

Comparative Analysis of Environmental Cost Accounting Implementation in Micro, Small and Medium Enterprises

Yuly Rusmariyani¹, Ramadhani Irma Tripalupi¹, Fithri Dzikrayah¹, Suteja Wirada Kusuma²

¹ UIN Sunan Gunung Djati Bandung, Bandung, Indonesia

² Curtin University, Bentley, Australia

Article Info

Article History

Submitted 28-05-2024

Revised 20-06-2024

Accepted 26-06-2025

Published 27-06-2025

Keywords:

Environmental cost accounting; SMEs; Social Responsibility; Sustainability

Rasmarini, Y., Tripalupi, R.I., Dzikrayah, F., & Kusuma, S.W. (2025). Comparative Analysis of Environmental Cost Accounting Implementation in Micro, Small and Medium Enterprises. *Internasional Journal of Economics Collaboration and Business Innovation (IJECBI)*, 1(1). 15-22

Correspondence:

ramadhaniirmatripalupi@uinsgd.ac.id

Abstract

Purpose – The implementation of environmental cost accounting is becoming increasingly important in the context of MSMEs in Indonesia, given their significant contribution to the economy and the challenges in managing the environmental impact of business activities. This research aims to analyze the comparison of environmental cost accounting implementation in two SMEs, namely Tempe Tahu Bintang Jaya and the UD Mega Cipta Wood Sawing SME, as well as to evaluate the effectiveness of environmental cost management in each business.

Methodology - This research uses a descriptive qualitative method with a literature study approach. Data are analyzed based on the five stages of environmental accounting: identification, recognition, measurement, presentation, and disclosure of environmental costs.

Findings - The research results show that both SMEs have identified and measured environmental costs, but there are still deficiencies in the recognition and presentation of these costs separately in the financial statements. UMKM Tempe Tahu Bintang Jaya is superior in separating environmental costs, although not systematically, while UMKM Penggergajian Kayu UD Mega Cipta combines environmental costs with administrative costs without clear details. The implementation of environmental cost accounting in both SMEs is still in its early stages and requires further development.

Implication - Efforts are needed to improve the classification, presentation, and disclosure of environmental costs in order to strengthen social responsibility and enhance competitiveness. Support from the government and increased awareness among SMEs are crucial to encourage the wider adoption of environmental cost accounting, thus supporting sustainability and social responsibility.

1. INTRODUCTION

Global awareness of the urgency of preserving the environment makes environmental cost accounting increasingly considered. Companies need to pay attention to the environmental impact of their business activities and include it in their financial reports (Fitriana & Susilowati, 2021). Environmental cost accounting plays an important role in helping businesses understand and manage the environmental impact caused by their operational activities (Rhamadani & Sisdianto, 2024). The application of this accounting not only serves as a reporting tool but also as a strategic instrument to enhance cost efficiency and the company's image in the eyes of the

public and stakeholders (Schaltegger, 2017). In addition, government regulations and policies encourage business actors to implement environmental cost accounting environmental (Kelly & Henny, 2023), such as Law No. 32 of 2009 on the Protection and Management of the Environment, which emphasizes the importance of corporate responsibility in maintaining the environment (Paru, 2018).

Environmental cost accounting is a system designed to identify, measure, and manage costs associated with a company's environmental activities. This system includes prevention costs, pollution control costs, environmental restoration costs, and operational costs related to sustainability (Jasch, 2003). Environmental accounting is a development of social accounting as a form of social responsibility in the field of accounting, which functions to recognize, measure, present, identify, and disclose environmental accounting (Puspita & Surendra, 2019) and (Lako, 2018). Environmental accounting plays a role as an effort to preserve the environment by voluntarily disclosing environmental costs in financial statements (Desty & Ersi, 2024). Attention to environmental and sustainability issues is increasing worldwide, including in Indonesia (Kusnandar et al., 2025). This is driven by the increasing awareness of the negative impacts of business activities on the environment, such as water, soil, and air pollution, and the excessive exploitation of natural resources (Juliana et al., 2025).

To address the increasingly pressing environmental challenges, the concept of environmental cost accounting has become very relevant and important, including for micro, small, and medium enterprises (MSMEs), because environmental accounting is one way for companies to demonstrate their responsibility towards the environment. This concept is relevant for both large-scale companies and MSMEs (Puspita & Surendra, 2019), and environmental cost accounting contributes to managing environmental impacts and resources more effectively, in line with the principles of sustainable development (Bagraff & Ahsan, 2024).

