

The Effect of Eco-Efficiency and Good Corporate Governance on Firm Value: Profitability as a Mediator

Enni Savitri^{1*} and Nik Herda Nik Abdullah²

¹Faculty of Economics and Business, Universitas Riau, Pekanbaru, Indonesia

²School of Accounting and Finance, Faculty of Business and Law, Taylor's University, Selangor, Malaysia

ABSTRACT

This study examined the value relevance of the “eco-efficiency” concept, which refers to the process of maximizing the effectiveness of business processes while minimizing a company’s environmental impact. The study aimed to determine the effect of eco-efficiency and good corporate governance (GCG) mediated by profitability on enterprise value. A total of 165 firm-years of data from the Indonesia Stock Exchange in the consumer goods industry sector listed from 2016 to 2020 were analysed using ISO certificate implementation criteria. The sampling method used in this study was based on purposive sampling, and the data was analyzed using Partial Least Squares. The results indicated that companies that implement eco-efficiency strategies can boost their firm value. An eco-efficiency strategy can lead to cost reductions and greater profits, which the market must recognize in order to increase profitability. The study also discovered that profitability mediated the relationships between eco-efficiency and firm value. However, it had no effect on GCG’s ability to increase the company’s value. The study’s originality lies in analysing the profitability effect on eco-efficiency, GCG, and firm value at a customer goods company with an ISO certificate 14001.

Keywords: Eco-Efficiency, Good Corporate Governance, Profitability, Enterprise Value

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* Corresponding author: Enni Savitri, Faculty of Economics and Business, Universitas Riau, Kampus Bina Widya Km 12,5 Simpang Baru, Pekanbaru, Indonesia, Email: enni.savitri@lecturer.unri.ac.id, Tel: +62 (0761) 63272

INTRODUCTION

The environmental situation is deteriorating in light of current trends. The environmental equilibrium has been disrupted as human capabilities have increased in recent centuries. Thus, there has been a growing expectation by society over the last two decades about the need for companies to become more environmentally responsible, which has led to most companies starting to take initiatives to improve their business practices (Musova et al., 2021). Due to this expectation, companies have indeed added environmental performance to their previous concerns for quality, service, and cost. Environmental performance, seen from a general perspective, means implementing measures that ensure the sustainability of environmental attributes such as water, soil, air, and ecosystems. Reducing environmental impacts or restoring ecosystems puts a huge demand on organizational resources. This large expenditure needs to be accounted for. Engaging in this restoration process leads to the emergence of eco-efficiency. The concept of eco-efficiency is thus the middle point between the economy and the environment (Benzidia et al., 2021; Osazuwa & Che-Ahmad, 2016). Eco-efficiency is an organisational step toward producing more valuable goods and services at the same time. Eco-efficiency reduces negative environmental impacts, resource consumption, and costs.

As a management control process, eco-efficiency seeks to lower environmental concentration while increasing environmental production. Thus, it can also reduce costs and have added value (Czyzewski et al., 2021). Companies that apply the concept of eco-efficiency effectively, appear to have added value for shareholders through the company's risk profile (Burnett et al., 2011). Good management of the resources owned, both renewable and non-renewable, must be responsible, and companies must wisely conserve the stock of resources so that present and future generations can enjoy them, and society can achieve prosperity by taking advantage of the resources they have properly (Haj-Salem, 2019). As a result, the company should manage the reduction of environmental impact as a responsibility to the environment and society. But at the same time, companies become a source of environmental pollution, such as water, air, and soil pollution (Khan et al., 2021). The concept of eco-efficiency is one of the concepts that can be developed to deal with problems that are frequently carried out by businesses. This concept refers to an efficiency that takes

into account natural resources and energy characteristics or a manufacturing approach that decreases the consumption of raw materials, water, electricity, and environmental effects per unit of product (Lin et al., 2019).

