworks such as the POJK 51/2017 index. This integration enhances the credibility and depth of sustainability disclosures, reinforcing their commitment

to long-term environmental and financial sustainability.

However, future research should consider expanding industry coverage, refining measurement approaches, addressing endogeneity concerns, incorporating longitudinal analyses, and integrating external factors to build a more comprehensive framework for understanding corporate sustainability reporting. Acknowledging these constraints not only provides transparency about the study's scope but also lays the groundwork for further research that can enhance the practical and theoretical contributions of EMA in corporate sustainability efforts.

Conclusion

The conclusion of this research highlights that EMA is positively associated with SRD, confirming that firms implementing EMA tend to enhance their sustainability transparency. The study also finds that the EEI contributes positively to SRD, emphasizing the role of resource efficiency in promoting sustainability disclosures. These findings support the notion that firms which integrating financial and environmental considerations into their decision-making processes are more likely to disclose comprehensive sustainability reports, reinforcing corporate accountability and transparency.

This study makes several contributions to both academic literature and business practice. Academically, it fills the gap in existing research by providing empirical evidence on the direct relationship between EMA and SRD, particularly in the energy sector. By distinguishing between MEMA and PEMA, this research offers a more nuanced understanding of how firms manage and report their environmental responsibilities. Additionally, the integration of EEI as an evaluation tool provides a new perspective on how financial and environmental performance

interact in shaping sustainability disclosures.

From a practical standpoint, the findings offer valuable insights for businesses, policymakers, and investors. For firms, the results suggest that adopting EMA and improving eco-efficiency can enhance sustainability disclosures, ultimately strengthening corporate reputation and attracting responsible investors. Policymakers can use this study as a foundation to develop regulatory frameworks and incentives that encourage firms to adopt environmental accounting practices and improve sustainability reporting standards.

Despite its contributions, this study has several limitations. First, it focuses exclusively on energy sector firms in Indonesia, which may limit the generalizability of the findings to other industries or geographical contexts. Future research could extend the analysis to other sectors or conduct cross-country comparisons to examine how different regulatory environments influence the EMA-SRD relationship. Second, the study relies on secondary data from sustainability reports, which may not fully capture the internal decision-making processes of firms regarding EMA implementation. Future studies could incorporate qualitative methods, such as interviews or case studies, to gain deeper insights into corporate sustainability strategies. Lastly, while the study establishes a positive association, it does not explicitly examine causal mechanisms. Future research could apply longitudinal or experimental designs to explore how EMA and SRD evolve over time and under different economic or policy conditions.

Overall, this research underscores the strategic importance of EMA and eco-efficiency in sustainability reporting, providing a foundation for future studies to explore more integrated approaches in corporate environmental accountability.

References

- Al-Mawali, H., Sharif, A. Al, Rumman, G. A., & Kerzan, F. (2018). Environmental Strategy, Environmental Management Accounting and Organizational Performance: Evidence from The United Arab Emirates Market. *Journal of Environmental Accounting and Management*, 6(2), 105–114. <https://doi.org/10.5890/JEAM.2018.06.002>
- Andrian, T., & Yvonne, A. S. (2021). Does Code of Conduct Moderate Corporate Attributes and Carbon Emission Disclosure? *Journal of Accounting, Business and Finance Research*, 11(2), 46–54. <https://doi.org/10.20448/2002.112.46.54>
- Beck, A. C., Campbell, D., & Shrivies, P. J. (2010). Content analysis in environmental reporting research: Enrichment and rehearsal of the method in a British-German context. *British Accounting Review*, 42(3), 207–222. <https://doi.org/10.1016/j.bar.2010.05.002>
- Bibi, Y. S., & Narsa, N. P. D. R. H. (2022). Pengaruh Environmental Management Terhadap Kinerja Keuangan dengan Green Innovation sebagai Variabel Mediasi. *Jurnal Akuntansi Indonesia Jember*, 20(2), 90. <https://doi.org/10.19184/jauj.v20i2.34896>
- Burritt, R. L., Hahn, T., & Schaltegger, St. (2002). Towards a Comprehensive Framework for Environmental Management Accounting — Links Between Business Actors and Environmental Management Accounting Tools. *Australian Accounting Review*, 12(27), 39–50. <https://doi.org/10.1111/j.1835-2561.2002.tb00202.x>
- Cohen, N., & Robbins, P. (2011). *Green*

