ISSN:2656-4270 (Online) 1410-4466 (Print)
Accredited by Ministry of Education, Culture, Research, and Technology with the ranking of Sinta (S3) SK NO.164/E/KPT/2021, 27th December 2021

Buletin Penelitian Sosial Ekonomi Pertanian Fakultas Pertanian Universitas Haluoleo
2023:25(1):1-8
https://ejournal.agribisnis.uho.ac.id/index.php/sosek
doi: https://doi.org/10.37149/bpsosek.v25i1.363

THE INCREASING BUSINESS ECO-EFFICIENCY AND COMPETITIVE ADVANTAGE THROUGH THE APPLICATION OF GREEN ACCOUNTING

Meta Ardiana[1*)], Rachma Agustina[1)], Dwi Ari Pertiwi[1)]

[1]Universitas Hasyim Asy'ari

Corresponding author: meta.unhasy@gmail.com

To cite this article:
Ardiana, M., Agustina, R., & Pertiwi, D. A. (2023). The Increasing Business Eco-Efficiency and Competitive Advantage through the Application of Green Accounting. *Buletin Penelitian Sosial Ekonomi Pertanian Fakultas Pertanian Universitas Haluoleo*, *25*(1), 1–8. https://doi.org/10.37149/bpsosek.v25i1.363

Received: January 12, 2023**; Accepted:** March 27, 2023**; Published:** April 03, 2023

ABSTRACT

The global ecological crisis caused by environmental damage due to the continuous exploitation of natural resources and the environment and not thinking about long-term sustainability is worsening and worrying. This is one of the driving aspects of the emergence of green accounting. The agro-industry sector is a sector that is vulnerable to environmental issues because it is closely related to the use of pesticides, concentrates, air quality pollution, use of fuel for its distribution, etc. This is what makes researchers interested in researching the Lumintu Farm Kediri Regency. This study examines how using green accounting increases eco-efficiency and competitive advantage. A comparison ratio of value added to environmental performance is used to analyze eco-efficiency. Data collection methods include literature study, observation, interviews, and documentation. The validity of the data is checked through the extension of participation, the persistence of words, and the triangulation of data. The findings demonstrated that Lumintu Farm had adopted green accounting through the stages of identifying costs for mitigating the impact of harmful externalities on production, recognition, measurement, presentation through the income statement, and disclosure of the costs or costs incurred by the company for environmental management. Eco-efficiency analysis with environmental performance and financial performance ratios shows positive results, 52%, an increase of 54%, and a rise of 2%. Implementing green accounting through a consistent allocation of environmental costs improves environmental performance and the entity's profit. With this profit, business continuity will be better in increasing livestock growth.

Keywords: competitive advantage; eco-efficiency; green accounting

INTRODUCTION

Nowadays, a good image of a company is seen when it has a competitive advantage when able to optimize profits for the welfare of the entity and able to maintain environmental sustainability (Mulyani, 2013). Most production activities must produce waste; the rest of the production has the possibility of harming the environment, so it requires management of the waste so that it does not harm the environment around the company. Environmental pollution and waste are examples of production externalities that negatively impact the environment around the company. It requires financial management, which can also be used as a control tool for corporate social responsibility towards the environment. Today's accounting science is a tool for presenting financial information, business language, and social responsibility. Non-renewable energy sources are becoming less available, increasing global warming, disasters nature and extreme weather are happening all over the world, and more and more warnings are at risk to the survival of living things (Kim & Todorovic, 2013)

Environmental accounting reveals the sacrifice or actual cost of input costs, results in cost efficiency, and can be used as a control measure. (Lako, 2019) defines accounting for environmental costs as an effort to calculate the number of charges or company sacrifices in environmental management into the entity's accounting recording process. Companies incur ecological costs due to production activities that affect environmental quality, both financially and financially. And nonfinancial. The output of the accounting recording process in presenting environmental costs in this accounting process is also used by policymakers within the entity in making economic decisions regarding environmental management for the sake of the entity's business continuity. (Nor et al., 2016) Companies in Malaysia are not required by law or regulation to report their green environmental credentials. However, the need for ecological disclosure remains if companies desire to legitimize their position among the public to increase expectations in measuring the environment. Green Accounting can be used to increase company revenue by treating waste as additional other income. Often companies ignore waste management because it will be considered an additional cost that will become the company's operational burden. (Unnithan & Somasundaram, 2019) When companies carry out environmental management by implementing environmental accounting, it will positively impact company performance through increasing positive impressions from consumers and The wider community, which later hopes will affect increasing competitive advantage and increasing profits. From the explanation above, it can be concluded that for business continuity, industry players not only pursue profit maximization but also pay attention to the idea of the triple bottom line, which focuses on profit, planet, and people.