SMEs play a crucial role in Indonesia's economic growth, contributing to the national gross domestic product (GDP) and absorbing a large amount of labor (Pratiwi, 2020; Monoarfa & Juliana, 2025) thus contributing to sustainable development (Yolanda, 2024; Sari et al., 2025). According to data from the Ministry of Cooperatives and SMEs (2021), MSMEs contribute around 60% to the national GDP and absorb more than 97% of the workforce. The main challenge is that MSMEs are less aware and do not understand the importance of incorporating environmental cost aspects into their cost accounting systems. This is often caused by limited resources and technical knowledge (Pratiwi, 2020).

Based on that background, this research aims to analyze the comparison of environmental accounting implementation at the Tempe Tahu Bintang Jaya MSME and the UD Mega Cipta Wood Sawmill SME. The urgency of this research is to evaluate the effectiveness of environmental cost management, support for sustainability programs, and the social responsibility of SMEs (Pratama & Sisdianto, 2024), which will have implications for policy implementation in the SME sector that still requires further support and supervision (Sari, 2021).

2. LITERATURE REVIEW

Jasch (2003) explaining that environmental cost accounting helps companies identify costs related to prevention, pollution control, and recovery of environmental damage caused by business activities. This concept is important because companies must be able to understand the magnitude of the costs incurred to manage negative impacts on the environment in order to improve and enhance operational efficiency (Fransiska et al., 2025).

Previous research from Sari & Muda (2023), stating that green accounting, which incorporates environmental cost elements, can help companies reduce operational costs while also enhancing the company's internal perspective. The results of the research by Indriastuti & Mutamimah (2023), stating that the implementation of green accounting and sustainable

performance in SMEs can reduce and even eliminate environmental costs and improve the environmental performance of SMEs. The concern of SMEs for the environment through the application of green accounting can become a value added for the sustainability of SME businesses (Rhamadani & Sisdianto, 2024).

The result of the research (Sari, 2025) and (Pratama & Sisdianto, 2024), namely green accounting helps MSMEs manage environmental impacts by recording and analyzing costs related to the environment, energy efficiency, and waste reduction, while an environmentally friendly work culture fosters awareness of sustainability. This research also found that the implementation of green accounting is still in its early stages, focusing on energy efficiency and waste reduction. The application of a green work culture is still limited to basic aspects such as plastic reduction and energy savings. The positive impacts of these practices include increased operational efficiency, business image, and customer loyalty.

View according to (Schaltegger, 2017), In line with the previous research mentioned above, one of the reasons why the implementation of environmental cost accounting is important is to help SMEs identify resource wastage and improve operational efficiency. In addition, environmental cost accounting can help SMEs comply with increasingly stringent environmental regulations and enhance the company's image in the eyes of consumers and stakeholders. However despite this, there are statements in practice that many SMEs face challenges in terms of implementation costs, understanding the concept, and limited internal capacity to effectively manage environmental cost accounting.

This is in line with the findings in Zulhaimi's (2015) research that few companies implement green accounting. And also an article by Latif (2023) which states that in practice, many companies tend to neglect environmental issues and only prioritize profit without considering third parties namely stakeholders.

The environmental cost report in Franciska et al (2019) research findings includes a grouping of prevention, detection, internal failure, and external failure costs according to Hansen & Mowen's theory (Paru, 2018).

3. METHODOLOGY

The method applied in this research is a descriptive qualitative method (Sukmana, 2022). The data source is secondary, with data collection techniques through literature study. The main literature study contains the data object being analyzed, namely: UMKM Tempe Tahu Bintang Jaya (Te et al, 2024) and the Wood Sawing SME UD Mega Cipta (Puspita & Surendra, 2019) and other relevant literature studies, totaling 25 sources. Data were collected based on these literature studies, then analyzed through the five stages of environmental accounting: identification, recognition, measurement, presentation, and disclosure of environmental costs, and the data were analyzed (Suyudi et al, 2020) to find similarities and differences, followed by drawing conclusions and implications.

4. RESULTS AND DISCUSSION

1. Results

Initial stage of implementing environmental cost accounting at UMKM Tempe Tahu Bintang Jaya

1. Conducting Environmental Cost Identification

In the process, UMKM Tempe Tahu Bintang Jaya has identified environmental costs, but it is still done in a general manner without any specific categorization, such as expenses for cleaning equipment, equipment maintenance, and pipe repairs.

