


The impact of improving environmental performance and implementing environmental cost allocation on company profitability

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Article Info	ABSTRACT
Keywords: environmental cost, environmental performance, corporate financial performance	Companies generally experience a business cycle, starting from the pioneering, growth, mature and decline stages. The company always maximizes performance and maintains company performance so that it can continue to compete with competitors and achieve optimal profits. In maintaining a company's financial performance, many factors must be considered, one of which is environmental factors. This research aims to discuss further the impact of improving environmental performance and implementing environmental cost allocation on company profitability, using the meta-analysis method. The data source used is secondary data, namely data obtained from previous research. The results show that almost all improvements in environmental performance and the use of environmental cost have an impact on company profitability.
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INTRODUCTION

A business cycle or industrial life cycle will generally be experienced by a company, starting from the pioneering stage, the growth stage, the maturity and stabilization stage, and the decline stage (Chandra , 2012). The company always strives to maintain its business and strives to extend the company's life cycle. This is done by continuing to innovate products and processes, creating products with competitive advantages, maximizing the use of technology, improving services, and marketing products in creative ways to be able to compete with increasingly fierce competitors. Companies must always maintain and optimize their company performance.

The company's performance is reflected in its financial performance. Financial performance can be assessed from its profitability ratio. Profitability ratios provide an overview of management's effectiveness in obtaining profits related to sales and investments (Zainab and Dian, 2020). Apart from that, environmental factors are also very important for companies. Companies that have a good environment and maintain it on an ongoing basis will influence the company's performance, both in terms of finances and productivity. A healthy environment will influence a company's cost information. When a company consistently protects its environment, the environmental maintenance cost

incurred will be lower, so that the cost incurred by a company can be minimized and profitability can be maintained. However, on the other hand, if a company cannot protect its environment to the point that it has a negative impact and creates environmental degradation or damage, then the company must incur greater cost to overcome and restore the damaged environment to its original state, especially the fines that must be paid to the government due to the company's non-compliance in maintaining it. environment (Hansen and Mowen, 2007).

This is in line with research conducted by Lalo, et al (2021) which states that environmental performance and environmental cost have an impact on company profitability. Environmental performance is shown in the amount of damage caused. The greater the environmental damage, the worse the company's performance. This is because public trust in the company will decrease, which will also have an impact on decreasing sales of the company's products. Likewise, with the large environmental cost caused by companies due to poor ecological systems, companies will reduce production processes that have a negative impact on the environment. Cost incurred to repair environmental damage will reduce company profits.

Companies that always pay attention to and protect the company's environment as long as the company operates have implemented eco-efficiency, namely reducing negative impacts on the environment, resources, consumption and cost while producing goods and services. Ecoefficiency supports sustainable development and implies increased efficiency that comes from improved environmental performance. Environmental performance can increase company productivity and will also have an impact on financial performance, including increasing company profitability.

Consumers are interested in products that are clean and environmentally friendly, where the product uses environmentally friendly raw materials and does not have a negative impact on the surrounding environment during the production process. The higher consumer interest in a company's products, the faster the company will grow rapidly and there will be an increase in productivity due to high demand for a product, resulting in an increase in profits. Apart from that, employees also prefer to work for companies that are responsible and pay attention to the environment. This will provide greater productivity, namely because it is supported by clean and safe working conditions. So, companies must protect the environment. The more controlled it is, the more optimal productivity and profits will be increased.

However, on the other hand, there is research which states that company financial performance is not influenced by environmental performance and environmental cost. Elviani, et al (2022) provide contradictory results. The findings provide a statement that the financial performance of mining companies is not affected by environmental cost. The amount of environmental cost incurred by the company does not increase or decrease the company's financial performance which is reflected in the Return On Asset (ROA) value. Likewise, research by Sahputra (2020) states that environmental performance has no effect on profitability.

Based on the description above, there are differences in the results of previous studies, so this research aims to discuss further the impact of improving environmental performance and implementing environmental cost allocation on company profitability.

Literature Review

Management Accounting

Management accounting is an accounting science that studies classification, measurement, estimation, accumulation, collection, preparation, examination, analysis, interpretation, understanding and communication of economic events which are used by management to carry out planning, monitoring, evaluation, decision making processes, and performance assessment in organizations (Siregar et al, 2013; 1-2).

