

# Implication of Environmental Management System and Environmental Performance on Financial Performance of Entities with Foreign Ownership as Moderator

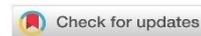
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## Abstract

**Keywords:**  
ISO 14001;  
PROPER KLHK;  
ROA; Foreign  
Ownership; EMS

This research aims to examine the determination of the Environmental Management System (EMS) and environmental performance on the company's financial performance as moderated by foreign ownership in the stock structure of manufacturing companies listed on the Indonesia Stock Exchange. This research uses a quantitative method by analyzing 27 manufacturing companies listed on the IDX through purposive sampling-based sample selection, then data analysis using the moderated regression analysis method. The results showed that foreign ownership could not moderate the effect of EMS proxied by ISO 14001 certification on the financial performance of the entity proxied by ROA, but on the other hand, the structure of foreign ownership shares could positively and significantly moderate the effect of environmental performance proxied by PROPER KLHK on the entity's financial performance. Meanwhile, if tested directly, neither EMS nor environmental performance has an effect on the company's financial performance.

## Abstrak

**Kata kunci:**  
ISO 14001;  
PROPER KLHK;  
ROA; Foreign  
Ownership; EMS

Penelitian ini bertujuan untuk menguji determinasi Environmental Management System (EMS) dan kinerja lingkungan terhadap kinerja keuangan perusahaan yang dimoderasi oleh kepemilikan asing dalam struktur saham perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia. Penelitian ini menggunakan metode kuantitatif dengan menganalisis 27 perusahaan manufaktur yang terdaftar di BEI melalui seleksi sampel berbasis purposive sampling, kemudian analisis data menggunakan metode moderated regression analysis. Hasil penelitian menunjukkan bahwa kepemilikan asing tidak dapat memoderasi pengaruh EMS yang diprosikan oleh sertifikasi ISO 14001 terhadap kinerja keuangan entitas yang diprosikan oleh ROA, namun di sisi lain, struktur saham kepemilikan asing dapat memoderasi secara positif dan signifikan atas pengaruh kinerja lingkungan yang diprosikan oleh PROPER KLHK terhadap kinerja keuangan entitas. Sedangkan bila diuji secara langsung, baik EMS ataupun kinerja lingkungan tidak berpengaruh terhadap kinerja keuangan perusahaan.

## 1. Preliminary

The government continues to innovate to increase the company's commitment in order for accountability of environmental management for business operations. One strategy that has been increasingly popularized is the reward and punishment mechanism in the PROPER program which was initiated by the Ministry of Environment and Forestry which encourages business actors to optimize environmental management. PROPER itself is an acronym for the Public Disclosure Program for Environmental Compliance which was coined in 1995 under the name PROPER KOSASIH (Kemenlhk, 2019). Until the monitoring period in 2019, based on the Decree of the Minister of Environment and Forestry

of the Republic of Indonesia number SK.1049 / MENLHK / SETJEN / PKL.4 / 12/2019 regarding the results of the assessment of company performance ratings in environmental management for 2018 - 2019, it was recorded that 2045 successfully supervised and obtained a PROPER rating, whether a company listed on the IDX or private. PROPER is considered to be one of the elements of the application of environmental accounting which results in a rating that indirectly enhances the company's image in society so that it can boost corporate performance both internally and externally.

It cannot be denied that PROPER itself is the driving force for the achievement of the SDGs (Sustainable Development Goals) global program. Presidential Regulation Number 59 of 2017 concerning the Implementation of Achieving the Sustainable Development Goals, regulates that Business Actors are one of the stakeholders who can play a role in implementing the Sustainable Development Goals (SDGs). This is in line because PROPER aims for companies to always implement sustainable production and consumption and with the criteria of community empowerment, they will be able to grow the local economy around the company (Media Indonesia, 2018). Research conducted by Nababan & Hasyir (2019) concluded that the higher the PROPER ranking will have an impact on the higher the ROA value. This shows that environmental performance has a good impact on the company's financial performance. The public considers that the company's policy to participate in the PROPER program and fulfill all the provisions in its clusterization can increase public trust and have implications for high company profitability.

Apart from PROPER, research within the scope of environmental accounting is affiliated with the implementation of ISO 14001: 2015 concerning EMS (Environmental Management System) which adheres to 5 main components namely environmental policy, planning, implementation and operation, checking and corrective action, review and development (Hazudin et al., 2015). This is in accordance with the 3-P concept which is a concept of sustainability called the Triple Bottom Line introduced by Elkington where 3-P consists of Profit, People, and Planet (Elkington, 1999). Profit is not only the main orientation of business operations, companies also need to pay attention to the principle of going concern and balance with the environment. The application of environmental accounting through ISO 14001 certification can actually have positive implications, because the company provides a signal to the public that the products produced have passed various stages that do not damage the environment (Ferron et al., 2012). Ferron et al. (2012) stated in his research, that the implementation of ISO 14001 could have a positive impact in the form of high profitability measured by EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortization) and net income for companies listed on BOVESPA, the Brazilian stock exchange by observing 552 companies in 1996-2008. However, this is not in line with the research conducted Hazudin et al. (2015), that ISO 14001 certification which focuses on building a corporate image of environmental responsibility had a good reputation in the public, but its implications for profitability were not satisfactory. The study used a sample of 17 companies listed on the Malaysian stock exchange for a duration of 7 years of data observation. Likewise research conducted by Sarumapet (2005), that environmental

performance did not have a significant positive relationship with the company's financial performance as measured by ROA.

