An Insight into Micro, Small, and Medium Enterprises' Environmental Responsibility and Its Implications on Environmental Performance

Review of Integrative Business & Economics Research

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ABSTRACT

Research on the green economy in micro, small, and medium enterprises (MSMEs) is very relevant due to the role of MSMEs in the economy and environmental aspects. It also aligns with the Indonesian government's efforts towards green economic transformation. The study aims to gain insight into MSMEs' environmental responsibilities and performance. This study also analyzes the influence of environmental concern and environmental responsibility on environmental performance. Moreover, MSMEs' efforts in developing environmental management systems are also analyzed. MSME entrepreneurs in West Java, Indonesia, were the samples for this study. The data collected was processed using structural equation modelling. Research findings show that MSMEs possess environmental concerns and responsibilities, which can determine environmental performance but will not impact their efforts in developing environmental management systems.

Keywords**:** Environmental Responsibility, Environmental Performance, Environmental Management System, Green Economy, MSME.

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1. INTRODUCTION

The green economy is a means towards sustainable development and economic prosperity. The central concept of a green economy requires a transformation of the economic structure through policy and regulatory reform to ensure sustainable development in the long term. Global sustainability provides benefits in various contexts, such as nature, society, and the economic environment. Regarding the importance of sustainability, determining practical elements in developing sustainability is an essential matter that policymakers, practitioners, and society need to pay attention to (Gunay, Kastrati, & Krsteska, 2023).

Sustainability, a general trend globally, is related to the balance of economic development, social welfare, and environmental concern. It has become a consideration for policymakers and businesspeople (Gray, 2010). According to the Brundtland Commission, the concept of sustainability, which is the basis of previous research, is a sustainable development that meets the present needs without compromising the future generations' ability to meet them (Löbler, 2017).

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Environmental consciousness is essential for sustainable economic growth (Coronel & Santos, 2024). Companies concerned with environmental aspects will be willing to be involved in activities that aim to preserve the environment (Naeem, Cankaya, & Bildik, 2022). In an organization that takes the initiative to be environmentally responsible, employees will also be encouraged to contribute to environmental performance (Sampene, Li, Agyeman.F.O., & Brenya, 2024). Organizations can achieve better environmental performance through employee awareness and involvement in environmental management systems (Johnstone, 2021). The capability of the people in the organization will determine the high and low of the company's performance (Susan, Winarto, & Gunawan, 2022).

Companies can utilize the management system to encourage economic sustainability, which can benefit the organization, stakeholders, and the environment in the long term (Fahmi, Mukti, Alamsah, Putra, & Sunarko, 2024). Relatively small companies are often unaware of the benefits of an environmental management system, even though implementing this system is one way to reduce environmental impact (Camacho & Thornhill, 2024). Lack of understanding of environmental impacts, lack of confidence in increasing the role of reducing environmental impacts, resistance to making changes, and management that is inconsistent in implementing environmental management systems are limitations faced by SMEs (Rizos, et al., 2016).

MSMEs indicate several similar characteristics related to environmental issues. Previous research shows that MSME entrepreneurs need more confidence in the green economy targets pursued by the government. They need to gain knowledge of formalized systems and understand more of the perceived benefits to encourage them to be aware of the importance of environmental management systems (Rizos, et al., 2016) (Afolabi, Ram, Hussainey, Nandy, & Lodh.S, 2023) (Camacho & Thornhill, 2024).

Adopting entrepreneurial practices with an environmental orientation is still a consideration for MSMEs due to the additional costs relevant to these practices (Nordin & Hassan, 2019). Micro, Small, and Medium Enterprises influence all country's economies (Susan M. , 2023), specifically Indonesia, and according to the Ministry of Finance of the Republic of Indonesia, the MSME sector is essential in driving the economy's growth (Susan M. , 2020). One critical role of MSMEs is creating new jobs for the Indonesian people. MSMEs are also experiencing a positive trend, with their numbers increasing yearly, which will positively impact the Indonesian economy. Data from the Ministry of Cooperatives and SMEs shows that Indonesia's MSMEs contribute 60.5% to its National GDP. It indicates that there is potential for developing MSMEs so that they can make a more significant contribution to the Indonesian economy (Tambunan.C.R., 2023). It is relevant to the role of MSMEs in determining the health of a country's economy, and MSME entrepreneurs are always expected to endeavor to maintain their businesses (Susan, Winarto, & Gunawan, 2024).