Green Accounting

Bell and Lehman (1999) define green accounting or environmental accounting as a concept in the field of accounting that supports environmentally friendly movements in a company or organization by recognizing, measuring and disclosing the environmental contribution to the operational activities of a business.

According to Cohen and Robbins (2011: 190) environmental accounting is the activity of collecting, analyzing, assessing and preparing environmental and financial data reports with the aim of reducing environmental impacts and cost. This accounting concept is central to many aspects of government policy. Environmental accounting has become the main thing in the environmental aspect of business and is responsible for economic growth.

Environmental Performance

According to Marini Asjuwita and Henri Agustin (2020), environmental performance is how a company's performance can participate in preserving the environment, while according to Rima Sekar Ayu Cahyani and Windhy Puspitasari (2023) environmental performance is a consequence of the organization's functional implementation in saving the climate by using materials. which is not harmful to the ecosystem. Organizations or companies that are involved in saving the climate as a form of corporate social obligation are called environmental performers or ecological observers. This movement can provide good inspiration in focusing on ecological maintenance (Suhendra et al., 2022).

Companies that tend to have high environmental performance have low levels of ecological pollution, which can influence the good image of the organization according to partners and investors (Rifli Sahputra, 2020). Based on the explanation above, environmental performance is an organization's efforts to create a good climate that is free from contamination by truly paying attention to the environment through an ecological management framework.

Environmental performance measurements generally fluctuate depending on the indicators used. Various guidelines for implementing environmental performance such as PROPER, ISO (ISO 14001 for environmental management systems and ISO 17025 for Environmental Test Certification from independent institutions), AMDAL (BOD and COD waste water test), and GRI (Global Reporting Initiative) are the most main, pioneer of progress in sustainable reporting work structures (Lindrianasari, 2015).

Environmental Cost

According to Santoso (2018), environmental cost are cost incurred due to environmental damage to a company's operational activities. Environmental cost were also explained by (Wulaningrum & Kusrihandayani, 2020), that environmental cost are expenses caused by organizations due to poor ecological systems and production processes. Environmental cost include the cost of handling the organization's functional activities that affect the climate, as well as the cost of repairing ecological damage due to the waste produced.

Arfan Ikhsan (2009:55-61) states that environmental cost are the influence of business activities on ecological quality, both financially and non-financially related. Environmental cost can be referred to as environmental quality cost, namely specific expenditures caused by poor natural quality or considering the fact that there may be poor ecological quality (Hansen and Mowen, 2007). Based on the definitions above, it tends to be assumed that environmental cost are expenditures made by an organization to prevent the possibility of poor ecological quality and overcome natural damage that arises as a result of the organization's activities.

Company Profitability

Financial performance can be calculated using profitability ratios which can show management's effectiveness in obtaining and achieving profits related to sales and investments (Zainab and Dian, 2020). According to Fahmi (2017), the profitability ratio is a proportion used to measure the feasibility of management in general as indicated by the level of benefit or profit obtained in connection with investments and sales results. In Hery's (2018) research, he stated that the profitability ratio describes an organization's ability to create profits through the overall capabilities and assets it has, especially starting from implementing sales transactions, utilizing resources and utilizing capital.

Return On Assets (ROA) and Return On Equity (ROE) are several profitability ratios. This ratio is the main focus of financial ratio analysis because it can show the company's profitability. The past profits of an organization can be measured and projected in the future using ROA. Hery (2018) defines ROA as the proportion used to calculate how much net profit is created from reserves invested in complete resources and total assets. The greater the ROA, the greater the net profit generated from total assets. According to Murhadi (2013), ROA is a proportion that shows how much return is generated on each type of resource claimed by the organization. The hope is that the greater the ROA, the better the organization's performance will be. ROA can be found as follows:

$$ROA = (\text{Net Profit}/\text{Total Assets}) \times 100\%$$

According to Lydia Gustina Putri (2023), Return On Equity (ROE) is a measure of how well a business uses its capital to increase profits. ROE can be formulated as follows:

$$ROE = (\text{Net Profit After Tax}/\text{Equity}) \times 100$$

Environmental Performance and Company Profitability

Environmental performance is reflected in the consequences of the ecological management system in relation to its ecological parts. Environmental performance can be

estimated based on how much ecological damage is caused by business activities. The environmental performance of an organization or company is said to be satisfactory if damage to the environment can be minimized. If the natural damage caused by the functioning of an organization has many negative impacts, then the organization's ecological performance is poor (Angelina & Nursasi, 2021). The environmental performance of an organization is influenced by several variables, especially customers who need products, product utilization, and disposal of product waste that is not harmful to the ecosystem (environmentally friendly) (D.R. Hansen & M. M. Mowen. 2018).