In its application, the implementation of ISO 14001 finds many challenges, one of which is the influence of company ownership. The author presumes that with the composition of foreign ownership in a company, it should be able to provide a positive impetus to build the image and good governance of an institution. Foreign ownership is expected to influence the company's decision to carry out environmental and social responsibility. Dewi & Suaryana (2015) revealed that foreign ownership has a positive effect on CSR disclosure. In other studies conducted by Arvitariani & Wahidahwati (2018) found that foreign ownership can significantly moderate the effect of the PROPER rating on ROA, this further strengthens the hypothesis that foreign ownership can strengthen the effect of environmental performance on profitability but in negative impact. This is possible because foreign investors, who generally come from developed countries, have an open mind in estimating the operational impacts of the company that will occur in the future, thus foreign investors' concern for the environment is very high.

## 2. Literature Review

### 2.1. Signaling Theory

Spence (1973) developed the idea of Akerlof (1970) related to the basic equilibrium signaling model. Spence provides an illustration of the labor market (job market) and suggests that companies that have a good performance (superior performance) use financial information to send signals to the market. From his research, Spence also found that the cost of signals on bad news is higher than good news and companies that have bad news send signals that are not credible. This motivates managers to disclose privacy information to reduce information asymmetry in the hope that it can send good signals about the company's performance to the market.

### 2.2. Stakeholder Theory

This theory was first expressed by Freeman & Cavusgil (1984) that stakeholder is defining stakeholders as "any group or individual who can affect or be affected by the achievement of an organization's objectives". Stakeholder theory is a theory which states that a company is not an entity that only operates for its own interests, but must provide benefits to all its stakeholders (shareholders, creditors, consumers, suppliers, society, and other parties). This theory considers the position of its stakeholders which is considered the most influential for the company. Stakeholder theory is often used in social, environmental, and sustainable management research, and in recent times it is gaining further popularity. Stakeholder theory has many different definitions, but to fit this purpose, it is focusing on 'managing stakeholder relationships' as opposed to 'stakeholder management' that may imply the manipulation of the stakeholders (Horisch et al., 2014). The idea of creating value for stakeholders based on sustainability could be inspired from both stakeholder theory and sustainable management. At first, the theories share the most important feature of sustainability, which is created through economic success, voluntary corporate

environment or social activities (Horisch et al., 2014). Secondly, sustainability based on value creation for stakeholders, directly relates to stakeholder theory, that argues about creating value for stakeholders and linking its benefits to different stakeholders is of great importance (Horisch et.al, 2014). Such interconnection between the two theories, creates value creation for the stakeholders in terms of creating good value for customers, producing high quality products, creating value for other stakeholders within the organisation, paying taxes to the government, and lastly generating profits for everyone as a sustainability approach. Such approach, facilitates company to find motivation, and establish a qualified workforce that also benefits the local community (Horisch et.al, 2014). Companies aim at producing sustainable products to help its stakeholders and the environment, and the stakeholders, such as investors, employees or suppliers gain profit. Additionally, prior research revealed that sustainable management can improve a company's health and safety standards, and employees are also encouraged to work for companies that prioritise sustainability (Horsich et.al, 2014).

### 2.3. Legitimacy Theory

Ghozali et al., (2007) in Arvitariani & Wahidahwati (2018) argued that the legitimacy theory is a theory that the fundamental thing is a social contract that occurs between the company and the community where the company operates and uses economic resources. Social contracts that involve the company and the community to gain legitimacy, refer the company to make various efforts to prevent the legitimacy gap. Efforts that are generally made by companies are to carry out activities related to their responsibilities which not only include company performance, but also responsibility for the environment and social environment (Arvitariani & Wahidahwati, 2018).

### 2.4. ISO 14001

Sinkin et al. (2008) revealed that ISO 14001 is one of the parameters for measuring eco-efficiency besides the carbon emission test and environmental impact measurement released by the WBCSD (Stigson et al., 2006). This is because the parameters of ISO 14001 implementation refer to saving resources and environmental management, so that it can represent environmental accounting measurements. The first generation of ISO 14001 itself was implemented for the first time on September 15, 1996 and has grown to the latest release version in 2015. The ISO 14001: 2015 standard was issued by the International Organization for Standardization based in Geneva, Switzerland.

