



Paper 49

The Impact of External Pressures on the Eco-Innovation Adoption of Micro, Small, and Medium Enterprise (MSME) in Indonesia

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Abstract - The concept of eco-innovation has been recognized as a robust mechanism for sustainable business innovation models of micro, small, and medium enterprises (MSME). However, less attention has been paid to the application of eco-innovation to MSME performance, although MSMEs may benefit more from eco-innovation practices than larger firms. This creates an innovation gap between MSMEs and large companies. This paper attempts to fill this gap by examining the impact of external pressures on the adoption of eco-innovation in MSMEs and its impact on the performance and competitiveness of company products. Quantitative data analysis is used in this research as the objective is to gain an in-depth understanding of the impact of eco-innovation on the performance of MSMEs in the manufacturing sector. The respondents in this research are Indonesian citizens and business owners in the fashion industry. This study uses a Partial Least Squares Structural Equation Modeling (PLS-SEM) approach to assess and estimate correlations between variables. The results show that the eco-innovation practices in the company is influenced by external pressures. This paper uses institutional theory to explain the drivers of eco-innovation adoption in Indonesia. The paper concludes that coercive pressures and mimetic pressures have a significant and positive impact on the adoption of eco-innovation. The study of the fashion industry can be a potential opportunity to deepen discussions with different types of eco-innovation that require a holistic view and company capabilities.

Keywords - Fashion industries, Eco-innovation, Green company, MSMEs performance

I. INTRODUCTION

Companies are looking for collaboration in today's competitive environment, realizing that they cannot just rely on internal capabilities and resources to innovate [1]. combine internal and external resources to accelerate internal innovation and expand the market for the use of external innovations [2]. Asian countries are making various efforts to encourage technological innovation to remain competitive. However, according to the 2014 Global Innovation Index (GII), Indonesia's level of innovation is still lagging behind neighboring countries such as Singapore, Malaysia, Thailand and Vietnam, which ranked 87th out of 143 countries. The concept of eco-innovation has not yet been fully adopted, and the level of innovation

practice lags behind other countries. The concept of eco-innovation is mainly used by large companies whereas eco-innovation requires a holistic approach for the functioning of micro, small, and medium-sized enterprises (MSMEs). MSMEs also benefit from flexible, bureaucratic and better customer relations features that can respond quickly to market and technological changes. However, experts point out that external factors, such as coercive pressure, normative pressure, and mimetic pressure can affect the promotion of eco-innovation by MSMEs, leading to a gap in innovation between MSMEs and large enterprises.

The concept of eco-innovation has been adopted as a transformational innovation in which the innovation process is transformed into innovative practices focused on the environment and sustainability. Companies are under pressure to respond to these demands and remain sustainable [3]. Thus, companies are giving attention to social and environmental considerations in their decision-making. The result of the adoption and implementation of eco-innovation is the improvement of environmental protection capacity and business efficiency. In developing countries, the concept of eco-innovation is in the initial stage, which means that more attention and understanding of sustainability practices are needed, along with external support. This paper aims to promote the adoption of eco-innovation practices. By understanding the institutional drivers of eco-innovation adoption, policymakers can create an environment conducive to increased adoption of eco-innovation by businesses, especially Indonesian MSMEs. The main objective of this study is to investigate the impact of different institutional pressures on the adoption of eco-innovation. In particular, this study is focusing on defining the relationship between innovation and Indonesian MSMEs and how MSMEs engage in eco-innovation practices to reduce the innovation gap between MSMEs and large enterprises. The data were collected through a questionnaire-based survey of the Indonesian manufacturing industry. Therefore, the hypothesis is designed as follows. For a more complete explanation, Figure 1.0 presents a conceptual model and a hypothesis of the paper.

Hypothesis 1. Coercive pressures have a positive impact on MSME adoption of eco-innovation.

Hypothesis 2. Normative pressures have a positive impact on MSME adoption of eco-innovation.

Hypothesis 3. Mimetic pressures have a positive impact on MSME adoption of eco-innovation.

The research conceptual model draws from external pressures received by the company. This research express potential coercive pressure, normative pressure, and mimetic pressure as independent variables having an effect on the adoption of eco-innovation as dependent variable. Fig. 1 presents a research conceptual framework and hypothesis of the paper.