The consumer goods industry sector is one of the promoters or drivers of economic growth and the source of foreign exchange for a country's exports. This is a mainstay sector that provides energy sources, production raw materials, and sources of state revenue as a resource-based sector. The consumer goods industry is still the main choice for investors to invest their funds. It is because stocks of goods and consumption companies still offer the potential for an increase (Savitri, et al., 2020a). In the manufacturing industry, especially the consumer goods sector, there were significant stock price movements from 2015–2019 of 61.56% to 0.29%, and this significant decline was caused by the sluggish consumer intention to make purchases so that it could create a lack of investment from consumers (Kemenperin RI, 2019). In addition to the value of stock prices, profitability also experienced fluctuations that tended to decrease, which was reflected in the highest average return on assets (ROA) of 13.16% in 2019 and the lowest of 8.17% in 2017, as well as the average return on assets equity (ROE) for two consecutive years decreasing from 12.16% to 9.38% in 2018-2019 (IDX, 2019). These fluctuations were caused by economic uncertainty, which had the potential to affect profitability ratios and could be due to the COVID-19 pandemic that had hit the world (Laili et al., 2019).

The latest survey was conducted by the Forum for Corporate Governance in Indonesia (FCGI) with a sample of 11 countries in Asia. The international standard that needs to be obtained must be at least 80%. Based on FCGI (2001) the Indonesian government has not made the improvement of good corporate governance (GCG) in the better direction as a top priority and does not yet have clear directions or rules, which was 34% in 2018 and decreased to 33.6% in 2020, which is still far from the international standard of reaching 80% (ACGA, 2020). This is due to the lack of awareness among certain companies or individuals about the basic values and practices of running a business, which increase the value of the company by implementing GCG. GCG can also help companies achieve sustainable corporate growth. Economists believe that the ruler's governance is one of the important factors that affect the future growth of a country. Therefore, corporate governance also has a significant influence on the sustainability of corporate growth itself (Steblyanskaya et al., 2019).

According to Sinkin et al. (2008), a company has fulfilled its obligations to the environment by adopting the concept of “eco-efficiency,” which is considered by investors to measure the value of the company. The application of effective eco-efficiency in the company will allow it to maintain stock prices, increase company profits, and have a higher company value. The application of eco-efficiency in companies can be influenced by high stock prices, which reflect an increase in company value (Osazuwa & Che-Ahmad, 2016; Purbawangsa et al., 2019). However, a past study by Videen (2010) showed that eco-efficiency had no effect on enterprise value. It is because the application of eco-efficiency did not have a consistent effect on enterprise value, and there is an argument that improving environmental performance will reduce shareholder value. Thus, the company’s costs of complying with ethical standards will result in a higher cost of goods, which will put the company at a disadvantage in the industry and reduce profitability.

Differences of opinion regarding eco-efficiency are a fundamental pattern for company management related to the environment, which aims to reduce environmental impacts, reduce costs, and have added value for the company, the environment, and society. Good profitability means the company has succeeded in utilizing eco-efficiency to generate profits. There are inconsistent findings on good governance, eco-efficiency, and profitability in the past studies. For instance, Matarazzo et al., (2013), and Chen et al., (2014) showed that eco-efficiency had a positive influence on profitability. Therefore, the application of good eco-efficiency will create added value that is beneficial to increasing the company’s profitability. Meanwhile, studies by Madanoglu et al. (2018) stated that GCG affects profitability. However, Tatsuo (2010) stated that eco-efficiency did not affect profitability, and Riyadh et al. (2019) found that GCG did not affect profitability.

Hence, based on the gaps in past studies, this study aimed to analyze eco-efficiency as an application of environmentally friendly production management based on good market response in the form of enterprise value. And evaluate the effects of eco-efficiency and GCG on enterprise value with profitability serving as the mediation variable in order to examine the relationship between eco-efficiency and GCG and the effect of profitability on business value. This study used a total of 165 companies over a five-year period in the consumer goods industry sector.