The current economic conditions need adjustments. We must consider the cost with a large enough environmental impact. For sectors with indirect environmental influences, we must control them properly. We must adopt and harmonize regulations for enterprises with more significant national economic restrictions and lower energy and pollution. A market mechanism is one type of law we can use to catalyze changes in the industrial structure, like tax reform, green accounting, environmental insurance, and ecological compensation. All aspects of regulation are used to ensure the economy moves forward for sustainable development (Zhao & Liu, 2019).

Green accounting is currently an essential point in the continuity of a business entity, environmental accounting is a form of corporate responsibility, and the green business concept (Lako, 2019) defines green accounting as a series of processes in the accounting process for recognizing, measuring value, recording, summarizing, reporting, and disclosing information about transactions, events, and financial, social, and environmental objects in an integrated manner to produce integrated, complete, and relevant accounting information useful for users in economic and non-economic assessment and decision making. Green accounting activities are also described by (Azis et al., 2020). Environmental accounting is collecting, analyzing, assessing, and preparing reports on environmental and financial data to reduce environmental impacts and costs. Because this type of accounting is also required for many parts of government policy, environmental accounting has emerged as a critical component of green business and responsible economic development.

Eco-efficiency of business in Indonesian absorption comes from 2 words, namely eco and efficiency, where eco is an economic-ecological resource which means the company can produce goods and services more using natural resources. Still, with less energy, hopefully, production and the resulting waste will also be less (Muzdalifah, 2020) is a series of company efforts to maintain its organization or business continuity while simultaneously reducing negative environmental impacts. Eco-efficiency shows a possible design for environmental cost reporting, and there are several advantages when companies present environmental costs first from revenue, current savings, and cost avoidance. The concept of business eco-efficiency can now be used as a tool for sustainable business strategies. Eco-efficiency assesses products and processes' environmental and economic impacts during the company's cycle. The company carries out ecological sustainability to reduce the environmental impact due to the company's operational activities by minimizing the company's operating costs. The concept of eco-efficiency focuses on how companies can create products with added value.

On the other hand, companies that pay less attention to eco-efficiency will gradually be left behind because by implementing eco-efficiency, the company will quickly reduce production costs (Putri, 2019). Eco-efficiency indicators have arisen to monitor environmental consequences. They are aimed to examine the evolution of eco-efficiency by evaluating economic growth, both in terms of consumption and manufacturing, as well as the related repercussions. (Basuki, 2015). Research results from There is a mutually significant relationship between the environment (Yarahmadi, 2015)

The agro-industry sector is a sector that is vulnerable to environmental issues because it is closely related to the use of pesticides, concentrates, air quality pollution, use of fuel for its distribution, etc. This makes researchers interested in researching the Lumintu Farm, Kediri Regency. This study aims to provide empirical evidence related to increasing business eco-efficiency and competitive advantage through the presentation of green accounting.

MATERIALS AND METHODS

The methodological approach is qualitative, following the research data employed in this study. This study employs qualitative descriptive research to gather information about boosting business eco-efficiency and competitive advantage through implementing environmental accounting.

Research on increasing Significant benefits and environmental effects in business through green accounting was conducted at Lumintu Ranch, Kediri City. This research was conducted from March – October 2022. This research was conducted at the Lumintu Farm in the Banyakan Village, Kediri Regency. This study examines how green accounting is used in financial reports. At the same time, the subjects in this study were farm owners, the accounting department, employees, consumers, and the community in the livestock environment.