2. Making Expense Recognition

Using the accrual method, where environmental costs are recognized even though cash has not yet been disbursed. These costs are included in the category of goods, services, and production costs, but do not have a specific item or account.

3. Conducting Cost Measurement

SMEs measure environmental costs based on the actual costs from the previous period using the historical cost method. This provides an overview of the actual expenditures required for waste processing.

4. Presentation of Costs

Environmental costs are presented in financial statements in general, not explicitly separated as environmental items. This presentation refers to the normative model, which records environmental costs alongside other similar costs.

5. Cost Disclosure

There is no specific disclosure related to environmental costs in the financial statements. Environmental costs are combined with capital expenditures and other operational costs. This makes it difficult to specifically assess the responsibility of SMEs in waste management.

Stages of Implementing Environmental Costs in the Wood Sawmill MSME UD Mega Cipta

1. Conducting Environmental Cost Identification

MSME UD Mega Cipta identified the negative impacts of wood milling operations, such as solid waste and gas emissions. However, these costs are considered part of general expenses without detailed classification.

2. Making Expense Recognition

Environmental management costs are recognized as an annual budget allocation for operations. However, there has been no specific recognition in the financial statements because they are considered part of overhead costs.

3. Conducting Cost Measurement

The measurement of environmental costs is based on the realization of costs from the previous period. This provides a simple approach but does not adequately reflect the actual needs for waste management.

4. Presentation of Costs

Environmental costs are presented as part of general administrative expenses. This presentation is not separate and does not reflect transparency in environmental expenditures.

5. Cost Disclosure

There is no explicit disclosure regarding environmental costs in the financial statements. These costs are presented together with other operational costs without further details. A summary of the comparison of SMEs in the implementation of environmental costs is presented in Table 1.

Tabel 1
Implementation of Environmental Costs

Aspect	MSME Tempe Tahu Bintang Jaya	MSME Penggajian Kayu UD Mega Cipta
Identification	Identification was carried out but not in accordance with PSAK standards	Identification is carried out in general without details
Recognition	Using the accrual basis and doesn't having a specific item	The recognition is made as part of the general expenses.

Presentation	Not presented specifically in the financial report	Served with the cost General Administration
Measurement	Using historical cost references from the previous period	Using the reference to budget realization previously

Data processed by the author, 2024

2. Discussion

Based on Table 1 above, it can be interpreted that both SMEs have similarities in waste management and recording environmental costs using a historical basis in measuring environmental costs, and both have identified, disclosed, recognized, measured, and presented environmental costs. However, there are also differences between the two journals, namely that the Tempe Tahu MSME has already implemented the separation of environmental costs, although not yet fully systematic and detailed, whereas the Wood Sawmill MSME tends to combine environmental costs in the general administrative report without any specific details. Additionally, the Tempe Tahu SMEs focus more on handling liquid and solid waste with an emphasis on the biological impact of organic waste, whereas the Wood Sawing SMEs focus on solid waste and gas emissions that have the potential to pollute the air and surrounding environment.

The stages of implementing environmental cost accounting in both SMEs include identification, recognition, measurement, presentation, and disclosure of environmental costs. Although both SMEs have identified environmental impacts, such as liquid waste, solid waste, and gas emissions, specific cost categorization has not yet been carried out (Apriani et al, 2023). The Tempe Tahu MSME uses the accrual method in recognizing environmental costs but does not have a specific cost item, whereas UD Mega Cipta records these costs as part of overhead costs (Fitriana & Susilowati, 2021) without specification. In cost measurement, both SMEs use a historical approach based on the realization of costs from the previous period. However, reporting transparency becomes an issue because environmental costs have not been presented or disclosed separately in the financial statements.

This finding is in line with the research results of (Sari, 2025), SMEs record and analyze environmental costs to help SMEs manage their environmental impact. Also in line with the statement from Sari & Muda (2023), that both SMEs have implemented green accounting by incorporating environmental costs. However they have not yet been able to provide information regarding the reduction of operational costs because environmental costs have not been presented separately, thus they cannot indicate the implications of reducing or eliminating environmental costs as in the research results of Indriastuti & Mutamimah (2023). Similarly it has not yet been able to help MSMEs identify resource wastage and improve operational efficiency as mentioned by Schaltegger (2017). This finding illustrates that the implementation of green accounting is still in the early stages, as stated by Sari (2025). This finding has not yet been able to prove Latif (2023) statement because the company has already implemented environmental costs in its business activities, but it has not yet been traced whether the company focuses solely on prioritizing profit. This finding also cannot yet prove the findings in Zulhaimi (2015) research, because it has only analyzed two companies.