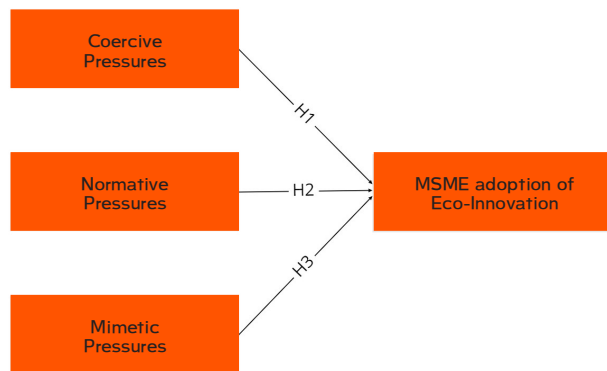


Fig. 1 Conceptual Framework

II. METHODOLOGY

This research uses a quantitative method using a survey. The population in this study are small business owners in Indonesia. The owners of the MSMEs have been classified according to the manufacturing sector, specifically the fashion industry. The manufacturing sector contributes greatly to the Indonesian economy through the value of exports, which supports GDP growth in Indonesia. However, this sector is the second largest polluter in the world. High production levels can have significant social and environmental impacts on the supply chain. Therefore, this study aims to examine the institutional pressures faced by companies in adopting environmental practices in Indonesia. The study model is tested using the statistical application of the Smart PLS software (v3.3.2) to calculate and analyze the sample size based on regression, path and principal component and to generate standardized regressions of the structural model paths in addition to the factor loading of the measurement elements. The items measured consist of external factors affecting the implementation of eco-innovation by Indonesian MSMEs.

The external factors consist of 10 indicators and are presented as independent variables. There is pressure from external stakeholders such as government agencies and non-governmental organizations to compel companies to implement various environmental regulations and standards. Normative pressures come from suppliers, customers, associations (e.g. trade unions), media and other social entities. Mimetic pressure occurs

when companies compete for superior performance. The introduction of eco-innovation can reduce the burden on the environment and improve the environmental image of a company. The adoption of eco-innovation measures a company's ability to adapt production processes that take into account the long-term impact on the environment. Innovation is related to the discovery and use of technology so that companies can use their resources to protect the environment from pollution and dangerous substances. This provides a competitive advantage that makes it easier for businesses to survive in the market. Table 1.0 shows the operationalization of the constructs.

III. RESULTS

The calculations indicated that the minimum requirement should exceed 110 and, as a result, 225 respondents were selected for reliability and validity testing [4]. The questionnaire consisted of 28 questions, consisting of 5 questions on the respondent's profile and 23 statements assessing the respondent's agreement, rated on a 5-point Likert scale, with 1 strong disagreement and 5 strong agreement. The questionnaire contains several statements that measure the factors by which companies adopt eco-innovation practices. The questionnaire was developed using a conceptual framework adopted from previous studies [5].

The 314 respondents were selected and processed to determine the strength of correlation between variables. The demographic sample size shows that 99.4% of the respondents own MSMEs in Indonesia and 95.2% (or 297) of them are MSMEs in the fashion industry. Most of them, 80.8%, is less than or equal to five years old. 85.2% of the respondents have a turnover lower than or equal to IDR 2,500,000,000 per year. Of the 297 respondents, data cleaning was carried out so that 225 respondents were obtained for further reliability and validity testing. The validity of a model may be assessed by evaluating the construct and the indicator (reliability), as well as whether it is convergent and discriminatory (validity). Several indicators such as CP4, EI2, EI5, EI6, and EI7 should be eliminated due to low outer loadings. Although there is one loading value around 0.5 and four around 0.6, but the construction reliability is greater than 0.7 and Cronbach's alpha is greater than 0.5. Furthermore, the AVE value is higher than 0.5. This suggests that the indicators and construct used in this study are likely to produce consistent results. Table 1 presents the results of the validity and reliability analysis. Table 1 presents the results of validity and reliability analysis.

Table 1 - Validity and Reliability Analysis

Items	CA	CR	AVE
Coercive Pressure	0.571	0.777	0.539
Normative Pressure	0.531	0.758	0.514
Mimetic Pressure	0.672	0.798	0.501
Eco-Innovation	0.515	0.755	0.508

R-square is a statistical parameter in a regression model that indicates how well the variation on the dependent variable can be explained. An R-squared value less than 0.5 is often used to predict human behavior because it is inherently difficult to predict. The R square value of the data in this study was greater than 25%, or 0.25 indicating that the effectiveness of the data fit the regression model is moderate. In addition, the inner VIF values between the path relationships have been presented in Table 2. Therefore, the collinearity of the structural model has to be examined. With the proposed VIF value <3, there is a strong claim that the study has no multicollinearity problems, while numbers greater than 5 indicate the potential for collinearity between predictor constructs. Table 2 shows the results of the hypothesis test.