Eco-efficiency measurement uses value added which is calculated from earnings before interest and tax (net profit before tax) and costs incurred for sales, then compared to environmental performance (Azis et al., 2020)

$$\text{Value Added} = \text{EBIT} - \text{Sale Cost} \tag{1}$$

$$\text{Eco-Efficiency} = \frac{\text{Value Added}}{\text{Environmental Performance}} \tag{2}$$

After calculating the value added from earnings before interest and tax deducted by selling costs, the level of eco-efficiency is calculated by the ratio of value added to environmental performance, namely the allocation of environmental costs that the entity has budgeted.

RESULTS AND DISCUSSION

Lumintu Farm is a UMKM chicken farming field in Banyakan village, Kediri Regency. It was established in 2013. Over time Lumintu Farm has developed quite rapidly. It has two chicken coops with a total chicken population of 30,000 chickens with an average age of 0 days – 16 weeks. Chickens are ready for sale around 16 weeks of age. The operational livestock process at Lumintu Farm begins with the preparation of the cage land, the transfer of DOC, the grading process, intensive maintenance, and finally, the sale of chickens to partners and customers. From the process of daily farming activities, there are several operational wastes that the researchers identified, including chickens dying in the working process due to viruses that attack and chicken manure that causes a strong odor.

Application of Green Accounting at Lumintu Farm

From observations, the researchers identified several operational wastes, including dead chickens in the operational process due to an invading virus, stinging chicken manure that polluted the environment, and green flies. Lumintu Farm itself is an entity engaged in the field of chicken farming. Therefore, the transaction recording system should be adjusted to financial accounting standards to allocate environmental costs. An elaboration regarding the green accounting application of Lumintu Livestock from the process of tracing costs to the stage of presenting and disclosing ecological costs.

a. Environmental cost tracking

Green accounting is a style of accounting that incorporates environmental expenses and financial results from operations. Green accounting indicators of gross domestic product (GDP) can be utilized in creating and evaluating policies and answering if the economy is already running consistently across one or more accounting periods. Green accounting can increase awareness of sustainability issues among the national government as policymakers, which tends to concentrate on the country's economic development (Rounaghi, 2019). Accounting principles require entities to apply sustainable business principles, meaning that the company's production process should also support and pay attention to environmental sustainability, namely all aspects of economic events, by identifying the negative impacts of the production process. From interviews conducted with Ms. Dita in the finance department, it is known that there are several costs related to waste handling, including transporting chicken manure and cleaning services. Lumintu Farm has a policy regarding waste management, and the company has already budgeted for the impact of externalities before the current period, so there has been a specific budget for handling environmental costs. This is in line with research conduct, which suggests that agricultural entities perform cost tracking at the beginning of the current period. Although there are no strict regulations regarding environmental accounting management, it would be better for the company to take a policy on managing negative externality impacts from the production process. As with research (Unnithan & Somasundaram, 2019), Companies must embrace green accounting at all levels. The government must take drastic action and levy penalties if environmental standards are not fulfilled. Environmental responsibility has evolved into one of the most important aspects of a company's corporate social responsibility.

b. Environmental Cost Recognition

After environmental costs have been successfully traced and met the requirements according to accounting principles, the next step is the recognition of financial transactions as costs. An expense transaction is recognized as an account because it benefits the entity. Lumintu Animal Husbandry recognizes environmental costs as an account because it benefits from sacrifices in the nominal form incurred. So that these costs are recognized as an account in the accounting process. The interview with Mr. David shows that the waste management transaction costs recording uses the accrual basis method. The entity records using the accrual basis method, and expenses are recognized when they occur, even when these costs are still payable.

c. Environmental Cost Measurement

Waste management at Lumintu Farms is based on how much waste is generated from the entity's production process. The waste measurement standard is based on the relation to the determination of the total expenditure in the form of the nominal that was realized when the transaction occurred. When measuring the amount of sacrifice for waste management, use currency units based on how much waste is managed. Each entity has a different standard policy, but there is still a need for a department or measuring instrument to determine the amount of cost allocation for financing based on entity standards. Mr. David explained that Lumintu Farm in measuring waste management costs refers to the results of budget realization. Environmental cost measurement is based on the policies of each entity. (Mulyani, 2013) states that although there are no specific rules for measuring environmental costs, entities can create different standards for measuring costs used to manage the entity's production waste.