For that reason it is recommended that UMKM Tempe Tahu Bintang Jaya start specifically categorizing environmental costs in their financial statements. This includes the categorization of prevention costs, detection costs, internal failure costs, and external failure costs according to the Hansen & Mowen theory (Paru, 2018) and research from Franciska et al (2019). Costs that can be categorized, for example, include the cost of liquid waste management, wastewater treatment plant maintenance, and the use of more environmentally

friendly raw materials. In addition SMEs need to present and disclose environmental costs separately in their financial statements. With a special item for environmental costs, both internal and external parties will find it easier to evaluate waste management performance (Cohen & Robbins, 2012). In the financial report notes, details regarding the allocation and use of waste management costs should be explained in detail, as stated in the research by Indriastuti & Mutamimah (2023) dan Schaltegger (2017).

On the other hand as stated by Sari (2025), that green accounting helps SMEs manage environmental impacts by recording and analyzing costs related to the environment, energy efficiency, and waste reduction, and fostering a work culture that promotes environmental awareness and sustainability. Thus SMEs can optimize the utilization of the waste produced. Solid waste has already been used as animal feed, but solutions need to be found for managing liquid waste to prevent environmental pollution. MSMEs can invest in more efficient waste processing technologies, such as repurposing liquid waste for non-consumable production needs or installing more affordable wastewater treatment plants for small-scale businesses. With these steps MSMEs not only enhance their social and environmental responsibility but also strengthen public trust in their operations (Schaltegger, 2017). Meanwhile for the wood milling MSME UD Mega Cipta, improvements are needed in the identification and recording of environmental costs. Costs related to waste management, such as wood dust and gas emissions, should be identified in detail and not just included in general expenses.

The presentation of financial statements also needs to be improved by including a specific item for environmental costs, so that it better reflects the environmental responsibility of the SMEs. In addition the measurement of environmental costs, which has so far been based solely on previous cost realizations, needs to be improved by considering actual needs and long-term cost estimates. As an additional step SMEs can adopt environmentally friendly technologies, such as filtration systems for wood dust or waste management that can be reused as by-products (Sari, 2025) and (Pratama & Sisdianto, 2024). This not only helps minimize environmental impact but can also create new revenue opportunities. By presenting transparent financial reports and improving waste management, SMEs can gain a better reputation in the eyes of the public and enhance their competitiveness in a market that is increasingly concerned with sustainability (Rhamadani & Sisdianto, 2024).

Based on the findings in this research, there are several practical and theoretical implications related to the implementation of green accounting in SMEs. Practically, a more systematic and detailed application of environmental cost accounting can help SMEs such as Tempe Tahu Bintang Jaya and UD Mega Cipta better manage their environmental impact. By categorizing environmental costs into more specific elements—such as prevention costs, detection costs, internal failure costs, and external failure costs—SMEs can identify potential inefficiencies, reduce long-term operational expenses, and enhance waste management efficiency. This approach also improves accountability and transparency in financial reporting, making it easier for stakeholders to assess the companies' environmental performance.

Theoretically, this study contributes to the growing body of knowledge on green accounting practices in SMEs, particularly in developing countries like Indonesia, where structured implementation remains limited. The findings demonstrate that green accounting practices are still in their early stages and require policy support and technical guidance to enable SMEs to use environmental cost information as a foundation for strategic decision-making. This aligns with environmental accounting theory, which emphasizes the integration of financial and sustainability information as part of corporate social responsibility. Therefore, this study can serve as a valuable reference for further research exploring the relationship between green accounting, operational efficiency, and SME competitiveness.

5. CONCLUSION

This research highlights the importance of implementing environmental cost accounting in SMEs to support sustainability and corporate social responsibility. SMEs play a significant role in the Indonesian economy, but this substantial contribution is often accompanied by challenges in managing the environmental impact of their business activities. Through case studies on UMKM Tempe Tahu Bintang Jaya and UKM Penggergajian Kayu UD Mega Cipta, this research reveals that the implementation of environmental accounting is still in its early stages and requires further development.

