
THE IMPLEMENTATION OF ENVIRONMENTAL MANAGEMENT SYSTEM TO MODERATE THE RELATIONSHIP BETWEEN THE GREEN STRATEGY AND COMPANY PERFORMANCE

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ABSTRACT

Introduction: The aspects of the highest pollution levels required a green strategy solution and the implementation of an Environmental Management System to improve the company's performance. This study aims to test and analyze environmental management systems' green strategy and implementation. **Method:** This study uses primary data collected using questionnaires from respondents using the Purposive sampling technique. The number of questionnaires that can be used is as many as 142, with the company analysis unit of State-Owned Enterprises and private companies included in the green industry list from 185 total questionnaires. Data were processed and analyzed using Structural Equation Modeling (SEM) by the alternative Partial Least Square (PLS) method. **Result:** The green strategy affects the company's performance. Meanwhile, applying the Environment Management System has no effect as a reinforcement of the relationship of green strategy on the company performance. The results of this study are expected to contribute to the company's strategy, state-owned enterprises, and private companies in determining green-oriented vision and goals. **Conclusion:** The Green strategy impacts the company's performance; it is proven that a good green plan will increase the company's performance produced by state-owned enterprises. A low green method will decrease the performance of the company made by state-owned enterprises and private industrial companies. The implementation of Environmental Management Systems cannot increase the impact of the green strategy on the productivity of industrial organizations, state-owned enterprises, and private companies.

Keywords: Green Strategy, Environmental Management System, Company Performance

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INTRODUCTION

The company's assessment is included in the category of good performance if it has a high profit or profit ratio. Many companies focus on their business aspects without considering the environmental impact. Nowadays, companies are already thinking about the effects caused by the company. The question arises whether profit maximization is the only goal because many other parties play a role in the company's survival. A company can continue to run and survive because it supplies materials for its operations, customers buy the products or services, employees work for it, the surrounding community allows it to operate, and so on (Kirchoff et al., 2016). For this reason, various strategies, ways, and approaches are constantly being developed.

The Central Statistics Agency, Badan Pusat Statistik (BPS), noted that at least 46 per cent of rivers in Indonesia are heavily polluted. According to National Geographic March 2020, 8.2 per cent of 57 per cent of all waste generated is textile waste (Kasih, 2021) The waste that pollutes the river

is dangerous to health and threatens the biota that lives along the river flow. It also impacts human health with various diseases, such as skin diseases and cancer, if polluted water is consumed. Besides the information, statistical data from 2014 to 2021 on environmental pollution showed that the amount of water, soil, and air pollution in several villages increased sharply.

Table 1. The number of villages by the type of Environmental Pollution in 34 provinces in Indonesia

The number of villages by the type of Environmental Pollution in 34 provinces in Indonesia									
	Water Pollution			Soil Pollution			Air Pollution		
	2014	2018	2021	2014	2018	2021	2014	2018	2021
Amount	8786	16847	10683	1301	2200	1499	11998	8882	5644

Therefore, companies should not only think about maximizing profit as their goal, but they must think and care about other parties.

Presidential Regulation Number 9 of 2021 concerning the implementation of carbon economic values to achieve national contribution and control the greenhouse gas emissions in national development, as well as law Number 32 of 2009, which regulates the protection with environmental management. It impacts the company's business strategy that the company must be able to design a plan that can accommodate all the needs of stakeholders, especially for improving company performance. The company must create an advanced and competitive industry to realize the vision. The industrial concept in 2025 is based on deepening the industrial structure, especially the efficiency and effectiveness of implementing the green sector as stated in Presidential Regulation 28 of 2008 About the green and independent industry. The company needs to be realized in measuring and determining the company performance that can be seen from various dimensions of Malcolm Baldrige's Criteria for performance excellence. (Rahayu & Rahmadwiati, 2021) As a guideline for the company to achieve a high-quality version. The seven indicators that are the basis of the measurement are Leadership, Strategy, Customer, Measurement Analysis and knowledge management, Workforce, Operation, and result. The Baldrige criteria have some advantages of providing a comprehensive and integrated assessment. The benefit of using the Baldrige criteria for measurement is that it allows businesses to conduct their evaluations (self-assessment) (Gazpersz, 2011). Malcolm Baldrige's measures have interdependence between them besides having comprehensive and conforming to international standards (Liang et al., 2004).