d. Financial Report of Environmental Costs

Lumintu Farm has presented the cost of waste management, shown in the income statement. Expenses incurred due to environmental management are broken down and then listed with other cost accounts. By standard, there are no specific rules governing the use of certain charges in determining environmental cost allocation accounts. Different account names can be used to represent environmental cost allocations in the presentation of financial statements. From the interviews with Mr. David, ecological costs are expressed with other operational costs, which will later impact obtaining company profits. This follows the research (Sunarmin, 2020), which states that when an entity is committed to allocating funds for environmental costs, the company will allocate costs through ecological disclosures or environmental prices, which can lead to reduced company profits because several companies record environmental costs as administrative and general expenses. Ecological costs are voluntary in annual reports or sustainability reports as investment expenses because they will gain social legitimacy in the future, indirectly providing a positive image of stakeholders for the company's concern for the surrounding environment. When a company has a good impression of managing its environment, society will accept the company. The following is a presentation of environmental costs at Lumintu Farm.

Table 1. Comparative income statement Lumintu Farm

	2020	2021
Income	135.400.200,00	147.576.000,00
Sale Cost	9.730.000,00	11.834.000,00
Chiken Feed Load	22.346.700,00	23.786.000,00
Electrical Expense	19.100.000,00	18.900.000,00
Salary Expenses	40.300.000,00	41.200.000,00
Operational Cost	14.760.000,00	15.864.000,00
Environmental Cost	6.786.000,00	8.465.000,00
Total Cost		
Earning before interest and tax	22.737.500,00	27.527.000,00

The comparative income statement data shows that the Lumintu farm has presented an allocation of environmental costs in the profit and loss statement post-environmental costs. Based on the relative profit and loss report for 2020-2021, it is known that environmental costs for Lumintu farms are allocated in post-environmental costs. The table shows that awareness of environmental quality is getting better. The farm has considered how good environmental quality is more effective, rather than reducing costs, so that it can impact good financial performance. In line with (Muzdalifah, 2020), the research results show that environmental performance significantly affects economic performance. Environmental performance can be used to evaluate a firm's financial success since a positive image can enhance public interest in acquiring corporate products, which improves financial performance (increases company profits). Improved financial performance raises stock prices and corporate stock value, attracting investors to participate in the company.

e. Environmental cost disclosure

The purpose of cost disclosure is to complement and enhance the environmental accounting process. Disclosing environmental costs shows the entity's transparency efforts to the broader community or the public. The method of accounting disclosure is also a form of providing information that is not visible with financial data. There are no specific standards governing the disclosure process. Disclosure or disclosure of economic transactions regarding livestock waste management activities is essential so that users of financial reports receive complete disclosure information that is useful in policy making. So far, the implementation of factory waste management activities has not been considered separately and in detail in a unique cost report. Mr. David, as the farm owner, explained that the farm had presented activities regarding waste handling activities in the business operational report, namely the income statement, to disclose the costs or costs incurred by the company for environmental management. Good corporate governance for management and legitimacy, namely by expressing social responsibility (Liu & Zhang, 2017)

From the analysis of the stages of environmental accounting, treatment applied to Lumintu Farm from the recognition stage to disclosure more or less has implemented environmental accounting. Still, it needs some adjustments to agricultural accounting standards and the strictness of government regulations. From the above analysis, it can also be concluded that green accounting can help entities and the environment in various accounting environmental management. This study helps us determine how environmental accounting is implemented and how it works as a characteristic of green reporting. If green accounting can be applied strictly at all levels and types of organizations, significant changes may lead to environmental improvement. (Unnithan & Somasundaram, 2019) Research in green accounting is assisting us in tracking it, determining how it is being used, and determining what can be done to maximize its usage. It also illustrates why businesses must embrace green accounting for improved resource utilization and environmental sustainability. According to statistics gathered from primary sources, most people support green accounting and its consequences for businesses. The government is strict about rules and regulations against it. Environmental Reporting is the word popularly used by developed countries to disclose information related to business operational activities related to the environment, including environmental audit activities, in terms of environmental hazards, costs, and liabilities of ecological impact measures. Commercial environment protection should cover the corporate environment reporting measures, the manufacturing system's adverse quantitative and qualitative effects on the goods environment, and its process and product innovation projects to achieve proper development (Singh et al., 2019).