Table 2 - Validity and Reliability Analysis

Hypothesis	SD	p-value	t-value	Result
H1: Coercive Pressure → Eco-Innovation	0.093	0.002	3.156	Supported
H2: Normative Pressure → Eco-Innovation	0.087	0.100	1.650	Not Supported
H3: Mimetic Pressure → Eco-Innovation	0.080	0.012	2.525	Supported

The H1 hypothesis was supported to confirm the positive and significant effect of coercive pressure on MSMEs to adopt eco-innovation. There is a significant relationship between coercive pressure and the adoption of eco-innovation. As the p-value is less than 0.01, it indicates that pressure from government or stakeholder policy pressure is affecting innovation in Indonesian MSMEs. This conclusion was reached when the authors argued that stakeholder pressure in organizations such as customers, government agencies, regulatory standards, policies, and non-governmental organizations was essential for the successful adoption and implementation of eco-innovation [6]. Schmitz also noted that adopting a proactive environmental strategy largely depends on pressure from various stakeholders, especially organizational and regulatory stakeholders [7]. Therefore, strengthen support for H1. The scale for measuring coercive pressure has been divided into five indicators. The CP2A indicator helps decision-makers propose ways to reduce the demand for resources. As a result, 94.04% of respondents agree that policymakers should strive to reduce resource demand by repairing or upgrading products rather than buying new

products and stimulating the economy. change. However, the remaining 5.96% disagree with this statement. These results indicate that people with full authority or power in Indonesia focus on organic production and sustainability. Indicators marked with the symbol CP4, indicating regulatory and policy support for clean manufacturing, had to be eliminated due to their low confidence scores. Following a previous study on external and internal factors that can influence the adoption of clean manufacturing [8], this study extends the empirical evidence and conceptual analysis of manufacturing to include eco-innovation concepts in clean technologies. Based on these results, the concept of modifying the production process to reduce environmental impact takes on more meaning. Therefore, it can be concluded that coercive pressure has a positive impact on the introduction of eco-innovation by MSMEs.

Unlike hypothesis H1, hypothesis H2, which aims to confirm the positive and significant effect of normative pressure on the adoption of eco-innovation by MSMEs was not supported. The results show that Indonesian MSMEs are starting to develop eco-innovation practices and achieve their sustainable goals. However, existing laws or regulations in the region have not led to the adoption and implementation of environmental innovations. Although companies are starting to develop eco-innovation, the motivation is still based on standards rather than sustainable goals. As normative pressures are tied to issues of legitimacy, organizations tend to engage themselves with other organizations and act according to the standards or norms that apply to their institutional sector. In developing countries, normative pressure is seen as a driving force influencing norms and responsibility, because it affects socially acceptable behavior. In other words, the normative pressures leading to eco-innovation have influenced the sense of responsibility that creates social acceptance and leads to sustainable lifestyles. Moreover, additional training is needed for other entities in the business world that promote normative pressures, such as suppliers, customers, trade unions, media, and other social structures related to sustainability, to improve eco-innovation practices.

The normative pressure measurement scale is divided into four indicators. The NP4A indicator represents the emerging environmental education programs in Indonesia. The results show that 98.62% of respondents agree that the increase in environmental education programs has increased public interest in the value of nature. However, the remaining 1.38% disagree with the statement. These results mean that environmental and social education programs are accepted by society and that awareness of the value of nature has increased. Hypothesis H3 was supported by the positive and significant effects of mimetic pressure on eco-innovation adoption. There is

a significant correlation between mimetic pressure and acceptance of eco-innovation. It shows that competitive pressure hampers innovation of Indonesian MSMEs. Mimetic pressures arise when companies compete for superior performance. To be market leaders, MSMEs continue to innovate and invest in eco-innovation. The flexible nature of MSMEs facilitates adaptation to market and demand. In developing countries, mimetic pressure promotes better environmental management for foreign and multinational organizations. Strong mimetic pressures affect governments and interest groups, forcing corporations to adopt advanced environmental management and technologies as subsidiaries of multinational corporations, making them redundant in local organizations. Therefore, it can be concluded that mimetic pressure has a positive impact on the acceptance of eco-innovations by MSMEs.

From the data analysis obtained, Fig. 2 presents the structural model.