As global warming and environmental degradation become more frequent, the elements of a green strategy become crucial in achieving corporate success. The public believes that the company or industry is the leading cause and plays an essential role in environmental damage. So, companies and industries should be more environmentally responsible. Adopting green practices is necessary for companies today (Tseng et al., 2013). Many industries are changing to adopt a green mindset. Furthermore, more companies are considering green innovation as a critical approach to reducing the negative impact on the environment (Albort-Morant et al., 2018); (C.-C. Lin et al., 2011); (C. Lin et al., 2014); (Tseng et al., 2013). (Ambec & Lanoie, 2008); (Etzion, 2007); (Orlitzky et al., 2003); (Sharma & Starik, 2002). On the one hand, some claims that addressing environmental issues will need more costs and decrease corporate profitability (Dimond, 2013); (Hahn, 2014); (Li et al., 2013).

While other experts argue that businesses that practice environmental responsibility not only save their money in managing energy and water use but also increase their sales and get better financial results (Dangelico & Vocalelli, 2017); (Hart & Dowell, 2011); (Leonidou et al., 2002).

Furthermore, the importance of the green strategy research aims to determine how much influence can be obtained if the green strategy is implemented on state-owned enterprises and private industrial companies to be directly oriented to the interests of accounting information submitted to the public, to analyze the extent and how much the influence of the green strategy has on profit, society, and environmental sustainability. Awarding industrial companies to encourage them to apply the principles of the green industry is one of the efforts made to achieve a green economy and achieve low-carbon development, which is regulated in Presidential Decree Number 98 of 2021. There is still a relatively small number of companies participating in the green industry, as recorded in Mobility. Industrial Activities Operational Permit, Izin Operasional Mobilitas dan Kegiatan Industri (IOMKI), reaches 16,000, but only 152 companies realize the green industry; this is a phenomenon that is still low awareness of industry players in the implementation of the green industry and does not fully understand that green sector can improve the performance to a better level.

Moreover, as a tool for implementing and assessing green strategies, Environmental Management System (EMS) manages the impact of organizational activities on the environment. It offers a method for organizing and carrying out environmental protection activities. To develop an Environmental Management System, the organization must assess its environmental impact, set targets to reduce the result, and plan to achieve the targets. The most critical component of an Environmental management system is organizational commitment. An environmental Management System can be developed and implemented effectively if there is a commitment from the top of the organization and all staff.

The organizations that implement an Environmental management system identify how their activities interact, a critical consideration in building a green strategy in creating a culture of shared awareness and action to support environmental responsibility (Banerjee, 2002). Green management theory is practice management that produces friendly environmental products and minimizes the impact on the environment through green strategies, green production, green research and development, and green marketing (C. Lin et al., 2014). A company's green strategy, whether public or private, governmental or commercial, should support existing business operations and overall business plans that the organization articulates well. Green systems help companies make decisions to impact the environment positively. The principles of the green strategy are based on leading the business to make decisions based on logic and a good sense of business (Olson, 2008).

This study uses the grand theory of Resource-Based Theory (RBT), which contains the variable in the Green Strategy theory that can be broadly accepted in the field of strategy management (Newbert, 2007).

An essay entitled "A Resource-Based Perspective of the Company" (Wernerfelt, 1984) combined the concept of differentiating capabilities with the research of (Selznick, 1957) and (Penrose & Pitelis, 2002) on the conception of business as a productive resource system to create a Resource-Based Theory (RBT). (Nothnagel, 2008) Moreover, (J. Barney's 1991) work on corporate

resources and sustainable competitive advantage has been a significant theory in this area. According to RBT, having the resources can help companies have long-term performance. In addition, (J. B. Barney & Arikan, 2005) states that valuable and scarce resources offer competitive advantages, so it is impossible to copy and extend the controlled resources. The resources are tangible and intangible assets companies use to develop and practice their plans. Potential resources for sustainable competitive advantage must have four qualities: (a) valuable resources, (b) rare resources, (c) imperfectly imitable resources (resources that cannot be perfectly replicated), and (d) lack of alternative resources (non-substitutability resources). In this case, the first step is to develop an enterprise-level green strategy that assesses the current state of the green operations and completes ongoing initiatives. As most business leaders know, because a strategy has not been formally written or articulated does not mean that someone is not being followed. An assessment of the maturity of each area of the strategy pyramid against the maturity model, along with assessing the degree of the best adoption practices, can indicate highly developed business areas and others that may not have a baseline level of green awareness.

