

CHAPTER II

LITERATURE REVIEW

2.1 Theoretical Basis

The world economy that has improved after the global crisis has had a positive impact on every company in Indonesia, resulting in an unavoidable tight competition. This competitive industry competition requires them to improve their performance in order to maintain viability and achieve the company's goal of making a profit (Murniati & Sovita, 2021). Profitability is a natural thing to see the sustainability of the company (Kholmi & Nafiza, 2022).

However, the industry's existence also has a negative impact on the area where businesses operate because they engage in environmental exploitation activities that, if uncontrolled, will significantly increase environmental pollution. In the 1970s, "green accounting" was first introduced in Europe. Traditional accounting methods have traditionally focused on topics like money and company deals when it comes to keeping track of business activity. However, the introduction of green accounting has changed the focus to environmental factors (Lomi, 2019). Applying environmental accounting is important whenever increasing environmental management effectiveness through a cost-benefit analysis of environmental operations is a top concern.

2.1.1 Definition of The Key Term

2.1.1.1 Green Accounting

Green accounting is accounting that identifies, measures, assesses, and discloses costs associated with environmental corporate activities. Environmental accounting produces reports for internal and external stakeholders to use as decision-making resources. Environmental accounting is a management tool for the environment and a communication tool with the community that provides pertinent information about the company's efforts to combat environmental contamination. Green accounting can be measured using PROPER. PROPER is a Company Performance Rating Program in Environmental Management developed

by the Ministry of Environment (KLH) since 1995, to encourage companies to improve their environmental management. From the right assessment, the company will get an image/reputation according to how it manages its environment. The PROPER assessment is divided into several color levels, namely 5 (Gold), 4 (Green), 3 (Blue), 2 (Red), and 1 (Black).

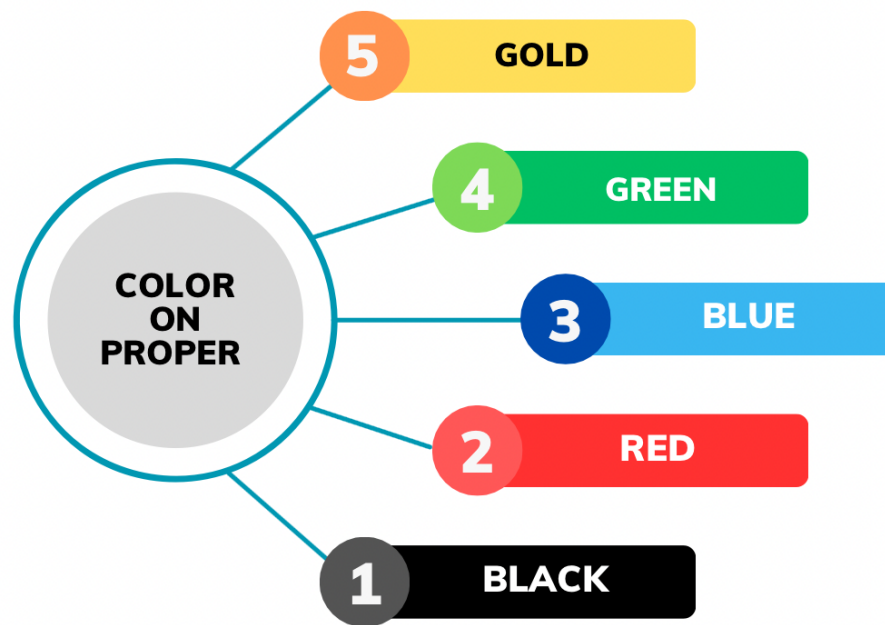


Figure 2.1 Color on PROPER

Source : Author (2023)

Gold : has consistently shown environmental excellence in production and service processes, as well as conducting business that is ethical and responsible to society

Green : carry out environmental management beyond what is required in regulations (beyond compliance) through implementing an environmental management system and utilizing resources efficiently and carrying out social responsibility properly

Blue : carry out the required environmental management efforts in accordance with the applicable provisions or laws and regulations

Red : carry out the required environmental management efforts but have not complied with the requirements as stipulated in the legislation