### 2.5. PROPER (Company Performance Rating Program in Environmental Management)

The Company Performance Rating Program in Environmental Management (PROPER) is a program of the Ministry of Environment and Forestry that has been running since 1995. This program aims to encourage corporate governance in environmental management through information instruments. The results of the company's environmental performance assessment in PROPER are five types of color ratings. The color ratings are gold (highest), green, blue, red and black (lowest) as shown Table 1 (Reliantoro, 2012).

Table 1. PROPER Rating Score

Color Indicator	Score
Gold	5
Green	4
Blue	3
Red	2
Black	1

Source: Ministry of Environment and Forestry of The Republic of Indonesia ([Lingkungan Hidup, 1995](#))

## 2.6. Foreign Ownership

Foreign ownership is the percentage of ordinary shares of a company that is owned by individuals, legal entities, the government and their share with foreign status, this is regulated and explained under Act No. 25 of 2007 concerning investment.

## 2.7. ROA (Return on Total Assets)

*Return on Total Assets* (ROA) measures the effectiveness of management in generating profits by utilizing assets owned ([Gitman et al., 2015](#)). The higher the ROA, the better the company's financial condition. ROA is formulated with the formula:

$$ROA = \frac{\text{Earnings available for common shareholders}}{\text{Total assets}}$$

## 2.8. The Effect of Environmental Management System on Company Performance

Ownership of ISO 14001 certification is a prestige in itself for a corporation, this is because internationally, the company has met the standards required to be considered a company with good environmental performance. This can lead to an indirect indication that the good image the company has has an indirect impact on the company's financial performance from the perspective of increasing investor and consumer confidence.

[Ferron et al. \(2012\)](#) stated in his research that companies with consistent ISO 14001 certification tend to have good profitability. Based on the explanation above, the authors formulate the following hypothesis:

H<sub>1</sub>: Environmental Management System has a positive effect on financial performance as proxied by ROA

## 2.9. Effect of Environmental Performance on Company Financial Performance

Similar to ISO 14001 certification, the award received from PROPER KLHK RI for the gold, blue and green categories is a prestige in itself for the corporation. The three categories were chosen because they represent a good minimum standard for companies in environmental management. Two other standards, namely red and black, are affiliated with companies that are considered to be damaging to the environment in practice. Researchers estimate that the existence of a company in the KLHK PROPER award event and receiving a reward in the form of categorizing companies into the green company category has good implications for public reporting so that it can increase public trust, especially investors, clients and consumers. Along with increasing trust, the company's products will be optimally absorbed by the market. [Arvitariani & Wahidahwati \(2018\)](#) found that environmental performance has no effect on ROA, whereas [Angelia & Suryaningsih \(2015\)](#) and [Singh & Jackson \(2015\)](#) found that environmental performance has an effect on financial performance. Based on this empirical data, the authors then develop a hypothesis:

H<sub>2</sub> : Environmental performance proxied by PROPER rating has a positive effect on the company's financial performance as proxied by ROA

### **2.10. Foreign Ownership Moderates the Effect of Environmental Management System on Financial Performance**

In an era of technological advances like today, consumers are faced with various choices of products to be consumed. News about manufacturing companies that do not heed good management can make consumers selective in choosing these products, especially nowadays, there is a lot of information on social media campaigning about environmental concerns. If there is no complete information about the manufacturer, the company's consumers can choose to buy from a company that is ISO 14001 certified (Johnstone & Labonne, 2009). This is a consideration for investors, especially in the foreign direct investment segment, where many foreign investors consider the sustainability of an entity as a result of the products produced. In empirical research it is found that foreign investment companies are more likely to implement an environmental management system (EMS) (Albornoz et al., 2011) and (Prakash & Potoski, 2007). He (2010) found that there is a positive relationship between foreign direct investment and environmental efficiency practices. However Qi et al. (2011) found that foreign direct investment does not have a statistically visible effect on ISO 14001 certification. Based on some of the findings above, the authors then develop a hypothesis:

H<sub>3</sub> : The interaction of the Environmental Management System (EMS) and foreign ownership has a positive effect on corporate financial performance

### **2.11. Foreign Ownership Moderates the Effect of Environmental Performance on Financial Performance**

Companies with a composition of foreign ownership, especially multinational companies with a large portion of foreign ownership, generally have better readiness in environmental management. Environmental performance, which is a representation of the Corporate Social Responsibility (CSR) strategy, is the media chosen by the company to show concern for the public and the sustainability of natural resources. In research conducted by Lundgren & Marklund (2012) and Angelia & Suryaningsih (2015), obtained information that environmental performance has an effect on company performance. Likewise with research conducted by Arvitariani & Wahidahwati (2018), that foreign ownership can affect environmental performance on financial performance. Thus, the authors draw the fourth hypothesis in this study, namely:

H<sub>4</sub> : The interaction of environmental performance and foreign ownership has a positive effect on corporate financial performance

## **3. Method**

### **3.1. Type of Research**

This type of research uses a quantitative approach which is translated through statistical models and translated into the interpretation of the numbers through hypothesis testing.