Relevant to the focus of National Research Priorities in Indonesia, innovation and technological readiness are needed to ensure national energy availability and change energy composition towards renewable energy (Humas, 2021). Research focus relevant to the green economy in MSMEs must be carried out in line with Indonesian government efforts towards green economic transformation. It is supported by research on small and medium businesses, which shows that businesspeople need more confidence in the government's net zero emissions plans. MSME business entrepreneurs usually show a lack of understanding, which in turn often determines their lack of interest in environmental management (Afolabi, Ram, Hussainey, Nandy, & Lodh.S, 2023).

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Regarding problems related to the MSMEs' environment, this research aims to analyze the environmental concern and environmental responsibility of MSMEs and their impact on environmental performance. The study also intends to understand the influence of environmental performance on MSME efforts in developing environmental management systems.

Sustainable development, a continuous process for the next generation's interest, requires transformation, one of which is social responsibility (Rosha & Lace, 2015) and this responsibility has implications for environmental performance (Bhat, et al., 2024). Research on human management in organizations related to the environment indicates that environmental concern and responsibility play a role in determining environmental performance. The higher the concern of people in the organization for the environment, the higher the environmental performance will be. It also applies to their responsibility towards the environment. Concern for the environment can encourage people to be responsible for the environment, ultimately impacting environmental performance (Umrani, et al., 2020). Research results also show that environmental management practices (Gimenez, Sierra, Rodon, & Rodriguez, 2015) and systems (Baird, Su, & Tung, 2022) can determine environmental performance.

Measuring an organization's environmental performance can be done through the beneficial or unfavorable impacts of actions on the environment, including the efforts to strive for sustainability, such as by reducing negative environmental impacts (Bag, Srivastava, Gupta, & Sivarajah, 2024). Other previous research on environmental behavior indicates a lack of concern for environmental maintenance, even though people show behaviors that tend to support sustainability efforts (Malik, et al., 2019).

Based on the conceptual framework and previous empirical research, several research hypotheses are tested in this research: the influence of environmental concern on environmental responsibility and performance, the impact of environmental responsibility on environmental performance, and the influence of environmental performance on the development efforts of environmental management systems.

2. METHODS

In accordance with the research objective to investigate factors relevant to the environmental performance of micro, small, and medium enterprises, there are four constructs in this research: environmental concern, environmental responsibility, environmental performance, and environmental management system. Construct measurement uses four indicators for each construct.

Each research variable uses indicators determined by utilizing several references from previous research (Kim, Kim, Choi, & Phetvaroon, 2019) (Malik, et al., 2019) (Umrani, et al., 2020) (Baird, Su, & Tung, 2022) (Bag, Srivastava, Gupta, & Sivarajah, 2024). The measurement of each research variable is adapted through a modification process while keeping its basis on the same research variable concept, which is relevant to MSMEs and environmental aspects.

The sample in this research included MSME entrepreneurs in West Java, Indonesia. The determination of the unit of analysis is based on the consideration that the respondent is the owner or manager of MSMEs. This consideration pertains to the need for data regarding the

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environmental management system. A total of 203 data was collected from a survey by distributing questionnaires to MSME entrepreneurs. The data were tested first to ensure its validity and reliability. The data were tested first to ensure its validity and reliability. Next, the relationship between research variables is tested by processing the data using a structural equation model with the support of Lisrel software.

203 respondents completed the questionnaires, and Table 1 provides the demographic characteristics of the respondents. Figure 1 presents the structural equation model which was constructed with direct paths from independent to mediator and dependent. Initial testing of the structural model produced a Goodness of Fit Index of 0.85, but the Root Mean Square Error of Approximation (RMSEA) value was 0.096. By checking the modification index, the result obtains a lower RMSEA value of 0.079, and the results of data processing support the fit of the model: Goodness of Fit Index 0.88, Normed fit index 0.91, Comparative Fit Index 0.95, and Incremental Fit Index 0.95.

Table 1. Demographic Characteristics of the Respondents

Characteristics		Frequency
Position	Owner	148
	Manager	55
Gender	Women	127
	Men	76
Age (years)	21 – 30	11
	31 – 40	67
	41 - 50	89
	> 50	36
Education	High School	95
	Bachelor	69
	Master	21
	Others	18
Business	Fashion	31
	Service	22
	Handicrafts	16
	Culinary	91
	Trading	24
	Others	19

The results of descriptive statistics in the form of means and standard deviations for each indicator and research variable are presented in Table 2. Based on a scale of 1 to 6, the results show that efforts to develop an environmental management system have the lowest average value compared to other research variables. It indicates that MSMEs have yet to make sufficient efforts regarding the development of an environmental management system.