This suggests that consumers will pay more attention to businesses with strong environmental performance, which will result in increased product sales and improved financial performance. Environmental performance is an effort to expand organizational profits by limiting the level of pollution or ecological damage caused to the organization, so that the organization will have good environmental performance (Rifli Sahputra, 2020). Marini Asjuwita and Henri Agustin (2020) stated that environmental performance is the main factor that gets public attention regarding environmental issues which are increasingly becoming global issues.

Environmental Cost and Company Profitability

Environmental cost are allocated for post-disaster recovery, repairs, environmental restoration, and other activities aimed at reducing environmental impacts (Environmental Accounting Guidelines, 2005:13). According to Dewi (2014), currently determining ecological cost in organizations is a burden and reduces company profits. However, in the long term, this can result in increased earnings per share, energy savings, monitoring and controlling environmental damage, as well as sustainable environmental improvements, increased company productivity and an environmentally conscious business image.

Companies have increased sales and financial performance by including environmental cost in selling prices and selecting customers who can afford them (D.I. Burhany, 2011). Research conducted by Fitriani (2013) also upholds the positive impact of ecological cost on productivity. The higher the exposure to the presentation of ecological cost information due to the use of environmental cost in the organization, the more information asymmetry that occurs will be reduced so that the cost value will be lower.

METHOD

This research uses a meta-analysis approach obtained from collecting several research results. This research functions as a method for collecting related information, as well as re-evaluating previous research findings by synthesizing and analyzing previously published research findings. Meta analysis as a research design, by analyzing and comparing previously existing studies in order to find the magnitude of the effect of applying a model/method/strategy using a study. This statistical method makes it possible to combine the results of different studies on the same subject.

This literature study uses data sources from secondary data. Data found from previous research that is relevant to the research to be conducted, as well as other sources

that have been circulating are secondary data. This information was obtained from various sources, the data was obtained from 20 journals. Research results from several researchers were obtained through Google Scholar searches, as well as Science Direct. Searches use the keywords "environmental cost", "environmental cost", "environmental performance", "environmental performance", "profitability" and "financial performance". Based on the journals that have been obtained, researchers identify and group journals based on environmental performance variables and environmental cost related to their impact on company profitability.

RESULT AND DISCUSSION

The results of collecting, grouping, and identifying evidence from previous studies that have been obtained, show that the majority of environmental performance and the implementation of environmental cost allocation basically have a significant impact on the company's financial performance as reflected in the company's profitability ratio, both Return On Assets (ROA) and Return On Equity (ROE). This is relevant to the findings of Lalo, et al (2021) which states that environmental performance and environmental cost have an impact on profitability in manufacturing companies. Environmental performance is shown in the amount of damage caused. The greater the environmental damage, the worse the company's performance. This is because public trust in the company will decrease, which will also have an impact on decreasing sales of the company's products. Likewise, with the large environmental cost caused by companies due to poor ecological systems, companies will reduce production processes that have a negative impact on the environment. Cost incurred to repair environmental damage will reduce company profits.

This is in line with research by Zainab and Dian (2020), which states that environmental performance and environmental cost have an impact on financial performance. Customers want products that are better for the environment, so good environmental performance will increase sales. Thus, companies that pay attention to the environment tend to have external benefits, for example getting a good picture and assessment from potential investors. Good environmental performance proves that the company can develop naturally and over a long period of time, because good environmental performance reflects that the organization or company has fulfilled its obligations and can avoid the problem of ecological damage which can cause large cost and losses for the company's business activities. . Likewise with environmental cost, the greater the environmental cost, the smaller the financial performance will be because the cost incurred by the company in relation to environmental management are unlimited.