### 3.2. Research Procedures and Data Collection Techniques

The population used in this research are all manufacturing sector companies listed on the Indonesia Stock Exchange for the 2016-2019 observation year. The data used was secondary data that can be accessed on the respective company websites or through the IDX web portal.

The sample in this research was obtained by using purposive sampling method, namely mapping samples with special criteria. The criteria used by the authors were:

1. Manufacturing sector companies that published annual financial reports on the Indonesia Stock Exchange consecutively and have never been delisted in the 2016-2019 period.
2. The company also disclosed ISO 14001 certification information in its annual financial reports published during the 2016-2019 observation year.
3. The company was also registered with the Indonesian Ministry of Environment and Forestry as a participant in the PROPER assessment program and has received gold, green and at least blue ratings in the 2016-2019 observation year.
4. There was a percentage of foreign ownership in the share ownership structure as stated in the annual report for 2016-2019.

### 3.3. Data Analysis Techniques

#### 3.3.1. Classic assumption test

According to Gauss-Markov in Gujarati & Porter (2013), each OLS estimator must meet the BLUE (Best Linear Un] Estimator) criteria, namely:

1. *Best*: the best,
2. *Linear*: is a linear combination of sample data,
3. *Unavailable*: average or expected value,  $E(\beta_2)$  must equal the actual value,
4. *Efficient estimator*: has minimal variance among unbiased estimators.

Regression models need to be tested with classical assumptions because the BLUE criteria above, which are carried out by normality test, multicollinearity test, autocorrelation test, and heteroscedasticity test.

#### 3.3.2. Multiple Linear Regression Analysis

Multiple linear regression analysis in this study using 2 models. To test the effect of moderating variables, the interaction test (moderated regression analysis) was used. The following is the regression equation used in this study:

##### Model 1

$$ROA = \alpha + \beta_1 EMS + \beta_2 ENVIPERF + \beta_3 FOROW + \varepsilon$$

##### Model 2

$$ROA = \alpha + \beta_1 EMS + \beta_2 ENVIPERF + \beta_3 FOROW + \beta_4 ISO * FOROW + \beta_5 PROPER * FOROW + \varepsilon$$

Information:

- ROA : *Return on Total Assets*  
 $\alpha$  : Constant regression coefficient  
 $\beta_1, 2, 3, 4, 5$  : The regression coefficient of each proxy

- EMS : *Environmental Management System* which is proxied by ISO 14001 certification
- ENVIPERF : Performance environment proxied by the PROPER rating
- FOROW : Percentage of share ownership by foreign parties
- $\varepsilon$  : Error term (estimator error rate)

#### 4. Result and Discussion

Based on data obtaining of manufacturing sector companies listed on the IDX for the period 2016-2019 and having gone through a series of selections using the purposive sampling method, the following data samples as shown [Table 2](#).

Table 2. Number of Research Samples

No.	Information	amount Company	Total Population	
			Period	
1	Data on manufacturing sector companies listed on the IDX for the 2014-2017 observation period	135	4	540
2	Data of companies whose fiscal year ends on December 31	135	4	540
3	Data on companies that during the 2016-2019 observation period were not certified ISO 14001 and did not have a percentage of share ownership from foreign parties	(83)	4	(332)
4	Outlier data	(25)	4	(100)
	Number of Samples	27	4	108

Source: IDX portal and website of each sample

#### 4.1. Classic Assumption Test

##### 4.1.1. Normality test

Based on the following [Figure 1](#), the normality test has been fulfilled by showing the points that spread around the diagonal line and the distribution follows the direction of the diagonal line ([Ghozali, 2018](#)). Thus, the regression model of this study fulfills the normality assumption.

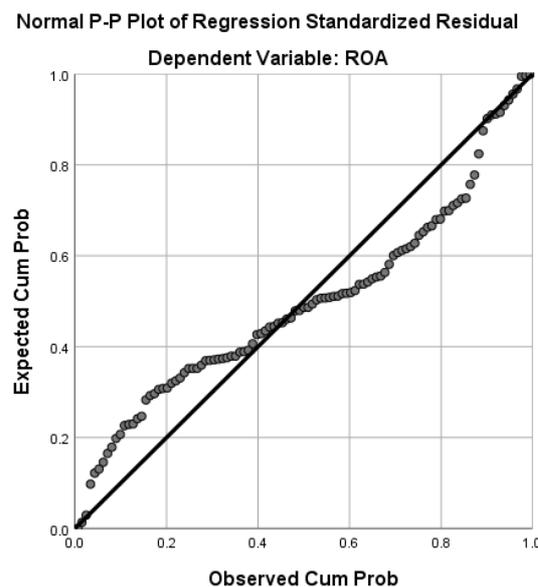


Figure 1. Normal P-Plot Graph

Source: Secondary data processed using SPSS 26

**4.1.2. Multicollinearity test**

Based on the following Table 3, the results show that all independent variables (EMS, ENVIPERF and FOROW) have a tolerance value above 0.10 and a Variance Inflation Factor (VIF) value less than 10 (Ghozali, 2018). Thus, in this study there was no multicollinearity in the regression model.