Black : deliberately commit acts or commit negligence resulting in pollution or environmental damage, as well as violating applicable laws and regulations and failing to carry out administrative sanctions

The Corporate Performance Rating Assessment Program in Environmental Management (Proper) initiated by the Ministry of Environment and Forestry turned out to be of little interest to the industry. This fact is known to the Environmental Guard who has data on industries that are reluctant to take part in the Proper program. In a principles-based jurisdiction, listed companies are required by the stock exchange (rather than the law) to meet certain standards of compliance. These standards are usually expressed in a corporate governance code. Companies are required, by the stock exchange's listing rules, to comply in detail with all provisions in the code but may, if unable to do so, report to the shareholders the ways in which compliance is not fully achieved, the reasons for the lack of compliance and when the company expects to be back in full compliance. It is means that the application of green accounting is promoted, but not compulsory.

2.1.1.2 Company

A company is a business organization that seeks to make a profit through the sale of goods and services. The term firm is synonymous with business or company. Company can operate under several different structures, including sole proprietorships and corporations. In this study, company refers to Mining Companies listed in Indonesia Stock Exchange from 2019-2022. The mining industry is involved in the extraction of precious minerals and other geological materials. The extracted materials are transformed into a mineralized form that serves an economic benefit to the prospector or miner. Typical activities in the mining industry include metals production, metals investing, and metals trading.

2.1.1.3 Performance

Performance evaluates how well a company implements its daily operations in line with previously developed strategies, which results in business effectiveness. Therefore, businesses need to monitor certain parameters to measure output and

evaluate the effectiveness of their strategies. Profitability is the extent to which a company earns an income from its business operation such as from sales or investment income. It measures the level of management effectiveness and efficiency on company's operational which are translated into its the financial performance. Profitability is a company's ability to generate or earn profits effectively and efficiently. Broadly speaking, the profit generated by the company comes from sales and investment income made by the company. To see profitability can be seen with the profitability ratio. The profitability ratio is the ratio to assess the company's ability to make a profit. This ratio also provides a measure of the effectiveness of a company's management. This is demonstrated by the profit generated from sales and investment income. In this study, company's performance is refers by Return on Assets (ROA) and Return on Equity (ROE).

2.1.2 Historical Literature Review

The first environmental accounts were constructed in several European countries working independently of each other. Norway was one of the first. Influenced by the publication of *Limits to Growth* (Meadows et al. 1972) and a burgeoning environmental movement, Norwegian officials were concerned that their natural resources, on which their economy is relatively dependent compared with other European countries, would run out. Therefore developed accounts to track use of their forests, fisheries, energy, and land. In the 1980s, they developed accounts for air pollutant emissions, which were closely tied to the energy accounts. The energy accounts were integrated into models used for macroeconomic planning, taking into consideration the roles of resource-based sectors in economic growth.

(Hecht, 2007) The Netherlands was also a leader in the development and adoption of environmental accounting. Dutch interest in this area originated with the work of Roefie Hueting, who developed and sought to implement a measure of sustainable national income that would take into account the degradation and depletion of environmental assets resulting from economic activity

2.1.3 Recent Issue and Development Green Accounting

Environmental accounting is very important issue. As economic development as well as environmental protection is equally important but contradictory issue therefore a careful assessment of the benefits and costs of environmental damages is necessary to find the tolerance limit of environmental degradation and the required level of development. For that there is need for proper framework which can provide guidelines on the issue of environmental cost, environmental liability, environmental assets, capitalisation of such cost and liability and reporting framework (Terre, 2018). Again environmental costs have impact on reported profit in the financial statement as well as product pricing. Study of corporate reporting practices reflects that there is an increasing tendency among the corporate managers to disclose some information in their annual report to inform about their efforts to shareholders and public in general. It is also clear that most of such environmental information reported by the companies is found to be non- financial. Such information is mere description of the efforts made by the company.