In Gustina's (2023) research, the results showed that organizations that have allocated environmental cost have an impact on financial performance as reflected in profitability (ROA and ROE). The greater the implementation of sustainable environmental cost allocation, the greater the financial performance estimated through ROA and ROE. This shows that an organization that applies ecological cost and can demonstrate good environmental maintenance through presenting environmental cost will have a greater

impact on improving financial performance. This will increase the social trust of partners, such as society in general and consumers, where ultimately financial performance will be able to be improved, such as achieving maximum company profitability. The higher the exposure to ecological cost due to the use of environmental cost in the organization, the more information asymmetry that occurs will reduce the cost value will be lower. This organization will introduce broader data and nothing will be hidden or become more transparent, so that it can be a consideration for investors when making investment choices.

Cahyani and Windhy (2023) revealed the impact of environmental performance on company financial performance in their research. Environmental performance has a positive effect on financial performance as shown by ROA, as a result of the company being able to disclose environmental results and activities well, so that it can convince investors that the company has good financial performance.

Sahputra (2020) explains that environmental cost significantly influence profits in manufacturing companies. As shown by ROA, this shows that increasing environmental cost will reduce profitability. Environmental cost which are expected to become long-term investments cannot be demonstrated in this research, because in a short period of time environmental cost will reduce organizational profits, but in the long term the benefits will be felt. Setiawan, et al (2018) also stated that environmental cost and environmental performance have a positive and insignificant relationship with financial performance, which cannot entirely be shown from the ROA profitability ratio.

In research conducted by Subakhtiar, et al (2022), it is known that environmental cost have a negative and significant impact on financial performance, and environmental performance influences financial performance. Financial performance in this research is shown by the ROA profitability ratio. The environmental cost incurred will be declared as additional cost by the company and charged to product cost. Assuming environmental cost are very large, it is conceivable that the company's product cost will increase. High prices for goods will certainly not satisfy buyers, which ultimately results in a decrease in wages and profits. Likewise with the influence of environmental performance on financial performance. Apart from influencing long-term revenues and profitability, good environmental performance will also receive a positive response from investors and stakeholders.

Dewata, et al (2018) also stated that environmental cost have a negative effect on company performance. This is because sometimes the environmental cost incurred by a company cannot immediately be felt in the same period. These benefits can be felt in the following period.

The majority of the research above explains that environmental performance and the application of environmental cost have an impact on company profitability. However, on the other hand, research conducted by Meiyana and Mimin (2019) and Sahputra (2020) gave contradictory results. The findings conclude that environmental performance has no effect on financial performance. This proves that environmental performance cannot influence the financial performance of a company because it is caused by several factors, partners or the

community feel that the results are not in accordance with their assumptions and believe that the organization can carry out environmental management better than anything legally required, for example using assets and resources efficiently, as well as carrying out 3R activities (Reuse, Reduce, Recycle). Therefore, environmental performance carried out through PROPER has not been able to attract stakeholders to invest capital in the company. On the other hand, companies can utilize this capital receipt for functional or production activities aimed at expanding profits.

Elviani, et al (2022) also provide a contradictory statement, that the financial performance of mining companies is not affected by environmental cost. The amount of environmental cost incurred by the company does not increase or decrease the company's financial performance which is reflected in the Return On Assets (ROA) value. Likewise, research by Evita and Syafruddin (2019) shows that environmental cost do not significantly influence a company's financial performance. This is in accordance with research by Meiyana and Mimin (2019) which also revealed that the impact of environmental cost through Corporate Social Responsibility (CSR) on company financial performance is not strong. The large environmental cost incurred are generally not always accompanied by the quantity and quality of CSR activities, moreover the environmental cost in this study tend to be low. In fact, good CSR activities have the potential to provide financial benefits to stakeholders and the company.

Companies with high profitability do not necessarily incur large environmental cost, this is because during the research period of Asjuwita and Henri (2020) the company's profitability was unstable, so environmental cost did not have a positive effect on profitability. Likewise with environmental performance, although on average companies have carried out ecological management in accordance with statutory regulations. However, environmental performance results cannot guarantee that the company's profitability will increase.