Table 3. Multicollinearity Test

Model		Coefficients <sup>a</sup>	
		Collinearity Statistics	
		Tolerance	VIF
1	EMS	.968	1,034
	ENVIPERF	.985	1,015
	FOROW	.982	1,019

a. Dependent Variable: ROA

Source: Secondary data processed using SPSS 26

**4.1.3. Heteroscedasticity test**

In testing using SPSS 26, as could be seen the points on the scatterplot graph (Figure 2) spread above or below the number 0 on the Y axis and do not form a certain clear pattern. (Ghozali, 2018), it can be concluded that there are no symptoms of heteroscedasticity in testing all variables.

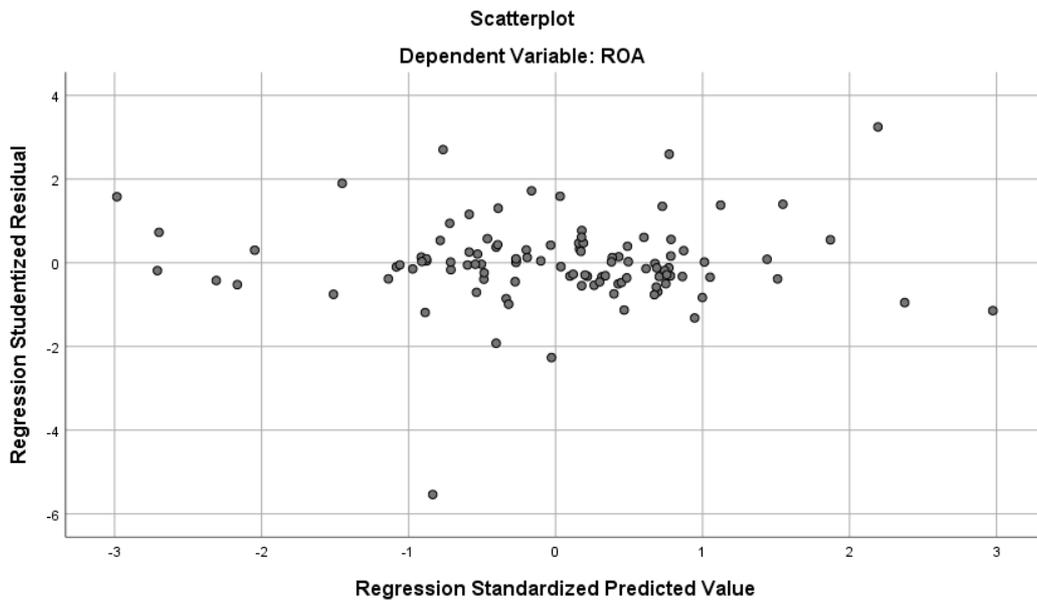


Figure 2. Scatterplot graphics

Source: Secondary data processed using SPSS 26

**4.1.4. Autocorrelation test**

In data Table 4 below, it can be seen that the Durbin-Watson test results obtained a value of 1.714. The sample used is 107 and the variables used are 4, so based on the Durbin-Watson table, it is known that the value of  $d_u = 1.62774$  and the value of  $d_l = 1.74284$ , and the value of  $4-d = 2.37226$ . Ghozali (2018) states that if the value of  $d_u < d < 4-d_u$ , then there is no lag variable among the independent variables or it can be concluded that there is no

autocorrelation symptom. In this study, the value of  $d = 1.714$  is greater than  $du = 1.62774$  and less than  $4-du = 2.37226$ , so it can be concluded that there is no autocorrelation between each research variable.

#### 4.2. Multiple Regression Analysis (Model 1)

In testing model 1, the independent variables used to perform data regression are EMS, ENVIPERF. This model can be intended to test the first and second hypotheses in this study. The following is a [Table 4](#) of the results of multiple regression analysis for model 1.

Table 4. Results of Multiple Regression Analysis Model 1

Model		Coefficients <sup>a</sup>				
		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.014	.028		.519	.605
	EMS	-.025	.068	-.036	-.364	.717
	ENVIPERF	.001	.006	.023	.239	.812
	FOROW	.058	.039	.147	1.496	.138

a. Dependent Variable: ROA

b. F-Value: 0.766, Sig: 0.516

c. R2: 0.022

Source: Secondary data processed using SPSS 26

Based on the data obtained in [Table 4](#), the following regression results are obtained:  
 $ROA = 0.014 - 0.025 \text{ EMS} + 0.001 \text{ ENVIPERF} + 0.058 \text{ FOROW} + \varepsilon$

From the test above, it can be seen that EMS (ISO 14001) has no effect on ROA with a significance value of 0.717. The t test results explain that the t regression coefficient of EMS is -0.364 with a significance of 0.717 which is greater than the 5% (0.05) significance rate so that it can be concluded that EMS individually or partially has a negative but insignificant relationship to the company's financial performance. Thus, based on the research results, the first hypothesis ( $H_1$ ) is rejected. This is against to the research conducted by [Ferron et al. \(2012\)](#) which states that EMS, which is proxied by ISO 14001 certification, has a positive and significant effect on the company's financial performance.