The purpose of choosing the consumer goods industry sector was because this sector is one of the drivers of economic growth and a source of foreign exchange. The main reason investors choose investment funds is because this company still has room for growth and is environmentally conscious. The originality of this research is the use of profitability as a mediation variable between eco-efficiency and GCG on enterprise value. Profitability can improve the relationship between GCG, firm value, and eco-efficiency. GCG's high level of eco-efficiency has the potential to increase company sales. The increase in sales has an impact on the increase in company profitability. High profitability will increase stock prices. Eco-efficiency is the application of environmentally friendly production management to market response in the form of company value. It is important to know that market appreciation in the form of increasing company value occurs when the company can implement eco-efficiency, GCG disclosure can provide a good image for the company regarding the company's relationship with all elements of stakeholders.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Eco-Efficiency and Profitability

The right to information on a company's operations that can affect its decision-making exists for stakeholders. The announcement of good accounting information will help company managers increase their prospects for the future (Haj-Salem, 2019). Furthermore, the company is responsible to the environment and its stakeholders in order to ensure the company's survival. With eco-efficiency, the company is not only focused on increasing profits, but also on the company's environmental operational activities. Businesses that implement eco-efficiency well will have good profitability because investors trust companies that have eco-efficiency because it can increase the value of profitability so that investors want to invest their capital in the long term. Based on previous research, Matarazzo et al. (2013) and Chen et al. (2014) showed that eco-efficiency had a positive and considerable impact on profitability. The hypothesis was as follows:

H₁: Eco-efficiency can improve profitability.

Good Corporate Governance and Profitability

Corporate governance is concerned with how investors feel managers will benefit them, how managers will reduce conflict by not taking on or investing in projects unrelated to the cash or capital committed by investors, fair procedures, and how investors will control managers (Madanoglu et al., 2018). According to the legitimacy theory, good corporate governance processes and appropriate profitability will result in the company receiving positive benefits, such as community support, which will eventually result in enhanced future company profits. Based on prior studies, Liu et al. (2015), Madanoglu et al. (2018), and Bhagat and Bolton (2019) found that GCG has a favourable and significant impact on profitability. The following hypothesis was proposed:

H₂: Good corporate governance can improve profitability.

Profitability and Firm Value

The profit earned by the company can be determined by showing the disclosed accounting information. The accounting disclosure here can be seen from the profit generated by the company. Profitability has a positive relationship with firm value, which means that the higher the company's profit growth, the better the company's future prospects (Huang & Chen, 2014). If the company's profit is high, it will increase the value of the company because the level of sales is high, and investors will get a greater rate of return and will give a positive signal if this information is conveyed properly. This will result in more shares for the company, which are in higher demand from investors and may impact share prices when they are traded. Based on previous research, Dang et al. (2019), and Lei & Song (2012) showed that the value of a company is positively and significantly affected by profitability. The following hypothesis was proposed:

H₃: Profitability can improve firm value.

Eco-Efficiency and Firm Value

Companies that implement eco-efficiency will disclose more information to justify and explain what is going on in the company. Eco-efficiency does not only focus on increasing profits and shareholder welfare, which are frequently overlooked when it comes to environmental performance by exploiting natural resources, causing pollution, and so on. The demands of stakeholders and the environment force companies to implement eco-efficiency to get a good response from stakeholders so that the value of the firm will increase. Based on previous research, Osazuwa and Che-Ahmad (2016) and Savitri et al. (2020b) showed that the value of a company is positively and significantly affected by eco-efficiency. The following is the premise, which is based on the above description:

H₄: Eco-efficiency affects firm value.

Good Corporate Governance and Firm Value

GCG serves as a control mechanism in a business that can eliminate or substantially minimize agency conflicts. Jiujiu et al., (2020) found that GCG has an impact on company value because its implementation will benefit investors, hence, investors feel confident in investing in companies that leads to an increase in firm value. Based on previous research, Lei and Song (2012) and Haj-Salem et al. (2019) showed that GCG significantly and positively affects a company's value. The research hypothesis was as follows:

H₅: Good corporate governance affects firm value.