The implementation of environmental cost accounting in SMEs in Indonesia still requires increased awareness, capacity development, and policy support. With better implementation, SMEs can enhance social responsibility, strengthen their positive image in the eyes of the public, and create better competitiveness in a market that is increasingly concerned with sustainability. Therefore, it is necessary to raise awareness and implement specific standards for environmental accounting from various parties, both internal and external, in order to support the sustainability of small and medium enterprises in Indonesia. The limitation of this research is that it cannot be generalized to a broader population. Therefore, further research can develop it by expanding data sources or employing various triangulation techniques.

REFERENCES

- Apriani, A., Nurwani, N., & Juliati, Y. S. (2023). Analisis Penerapan Akuntansi Manajemen Lingkungan dalam Pengungkapan Biaya Lingkungan Berdasarkan Perspektif Islam. *Jurnal Ilmiah Ekonomi Islam*, 9(2), 2374. <https://doi.org/10.29040/jiei.v9i2.9510>.
- Bagraff, H. A., & Ahsan, M. (2024). Green Accounting, Financial Performance, and Company Value: A Bibliometric Study. *International Journal of Current Science Research and Review*, 7(0), 4124-4135.
- Cohen, N., & Robbins, P. (Eds). (2012). *Green business: An A-to-Z guide*. SAGE Publications, Inc.
- Desty, A. F., & Ersi, S. (2024). Penerapan Akuntansi Lingkungan dalam Meningkatkan Kinerja Perusahaan. *Jurnal Manajemen Dan Akuntansi*, 1(3), 184-191.
- Fitriana, D., & Susilowati, L. (2021). *Akuntansi Lingkungan dalam Pandangan Islam*. Jakarta: Alim's Publishing.
- Franciska, R. M., Sondakh, J. J., & Tirayoh, V. Z. (2019). Analisis penerapan akuntansi biaya lingkungan pada pt. royal coconut airmadidi. *Going Concern: Jurnal Riset Akuntansi*, 14(1).
- Fransiska, I. B., Manoarfa, H., Juliana, J., & Asih, V. S. (2025). Social Impact Measurement by Social Return on Investment Based on Islamic Social Enterprise. *Iqtisad: Journal of Islamic Economic and Civilization*, 1(1), 70-89.
- Goldie Kelly, S., & Deliza Henny. (2023). Pengaruh Green Accounting dan Kinerja Lingkungan Terhadap Nilai Perusahaan dengan Profitabilitas sebagai Variabel Moderasi. *Jurnal Ekonomi Trisakti*, 3(2), 3301–3310. <https://doi.org/10.25105/jet.v3i2.18051>.
- Indriastuti, M., & Mutamimah, M. (2023). Green accounting and Sustainable Performance of Micro, Small, and Medium Enterprises: The Role of Financial Performance as Mediation. *The Indonesian Journal of Accounting Research*, 26(2), 249-272.
- Juliana, J., Monoarfa, H., & Adirestuty, F. (2025). *INDUSTRI HALAL: Peluang Dan Tantangan Global*. Depok: Rajawali Buana Pusaka (Ranka Publishing).
- Jasch, 2003. (2003). Environmental Management Accounting (EMA): Reflection of Environmental Factors in the Accounting Processes through the Identification of the Environmental Costs Attached to Products, Processes and Services n Cleopatra aendroi Lector Universitar Doctor Co. *Theoretical and Applied Economics*, 10, 81–87. <http://store.ectap.ro/articole/173.pdf>.