- Business: An A-to-Z Guide*. SAGE Publications, Inc.
<https://doi.org/10.4135/9781412973793>
- Dangelico, R. M., Pujari, D., & Pontrandolfo, P. (2017). Green Product Innovation in Manufacturing Firms: A Sustainability-Oriented Dynamic Capability Perspective. *Business Strategy and the Environment*, 26(4), 490–506.
<https://doi.org/10.1002/bse.1932>
- Demirel, P., & Kesidou, E. (2019). Sustainability-oriented capabilities for eco-innovation: Meeting the regulatory, technology, and market demands. *Business Strategy and the Environment*, 28(5), 847–857.
<https://doi.org/10.1002/bse.2286>
- Derchi, G.-B., Davila, A., & Oyon, D. (2023). Green incentives for environmental goals. *Management Accounting Research*, 59, 100830.
<https://doi.org/10.1016/j.mar.2022.100830>
- Dowling, J., & Pfeffer, J. (1975). Organizational Legitimacy: Social Values and Organizational Behavior. *The Pacific Sociological Review*, 18(1), 122–136.
<https://doi.org/10.2307/1388226>
- Dura, J., & Suharsono, R. S. (2022). Application Green Accounting To Sustainable Development Improve Financial Performance Study In Green Industry. *Jurnal Akuntansi*, 26(2), 192–212.
<https://doi.org/10.24912/ja.v26i2.893>
- Ferreira, J., Coelho, A., & Moutinho, L. (2020). Dynamic capabilities, creativity and innovation capability and their impact on competitive advantage and firm performance: The moderating role of entrepreneurial orientation. *Technovation*, 92–93, 102061.
<https://doi.org/10.1016/j.technovation.2018.11.004>
- Freeman, R. E. (2010). *Strategic Management: A Stakeholder Approach*. Cambridge University Press.
- Gerged, A. M., Zahoor, N., & Cowton, C. J. (2024). Understanding the relationship between environmental management accounting and firm performance: The role of environmental innovation and stakeholder integration – Evidence from a developing country. *Management Accounting Research*, 62, 100865.
<https://doi.org/10.1016/j.mar.2023.100865>
- Hashfi, M. H. Al. (2024). Beyond Sustainability: The ESG Performance Relationship on Earnings Management and Tax Avoidance. *Scientax*, 5(2), 131–147.
<https://doi.org/10.52869/st.v5i2.771>
- Hur, T., Song, T. L., & Lee, H.-J. (2003). *A Study on the Eco-efficiencies for Recycling Methods of Plastic Wastes*. Konkuk University.
- Ichimura, M., Nam, S., Bonjour, S., Rankine, H., Carisma, B., Qiu, Y., & Khrueachotikul, R. (2009). Eco-efficiency Indicators: Measuring Resource-use Efficiency and the Impact of Economic Activities on the Environment. “*Greening of Economic Growth*” Series, 25.
<https://sustainabledevelopment.un.org/content/documents/785eco.pdf>
- Küçükoğlu, M. T. (2018). The Mediating Role of Green Organizational Culture Between Sustainability and Green Innovation: A Research in Turkish Companies. *Business & Management Studies: An International Journal*, 6(1), 64–85.
<https://doi.org/10.15295/bmij.v6i1.208>
- Maama, H., & Appiah, K. O. (2019). Green accounting practices: lesson from an emerging economy. *Qualitative Research in Financial Markets*, 11(4), 456–478.
<https://doi.org/10.1108/QRFM-02-2017-0013>