This is also not much different in testing the second hypothesis, from the results of multiple regression analysis in model 1, it is found that the ENVIPERF variable has no effect on ROA. Judging from the results of the regression coefficient of 0.001 with a significance value of 0.812 greater than 0.05. Thus it can be concluded that the environmental performance proxied by the PROPER rating has no effect on the financial performance proxied by ROA. The results of this study confirm the research conducted by [Arvitariani & Wahidahwati \(2018\)](#) that the PROPER rating does not affect ROA, but contradicts the research conducted by [Angelia & Suryaningsih \(2015\)](#) and [Singh & Jackson \(2015\)](#) which states that environmental performance has a positive impact on the company's financial performance.

#### 4.3. Multiple Regression Analysis (Model 2)

The following is a t-test [Table 5](#) for moderation testing.

Table 5. Moderated Regression Analysis Model 2

Model		Coefficients <sup>a</sup>			t	Sig.
		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta		
2	(Constant)	.017	.038		.432	.666
	EMS	-.018	.096	-.026	-.183	.855
	ENVIPERF	-.012	.008	-.201	-1,469	.145
	FOROW	.091	.154	.231	.590	.556
	EMS * FOROW	-.130	.376	-.146	-.347	.729
	ENVIPERF * FOROW	.058	.025	.328	2,313	.023

a. Dependent Variable: ROA

b. F-Value: 1.547, Sig: 0.182

c. R2: 0.071

Source: Secondary data processed using SPSS 26

Based on the regression results above, the following equation values are obtained:

$$\text{ROA} = 0.017 - 0.018 \text{ EMS} - 0.012 \text{ ENVIPERF} + 0.091 \text{ FOROW} - 0.130 \text{ EMS} * \text{FOROW} + 0.058 \text{ ENVIPERF} * \text{FOROW} + \varepsilon$$

Based on the t-test analysis data from the second model above, information is obtained that the interaction between EMS (ISO 14001) and FOROW (foreign ownership of the stock structure) is not significant. This is evidenced by the negative moderation coefficient value of 0.347 with a significance of 0.729. Thus, foreign ownership in the company's stock structure that the authors observe cannot moderate the effect of implementing an environmental management system (ISO 14001) on financial performance. This confirms that the third hypothesis in the study is rejected. These results confirm the findings of the study [Qi et al. \(2011\)](#) that foreign investment does not affect the implementation of the ISO 14001 system. However, it is contrary to research conducted by [He \(2010\)](#) which states that foreign direct investment has a positive impact on the policy for implementing ISO 14001.

Meanwhile, the environmental performance interaction proxied by PROPER and FOROW (the percentage of foreign ownership in the observed company stock structure) has a positive coefficient of 2.313 with a significance value of 0.023 which is smaller than the significant rate of 0.05. Thus, it can be concluded that foreign ownership in the stock structure can positively moderate the effect of environmental performance (PROPER) on financial performance (ROA). This confirms the fourth hypothesis of the study that the interaction of environmental performance and foreign ownership has a positive effect on corporate financial performance. These findings confirm previous research conducted by [Arvitariani & Wahidahwati \(2018\)](#) who found that foreign ownership was able to moderate the effect of PROPER on ROA with a research sample of mining and consumption companies listed on the IDX for the period 2012-2016. However, in this study, the implication direction of the moderating variable is positive, it controvert the research result that was conducted by [Arvitariani & Wahidahwati \(2018\)](#) which state that the direction of moderation is negative even though the results are significant. In the other hand, the result

of this study is in line with the findings of the study [Lundgren & Marklund \(2012\)](#) and [Angelia & Suryaningsih \(2015\)](#).

## 5. Conclusion

Looking at the regression data presented in this study, the authors conclude that the environmental management system implemented through ISO 14001 certification has not had a direct significant impact on the company's financial performance from the element of profitability. Likewise, environmental performance (proxied by PROPER KLHK) which is predicted as a green company parameter for public companies listed on the IDX has not had any implications for company profitability proxied by ROA. It is assumed that there is a probability that investors in Indonesia think that environmental issues are only temporary sentiments that do not have an impact on the company's financial performance. This finding does not provide linearity to the legitimacy theory, where companies that have contributed to society through environmental management responsibilities will gain public and government legitimacy, so that companies can run business operations well and maintain long-term business stability. The findings in this study reveal that although companies have contributed and participated in the PROPER program initiated by the government, it does not necessarily have a positive impact on financial performance, it is necessary to carry out further research and analysis of other factors that affect these implications.