Measuring and determining the company's performance can be seen from various dimensions of Malcolm Baldrige's Criteria for Performance Excellence. (Rahayu & Rahmadwiati, 2021) It is a guideline for the company to achieve high-quality performance. The seven indicators that are the basis of measurement are Leadership, Strategy, Customer, Measurement Analysis and knowledge management, Workforce, Operation, and Result. The Baldrige criteria have the advantage of providing a comprehensive and integrated assessment. The measurement using the Baldrige criteria offers the advantage of allowing companies to conduct self-assessments (Gazpersz, 2011). Besides having full measures in line with international standards, Malcolm Baldrige's criteria also depend on other criteria (Liang et al., 2004). Furthermore, to have full criteria in line with international standards, Malcolm Baldrige also has interdependence, among other measures (Liang et al., 2004). Many countries have adopted Malcolm Baldrige Criteria for performance excellence, including Indonesia, mainly state-owned or privately owned industries. Baldrige is experiencing the development of at least some new instruments that are different from the agents of previous research conducted, namely in core values in the assessment of Leadership, strategy, Customer, Measurement Analysis and knowledge management, Workforce, Operation, and result. Previous research still uses the Malcolm Baldrige Criteria for performance excellence of the old version or before 2021; therefore, measuring the performance is a differentiator from previous studies.

Fundamentally, the Green Strategy is a tool for companies and assists in making decisions, positively impacting the environment. (Mhaisen & Naser Abdul-Ameer, 2020) Found that prioritizing the green strategy to the company XYZ should focus on product supervision and pollution prevention; these strategies should be implemented in the supply chain to gain their competitive advantage in terms of cost reduction. Likewise (Masoumik et al., 2015) argue that a significant relationship exists between green strategy, environmental performance, and competitive benefits. The results also imply that technology strategy is essential in generating competitive advantages. However, it receives the least attention from manufacturers. One side argues that the additional costs will increase costs and lower the profitability of the company (Clarkson et al., 2008); (Hahn, 2014); In contrast to (Bıçakcıoğlu et al., 2019), the findings of the research are the green business

strategy has a strong effect on company performance strengthened by the cost, leadership, and environmental orientation. However, in the study, the differentiation between green products and labor is very weak. (Olson, 2008) The strategies support a company's well-known and well-articulated business plans, operations, and assets. Olson added that the green approach helps businesses make choices that benefit them. In this area, the study formulates the following claims of previous descriptions: H1: Green strategy positively affects the company's performance.

Industrial activity has an impact on environmental damage. Environmental change is a factor because of the carbon emissions (derived from fossil burning, mining, and increased waste (Ahmed & Karanis, 2018). The company's production activities are activities that are supported by natural resources. Natural resource activities produce waste that will damage the environment continuously and make the stakeholders encourage companies to care about the environment. Although many companies feel the urgency to do something, they often fail to link their sustainability efforts with their business strategies. In a global survey, more than 1,500 executive companies of their sustainability and business strategy perspectives. (Galpin & Hebard, 2018) Most respondents believe sustainability is becoming increasingly important to the business strategy, and the risk of failing to act on sustainability is growing.

(Porter & Van der Linde, 1995) Argue that the companies feel pressured to implement sustainability practices that make uncoordinated sustainability activities disconnected from the corporate strategy that does not make a meaningful social impact or strengthen a company's long-term competitiveness. Suppose a company's ongoing efforts are to provide long-term value to the company and society. In that case, sustainability must be integrated into the company's strategy. In that regard (Porter & Van der Linde, 1995) advocates that each firm identifies a set of the best social issues to solve and derive the most significant competitive benefit.