Eco-Efficiency Analysis

Eco-efficiency measurement uses value added which is calculated from earnings before interest and tax (net profit before tax) and costs incurred for sales, then compared to environmental performance (Azis et al., 2020). Following are the results of business eco-efficiency calculations at Lumintu Farm:

Table 2 Eco-Efficiency Calculations

Description	2020	2021
Environmental Performance		
Environmental Cost	6.786.000,00	8.465.000,00
Financial Performance		
EBIT	22.737.500,00	27.527.000,00
Sale Cost	(9.730.000,00)	(11.834.000,00)
Value Added	13.007.500,00	15.693.000,00
Eco-Efficiency	52%	54%

The calculation table above shows an increase in eco-efficiency from 2020 to 2021, which is 52%, 54%, and a rise of 2%. Eco-efficiency is a term that involves efficiency and combines mineral wealth and energy characteristics or a manufacturing process that eliminates the use of rare metals, fuel, and water, as well as waste per product unit. (Sunarmin, 2020) Lumintu Farms has sought eco-efficiency by reducing waste output through an environmental cost allocation process. (Burritt & Christ, 2016) said eco-efficiency is an essential indicator of environmental performance. Businesses that value environmental performance in manufacturing must manage resources efficiently and sensibly with every resource and energy used. Manage resources effectively, superbly, and intelligently with each resource and energy used.

The application of eco-efficiency at Lumintu Farm is in line with the results of (Ehrenfeld, 2005) research that the BASF chemical product company applies eco-efficiency in a simple way to choose between processes and alternative options—allocating cost (or value) and impact relative to the process/product. This supports the research results (Egan & Tweedie, 2018). Although eco-efficiency is only one part of the elements, it can have a comprehensive impact on organizational sustainability management,

In line with (Azis et al., 2020), YW-UMI Ibn Sina Hospital research is already measuring, appraising, acknowledging, presenting and disclosing information about waste management. The thing to note is that the environmental cost report is still included in the company's general financial statements, which are presented together with other similar costs. It is better if the company makes a special report on environmental expenses so that the function of the ecological cost report as a basis for making economic decisions can be used optimally.

Increasing Competitive Advantage through Green Accounting

The entity's allocation of environmental costs, which are voluntary in the financial statements, is a form of investment spending because it will have an impact on getting a good social impression for the future, which will indirectly give a positive image of stakeholders to the company for its concern for the surrounding environment (Şimşek & Öztürk, 2021) The allocation of environmental costs that Lumintu Farms have carried out is a form of social responsibility, Under it now, the European Union Green Book defines CSR as "the voluntary inclusion of social and environmental issues by enterprises in their business activities and interactions with their interactants." (Afni et al., 2019)

The results of an interview with the head of the Lumintu farm, Mr. David, stated that "The company's sacrifice in paying for the environment can reduce the potential for higher costs in the future such as the cost of public claims for pollution, the risk of business closure due to sanctions from the government, etc." (Sunarmin, 2020) explains the benefits of implementing environmental accounting according to, among others, the following: (a) Encouraging entity accountability and increasing environmental transparency, (b) Assisting entities in establishing strategies to respond to environmental issues in a context where the demands and communities are getting more assertive on related environmental issues. (c) Building a more positive image allows the entity to obtain a favorable view from the community and environmental activist groups. (d) Encouraging consumers to buy eco-friendly products gives the entity a competitive marketing advantage. (e) Show the institution's dedication to continual ecological improvement. (f) Avoiding bad public opinion while considering that firms involved in environmentally sensitive locations will often tolerate community challenges. Several companies that have not realized the environmental impact of their production operations have affected many communities. The insensitivity of a company's management and the inaccuracy of reporting data generated by accounting products to the authorities will eventually have this effect.