Eco-Efficiency, Profitability and Firm Value

Eco-efficiency in the enterprise's mechanism that has an impact on both society and the environment can reduce production costs while increasing profitability, which increases retained earnings. A company's value will increase in the future due to increased profitability (Savitri et al., 2020). Companies with good environmental performance and a high level of efficiency can emphasize costs that can increase a company's profitability (Khasanah & Sucipto, 2020). With the implementation of eco-efficiency as a result of the company's increased profitability and value, investors

will become interested in making investments in it. (Rais, Said, & Usman, 2020). According to Matarazzo et al. (2013), eco-efficiency has a positive and significant relationship with profitability. Meanwhile, Al-Najjar & Anfimiadou (2012) and Osazuwa & Che-Ahmad (2016) showed that the value of a company is affected by profitability. According to the given description, the hypothesis was as follows:

H₆: Eco-efficiency affects firm value mediated by profitability.

Good Corporate Governance, Profitability and Firm Value

Profitability information is a form of positive signal that can be used by investors to consider the company's profitability as one of their rationalizations in making investment decisions. The implementation of GCG principles can provide benefits such as good company performance because of good profitability, so that the level of investor and community confidence increases while reducing agency conflicts. The relationship between profitability and firm value will be seen if you look at the main objective of each company, namely to obtain maximum profit, where an increase in profit indicates that the profitability of a company has increased (Lumoly et al., 2018). This research is supported by several studies conducted by Liu et al. (2015), Madanoglu et al. (2018), and Bhagat and Bolton (2019), which stated that GCG has a positive and significant relationship to profitability. Research conducted by Lei and Song (2012), Huang and Chen (2014), and Yanto (2018) stated that profitability affects business value in a positive and important way. Profitability is expected to be a mediating variable between GCG and firm value. The following was the last hypothesis:

H₇: Good corporate governance affects firm value mediated by profitability.

METHODOLOGY

Data Collection

Using the secondary data from 2016 to 2020, this study was undertaken on firms in the consumer products industry or consumer goods industry listed on the Indonesia Stock Exchange (IDX). The information was derived from

the company's financial statements and annual report. This study examined 165 companies using the purposive sampling method. The following criteria were applicable: 1) Companies in the consumer goods sector listed on the Indonesia Stock Exchange from 2016 to 2020; 2) companies produce financial and annual reports every year from 2016 to 2020; 3) companies did not apply for ISO certificates from 2016 to 2020; 4) companies report their financial statements in rupiah currency; and 5) companies had complete data related to the variables used in the study. Data analysis used path analysis with the Partial Least Square (PLS) approach using formative measurements. The international standardisation environmental certificate (ISO 14001) was the measure of the presence of eco-efficiency in the firm with an indicator variable for eco-efficiency.

Table 1: Identification and Measurement of Variables

Variable	Symbol	Measurement	Source
Company Value	Tobins Q	Total equity market value and debt to total assets	(Laili et al., 2019)
Profitability	ROA	Net profit after interest and taxes on own capital	(Sawir, 2015)
	ROE	Net income on total assets	(Sawir, 2015)
Eco-Efficiency	ECO	The international standardisation environmental certificate (ISO 14001) as a measure of the presence of eco-efficiency in the firms with an indicator variable for eco-efficiency.	(Osazuwa & Che-Ahmad, 2016)
Good Corporate Governance	GCG	CGPI = total items disclosed / maximum score the company should disclose × 100%	(Hassan & Halbouni, 2013)

RESULTS AND DISCUSSION

Descriptive Statistics

Table 2 shows the average development of the variables of company value, eco-efficiency, GCG, and profitability. The development of the value of the company as measured by Tobin's Q in the consumer goods industry sector tended to increase as the company experienced an increase in its ability to grow sustainably every year. The development of good eco-efficiency in the consumer goods industry sector tended to be quite stable, as many as 52% — 56% of companies disclosed their annual and

financial reports regarding good eco-efficiency practices. The importance of implementing and disclosing eco-efficiency through the use of ISO 14001 was well understood by companies in this sector. Company awareness in this sector was relatively good regarding the importance of implementing and disclosing GCG. The low value of the company and its declining ability to grow sustainably indicated that awareness of this fairly good company can still be improved.