- Mosaoy, D. J. J. Al. (2023). The role of environmental management accounting information in the design process of environmental and sustainable products. *International Journal of Engineering Business Management*, 15. <https://doi.org/10.1177/18479790231183511>
- Nabila, R. (2021). Green Accounting for Sustainable Development: Case Study of Indonesia's Manufacturing Sector. *Akuntansi Dewantara*, 5(1), 1–10. <https://doi.org/10.26460/ad.v5i1.9147>
- Nkundabanyanga, S. K., Muramuzi, B., & Alinda, K. (2021). Environmental management accounting, board role performance, company characteristics and environmental performance disclosure. *Journal of Accounting & Organizational Change*, 17(5), 633–659. <https://doi.org/10.1108/JAOC-03-2020-0035>
- O'Donovan, G. (2002). Environmental disclosures in the annual report. *Accounting, Auditing & Accountability Journal*, 15(3), 344–371. <https://doi.org/10.1108/09513570210435870>
- Odang, N. K. (2021). Analisis Profitabilitas Customer Berdasarkan Pendekatan Time-driven Activity-based Costing (TDABC). *Jurnal Ekonomi Perjuangan*, 3(1), 28–38. <https://doi.org/10.36423/jumper.v3i1.710>
- Odang, N. K., & Sidabutar, G. R. A. (2024). Maksimalisasi Profit UMKM Berdasarkan Perspektif Pricing Strategy. *Jurnal Riset Dan Aplikasi: Akuntansi Dan Manajemen*, 7(1), 129–140. <https://doi.org/doi.org/10.33795/jraam.v7il.011>
- Odang, N. K., Taufiqurrahman, T., & Sitopu, A. H. (2024). Classification of Company Sustainability Status Based on Multidimensional Aspects. *The 3rd International Conference on Natural Resources and Sustainable Development (ICNRSD)*.
- Odang, N. K., Taufiqurrahman, T., & Sitopu, A. H. (2025). Signifikansi Agresivitas Pajak Ditilik dari Aspek Keberlanjutan Perusahaan No Title. *Jurnal Akuntansi Indonesia*, 14(1), 52–66. <https://doi.org/http://dx.doi.org/10.30659/jai.14.1.52%20-%2066>
- Paramastri, D. K., Pontjoharyo, W., Akuntansi, J., Bisnis, F., & Ekonomika, D. (2019). Penerapan Environmental Management Accounting Untuk Mencapai eco-Efficiency Pada Pt. Indo Bali Di Bali. *Calyptra*, 7(2), 939–949.
- Pratiwi, Y. N., Meutia, I., & Syamsurijal, S. (2020). The Effect of Environmental Management Accounting on Corporate Sustainability. *Binus Business Review*, 11(1), 43–49. <https://doi.org/10.21512/bbr.v11i1.6028>
- Rahman, M. M., Saha, S., & Hoque, M. (2024). Unveiling the link between environmental management accounting, energy efficiency, and accountability in state-owned enterprises: An integrated analysis using PLS-SEM and fsQCA. *Environmental Challenges*, 14, 100832. <https://doi.org/10.1016/j.envc.2023.100832>
- Samosir, M. R., Sondakh, J. J., & Tirayoh, V. Z. (2024). Analisis penerapan akuntansi manajemen lingkungan pada perusahaan sub sektor kayu dan pengolahannya di Bursa Efek Indonesia (BEI) dan kesesuaiannya dengan Standard Global Reporting Initiative (GRI). *Riset Akuntansi Dan Portofolio Investasi*, 2(2), 23–32. <https://doi.org/10.58784/rapi.96>
- Schaltegger, S. (2018). Linking Environmental Management Accounting: A Reflection on (Missing) Links to Sustainability and

- Planetary Boundaries. *Social and Environmental Accountability Journal*, 38(1), 19–29.
<https://doi.org/10.1080/0969160X.2017.1395351>
- Simbolon, R. S., & Odang, N. K. (2024). Sustainability Report Disclosure and Investor Reaction: An Explanatory Study on Infrastructure Sector Companies. *JRAM (Jurnal Riset Akuntansi Multiparadigma)*, 11(2), 30–42.
<https://doi.org/http://dx.doi.org/10.30743/akutansi.v11i2.10122>
- Solovida, G. T., & Latan, H. (2017). Linking environmental strategy to environmental performance. *Sustainability Accounting, Management and Policy Journal*, 8(5), 595–619.
<https://doi.org/10.1108/SAMPJ-08-2016-0046>
- Somantri, A. J., & Sudrajat, A. M. (2023). Pengaruh Penerapan Green Accounting dan Kinerja Lingkungan Terhadap Sustainable Development (Pada Perusahaan Manufaktur Sektor Industri Dasar Dan Kimia 2020-2022). *Jurnal Pendidikan Tambusai*, 7(3).
<https://doi.org/https://doi.org/10.31004/jptam.v7i3.9899>
- Syahputra, D., Helmy, H., & Mulyani, E. (2019). Analisis Pengungkapan Lingkungan Berdasarkan Global Reporting Initiatives (Gri) G4. *Jurnal Eksplorasi Akuntansi*, 1(2), 678–693.
<https://doi.org/10.24036/jea.v1i2.102>
- Thomas, J., Yao, W., Zhang, F., & Zhu, W. (2022). Meet, beat, and pollute. *Review of Accounting Studies*, 27(3), 1038–1078.
<https://doi.org/10.1007/s11142-022-09694-0>
- Wang, T., Ismail, K., & Azmi, K. S. A. (2022). The Rise of MCS and EMA in the Sustainable Field: A Systematic Literature Analysis. *Sustainability*, 14(24), 16532.
<https://doi.org/10.3390/su142416532>
- Wardaningtyas, D., & Poerwati, T. (2024). Pengaruh Pengungkapan Sustainability Report, Green Accounting dan Green Strategy Terhadap Kualitas Laporan Keuangan. *Jurnal Riset Akuntansi Politala*, 7(2), 518–529.
<https://doi.org/10.34128/jra.v7i2.371>