The information on amount of money spent for such initiatives and its material effect on financial results is grossly missing in such information. Again there is wide variation noticed in the style of reporting and theme the companies selected to report. This can add to other dimension of the problem of lack of comparability and verifiability. So it is felt that such information should be integrated with financial accounting information to have reliability. For integration it is necessary for monetary measurement of environmental cost and benefits. But all cost and benefit to the environment cannot be suitably measured in monetary unit, at least at micro level. (Benjamin, 2022) Internal cost, like investment made by the corporate sector for minimization of losses to Environment by product development, process development can be possible for monetary measurement but cost of externalities like degradation and destruction like soil erosion, loss of bio diversity, air pollution, water pollution, noise pollution, problem of solid waste, depletion of nonrenewable natural resources i.e. loss emerged due to over exploitation of non-renewable natural resources like minerals, water, gas,

deforestation etc. and the environmental assets created by business like afforestation, bio-diversity conservation, water preservation etc cannot be suitably measured in monetary terms. Further, it is very hard to decide that how much loss has occurred to the environment due to establishment of a specific business unit. This makes obstacles in the total integration of environmental accounting within the framework of existing GAAP. However, it is possible to disclose internal cost and benefit of environmental measures that is undertaken by a business unit and its material effects in reported profit by disclosing the way of recognition (Terre, 2018).

In case of externalities, like level emission, waste generation, afforestation etc. though monetary assessment is not possible but business can make some sort of quantitative measurement like for water management cubic kilometres, for emission level concentration of specified particles in terms of ppm., area of land afforested, quantitative facts on expenditures incurred of such activities, and targets set and achieved. This kind of information can enhance authenticity and reliability of environmental information. However, for such kind of assessment involvement of some technicalities is necessary. On the other hand for such recognition of inter cost and other externalities a specific set of regulatory pronouncement is pre-requisite to have uniformity of accounting information. As in the present state environmental accounting and reporting is a voluntary rather than mandatory, in such situation everyone have tendency to depict the strength rather than the weakness (Putri, 2018).

2.1.4 Theoretical Literature

2.1.4.1 Green Accounting

According to Putri et.al (2019) Green accounting is a system to create costs and obtain environmental benefits. It provides information that helps managers in evaluating, operating, controlling, deciding, reporting and protecting the environment. At the beginning of the emergence of accounting issues, environment companies did not want to disclose environmental damages in their financial statements, but companies were forced to comply with these issues because of time

lapse and increased damage. Recognizing the environmental costs associated with the products of a company or organization is very important for a good management decision. The use of environmental accounting in issues such as costing, investment analysis and strategic management decisions has increased. Today, many companies are facing environmental issues and are looking for an appropriate way to report and disclose information to the general public and use this information in the direction of developing and protecting the environment.

2.1.4.2 Return on Assets

Return on assets compares the value of a business's [assets](#) with the profits it produces over a set period of time. Return on assets is a tool used by managers and financial analysts to determine how effectively a company is using its resources to make a profit (Benjamin, 2021). The term return on assets (ROA) refers to a financial ratio that indicates how profitable a company is in relation to its total assets. Corporate management, analysts, and investors can use ROA to determine how efficiently a company uses its assets to generate a profit. The metric is commonly expressed as a percentage by using a company's net income and its average assets. A higher ROA means a company is more efficient and productive at managing its balance sheet to generate profits while a lower ROA indicates there is room for improvement (Hargrave, 2022)

2.1.4.3 Return on Equity

Return on equity (ROE) is a measure of financial performance calculated by dividing net income by shareholders' equity. Because shareholders' equity is equal to a company's assets minus its debt, ROE is considered the return on net assets. ROE is considered a gauge of a corporation's profitability and how efficient it is in generating profits. The higher the ROE, the more efficient a company's management is at generating income and growth from its equity financing (Fernando, 2023). Return on Equity is a two-part ratio in its derivation because it brings together the income statement and the balance sheet, where net income or profit is compared to the shareholders' equity. The number represents

the total return on equity capital and shows the firm's ability to turn equity investments into profits. To put it another way, it measures the profits made for each dollar from shareholders' equity. (Werry, 2020).