- Kusnandar, P. W., Juliana, J., Rasida, R., Utomo, Y. T., & Mac-Doqu, F. K. (2025). The Influence of Brand Trust, Islamic Branding, and Religiosity on Purchasing Decisions: The Moderating Role of the Halal Label. *Indonesian Journal of Islamic Economics and Sustainability*, 1(1), 1–15. Retrieved from <https://www.ijiesjournal.com/index.php/ijies/article/view/1>
- Lako, A. (2018). *Akuntansi Hijau: Isu, Teori dan Aplikasi*. Jakarta: Salemba Empat.
- Latif, Abdul. (2023). Green Accounting: Apakah Menjadi Sebuah Solusi untuk Kota 'Metropolitan'? Tersedia di <https://kumparan.com/>.
- Monoarfa, H & Juliana, J. (2025). *Falsafah dan Praktik Bisnis Islami Dari Rasulullah hingga Era Digital*. Depok: Rajawali Buana Pusaka (Ranka Publishing).
- Paru, S. M. (2018). *Akuntansi Manajemen Lingkungan: Metoda Akuntansi Lingkungan Guna Meningkatkan Eko-efisiensi Usaha dan Mengatasi Krisis Ekologi Studi pada CV. Andi Offset* (Doctoral Dissertation, Universitas Gadjah Mada).
- Pratama, W., & Sisdiyanto, E. (2024). Analisis Penerapan Standar Akuntansi Lingkungan dalam Meningkatkan Sektor UMKM di Indonesia. *Jurnal Ilmiah Ekonomi dan Manajemen*, 2(12), 464-476.
- Pratiwi, E.A., J. (2020). Implementasi Akuntansi Lingkungan pada UMKM di Indonesia. *Jurnal Akuntansi dan Keuangan. Jurnal Pengabdian Masyarakat*, 58–64.
- Puspita, D. A., & Surendra, A. (2019). Analisis Penerapan Green Accounting (Studi Empiris Pada UKM Penggajian Kayu U.D Mega Cipta di Desa Pilangsari, Banaran, Kalijambe, Kabupaten Sragen). *Jurnal Penelitian Dan Kajian Ilmiah*, 17(2), 2085–2215.
- Rhamadani, S. F., & Sisdiyanto, E. (2024). Urgensi Akuntansi Lingkungan dalam Meningkatkan Daya Saing Perusahaan di Pasar Global Era Digital. *Jurnal Ilmiah Ekonomi Dan Manajemen*, 2(12), 477-490.
- Sari, A. K., Kesuma, S. A., & Muda, I. (2023). MSMEs Upgrade with the Concept of Green Accounting and Digitalization (Study Literature Review). *International Journal of Social Service and Research*, 3(3), 763-767.
- Sari, G. I. (2025). Implementation of Green Accounting and Environmentally Friendly Work Culture in Increasing the Competitiveness of Local MSMEs. *Riwayat: Educational Journal of History and Humanities*, 8(1), 713-726.
- Sari, M., & H. (2021). Peran Kebijakan Lingkungan dalam Mendorong Akuntansi Hijau pada UMKM. Vol. 5, NO(1). <https://berkas.dpr.go.id/puskajianggaran/jurnal-budget/public-file/jurnal-budget- public-10.pdf>.
- Sari, R. A., Rahayu, A., Juliana, J., Sholahuddin, M., & Valijon, R. O. (2025). The Role of Islamic Marketing Ethics in Improving Brand Credibility. *Indonesian Journal of Islamic Economics and Sustainability*, 1(1), 49–67. Retrieved from <https://www.ijiesjournal.com/index.php/ijies/article/view/5>
- Schaltegger, s., Burrit, R., P. H. (2017). *An Introduction to Corporate Environmental Management: Striving for Sustainability* Routledge. In *Journal GEEJ* (Vol. 7, Issue 2).
- Sukmana, S. D. (2022). Implementasi Fungsi Audit Internal dalam Penerapan Prinsip Akuntabilitas (Studi Perumda Pasar Juara Kota Bandung). 2(1), 1–10.
- Suyudi, M., Permana, D., & Suganda, D. (2020). Penerapan Akuntansi Lingkungan sebagai Bentuk Pertanggungjawaban Perusahaan terhadap Lingkungan. *Substansi: Sumber Artikel Akuntansi Auditing Dan Keuangan Vokasi*, 4(2), 188-216.
- Te, A., Herdi, H., & Aurelia, P. N. (2024). Analisis Penerapan Akuntansi Biaya Lingkungan dalam Proses Pengolahan Limbah pada UMKM Tempe Tahu Bintang Jaya Waipare Desa Watumilok Kecamatan Kangae. *Accounting UNIPA-Jurnal Akuntansi*, 3(2).
- Yolanda, C. (2024). Peran Usaha Mikro, Kecil dan Menengah (UMKM) dalam Pengembangan Ekonomi Indonesia. *Jurnal Manajemen Dan Bisnis*, 2(3), 170-186.
- Zulhaimi, H. (2015). Pengaruh Penerapan Green Accounting terhadap Kinerja Perusahaan. *Jurnal Riset Akuntansi dan Keuangan, UPI*, 3 (1), 603-616.