Table 2: Descriptive Statistics Test Results

Variable	Indicator	Annual Average					Min	Max	mean	Std. dev
		2016	2017	2018	2019	2020				
Company Value	Tobins Q	2.81	12.69	10.11	3.24	3.07	0.16	383.56	6.41	35.78
Good Corporate Governance	GCG	0.76	0.75	0.77	0.79	0.79	0.55	0.95	0.77	0.10
Profitability	ROA	0.09	0.09	0.09	0.14	0.09	-0.21	1.55	0.10	0.19
	ROE	0.17	0.18	0.12	0.13	0.17	-0.68	2.57	0.15	0.35

Based on Table 3, it can be seen that from 65.7% to 47.4% fewer businesses each year did not have the ISO 14001 certificate. An increase of 34.3% to 52.6% was seen among companies that already had the ISO 14001 certifications. This showed that the company had implemented eco-efficiency so that it could raise its environmental responsibility. So it can be concluded that companies that have eco-efficiency, GCG, and high profitability to the surrounding environment and are mature will improve the company’s image, which will be an attraction for investors to invest their capital in order to increase the value of the company and obtain maximum profits.

Table 3: Descriptive Analysis of Dummy Variable Eco-Efficiency

			Year					Total
			2016	2017	2018	2019	2020	
ISO 14001	Without ISO 14001 certification	Count	23	20	20	20	18	101
		% within year	65.7%	54.1%	54.1%	54.1%	47.4%	54.9%
	With ISO 14001 certification	Count	12	17	17	17	20	83
		% within year	34.3%	45.9%	42.9%	45.9%	52.6%	45.1%
Total		Count	35	37	37	37	38	184
		% within year	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Model Test

The outer model test is a test that is managed using indicators that comprise the latent variable. The outer model was calculated in this study using the weight and VIF value. Table 4 presents the results of the outer model test.

Table 4: Outer Model Test

	Outer Weight		Loading Factor
	P Values	VIF	Original Sample (O)
ECO -> Eco Efficiency	0.000	1.000	1.000
GCG -> GCG	0.000	1.000	1.000
ROA -> Profitability	0.005	1.537	0.883
ROE -> Profitability	0.003	1.537	0.901
Tobins Q -> Company Value	0.000	1.000	1.000

Figure 1 shows the estimation results of the PLS model. All indicators were valid because the outer weight value is less than 0.05 and the loading factor value was greater than 0.5. Therefore, the ROA and ROE indicators were still quite feasible to maintain. In this study, formative construct measurement was deemed feasible. At the value of VIF, both inner VIF and outer VIF are 10. This demonstrated that the PLS model had no multicollinearity issues, indicating that it was suitable for further analysis.

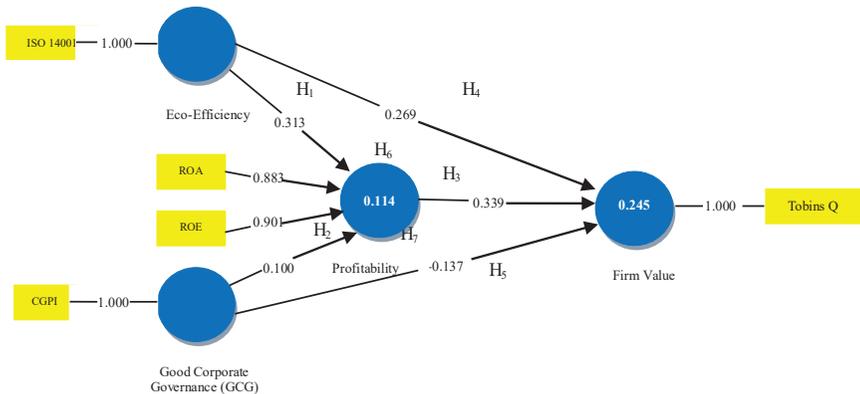


Figure 1: Measurement Model
(Source: SmartPLS 2.0 M3 Processed Data)

Structural model

The inner model test involves an evaluation of the structural model’s goodness of fit, an evaluation of the path coefficient, and a computation of the determination coefficient. Table 5 exhibits the estimation of the inner model analysis model on constructs with formative indicators.