CONCLUSION

In the results of the discussion regarding the journals studied in this research with the keywords environmental cost, environmental performance, and company profitability, most researchers found that environmental performance and environmental cost have an impact on the profitability of a company. Good environmental performance and the application of environmental cost have an impact on improving the company's financial performance which is reflected in profitability ratios, namely Return On Assets (ROA) and Return On Equity (ROE). Environmental performance has an impact on company profitability. Improved environmental performance can be seen from the minimal impact of damage caused by companies to the environment. The smaller the environmental damage, the greater public confidence. In the end, it will encourage consumers to become regular customers, and will encourage stakeholders or the public to invest their capital in the company. This will increase the supply of funds for the company's operational and production activities. Then, it will increase sales of the company's products along with increasing demand, and

ultimately will increase the company's profitability. The implementation of environmental cost allocation also has an impact on company profitability. Environmental cost are allocated routinely and continuously to prevent and maintain the environment to avoid environmental damage due to company operational activities. A well-maintained environment will minimize the cost incurred by the company. On the other hand, if environmental damage occurs, the environmental cost incurred by the company will be greater to overcome it and restore the environment to its original state, so that the greater the company will reduce profits and ultimately reduce the company's profitability. Environmental cost that can be allocated appropriately will have a positive influence on the company and the social environment. However, based on the results of meta-analysis, several studies have shown that improving environmental performance and implementing environmental cost allocation do not have an impact on company profitability. This is because sometimes the environmental cost incurred by a company cannot immediately be felt in the same period. These benefits can be felt in the following period. On the other hand, the amount of environmental cost allocated does not guarantee the quality and magnitude of the company's activities to improve environmental performance. The environmental performance carried out by companies does not necessarily meet community expectations. Thus, this causes people to have less confidence in the company, and will have an impact on the company's sales and profitability.

REFERENCES

- [1] Aditya, B. G. (2020). Pengaruh Biaya Lingkungan, Kinerja Lingkungan dan ISO 14001 Terhadap Tingkat Profitabilitas: Studi Empiris di Perusahaan Manufaktur pada Indeks Saham Syariah Indonesia yang Terdaftar di Bursa Efek Indonesia Tahun 2016-2018 dalam Pengaruh Biaya Lingkungan Dan Kinerja Lingkungan Terhadap Profitabilitas Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia.
- [2] Angelina, M., & Nursasi, E. (2021). Dalam Pengaruh Kinerja Lingkungan, Biaya Lingkungan, Kepemilikan Saham Publik, Green Accounting, Dan Struktur Modal Terhadap Kinerja Keuangan. *Jurnal Manajemen Dirgantara*, 14(2).
- [3] Asjuwita, Marini, dan Henri Agustin. (2020). Pengaruh Kinerja Lingkungan Dan Biaya Lingkungan Terhadap Profitabilitas Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia Tahun 2014-2018. Vol. 2, No. 3, hal 3327-3345.
- [4] Babalola, Yisau Abiodun. (2012). The Impact of Corporate Social Responsibility on Firms' Profitability in Nigeria dalam Pengaruh Kinerja Lingkungan Dan Biaya Lingkungan Terhadap Profitabilitas Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia Tahun 2014-2018. *European Journal of Economics, Finance and Administrative Sciences*.
- [5] Bell, F dan Lehman, G. (1999). Recent Trends in Environment Accounting: How Green Are Your Account. *Accounting Forum* .

