Green Accounting Analysis (Reduce, Reuse, Recycle) to Improve Financial Performance: a Case Study of Kud Tani Bahagia 1 Mojokerto

Helmi Difa Hamdani [1*], Driana Leniwati [2], Setu Setyawan [3], Ahmad Waluya Jati [4], & Muhammad Wildan Affan [5]

[1, 2, 3, 4, 5] Fakultas Ekonomi Dan Bisnis, Universitas Muhammadiyah Malang
Email: helmidifa99@gmail.com; driana@umm.ac.id; setiawan@umm.ac.id; waluya@umm.ac.id; wildan@umm.ac.id
* Corresponding Author: helmidifa99@gmail.com

Received : 18 Oktober 2024
Revised form : 27 November 2024
Accepted : 24 Desember 2024
Available Online : 30 Mei 2025

ABSTRACT

Using an interpretive paradigm, the purpose of this study is to implement the concept of 3R Green Accounting, which stands for "Reduce, Reuse, and Recycle." This study also attempts to interpret the 3R concept by determining whether or not it has an effect on financial performance through the use of a case study design. Furthermore, the research combines three concepts in green accounting, namely environmental costs, social costs, and economic costs, in the process of implementing green accounting in KUD. The first Tani Bahagia. The information was gathered by conducting in-depth interviews with members of the KUD staff as well as members of the community in the surrounding area. Following the clustering of the findings from the interviews and the simplification of the data, the findings were then examined and conclusions were formed. In addition, the findings of this comprehensive investigation shed light on whether or not the 3R idea results in any expenses and whether or not it would have an impact on the financial performance of KUD. By taking into consideration the fundamentals of accounting.

Keywords: Green Accounting; 3R (Reduce, Reuse, Recycle); Financial Perfomance.

e-ISSN: 2527-9947/© 2025 The Authors
DOI: 10.30996/jem17.v10i1.131917
Published by Fakultas Ekonomi dan Bisnis, Universitas 17 Agustus 1945 Surabaya.

INTRODUCTION

Currently, the era of the industrial revolution has prompted some companies to apply technology with an orientation to increase company productivity. The introduction of technology is growing every time and begins with a large investment in development and research within the company to increase productivity and also minimize the cost of production factors. However, from this orientation it can be inappropriate if it only focuses on the production process, as a consequence if the government ignores the management of waste produced from the results of a production, there will be a problem related to the environment for waste management. Over the past few decades the management of leftover waste has evolved as a serious response to environmental problems, although the current focus of waste management is more towards reducing its environmental impact rather than preventing it for sustainability. For example, using the strategy of recycling that allows the management of various types of waste (gas, liquid, and solid), while providing a detailed representation of the waste produced from a production process [1].

The government is currently reviewing the extent of the effectiveness of companies' efforts in managing the environment. They use the work program carried out by the Ministry of Environment and Forestry to evaluate how companies can manage the environment, including in managing waste. The implementation of this work program, naturally, also has a good impact on the protection of the surrounding community and forests, because companies are expected to fulfill their responsibilities for environmental conservation, so that companies avoid industrial waste pollution [1].

Environmental management has become a major focus for companies, especially in the manufacturing sector. It is undeniable that manufacturing companies will produce waste during the production process [2]. If the waste is not managed properly, the company can cause or the company will contribute to environmental pollution [3]. Environmental performance evaluation is usually carried out through an environmental management system that includes the control of various aspects of the environment.

Problem Formulation

1. Whether the flow of green accounting, especially in the 3Rs (Reduce, Reuse, Recycle) can affect financial performance.
2. Seeing how KUD uses green accounting practices to optimize environmental costs.

Purpose of Writing

1. This research aims to bridge the existing gap by exploring in depth how the implementation of green accounting concepts, especially reduse, reuse, and recycle strategies, can improve financial performance.
2. This research is also used to identify the extent to which KUD Tani Bahagia 1 has applied green accounting principles, as well as understand the strategy of reduce, reuse and recycle. As well as whether the KUD Tani Bahagia 1 has an impact on the implementation of green accounting on its financial performance.