Green accounting practices have a favorable impact on environmental performance. The environment is hoped to be safeguarded through green accounting since the company will voluntarily comply with government rules where it conducts business. Aside from that, an increase results in positive community perceptions, which increase community loyalty to the company, which increase will eventually follow in company sales and profitability. Green accounting has a favorable impact on efforts to prevent environmental contamination. Furthermore, the use of green accounting has an impact on strengthening business continuity. Businesses will pay more attention to environmental issues if ecological or green accounting is implemented (Cader et al., 2022).

Implementing green accounting through a consistent allocation of environmental costs improves environmental performance and the entity's profit. With this profit, business continuity will be better in increasing livestock growth. The results of the (Jaelani, 2021) According to the study, the implementation of environmentally friendly accounting in organizations is a pattern of CSR, relevant parties in different managerial tools in terms of business responsibility and strategic advantage, such that companies that successfully coincide their interested parties and start practicing ecologically sustainable accounting will accomplish a difficult to imitate market edge. Research by Birgani's results shows that initial testing results with Grounded Theory analysis justify the positive impact of implementing green accounting, namely Information Advantage; Cost Advantages; Competitive Advantage, and Ecological Sustainability (Birgani et al., 2022).

CONCLUSIONS AND SUGGESTION

This research shows that Lumintu Farm, as an entity that produces an external negative effect on the environment, is already allocating the budget for the actual costs related to environmental management. The accounting treatment starts from the stage of recognition. The number of ecological expenses is recognized as equal to the nominal output using an accrual basis recording basis. Next is the measurement stage the company operates, which units are based on how big waste is generated from the production process. Stage reporting presented in the financial statements profit and loss on operating expenses post. Lumintu Farms has sought eco-efficiency by reducing waste output through an environmental cost allocation process. The calculation shows an increase in eco-efficiency from 2020 to 2021 in Lumintu Farm, which is 52%, 54%, and a rise of 2%. Implementing green accounting through a consistent allocation of environmental costs has a beneficial impact on the institution's profitability and environmental effects. With this profit, business continuity will be better in increasing livestock growth.

REFERENCES

Afni, Z., Meuthia, R. F., & Rahmayani, R. (2019). Telaah Kualitatif Model Penerapan, Pelaporan dan Pemeriksaan Green Accounting Pada Perusahaan. *Jurnal ASET (Akuntansi Riset)*, *11*(2), 340–349. https://doi.org/10.17509/jaset.v11i2.20794 .

Azis, I., Widiawati, A., & Nur, A. A. (2020). Analisis Penerapan Environmental Management Accounting (Ema) Dalam Meningkatkan Eko-Efisiensi Usaha (Studi Kasus Pada Rumah Sakit Ibnu Sina YW-UMI Kota Makassar). *AkMen JURNAL ILMIAH*, *17*(2), 242–253. https://doi.org/10.37476/akmen.v17i2.895

Basuki, B. (2015). Eco-Efficiency and Sustainable Development as Efforts to Produce Environmentally Friendly Product: An Exploratory Case Study. *Issues In Social And Environmental Accounting*, *9*(3), 199. https://doi.org/10.22164/isea.v9i3.105

Birgani, F. M., Salehi, A. K., Basirat, M., & Kaabomeir, A. (2022). Providing a Micmac Analysis to Strengthen Sustainable Green Accounting Values of Capital Market Companies: Polar Matrix Analysis. *International Journal of Finance and Managerial Accounting*, *7*(24), 133–158. https://ijfma.srbiau.ac.ir/article_17872.html

Burritt, R., & Christ, K. (2016). Industry 4.0 and environmental accounting: a new revolution? *Asian Journal of Sustainability and Social Responsibility*, *1*(1), 23–38. https://doi.org/10.1186/s41180-016-0007-y

Cader, J., Koneczna, R., & Smol, M. (2022). Corporate social responsibility as a significant factor of competitive advantage - a case study of energy companies in Poland. *Energy Reports*, *8*, 7989–8001. https://doi.org/10.1016/j.egyr.2022.06.032

Egan, M., & Tweedie, D. (2018). A “green” accountant is difficult to find. *Accounting, Auditing & Accountability Journal*, *31*(6), 1749–1773. https://doi.org/10.1108/aaaj-03-2017-2891

Ehrenfeld, J. R. (2005). *Philosophy, Theory, and Tools*. *9*(4), 6–8.