- [6] Cahyani, R. S. A., Dan Winhy. (2023). Pengaruh Kinerja Lingkungan, Biaya Lingkungan, Kepemilikan Saham Publik, Green Accounting, Dan Struktur Modal Terhadap Kinerja Keuangan. *Jurnal Akuntansi Trisakti*. Vol. 10, No. 2, Hal 19-208.
- [7] Chandra, Prasanna. (2012). *Investment Analysis and Portfolio Management 4th Edition*. New Delhi : Tata McGraw Hill Education Private Limited.
- [8] Cohen, N., dan P. Robbins. (2011). *Green Business: An A-to-Z Guide*. Thousand Oaks. California: SAGE Publications Inc.
- [9] Dewi, K. (2014). Analisa Environmental Cost pada Perusahaan Non-Keuangan yang Terdaftar di Bursa Efek Indonesia Periode 2011, 2012 dan 2013 dalam Pengaruh Biaya Lingkungan, Kepemilikan Asing Dan Political Cost Terhadap Kinerja Perusahaan Pertambangan Di Indonesia. *Binus Business Review*, 5(2), 615-625.
- [10] D.I. Burhany. (2011). Pengaruh implementasi akuntansi lingkungan terhadap kinerja lingkungan dan pengungkapan informasi lingkungan serta dampaknya terhadap kinerja keuangan perusahaan dalam Biaya Lingkungan, Kinerja Lingkungan, dan Kinerja Keuangan pada Perusahaan Manufaktur. *Indonesian Journal of Economics and Business*, vol. 1, no. 2, pp. 257-270.
- [11] D.R. Hansen & M/M. Mowen,. (2018). *Cornerstones of Cost Management*, dalam *Biaya Lingkungan, Kinerja Lingkungan, dan Kinerja Keuangan pada Perusahaan Manufaktur*. 4th Edition, Boston: Cengage Learning.
- [12] Elviani, Endang, dkk. (2022). Analisis Pengaruh Biaya Lingkungan Terhadap CSR Dengan Kinerja Keuangan Sebagai Variabel Intervening. *Jurnal Sains Akuntansi dan keuangan*, Vol. 1, No.1, hal 1-12.
- [13] *Environmental Accounting Guidelines*. (2005). Japan Ministry of Environment dalam *Pengaruh Biaya Lingkungan, Kepemilikan Asing Dan Political Cost Terhadap Kinerja Perusahaan Pertambangan Di Indonesia*.
- [14] Evita, Meisya dan Syafruddin. (2019). Pengaruh Biaya Lingkungan, Kinerja Lingkungan, Dan Iso 14001 Terhadap Kinerja Keuangan Perusahaan Pertambangan Studi Kasus Pada Bursa Efek Indonesia Tahun 2014-2017. *Jurnal Akuntansi Universitas Batam*, Vol. 13, No. 1, Hal 27 – 35.
- [15] Fahmi, I. (2017). Analisis Laporan Keuangan dalam Pengaruh Kinerja Lingkungan, Biaya Lingkungan, Dan Pengungkapan Lingkungan Terhadap Profitabilitas Pada Perusahaan Manufaktur Sektor Industri Barang Konsumsi Yang Terdaftar Di Bursa Efek Indonesia Periode 2014 – 2018. Bandung: Alfabeta, p.271.
- [16] Gustina P., Lydia. (2023). Pengaruh Biaya Lingkungan Terhadap Kinerja Keuangan Perusahaan (Studi Kasus Pada Perusahaan Manufaktur yang Terdaftar di BEI Periode Tahun 2017-2021). *Jurnal Ekombis Review*, Vol. 11, No. 1, hal 831-38.
- [17] Hery. (2018). Analisis Laporan Keuangan: Integrated and Comprehensive Edition dalam *Pengaruh Kinerja Lingkungan, Biaya Lingkungan, Dan Pengungkapan Lingkungan Terhadap Profitabilitas Pada Perusahaan Manufaktur Sektor Industri Barang Konsumsi Yang Terdaftar Di Bursa Efek Indonesia Periode 2014 – 2018*. Jakarta: PT Grasindo, p.324.