LITERATURE REVIEW

Green Accounting

Green accounting is an approach in the discipline of accounting that involves identifying, measuring value, recording, presenting, reporting, and disclosing information that integrally covers financial, social, and environmental dimensions. This approach aims to produce holistic, integrated, and relevant accounting data as a basis for more informative decision-making in the context of economic and non-economic resource management. Meanwhile, the 3R (Reuse, Reduce, Recycle) principle is a strategic framework in waste management that focuses on reducing, reusing, and reprocessing waste. Reuse refers to the reuse of materials that still have useful value, both for similar and different functions. Reduce is oriented towards minimizing waste production through changes in consumption or production patterns. Meanwhile, Recycle focuses on transforming waste materials into new products that have beneficial value. The essence of the 3R principle is to create a circular mechanism that allows waste to be managed sustainably [4].

The question that arises is the extent to which the application of waste management through the 3R concept can contribute to the financial performance of the organization. This requires further evaluation, especially regarding the direct and indirect economic impact of the strategy on resource management and operational efficiency [4].

Stakeholders Theory

The stakeholder theory emphasizes that companies are not only responsible for achieving financial benefits for their own interests, but also obliged to provide benefits and create added value for the stakeholders involved. Therefore, it is essential for the company to build, improve, and strengthen the support from stakeholders to ensure the smooth operation of the company and support the achievement of its strategic goals [3]. Stakeholders, in this case, refer to individuals or groups that have the capacity to influence the company's performance as well as be influenced by the company's activities. They play a crucial strategic role in supporting the success of the organization. The relationship between the company and stakeholders is symbiotic, where each party depends on each other to achieve mutual success depends [5].

Furthermore, the stakeholder theory emphasizes that the company's attention should not be limited to the interests of only owners or shareholders. Instead, companies must actively accommodate the needs and roles of other stakeholders, given their significant contribution to the company's continuity. Ignoring the existence of stakeholders can result in a company losing access to the resources and support needed to achieve its main goal, which is to obtain optimal profits [5].

Theory of Legitimacy

This research refers to the Grand Theory in the form of a theory of legitimacy. This theory assumes that an organization is an integral part of society, so its existence must be in harmony with applicable social norms. In the context of its application to economic and financial performance, legitimacy theory explains that mismatches between the internal values of a company and the social values of society can lead to a loss of legitimacy. This condition has the potential to threaten the sustainability of the company's operations [6].

In the scope of social and environmental accounting, the theory of legitimacy is often the main reference. This theory highlights the importance of an inclusive corporate management system, taking into account the interests of the community, the government, individuals, and community groups. This emphasizes that social and environmental disclosure is a reflection of the existence of a social contract between the company and the community. In order for the relationship to run harmoniously, the company must adjust its activities to the values and norms that apply in the social environment [6].

Legitimacy theory offers a logical framework of thinking about the relationship between companies and society. In this theory, the legitimacy of an organization depends on the acceptance of society, which in turn affects the company's access to other financial and economic resources. Thus, public legitimacy is a strategic element that supports the company's sustainability. Therefore, legitimacy can be used as a foundation in building a structured and sustainable corporate [6].

Company Performance

A company's performance assessment is often reviewed through its financial performance. Financial performance focuses on certain indicators that can measure the success rate of a company in generating profits [7]. Thus, the financial performance of a company can be interpreted as the company's ability to achieve profits in accordance with the standards and criteria that have been set in a certain period. Meanwhile, defines a company's performance as a picture of the company's financial situation that can be revealed through the use of financial analysis tools. This allows the evaluation of the company's financial condition, both in terms of achievements and performance, over a certain period of time [8].

Financial performance evaluation is generally carried out using various financial ratios sourced from the company's financial statements. Each ratio has specific goals, benefits, and interpretations to support the decision-making process, policy setting, and formulation of the company's strategic direction [9].

If a company carries out activities related to the environment, social responsibility in the field of the environment also involves additional costs. Costs incurred as a consequence of such activities are known as environmental costs [10], which include expenses to deal with environmental damage caused by the company's operations [11]. These environmental costs can include preventing environmental degradation, restoring environmental conditions to their original state, and improving the environment that has been affected by the company's operations [12].

Tambunan et al., affirms that environmental costs are an effort by the company to fulfill its social responsibility related to the negative impact of operational activities on environmental quality [13]. Hansen and Mowen classify environmental costs into four categories: prevention costs, detection costs, internal failure costs, and external failure costs [14]. Although environmental costs are often considered only as a deduction of profits, the allocation of funds for environmental management reflects the company's commitment to environmental sustainability. Furthermore, this allocation strengthens people's trust in corporate social responsibility and can be considered a strategic long-term investment [5].