2.2 Previous Research

Previous research by Slamet (2021) indicates that green accounting has a significant impact on profitability company, meaning that green accounting has a positive impact on increasing company profits. But in reality, there are still many companies that do not provide information related to green accounting. It is hoped that further researchers will increase the observation period to increase the data obtained more. Ines (2023) conclude that the presence of industry has a negative impact on the surrounding environment because businesses engage in environmental exploitation that, if not controlled, will have a severe impact on environmental pollution based on the phenomena and theories observed and the results of the research analysis conducted.

According to Heni (2020) The implementation of green accounting which is proxied in the PROPER certificate category has a positive effect on firm value. This means that the application of green accounting can cause market reactions with changes in stock prices. Thus, the implementation of green accounting can be a positive signal for investors. Ati (2021) finds that Green accounting has a negative and significant influence on profitability in mining sector companies and consumer goods industry sectors listed on the Indonesia Stock Exchange for the period. For the period, environmental performance had no impact on profitability in mining sector companies and consumer goods industry sectors listed on the IDX.

2.2.1 Green Accounting Reflects to The Management Operation and Financial Performance

One of the Green Accounting components is Environmental Management Systems (EMS). EMS is a framework for managing environmental impacts and complying with environmental regulations. An EMS involves establishing policies and procedures for environmental management, conducting regular environmental

audits, and implementing continuous improvement measures. An Environmental Management System (EMS) is a framework that helps an organization achieve its environmental goals through consistent review, evaluation, and improvement of its environmental performance. The assumption is that this consistent review and evaluation will identify opportunities for improving and implementing the environmental performance of the organization. The EMS itself does not dictate a level of environmental performance that must be achieved; each organization's EMS is tailored to its own individual objectives and targets. EMS helps an organization address its regulatory requirements in a systematic and cost-effective manner. This proactive approach can help reduce the risk of non-compliance and improve health and safety practices for employees and the public.

The greater the operational efficiency, the more profitable a firm or investment is. This is because the entity is able to generate greater income or returns for the same or lower cost than an alternative. The term "efficiency" refers to the peak level of performance that uses the least amount of inputs to achieve the highest amount of output. Efficiency requires reducing the number of unnecessary resources used to produce a given output, including personal time and energy. Business efficiency describes how effectively a company generates products and services related to the amount of time and money needed to produce them. Efficient companies make the most of their resources, transforming labor, materials and capital into products and services that create profit for the company. Inefficient companies, on the other hand, lack organization, which can slow down their operations, waste time and money and impact profitability.

2.2.2 Green Mining

Green mining is an environmentally sustainable method of extracting, processing, and distributing minerals, metals, and fossil fuels. The goal of green mining is to reduce the environmental impact of operations and conserve resources for future generations. It involves the adoption of practices that minimize waste, reduce energy consumption, reduce water usage, and promote reforestation. These

practices can not only protect the environment but also help the industry to become more cost-efficient and economically sustainable.

One of the key challenges facing the industry today is climate change. Traditional practices contribute significantly to greenhouse gas emissions, which are driving the global temperature rise. Green mining aims to reduce these emissions by implementing measures such as energy-efficient equipment, renewable energy sources, and carbon capture and storage technologies. By reducing energy consumption, green mining can lower operating costs, increase competitiveness, and help to mitigate the effects of climate change. Another critical challenge facing the industry is water scarcity. Traditional practices can consume large amounts of water, leading to the depletion of local water sources. Green practices aim to minimize water usage by recycling and reusing water and by using more efficient water treatment systems. By reducing water usage, it can help to conserve this precious resource, reduce the risk of water scarcity, and improve local communities access to water.

Green mining also seeks to minimize waste and promote responsible disposal of waste. Traditional practices can generate large amounts of waste, including tailings, which can be toxic and harmful to the environment. These practices promote waste reduction and the use of environmentally responsible waste management techniques, such as the use of tailings dams and the reuse of waste materials. By reducing waste, green mining can help to conserve resources and reduce the environmental impact of operations. Another key aspect of green mining is reforestation. Traditional practices can result in the destruction of large areas of forest, which can have a devastating impact on local ecosystems and wildlife. Green mining practices aim to promote reforestation and the restoration of degraded landscapes, helping to mitigate the environmental impact and improve the health of the local environment.