However, there is an interesting finding, that foreign investors actually appreciate the environmental performance of companies in Indonesia as evidenced by the achievement of the PROPER rating and have significant impact on financial performance, although on the other hand, foreign investors do not pay attention about the existence of ISO 14001 certification, because the impact is not so substantial to the company's profitability. This is good, because foreign investors place high trust in the Indonesian government on the PROPER program initiated by the Ministry of Environment and Forestry. This program provides a special attraction for foreign investors, because based on research data, they can be categorized as believing that the KLHK PROPER represents an adequate assessment of environmental performance for companies in Indonesia. The finding in this research responding the stakeholder theory in good affirmation, which is portrayed that companies that operate with using the natural resources should give a positive impact to its surrounding especially the stakeholder such as shareholders, creditors, consumers, suppliers, even the society. So those can give good implication to their reputation in public. The good reputation could give positive impact to the investors' trust. This also confirms the signaling theory, which discloses sensitive and voluntary information such as information on environmental responsibility along provides good news to the public to avoid information asymmetry. This is proofed by the response from foreign investors who observe indications of the long-term sustainability of the business run by entities; in this case financial performance which is proxied by ROA, where companies that voluntarily disclose environmental performance can have a positive impact on financial performance from the perspective of foreign investors.

Suggestions for further research, it is better to include control variables such as company size, solvency ratio or marketing costs that have not been included in this study, so

as to sharpen the results of the analysis on the implications of environmental performance and environmental management systems on company profitability. Likewise, the use of other independent variables that are possible to be determinants in this study, for example corporate governance and investment costs, can see the scope of research from different aspects. Further research can also use a sample of all companies listed on the IDX, so that it is not only limited to manufacturing. This can provide a complete perspective regarding environmental performance and the environmental management system prevailing in Indonesia.

The results of this study are expected to make a positive contribution to the investment climate in Indonesia, that the PROPER program initiated by the Ministry of Environment and Forestry of the Republic of Indonesia can have positive implications for financial performance from the perspective of foreign investment in manufacturing companies in Indonesia. The limitation of this study is the number of research samples that are only within the scope of the manufacturing sector listed on the IDX, so that it cannot represent the evidence of the hypothesis as a whole.

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## References

- Akerlof, G. A. (1970). The market for "lemons": Quality uncertainty and the market mechanism. *Quarterly Journal of Economics*, 84(3), 488–500. <https://doi.org/10.2307/1879431>
- Albornoz, F., Cole, M. A., Elliott, R. J. R., & Ercolani, M. (2011). In Search of Environmental Spillovers. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1121916>
- Angelia, D., & Suryaningsih, R. (2015). The Effect of Environmental Performance And Corporate Social Responsibility Disclosure Towards Financial Performance (Case Study to Manufacture, Infrastructure, And Service Companies That Listed At Indonesia Stock Exchange). *Procedia - Social and Behavioral Sciences*, 211, 348–355. <https://doi.org/10.1016/j.sbspro.2015.11.045>
- Arvitariani, Y., & Wahidahwati. (2018). Pengaruh Kinerja Lingkungan Dan Corporate Social Responsibility Disclosure Terhadap Kinerja Keuangan Dengan Foreign Ownership Sebagai Pemoderasi. *Jurnal Ilmu dan Riset Akuntansi (JIRA)*, 7(5). <http://jurnal mahasiswa.stiesia.ac.id/index.php/jira/article/view/198>
- Dewi, M., & Suaryana, I. (2015). Pengaruh Profitabilitas Dan Kepemilikan Asing Pada Pengungkapan Corporate Social Responsibility. *E-Jurnal Akuntansi*, 13(1), 84–98.