Environmental Costs and Corporate Value

Research conducted by Daromes and Kawilarang, shows that there is a positive relationship between environmental performance and company value. This is due to the company's ability to strengthen its positive image and increase its share price through the implementation of social responsibility, especially by paying attention to environmental performance. By effectively managing environmental impacts to anticipate potential disruptions to the surrounding community, companies can build a good reputation, which ultimately attracts investors [15].

On the other hand, it was found that there was a negative or misaligned relationship between environmental performance and company values. This happens because companies with poor environmental performance tend to disclose more information in an effort to cover up their weaknesses. This strategy, known as greenwashing, aims to raise investor expectations even though it does not reflect a noticeable improvement in the company's environmental performance [16].

RESEARCH METHODS

The research used in this article uses descriptive research with qualitative methods and uses an interpretive paradigm. The purpose of this study refers to the phenomenon that exists in the Cooperative of the Happy Farmer Village Unit 1 Gondang, Mojokerto. For the data collection technique based on interview data and existing literature and articles, the discussion is almost the same as the content of this study.

Research Design

The design used is descriptive which studies in accordance with the information that is studied and uses qualitative methods and combined with an interpretive paradigm which later all of the phenomena found will be studied in more depth according to the findings of the results of the data. In this section, the author is asked to explain in detail how the research design is.

Research Limits

For the limitation of this research, namely in the few articles and journals that explain the 3Rs of KUD in Indonesia, most of the findings for waste management are carried out in companies engaged in manufacturing. In this section, the author is asked to explain in detail the limitations of the research.

Participants and Settings

This research was carried out on the karwayan at KUD Tani Bahagia 1 Gondang Mojokerto, as well as the surrounding community. This research was conducted in 2023 with the following informants:

Table 1. Informant KUD Tani Bahagia 1 Gondang Mojokerto

No	Name	Age	Work
1	Xavier	60	Treasurer
2	Zilong	58	Manager
3	Nathan	42	Employee
4	Noland	27	Employee
5	Kairi	28	Employee
6	Eudora	31	Community
7	Rafaela	45	Society

Source: Interview informant, 2023.

Measurement

Data Collection

For the data collection technique, namely direct interviews with employees in KUD, especially employees who have duties or those in charge of waste management. As well as researchers to see firsthand how to manage waste in KUD, and to see in the surrounding community whether there are any disturbances from the work produced by KUD. Not only from employees and the community, the researcher also conducted an interview with the treasurer of KUD whether on the basis of waste management can improve financial performance in the KUD. which was carried out.

Data Analysis

Technical steps for data processing There are several steps, namely the first is to group the data and select the main things and focus on what is needed in the research and discard what is not needed, this is done because the data obtained in the observation results is too broad so it is necessary to select data to make it easier. For the second ledge, the data obtained from the results of interviews on the research object is associated with the theory of legitimacy and stakeholder theory, this is done to help researchers more easily draw conclusions and collect data. And the third step is data triangulation, which is used to verify the validity of the data or information that has been obtained from the results of the interview. Triangulation can also be interpreted as checking data from other sources, such as comparing the answers of employees and managers in the Kopedrasu Unit of Desa Tani Bahagia 1, which is used to strengthen data from key informants and additional informants.

RESULTS

In theory, it is found that green accounting has 4 (four) indicators, namely A) Environmental costs, B) Social costs, C) Economic costs, D) Energy efficiency costs and resource costs. Meanwhile, in the findings from the results of the interview survey conducted in the company, it was found that there are 3 (three), namely points A, B, and C, there are cost indicators in the application of green accounting. The following is the data from the interview with the informant:

Environmental Costs on Green Accounting

Based on the results of the interview, each informant almost had the same answer from the results of the system applied to the Happy Farmers 1 KUD. In general, employees or employees mentioned that the environmental costs applied to waste treatment costs are from the results of the waste. It is almost the same as the general theory that environmental costs are the costs for the collection, management and disposal of waste products or solids, liquids, or gases. However, there is something unique from the discovery from the results of the observations made, the cooperative has a system about waste management that is transferred to people for processing and the results of the waste that has been processed are deposited to the cooperative again to be sold, it can be said to be unique because the results of their sales are divided from the cooperative, namely the waste assistance, and the manager or producer of waste products, namely spreading their knowledge, So they are considered mutually beneficial.

Social Costs on Green Accounting

In terms of data obtained from informants on the concept of social costs between cooperative activities and the impact obtained on the community. The cooperative admitted from the activities they carried out, they said that peacocks did not interfere with the activities of the surrounding community.