Green mining practices are not only beneficial for the environment but also for the industry itself. Adopting these practices can help to improve the reputation of the industry, increase customer loyalty, and attract new customers. As consumers become increasingly environmentally conscious, there is a growing demand for

responsibly sourced minerals and metals. These practices can help the industry to meet this demand, demonstrating its commitment to sustainable development and responsible resource management. By reducing the environmental impact of operations and conserving resources, green mining can help to mitigate the effects of climate change, reduce water scarcity, and promote reforestation. It is an essential component of a sustainable future, helping the industry to become more environmentally responsible, cost-efficient, and economically sustainable.

2.2.3 Contribution Mining Industry in Indonesia

Indonesia's mining sector has seen its share in GDP contribution growing rapidly in the last five years, from just 7.18% in 2016 to over 12% as of the end of 2022. In the first quarter of 2023, its share of GDP contribution remains significant at 11.85% and a notable increase compared to the same period in the previous year of 10.37%.

In the past, Indonesia's mining industry has concentrated on mining and exporting raw ores rather than being a part of the production value chain. Through this downstreaming policy, the current administration has succeeded in capturing value from the production and exports of more refined products such as, in the case of nickel, ferronickel and nickel matte. Indeed, these industrial policies were set in motion even before the COVID-19 pandemic struck, such as through the ban on exports of raw nickel announced in 2019, allowing the government to grow the economy throughout the pandemic and after it has receded.