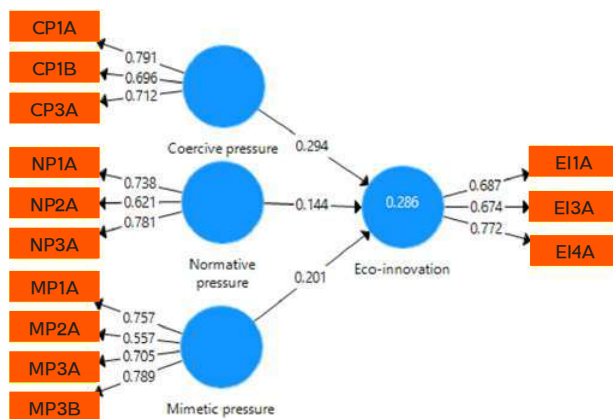


Fig. 2 Structural Model

IV. DISCUSSION

Based on the data analysis, this paper concludes that coercive pressure and mimetic pressure have a positive and significant effect on eco-innovation practices. These results indicate that companies under coercive and mimetic pressures are more likely to adopt eco-innovation in order to gain legitimacy and maintain better relationships with stakeholders. However, normative pressures do not support green innovation practices in Indonesia. This result shows that the adoption of eco-innovation is attractive and can be beneficial for many companies, but the Indonesian experience is still in its infancy as many do not know how to implement eco-innovation effectively and there are only a limited number of companies who have successfully implemented eco-innovation. The companies that received high institutional pressures are more likely to implement eco-innovation. This allows them to conform to coercive and mimetic pressures to maintain good relationships with stakeholders to obtain legitimacy

and reputation. Otherwise, companies would be punished by governments, isolated from stakeholders, and deprived of external resources and market share [9], [10]. Therefore, the higher the rate of adoption of eco-innovation by companies, the lower the impact of regulatory pressures. In other words, the positive effect of institutional pressure depends on the level of implementation of eco-innovation.

Based on the general results and the analysis of this study, two conclusions were drawn. First of all, eco-innovation is an important aspect to ensure a competitive advantage. Eco-innovation arises from the concept of open innovation, which is undergoing a social change. The concept implements ecological production processes as a result of the combination of internal and external resources of the company. This research helps determine the factors that influence a company's innovation potential. It also analyzes the level of institutional pressures on companies and influences the adoption of eco-innovation by companies. Second, the late introduction of eco-innovations compared to other countries can be explained by the still nascent level of implementation. In other words, the concept of eco-innovation has not yet been fully embraced by Indonesian MSMEs. The implementation of eco-innovation method has the potential for the development of Indonesian MSMEs. Therefore, additional training is needed to introduce the concept of eco-innovation and increase understanding among members.

V. CONCLUSION

The concept of eco-innovation is an effective means of overcoming the positive impact on the environment and reducing the negative impact of environmental practices [11]. In this study, it was found that coercive and mimetic pressures were found to drive the adoption of eco-innovation. The pressure that MSMEs receive from the external entity creates a positive environmental effect via resource saving [12]. As indicated by Hermosilla et al. that eco-innovation leads to less waste, less pollution, and less resource use [13]. On the other hand, normative pressures have a negative relationship with eco-innovation adoption. The negative relationships indicate that not all capabilities support companies that lead to eco-innovation. This is due to the lack of information received about the practice of innovation itself or the available resources are still limited so MSMEs take other alternatives to increasing company innovation. The findings further show that the organization is relationship-oriented and responds to various forms of pressure to maintain good relations with stakeholders and to pursue social legitimacy [14]. This paper shows that institutional pressures support concrete interpretations of eco-innovation practices. The study findings offer a number of implications for practitioners and policy makers. The role of institutions should be strengthened to promote environmental innovation and encourage

organizational activities to improve environmental performance. Institutional pressure encourages an organization's standards, beliefs, and culture to promote an eco-friendly climate while encouraging the adoption of environmentally friendly practices. Institutional pressure also helps organizations to implement environmental management [15].

This research has a number of limitations. First, the survey concerns MSMEs with few employees in the Indonesian fashion sector. Second, the survey was conducted online with a limited number of MSME owner respondents as key informants. Third, this survey was conducted for a limited period from December 2021 to July 2022. Besides all the limitations of this study, it is important to recognize that the results will depend on the criteria used in this study and that there may be other eco-innovation factors that were not considered in this study. Furthermore, data collection is based on causal relationships between independent and dependent variables. Therefore, it may not be the proposed general model proposed, as external pressures may reflect mixed motivations. This model provides different results in different sectors and countries. As a suggestion for future research, by exploring the conceptual model it is possible to understand the main characteristics, similarities, and differences of companies introducing the concept of eco-innovation. In addition, the conceptual model can also be combined with internal resources with pressure received to provide a different perspective on the use of this eco-innovation concept.

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