Economic Costs on Green Accounting

One of the principles applied to economic costs is the mutually beneficial working relationship between KUD and farmers. All waste that is produced from KUD activities is sold or handed over to farmers for them to process into fertilizer or planting media, from the results of the fertilizer KUD will help distribute to shops. The management costs are borne by the farmers, while KUD only supplies waste and helps sell the products produced. Where from these activities there will be profit sharing. However, in general, economic costs in green accounting include several things, but based on the results of interviews from informants, there are 2 aspects that exist in the KUD. The first aspect of externality is the cost aspect arising from the negative impact of the general public, the second aspect of waste management costs in this case includes whether the results of green accounting affect financial performance.

DISCUSSION

The results of this study show that the concept of waste management or what is often called recycling or in the current era can be called green accounting can penetrate to a wider area. Where the concept of green accounting affects financial performance can be said to be quite promising for companies. Because the concept of green accounting theory which has three indicators in this research complexly explains that about environmental costs, not about companies that incur costs, companies can also benefit from the waste that has been produced, namely by the process of reduce, reuse, recycle.

The concept applied at KUD Tani Bahagia 1 Gondang, Mojokerto is a concept of mutually beneficial profit sharing where the waste process is processed by local farmers who can generate a profit, and KUD does not incur management costs and environmental costs caused by waste from production. The researcher added a recommendation on social costs, from the results of research on social there is indeed no influence on the community but if when there is large production it still causes dust from the production products, so according to the researcher on environmental costs must still be optimized so that there is no disturbance to society or the surrounding community, and according to the researcher why coaching is not held for the community, so that they can manage the waste from KUD production, because if they continue to refer to being produced or handed over to farmers, the results are not necessarily in accordance with the expectations of KUD. So according to the researcher, adding that the cost of coaching is a good thing, even though KUD spends more money on coaching, KUD also expects goods that meet the criteria, besides that it will affect the society or the surrounding community, because from coaching there are eight jobs. It can be recommended in the future to KUD Tani Bahagia 1 Gondang Mojokerto.

From previous research, according to this, it is almost consistent that for financial performance and environmental performance does not have a significant impact, although in this study the KUD gets a profit from the sale of the waste, it is better for KUD to carry out its social CSR rights to the community so that they are more concerned about the environmental impact caused in the future.

However, according to research conducted by stating that green accounting can affect profitability, because the better the management of green accounting proves how much the level will be PROPER and will get high profitability.

CONCLUSION

Based on the results of the research, it can be concluded that the theory used has explained the importance of green accounting for sustainability, as well as the significant influence on the management of 3R to obtain profitability. The purpose of this research is to examine the amount of profit that will be achieved using green accounting, especially in the 3R. The results of the discussion, it has also been determined that the profits obtained can also produce positive and negative things from the researchers that have been carried out.

SUGGESION

By effectively implementing the 3R principles, KUD Tani Bahagia 1 Mojokerto can improve their sustainability performance and create financial benefits as well as sustainable environmental benefits. Economic and Environmental Benefits:

1. Reduced Operational Costs: By reducing waste and improving efficiency, KUD can reduce operational costs, which will positively impact financial performance.
2. Improving Corporate Image: Adopting the 3R principle can improve the company's image in the eyes of customers and the community as an environmentally responsible entity.
3. Regulatory Compliance: Ensuring compliance with environmental regulations can reduce the risk of fines and penalties and improve long-term sustainability.

CREDIT AUTHORSHIP CONTRIBUTION STATEMENT

Helmi Difa Hamdani, & Driana Leniwati: Conceptualization, Supervision, Data Curation, Formal Analysis, Project Administration, Writing-original Draft, and Writing-review Editing. **Ahmad Waluya Jati, & Muhammad Wildan Affan**: Conceptualization, Resources, Software, Validation, Visualization, and Writing-review Editing. **Setu Setyawan**: Funding Acquisition, Investigation, Writing-original Draft, and Writing-review Editing.

DECLARATION OF COMPETING INTEREST

The author declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

ACKNOWLEDGMENTS

The authors would like to thank the anonymous referees for their helpful comments and suggestions.

DATA AVAILABILITY

Data will be made available in request.

FUNDING

This research is support by all authors and independent funding.

REFERENCES

[1] Syafrina Qolbiatin Faizah, B., Negeri Surabaya JlLidahWetan, U., Wetan, L., Lakarsantri, K., Ssurabaya, K., & Timur, J. (2020). THE APPLICATION OF GREEN ACCOUNTING TO FINANCIAL PERFORMANCE. Journal of Contemporary Accounting Research, 12(2), 94–99.