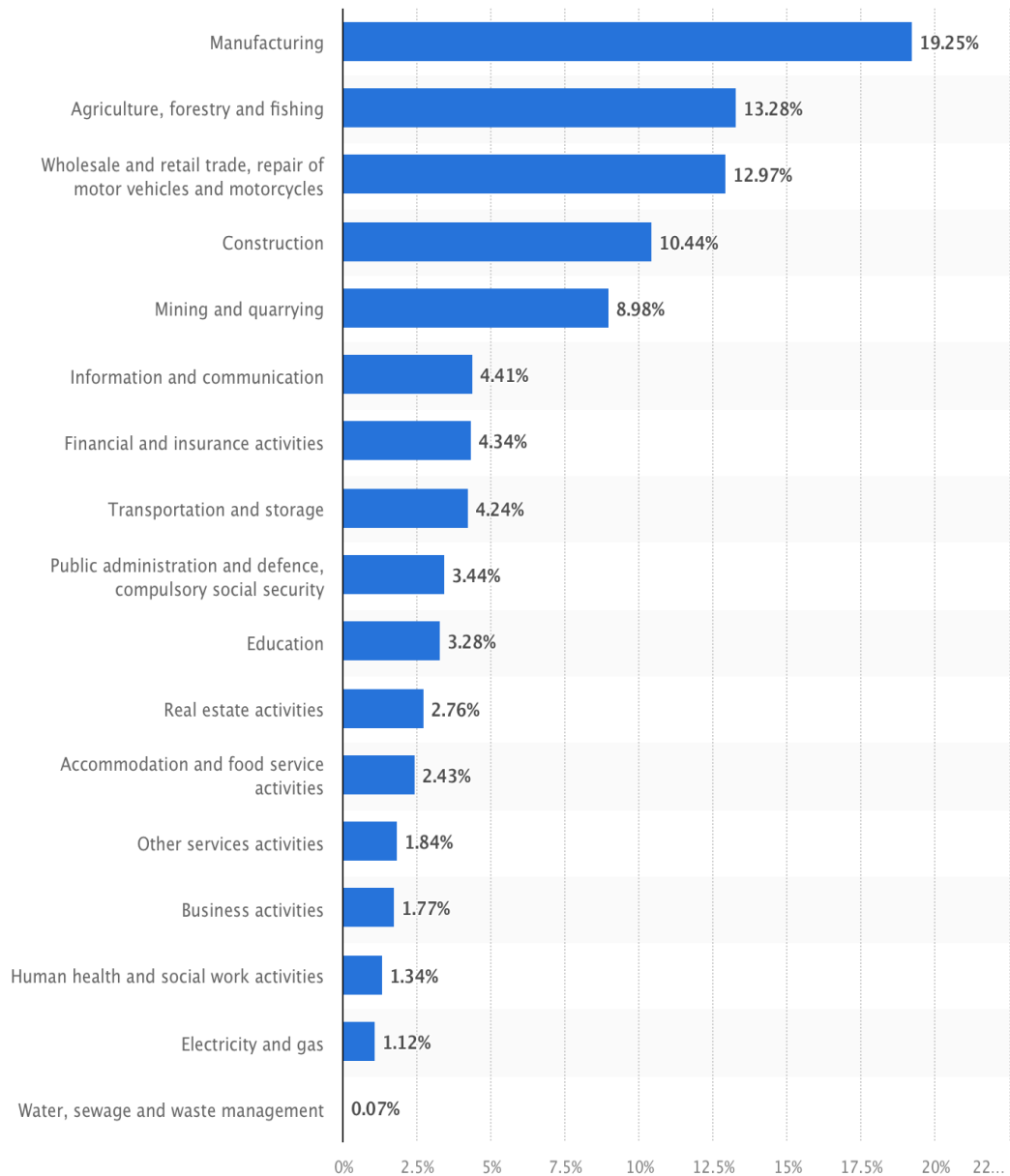


Figure 2.2 Gross Domestic Product of Indonesia in 2021

Source : Statistica 2021

As Indonesia possesses some of the largest, if not the largest reserves, for a number of raw minerals, such as the aforementioned nickel and copper, as well as tin, bauxite, and gold, the country has seen a significant increase in foreign and domestic investments towards the establishment of mineral refineries, also known

as smelters. For example, currently, the country has 13 nickel smelters in operation – from just 2 in 2014. By 2024, it expects to see 30 smelters running at full capacity. Several other processing plants are also in the works and are expected to be fully operational by 2025.

2.3 Framework

The development of green accounting practices has always been an attraction for research. Parties involved in the method of green accounting can realise their concern for the environment around the company. Green accounting becomes an agent of change to improve the company's environmental conditions (Susilo, 2008). In this case, the development of green accounting becomes a collaboration in increasing company profitability in decision-making. Green accounting is measured by its PROPER, and Company's Performance can be measured by Return on Assets and Return on Equity.

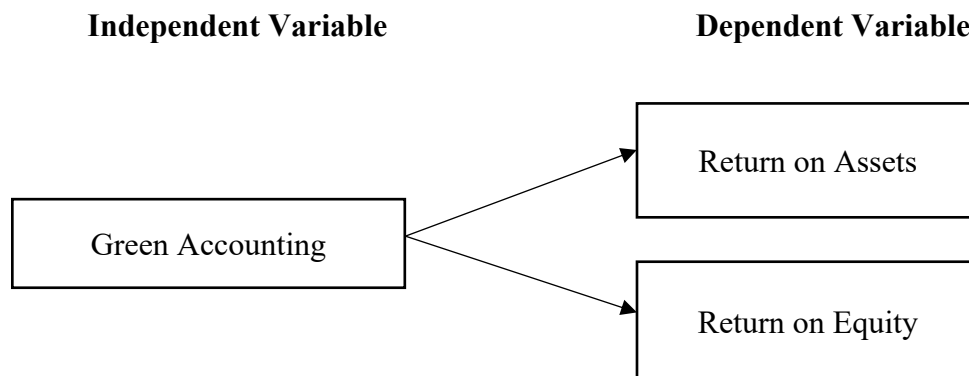


Figure 2.3 Conceptual Framework

2.4 Hypothesis

The purpose of this research is to investigate the possible influences of the independent variable that has been determined and the dependent variable that has been determined. This research independent variable, green accounting, will be compared against the research dependent variable, profitability, to determine whether the green accounting influence the profitability or not.

H1. Green Accounting has a positive significant effect toward Return on Assets of the listed mining company

H2. Green Accounting has a positive significant effect toward Return on Equity of the listed mining company