Table 5: Inner Model Test

	Value	Measurement
R square (NP)	0.245	P<0.033
R square (Prof)	0.114	P<0.033
Q Square	0.331	<i>Q-square value > 0 indicates the model has predictive relevance, otherwise if the Q-Square value ≤ 0 indicates the model lacks predictive relevance.</i>
SRMR	0.021	< 0,08

Based on the analysis as shown in Table 5, the average R-squared (NP) value was 0.245, which meant that 24.5% of the variance in firm value was affected by eco-efficiency, and GCG. While 75.5% of the variance in firm value was influenced by other factors outside eco-efficiency and GCG, the average R-squared (PROF) of 0.114 meant that 11.4% of the profitability variance was influenced by eco-efficiency and GCG, while the remaining 88.6% of the company’s profitability variance was influenced by other factors other than eco-efficiency and GCG. Based on the R square value of the two endogenous variables <0.33, the model stated that the SEM model was actually still in the weak category (Hair *et al.*, 2021). There are still many exogenous variables outside of eco-efficiency, and GCG that can actually affect firm value and profitability but have not been investigated in this study. The value of Q Square was 0.331, which is greater than 0. It can be concluded that the model already had predictive relevance. The SRMR value of the model was 0.021. The model was shown to be a perfect fit in predicting the influence between variables in the model because the SRMR model had a coefficient of determination of less than 0.08. According to the findings of the model’s R square, Q square, and SRMR values’ evaluation of the model’s viability. Hence, the PLS model could be utilized to assess the research hypothesis and was feasible.

Table 5: Inner Model Test

	Hypothesis	Path Coefficient	T Statistic	p value	Result
H1	Eco-Efficiency → Profitability	0.313	5.632	0.000	Accepted
H2	GCG → Profitability	0.100	1.465	0.143	Rejected
H3	Profitability → Firm Value	0.339	3.607	0.000	Accepted
H4	Eco-Efficiency → Firm Value	0.269	3.689	0.000	Accepted
H5	GCG → Firm value	-0.137	1.754	0.079	Rejected
H6	Eco-Efficiency → Profitability → Firm value	0.106	2.689	0.007	Accepted
H7	GCG → Profitability → Firm value	0.034	1.498	0.134	Rejected

Table 5 demonstrates how eco-efficiency and good corporate governance affect profitability. Profitability and eco-efficiency have an impact on the company's value. Meanwhile, good corporate governance had no effect on firm value. Profitability was not able to mediate the effect of eco-efficiency on firm value. Profitability can mediate the effect of GCG on firm value.

Discussion

Profitability benefits from environmental efficiency. Profitability will increase for businesses that adopt eco-efficiency. Companies that use the notion of eco-efficiency will be more profitable than companies that do not use the concept of eco-efficiency. A company owes it to the environment and its stakeholders to support the company's continuity in appropriate and effective situations. When compared to other businesses, those who have embraced the idea of eco-efficiency can have an impact on returns (Matarazzo et al., 2013). Eco-efficiency can be used to increase pollution control while reducing production and compliance expenses. Thus, cost reduction can enhance corporate profits, allowing companies to have higher profitability figures (Meutia et al., 2019).

GCG has no impact on revenue given that the company has not kept up a stable income. GCG's implementation had barely increased profitability. Potential conflicts between shareholders' interests and management's interests could arise from controlling the execution of GCG using the CGPI rating category. The company performs better as a result of management's use of GCG (Riyadh et al., 2019).

Profitability has an impact on business value. Profitability growth can boost business value. Most investors use profitability ratios while making investment decisions. In terms of the company, profitability can be used to assess the effectiveness of management (Dang et al., 2019). As a result, profitability is beneficial in demonstrating the company's performance in generating profits for the company, which can later improve the company's worth. The management will employ a high level of profitability to send a favourable signal to users, reducing information asymmetry in the organisation (Risa, 2018; Safitri et al., 2019; Dang et al., 2019).