According to stakeholder theory, the stakeholders determine the success of the company. It is essential to communicate environmental performance as a form of corporate responsibility to stakeholders because the company depends on the support of all stakeholders to survive (Gray et al., 1995).

Based on the above summary, this study hypothesizes that the green strategy improves the performance of companies, and Environmental Management System supports the impact. H2: The implementation of the Environment Management System can strengthen the positive relationship between the green strategy and company performance. Therefore, this study aims to analyze the implementation of environmental management systems to facilitate the relationship between green strategy and company performance.

METHOD

This research is associative causality research with the quantitative method. This method is based on a positivist philosophy, used to examine a specific population or sample. According to (Sugiyono, 2013), quantitative data analysis aims to test hypotheses that quantitative methods have determined, and problematic research methods must exist and be transparent.

Causality research is a study that examines the influence of green strategy on company performance by using an application of an environmental management system as a moderator. This

study was conducted in 2021 on State-Owned Enterprises and private industrial enterprises, which are registered on the websites of the Ministry of Industry and State-Owned Enterprises. Green business or environmental awards are given to companies. The company serves as an analytical unit of research. The degree of aggregation of the data collected for analysis in the study is related to the main objective of the investigation, which is the analysis unit (Sekaran & Bougie, 2016).

RESULTS AND DISCUSSION

The value of the coefficient of the Green Strategy to the company's performance is 0.372. It assumes that other variables in the model are not changed, so the value of the company's performance variables will increase by 0.372 for each unit of Green Strategy value. The coefficient value of the application of Environmental Management System with Green Strategy (EMS*X1) to the company's performance of -0.052 which means that with every decrease in the value of the application of Environmental Management System with Green Strategy (EMS*X1) by one unit, the buy of the company's performance variables will decrease by -0.052 assuming the other variables in the model are fixed.

A. Measurement Analysis

In this study, the data analysis uses SEM-PLS before testing the hypothesis. First, the measurement model was tested using convergent validity, discriminated validity, and reliability indicators for each dimension and variable. Based on the initial measurement model (figure) and the value of the outer loading measurement model contain reliable signs (external loading value > 0.708 and AVE value > 0.5). Generally, convergent validity and reliability are reached (Composite Reliability > 0.708) indicators that produce > 0.5 but a reliable construct, so it is still maintained. For each related concept, the AVE value of the quadratic correlation between latent constructs can be used to determine whether the validity of the discriminant is satisfied.

a. Structural Model Analysis

Parameters and coefficients indicate the correlations between latent variables after the accurate and reliable test results.

Table 2. T-Value Testing-Statistic

Correlation	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STD EV)	P Values
Green strategy -> Company Performance X1 -> Y	0,372	0,373	0,136	2,732	0,007
The Implementation of <i>Environmental Management System</i> *Green strategy -> Company Performance Z X1 -> Y	-0,052	-0,057	0,089	0,583	0,560

Source: Results of data processing (2022)

b. Green Strategy on the Company Performance

Green innovation is needed in state-owned enterprises and private industrial companies in their production activities. According to the research findings, the green strategy impacts business performance. The company has adopted regulated environmental standards and efforts. It supports green strategy funding, which implies that state-owned enterprises and private industrial companies have implemented the green strategy process by making a green

investment and having a green certification. The company obtained the green Award for the success of environmental performance.

The Social and Environmental Responsibility Program of State-Owned Enterprises, known as the state-owned enterprises TJSL Program, is an activity that represents the company's commitment to sustainable development. This is further strengthened for the state-owned enterprises by the regulation of the Minister of State-Owned Enterprises of the Republic of Indonesia number Per-05/Mbu/04/2021 on Social and Environmental Responsibility Programs of State-Owned Enterprises (Negara, 2018).

These findings are in line with the study (Ergun et al., 2019); (SOEDJATMIKO et al., 2021) (Soewarno et al., 2019) that shows a green approach increases the value of the company. Although it costs more to apply greening operations by following the company's objectives, many businesses have to adopt the green strategy. The green process has a positive impact on the environment because the green system can increase productivity with friendly environmental technologies and effectively and efficiently resources, minimize the adverse impacts on the environment and lower costs that can increase profits and create good prospects for the company's performance (Soebarjo & Permana, 2014)—stated that the green strategy can strengthen the company's performance.