Jaelani, D. (2021). Implementasi Corporate Social Responsibilty (Csr) Sebagai Model Manajemen Perusahaan Dalam Mencapai Keunggulan Kompetitif. *AKSELERASI: Jurnal Ilmiah Nasional*, *3*(3), 62–71. https://doi.org/10.54783/jin.v3i3.485

Kim, J. T., & Todorovic, M. S. (2013). Towards sustainability index for healthy buildings - Via intrinsic thermodynamics, green accounting, and harmony. *Energy and Buildings*, *62*(6923), 627–637. https://doi.org/10.1016/j.enbuild.2013.03.009

Lako, A. (2019). Rerangka Konseptual Akuntansi Hijau. *Akuntan Indonesia*, *May*, 62–71. https://www.researchgate.net/publication/332960950

Liu, X., & Zhang, C. (2017). Corporate governance, social responsibility information disclosure, and enterprise value in China. *Journal of Cleaner Production*, *142*, 1075–1084. https://doi.org/10.1016/j.jclepro.2016.09.102

Mulyani, N. S. (2013). Analisis Penerapan Akuntansi Biaya Lingkungan Pada Pabrik Gondorukem dan Terpentin (PGT) Garahan - Jember. *Skripsi*, *57*(4), 1–55. https://repository.unej.ac.id/bitstream/handle/123456789/2139/Nita Sri Mulyani - 090810301131. pdf?sequence=1&isAllowed=y

Nuramal. (2020). Peningkatan Eko-Efisiensi Usaha Dengan Penerapan Environmental Management

Accounting (EMA). *Jurnal Ekonomi Pembangunan*, *6*(2), 102–111. http://dx.doi.org/10.35906/jep01.v6i2.578

Nor, N. M., Bahari, N. A. S., Adnan, N. A., Kamal, S. M. Q. A. S., & Ali, I. M. (2016). The Effects of Environmental Disclosure on Financial Performance in Malaysia. *Procedia Economics and Finance*, *35*(October 2015), 117–126. https://doi.org/10.1016/s2212-5671(16)00016-2

Putri, A. Y. (2019). Pengaruh Eco-Efficiency Terhadap Nilai Perusahaan Dengan Struktur Pendanaan Sebagai Variabel Moderasi. *Journal of Universitas Airlangga*, 12–31. http://repository.unair.ac.id/87004/1/abstrak.pdf

Rounaghi, M. M. (2019). Economic analysis using green and environmental accounting to identify environmental costs and sustainability indicators. *International Journal of Ethics and Systems*, *35*(4), 504–512. https://doi.org/10.1108/IJOES-03-2019-0056

Şimşek, H., & Öztürk, G. (2021). Evaluation of the relationship between environmental accounting and business performance: the case of Istanbul province. *Green Finance*, *3*(1), 46–58. https://doi.org/10.3934/gf.2021004

Singh, S., Singh, A., Arora, S., & Mittal, S. (2019). Revolution of Green Accounting: A Conceptual Review. *2019 2nd International Conference on Power Energy Environment and Intelligent Control, PEEIC 2019*, 481–485. https://doi.org/10.1109/PEEIC47157.2019.8976544

Sunarmin, S. (2020). Green Technology Accounting as an Innovation to Reduce Environmental Pollution. *Neraca : Jurnal Akuntansi Terapan*, *1*(2), 135–141. https://doi.org/10.31334/neraca.v1i2.862

Unnithan, K. V., & Somasundaram, M. (2019). A Study on the Concepts and Importance of Green Accounting in India. *Compliance Engineering Journal*, *10*(10), 221–229.

Yarahmadi, H. (2015). The Effects of Green Accounting in the Society. *Journal of Finance and Accounting*, *3*(5), 140. https://doi.org/10.11648/j.jfa.20150305.15

Zhao, X., & Liu, S. (2019). Analysis of Industrial Correlation of China: Considering the Energy Resources based on Green Accounting. *IOP Conference Series: Earth and Environmental Science*, *237*(4). https://doi.org/10.1088/1755-1315/237/4/042007