Table 2. Descriptive Statistic Results

Variables	Items	Mean	Standard Deviation
Environmental Concern	EC1	4.3793	1.06658
	EC2	4.5764	1.03782
	EC3	4.4335	1.10322

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	EC4	4.3842	1.25475
Environmental Responsibility	ER1	4.6995	1.06397
	ER2	4.8276	1.06930
	ER3	4.7044	1.13073
	ER4	4.9064	0.89338
Environmental Performance	EP1	4.1576	1.17093
	EP2	4.6256	1.08898
	EP3	4.3990	1.18296
	EP4	3.9803	1.25454
Environmental Management System	EMS1	3.2759	0.84593
	EMS2	3.3990	1.11843
	EMS3	3.6502	1.01026
	EMS4	3.3547	0.92934

3. RESULTS AND DISCUSSION

Initial testing of the collected data showed that all research variables were consistent in measurement. The results can be seen based on Cronbach's Alpha calculations, which had a value above 0.70. Table 3 presents the results of reliability testing for each variable.

Table 3. Reliability Test Results

Variables	Alpha Value
Environmental Concern	0.855
Environmental Responsibility	0.901
Environmental Performance	0.791
Environmental Management System	0.764

Validity testing shows that each indicator is appropriate in measuring each research variable. Table 4 presents the results of validity testing, and each item resulting from the Corrected Item-Total Correlation calculation has a value in the range 0.510 - 0.824.

Table 4 Validity Test Results

Variables	Items	Corrected Item-Total Correlation
Environmental Concern	EC1	0.675
	EC2	0.747
	EC3	0.682
	EC4	0.703
Environmental Responsibility	ER1	0.770
	ER2	0.804
	ER3	0.824
	ER4	0.729
Environmental Performance	EP1	0.546

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	EP2	0.608
	EP3	0.654
	EP4	0.599
Environmental Management System	EMS1	0.558
	EMS2	0.548
	EMS3	0.656
	EMS4	0.510