In Indonesia, the green strategy is often discussed in newspapers or seminars, but its implementation is still lacking. Although Indonesia's economic expansion is relatively rapid, the problem of environmental degradation still arises. Empirical research on how green strategy affects company performance is still sparse. This condition certainly does not contribute optimally to the green economy, especially the problem of management and environmental protection by the companies in Indonesia.

The study also clarifies that having only a green innovation strategy is insufficient. Company managers must build a solid green identity so that all members are responsible for environmental protection and management issues. Managers can encourage member behaviour and resources to use processes and produce products that support environmental sustainability by having a solid green identity. In the era of an environmentally conscious society, companies must accommodate the interests of green stakeholders because the quality of relationships determines company performance. The results of this study also confirm that a company needs legitimacy from the society in which it operates for the company to have a sustainable competitive advantage. Strong legitimacy allows companies to gain access to resources and greater profitability. Thus, managers or directors of State-Owned Enterprises and private industrial companies in Indonesia must understand that the performance of the green strategy will be better with more vital legitimacy, and it will get support from the community.

c. Green Strategy to the company's performance in strengthening the influence of the Environmental Management System

Based on the research findings, implementing an environmental management system has little impact on the company's performance when implementing a green strategy. According to the study, the problems for businesses are unusual circumstances such as the Covid-19 outbreak, the decision makers who prioritize profits over the environmental management systems should

assist the companies with green strategies in making choices that will give benefit the environment (Boiral et al., 2012) claimed that the implementation of ISO 14.001 does not produce significant improvements. Various studies have shown that the growth of management practices and standards such as ISO 14.001 can be driven by multiple institutional pressures and not show actual effectiveness (Castka & Prajogo, 2013).

Furthermore, as stated (Wang & Renato, 2016), the effectiveness of green technology innovation has a considerable beneficial impact on the company's growth performance. It is indicated as one of the elements that affect the performance of green growth. It means that implementing the green strategy has successfully become one of the critical elements in improving business performance. This is in line with the research (Agoes & Ardana, 2009), which found that good governance has a system that controls the board of directors, shareholders, and other stakeholders through a transparent process. This system can be called a green strategy for the progress of the company and the improvement of the company's performance.

In addition, (D'Aveni, 1995) argued that the green strategy is applied to a more excellent global vision of responsible corporate behaviour and must be persistent in facing technological advances to maintain the competitive advantage. Implementing the green strategy is a solution to answer the phenomenon of environmental pollution caused by the production process. The following research by (Chen et al., 2006) stated that the green strategy is a variable used in equivalence green product strategy to develop the product.

The significance of the research on the green approach is to assess the extent and magnitude of the influence of the green system on profits, society, and environmental sustainability. It is also determined how much the influence of the green strategy can be obtained if it is applied to state-owned and private companies so it can be directly oriented to the interests of accounting information submitted to the public. The application of the green strategy to the company's performance is influenced by strategic processes, implementation, environmental performance, and green innovation indicators. In achieving company performance, the aspects of green strategy become necessary because of the increasingly widespread phenomenon of global warming and environmental damage. The public believes that the company or industry is the leading cause and plays an essential role in environmental damage.

CONCLUSION

The study's main findings are as follows: 1) The Green strategy impacts the company's performance; it is proven that a good green strategy will increase the company's performance produced by state-owned enterprises. The low green strategy will decrease the performance of the company made by state-owned enterprises and private industrial companies. Therefore, the green strategy can directly explain the growth in the performance of private and state-owned industrial enterprises. 2) The implementation of Environmental Management Systems cannot increase the impact of the green strategy on the productivity of industrial organizations, state-owned enterprises, and private companies. It shows that implementing environmental management systems cannot reduce the financial impact of the green strategy on state-owned enterprises and private industrial enterprises. Thus, applying the Environmental Management System cannot strengthen the green

strategy; it will worsen the company's performance. Limitations are the government regulations on dissolution, restructuring, merging, or becoming a subsidiary of the state-owned enterprises, so the sample of this study is minimal. The research suggestion is necessary to conduct comparative research of the companies managed by the government and private sector to see the implementation of a more effective environmental management system.

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