A company's ability to manage its value level to attract more investment and operate smoothly improves with increasing eco-efficiency. When a company has an effective eco-efficiency role, it can increase the value of the company when the right policies are taken to improve the environment by reducing environmental impacts due to the company's operational activities. The implementation of ISO 14001 results in the alignment of environmental standards with business operations and system optimization, which reduces risk, keeps costs down, and increases company value. The application of eco-efficiency practices that are directed in a sustainable manner results in an increase in company value. The findings are consistent with Osazuwa and Che-Ahmad (2016), Burnett et al. (2011), and Guenster et al. (2011).

GCG had no effect on firm value. Participation in the CGPI survey on GCG was not related to firm value, especially in developing countries such as Indonesia, where the implementation of GCG still varies due to the legal environment, which is still inadequate. The control role of the independent board of commissioners has not been maximized in efforts to encourage management to increase the value of the company. In the years 2016 to 2018, the GCG managed through state-owned companies listed on the Indonesia Stock Exchange had no effect on the company's worth, which is consistent with Siagian et al., (2013), Sun and Pratt (2014), and Yanto (2018).

Profitability had an impact on eco-efficiency and the company's value. A strategy to achieve or maximize the welfare of shareholders and other stakeholders is through the addition of company funds through eco-efficiency. The implementation of eco-efficiency in an environment where the business has achieved ISO 14001 can enhance asset management

effectiveness and increase profitability. Investors, the environment, and society all respond positively to companies that have a good reputation and a stable financial position (Sun & Pratt, 2014; Chen et al., 2014).

Through its profitability, GCG has no impact on a company's value. In order to keep their business, companies must be able to manage earnings on assets carefully. The thoughts of investors may be improved by GCG implementation, but this is not a given. The GCG implementation in Indonesia is not trusted by investors. Although GCG practices have indeed been implemented in a company, the company has not done so in compliance with the GCG's guiding principles (Randi & Juniarti, 2013; Rais et al., 2020).

CONCLUSION AND IMPLICATIONS

Eco-efficiency may affect a company's profitability. When the company employs effective eco-efficiency, the environment, the community, and society will be more supportive of the firm's operations. Meanwhile, GCG had no effect on the company's profitability given that companies that use GCG had not maintained consistent profits. It also shows that when GCG was implemented, profitability did not increase or had no effect. Good profitability and eco-efficiency will increase firm value. However, GCG did not affect the value of the company. It is because the corporation has not fully implemented the implementation in accordance with the GCG principles, which casts doubt on certain of the GCG principles. Through profitability, eco-efficiency impacts the value of a company. Eco-efficiency has a significant indirect influence on firm value via profitability as a mediation variable, indicating that profitability has an effect on the relationships between eco-efficiency and firm value. Meanwhile, GCG had no indirect impact on firm value through profitability. This demonstrates that profitability cannot explain the influence of GCG on firm value.

Implications of the study include that eco-efficiency practices influence consumer behavior by attracting environmentally friendly consumers, thereby increasing company sales. One of the key business strategies of firms engaged in environmental strategies is the adoption of the ISO 14001, which entails organisations integrating environmental standards with their business processes. Companies improve their efficiency and effectiveness

as environmental conditions change. Such a company increases the value of the business by saving time, money, and risk. The share price of a firm must be used to its advantage if it wants to raise its value and control over the implementation of corporate governance within the company. When a company has effectively implemented eco-efficiency, it should maintain consistency by carrying out routine evaluations to keep the implementation of eco-efficiency within the company growing.

As a result, the study's limitations on the indicator for measuring eco-efficiency in this study used an ISO 14001 certificate. Measurement with the application of an ISO 14001 certificate is used to see and assess the quality of the application of eco-efficiency. So data analysis was limited to the scope of the measurements used. Due to the regulatory incentives, a lot of businesses only implement GCG concepts. GCG principles have not yet become a culture within the company. Green accounting, environmental dynamics, and firm expansion could all be considered by future researchers.

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