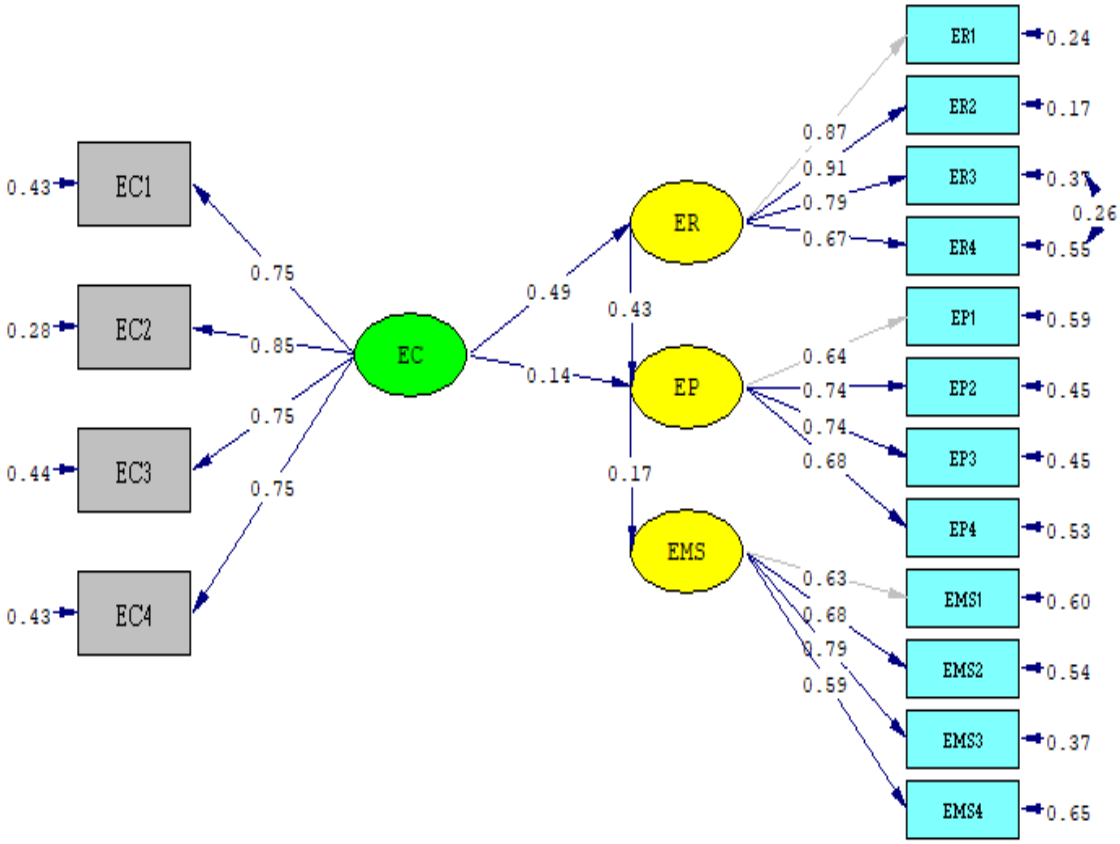

Figure 1 Structural Model Results

Notes:
EC = Environmental Concern
ER = Environmental Responsibility
EP = Environmental Performance
EMS = Environmental Management System

The data processing results regarding the influence of environmental concern on environmental responsibility show statistically significant results with a t-value of 6.32. Thus, the hypothesis is accepted based on the testing results of the relationship between environmental concern and responsibility. The results of this research support previous research (Umrani, et al., 2020). Likewise, environmental responsibility influences the environmental performance of MSMEs, as indicated by a t-value of 4.41, and corroborates

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previous research (Chang, Yeh, & Li, 2020) (Umrani, et al., 2020) (Zhou, Tiruneh, & Legese, 2023) (Bhat, et al., 2024).

The results of hypothesis testing show differences from those of research conducted by (Umrani, et al., 2020). The insignificance of the results of the influence between the research variables is found in the relationship between the environmental concern variable and environmental performance, with a t-value of 1.51. The results of testing the impact of environmental performance on the MSME environmental management system showed that it was not statistically significant, with a t-value of 1.88. The result differs from previous research, which shows that environmental performance can determine the extent of the use of environmental management systems (Baird, Su, & Tung, 2022).

The results of hypothesis testing show that environmental concern influences environmental responsibility, which indicates that MSME entrepreneurs who care about the environment will feel the need to be responsible for the environment. Concern about the condition of the world environment, awareness of the negative impacts of an unmaintained environment and that humans need to live in harmony with nature to survive, and the need to be concerned for the environment will encourage them to participate in activities aimed at preserving the environment and taking responsibility for environmental damage. The responsibility of MSME entrepreneurs towards the environment will have positive implications for organizational environmental performance related to the accuracy of handling business waste, waste recycling efforts, the use of environmentally friendly products, and savings in water and electricity use. The findings of this research indicate that these positive implications for environmental performance do not mean that MSME entrepreneurs are willing to make efforts in the form of monitoring the impact of business operations on the environment, determining environmental performance measures, or determining documented environmental policies and procedures to reduce the effects on the environment.

4. CONCLUSION

The study focuses on MSMEs, specifically regarding environmental sustainability. It shows that MSME entrepreneurs who are concerned about the environment will be more responsible for sustainability, which ultimately improves environmental performance. The research findings show that, in general, MSMEs are concerned and accountable for the environment. However, this does not automatically mean that they will try to develop an environmental management system.

MSMEs responsible for their environment can positively impact their environment's performance. Other findings indicate that increased environmental performance does not affect efforts to develop the environmental sustainability system. It is relevant to previous research regarding situations faced by many MSMEs who face challenges in going through changes, limitations on environmental knowledge, and issues regarding sustainability costs.

As stated in the introduction, MSMEs have similar characteristics related to environmental issues. Besides, MSME entrepreneurs are generally individual, family, or non-family companies (Memili, Fang, & Chrisman, 2015). Micro, small, and medium enterprises in Indonesia are also typically run by individuals (Kilay, Simamora, & Putra, 2022). They can be classified based on assets, sales value, or workers' number (Tarihoran, Hubeis, Jahroh, & Zulbainarni, 2023). With the similar characteristics of MSMEs in Indonesia, the results of this research indicate the role of environmental responsibility in determining the

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environmental performance of MSMEs in West Java, Indonesia, which can also apply to MSMEs in other provinces in Indonesia. Likewise, this also applies to research findings that environmental performance does not have a role in determining MSMEs' efforts to establish an environmental management system.

Many factors can affect environmental performance. Further studies can consider other antecedent variables in the research model, especially determining environmental performance factors that companies can actively improve.

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