- Elkington. (1999). Cannibals with forks: the triple bottom line of 21st century business. In *Choice Reviews Online* (Vol. 36, Nomor 07). New Society Publishers. <https://doi.org/10.5860/choice.36-3997>
- Ferron, R. T., Funchal, B., Nossa, V., & Teixeira, A. J. C. (2012). Is ISO 14001 certification effective? An experimental analysis of firm profitability. *BAR - Brazilian Administration Review*, 9(SPL. ISS), 78–94. <https://doi.org/10.1590/S1807-76922012000500006>
- Freeman, S., & Cavusgil, S. T. (1984). Strategic management. A stakeholder approach. In *Journal of International Marketing* (Vol. 15, Nomor 4). Pitman.
- Ghozali, I. (2018). *Aplikasi Analisis Multivariate dengan Program SPSS IBM SPSS 25 Update PLS Regresi* (9 ed.). BP UNDIP.
- Ghozali, Imam, & Chariri, Anis. (2007). Teori akuntansi. Semarang. In *Badan Penerbit Universitas Diponegoro*. Badan Penerbit Universitas Diponegoro.
- Gitman, L., Smith Beaumont, M., Hall, J., Makina, D., Malan, M., Marx, J., Mestry, R., Ngwenya, S., & Strydom, B. (2015). *Principles of Managerial Finance: Global and Southern African Perspectives*.
- Gujarati, N. D & Porter, D. C. (2013). Dasar-dasar Eko-nometrika. In *Buku 1 dan Buku 2 Edisi 5*.
- Hazudin, S. F., Mohamad, S. A., Azer, I., Daud, R., & Paino, H. (2015). ISO 14001 and Financial Performance: Is the Accreditation Financially Worth It for Malaysian Firms. *Procedia Economics and Finance*, 31, 56–61. [https://doi.org/10.1016/s2212-5671\(15\)01131-4](https://doi.org/10.1016/s2212-5671(15)01131-4)
- He, J. (2010). What is the role of openness for China's aggregate industrial SO2 emission?: A structural analysis based on the Divisia decomposition method. *Ecological Economics*, 69(4), 868–886. <https://doi.org/10.1016/j.ecolecon.2009.10.012>
- Hörisch, J., Freeman, R.E. and Schaltegger, S., 2014. Applying Stakeholder Theory in Sustainability Management: Links, Similarities, Dissimilarities, and a Conceptual Framework. *Organization & Environment*, 27(4), pp. 328-346.
- Johnstone, N., & Labonne, J. (2009). Why do manufacturing facilities introduce environmental management systems? Improving and/or signaling performance. *Ecological Economics*, 68(3), 719–730. <https://doi.org/10.1016/j.ecolecon.2008.06.003>
- Kemenlhk, P. (2019). *Proper - Kementerian Lingkungan Hidup dan Kehutanan*. KEMENTERIAN LINGKUNGAN HIDUP DAN KEHUTANAN. <https://proper.menlhk.go.id/proper/sejarah>
- Lingkungan Hidup, M. N. (1995). Menteri Negara Lingkungan Hidup Nomor : Kep-35 a / Menlh / 7 / 1995 Tentang Program Penilaian Kinerja Perusahaan / Kegiatan Usaha Dalam Pengendalian Pencemaran Dalam Lingkup Kegiatan Prokasih ( Proper Prokasih ). *Keputusan Menteri LH*, 35, 7–10.
- Lundgren, T., & Marklund, P.-O. (2012). Environmental Performance and Profits. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2006991>
- Media Indonesia. (2018). *Program PROPER Sebagai Penggerak Pencapaian “SDGs.”* <https://mediaindonesia.com/media-lhk/202947/program-proper-sebagai-penggerak-pencapaian-sdgs>
- Nababan, L. M., & Hasyir, D. A. (2019). Pengaruh Environmental Cost dan Environmental Performance Terhadap Financial Performance (Studi Kasus pada Perusahaan Sektor Pertambangan Peserta PROPER Periode 2012 – 2016). *E-Jurnal Ekonomi dan Bisnis Universitas Udayana*, 259. <https://doi.org/10.24843/eeb.2019.v08.i03.p03>
- Prakash, A., & Potoski, M. (2007). Investing up: FDI and the cross-country diffusion of ISO 14001 management systems. *International Studies Quarterly*, 51(3), 723–744. <https://doi.org/10.1111/j.1468-2478.2007.00471.x>
- Qi, G. Y., Zeng, S. X., Tam, C. M., Yin, H. T., Wu, J. F., & Dai, Z. H. (2011). Diffusion of

- ISO 14001 environmental management systems in China: Rethinking on stakeholders' roles. *Journal of Cleaner Production*, 19(11), 1250–1256. <https://doi.org/10.1016/j.jclepro.2011.03.006>
- Reliantoro, S. (2012). *The Gold for Green: Bagaimana Penghargaan PROPER Emas Mendorong Lima Perusahaan Mencapai Inovasi, Penciptaan Nilai dan Keunggulan Lingkungan* (1 ed.). Kementerian Lingkungan Hidup.
- Sarumpaet, S. (2005). the Relationship Between Environmental Performance and Financial Performance of Indonesian Companies. *Jurnal Akuntansi dan Keuangan*, 7(2), 89–98. <https://doi.org/10.9744/jak.7.2.pp.89-98>
- Singh, D., & Jackson, L. A. (2015). Towards Mapping Environmental Performance and Financial Performance. *Delhi Business Review*, 16(1), 21–30. <http://search.ebscohost.com/login.aspx?direct=true&db=bsu&AN=119250154&site=ehost-live>
- Sinkin, C., Wright, C. J., & Burnett, R. D. (2008). Eco-efficiency and firm value. *Journal of Accounting and Public Policy*, 27(2), 167–176. <https://doi.org/10.1016/j.jaccpubpol.2008.01.003>
- Spence, M. (1973). Job market signaling. *Quarterly Journal of Economics*, 87(3), 355–374. <https://doi.org/10.2307/1882010>
- Stigson, B., Madden, K., Young, R., Brady, K., & Hall, J. (2006). Eco-efficiency Learning Module. *World Business Council for Sustainable Development(WBCSD)*, 231. <https://www.wbcsd.org/Projects/Education/Resources/Eco-efficiency-Learning-Module>



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