- [18] Hadi, Nor. (2011). Corporate Social Responsibility dalam Pengaruh Kinerja Lingkungan Dan Biaya Lingkungan Terhadap Profitabilitas Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia Tahun 2014-2018. Yogyakarta : Graha Ilmu.
- [19] Hansen dan M. M. Mowen. 2007. Managerial Accounting 8th Edition. USA: Thomson South Western.
- [20] Lalo, Annas. (2021). Pengaruh Biaya Lingkungan Dan Kinerja Lingkungan Terhadap Profitabilitas Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia. Jurnal Ilmiah Komputerisasi Akuntansi, Vol. 14, No. 1, pp 196-204.
- [21] Lindrianasari. (2007). Hubungan antara Kinerja Lingkungan dan Kualitas Pengungkapan Lingkungan dengan Kinerja Ekonomi di Indonesia dalam Pengaruh Kinerja Lingkungan, Biaya Lingkungan Dan Ukuran Perusahaan Terhadap Kinerja Keuangan Dengan Corporate Social Responsibility (Csr) Sebagai Variabel Intervening. JAAI, 11, 159-172.
- [22] Meiyana, Aida dan Mimin Nur A. (2019). Pengaruh Kinerja Lingkungan, Biaya Lingkungan, Dan Ukuran Perusahaan Terhadap Kinerja Keuangan Dengan Corporate Social Responsibility Sebagai Variabel Intervening (Studi Empiris Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia Tahun 2014-2016). Vol. 8, No. 1, hal 1-18.
- [23] Murhadi, Werner R. (2015). Analisis Laporan Keuangan: Proyeksi dan Valuasi Saham dalam Pengaruh Kinerja Lingkungan, Biaya Lingkungan, Dan Pengungkapan Lingkungan Terhadap Profitabilitas Pada Perusahaan Manufaktur Sektor Industri Barang Konsumsi Yang Terdaftar Di Bursa Efek Indonesia Periode 2014 – 2018. Jakarta: Salemba Empat, p.172.
- [24] Putri, L.G.,(2023). Pengaruh Biaya Lingkungan Terhadap Kinerja Keuangan Perusahaan (Studi Kasus Pada Perusahaan Manufaktur yang Terdaftar di BEI Periode Tahun 2017-2021). EKOMBIS REVIEW: Jurnal Ilmiah Ekonomi Dan Bisnis, 11 (1).
- [25] Rima Sekar Ayu Cahyani, Windhy Puspitasari. (2023). Pengaruh Kinerja Lingkungan, Biaya Lingkungan, Kepemilikan Saham Publik, Green Accounting, Dan Struktur Modal Terhadap Kinerja Keuangan. Jurnal Akuntansi Trisakti ISSN : 2339-0832 (Online) Volume. 10 Nomor. 2 September 2023 : 189-208.
- [26] Sahputra. R. (2020). Pengaruh Kinerja Lingkungan, Biaya Lingkungan, Dan Pengungkapan Lingkungan Terhadap Profitabilitas Pada Perusahaan Manufaktur Sektor Industri Barang Konsumsi Yang Terdaftar Di Bursa Efek Indonesia Periode 2014 – 2018. Fakultas Ekonomi Universitas Pakuan Bogor.
- [27] Santoso, A. D. (2018). Penerapan Biaya Lingkungan Dalam Perlindungan Sumberdaya Alam Dan Kelestarian Lingkungan Dalam Analisis Pengaruh Biaya Lingkungan Terhadap CSR Dengan Kinerja Keuangan Sebagai Variabel Intervening. Jurnal Rekayasa Lingkungan, 11(1).
- [28] Setiawan, W, dkk. (2018). Pengaruh Kinerja Lingkungan, Biaya Lingkungan Dan Ukuran Perusahaan Terhadap Kinerja Keuangan Dengan Corporate Social

- Responsibility (Csr) Sebagai Variabel Intervening (Studi Kasus Perusahaan Studi Kasus Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia Tahun 2012-2016). *Journal of Accounting*, hal 1-12.
- [29] Subakhtiar, F. S., dkk. (2022). Pengaruh Kinerja Lingkungan, Biaya Lingkungan, Dan Ukuran Perusahaan Terhadap Kinerja Keuangan Pada Perusahaan Yang Terdaftar Di Bursa Efek Indonesia.(Studi Kasus Pada Perusahaan Food And Beverage Tahun 2019-2020). *E-JRA*, Vol. 11, No. 2, hal 81-93.
- [30] Suhendra, A., Faisal, Y., & Soleha. (2022). Pengaruh Kinerja Lingkungan, Biaya Lingkungan, Kepemilikan Saham Publik, Green Accounting, Dan Struktur Modal Terhadap Kinerja Keuangan.
- [31] Wulaningrum, R., & Kusrihandayani, D. (2020). Pengaruh Pengungkapan Lingkungan, Biaya Lingkungan Dan Profitabilitas Terhadap Nilai Perusahaan Dalam Pengaruh Biaya Lingkungan Dan Kinerja Lingkungan Terhadap Profitabilitas Pada Perusahaan Manufaktur Yang Terdaftar Di Bursa Efek Indonesia. *Jurusan Akuntansi Politeknik Negeri Samarinda*, 97–103.
- [32] Zainab, Aqila dan Dian Imanina Burhany (2020). Biaya Lingkungan, Kinerja Lingkungan, dan Kinerja Keuangan pada Perusahaan Manufaktur. *Prosiding The 11th Industrial Research Workshop and National Seminar Bandung*, 26-27 Agustus 2020.