[2] Aida Meiyana, M. N. A. (2019). THE EFFECT OF ENVIRONMENTAL PERFORMANCE, ENVIRONMENTAL COSTS, AND COMPANY SIZE ON FINANCIAL PERFORMANCE WITH CORPORATE SOCIAL RESPONSIBILITY AS AN INTERVENING VARIABLE.

[3] Putri, A. M., Hidayati, N., Amin, M., Study, P., Faculty, A., & And, E. (2023). THE IMPACT OF THE IMPLEMENTATION OF GREEN ACCOUNTING AND ENVIRONMENTAL PERFORMANCE ON THE PROFITABILITY OF MANUFACTURING COMPANIES ON THE INDONESIA STOCK EXCHANGE. www.idx.co.id

[4] Lako, A. (2016). Konstruksi Teori Akuntansi Hijau dan Strategi Pendidikan Akuntansi. Paper disajikan dalam Seminar Nasional dan Kolaborasi Riset IAI-KAPd sesi Corporate Governance & CSR. Universitas Negeri Surakarta, 12-13 November 2016

[5] Asjuwita, M., & Agustin, H. (2020). THE EFFECT OF ENVIRONMENTAL PERFORMANCE AND ENVIRONMENTAL COSTS ON PROFITABILITY IN MANUFACTURING COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE IN 2014-2018. In Journal of Accounting Exploration (Vol. 2, Issue 3). Online. http://jea.ppj.unp.ac.id/index.php/jea/issue/view/28 Chapter 1. (n.d.).

[6] Rosmanidar, E., Putriana, M., Aulia, M., & Nasution, P. (2024). Environmental Performance on Financial Performance (Case Study on Basic Materials Companies Listed in the Indonesian Sharia Stock Index in 2017-2021).17(1), 111–125. https://doi.org/10.51903/e-bisnis.v17i1.1770

[7] Amira, A., Siswanto, Finance, P., & Stan, N. (2022). THE EFFECT OF THE APPLICATION OF ENVIRONMENTAL ACCOUNTING ON THE VALUE OF CONSUMER NON-CYCLICALS COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE.

[8] Albastiah, F. A., & Sisdianto, E. (2022). Penerapan Green Accounting, Dan Corporate Social Responsibility Terhadap Kinerja Keuangan Bank Umum Syari'ah Di Indonesia Tahun 2018-2020. Jurnal Akuntansi Dan Pajak 22 (1): 1–13. https://jurnal.stie-aas.ac.id/index.php/jap/article/view/4900.

[9] Erica, D. (2018). Analysis of Financial Statement Ratios to Assess the Company's Performance of PT Kino Indonesia Tbk. Ecodemica Journal, 2(1).

[10] Chasbiandani, T., Rizal, N., & Indra Satria, I. (2019). The application of green accounting to the profitability of companies in Indonesia. AFRE (Accounting and Financial Review),2(2). https://doi.org/10.26905/afr.v2i2.3722

[11] Suandi, A., & Ruchjana, E. T. (2021). THE EFFECT OF ENVIRONMENTAL PERFORMANCE AND ENVIRONMENTAL COSTS ON RETURN ON ASSETS (ROA). Journal of Applied Accounting Research, 5(1), 2021.

[12] Okafor, T. G. (2018). Environmental costs accounting and reporting on firm financial performance: A survey of quoted Nigerian oil companies. International Journal of Finance and Accounting, 7(1), 1 6.

[13] Tambunan, A. L., Aristi, M. D., & Azmi, Z. (2023). The Effect of Environmental Costs and Corporate Social Responsibility on Financial Performance. Journal of Microskill Economics Heroes, 13(1), 1–9. https://doi.org/10.55601/jwem.v13i1.936

[14] Hansen & Mowen. (2009). Akuntansi Manajerial. Jakarta: Salemba Empat.

[15] Daromes, F. E., & Kawilarang, M. F. (2020). Peran Pengungkapan Lingkungan Dalam Memediasi Pengaruh Kinerja Lingkungan Terhadap Nilai Perusahaan. Jurnal Akuntansi, 14(1), 77–101.

[16] Fatemi, A. Glaum, M. & Kaiser, S. (2018). ESG performance and firm value: The moderating role of disclosure. Global Finance Journal, 38 , pp. 45-64.