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The Influence of Green Supply Chain Management on Environmental Performance with Government Regulation as Mediation in Convection MSMEs

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Abstract

Micro, small, and medium enterprises (MSMEs) are one of Indonesia's largest employment sources. According to the Ministry of Economy, Maritime Affairs and Investment, textile, convection, batik, yarn, and textile industries are among the MSME enterprises contributing to waste pollution in Indonesia. This study aims to determine the impact of Green Supply Chain Management (GSCM) incorporating government regulations on environmental performance in convection MSMEs in Bulak Timur Depok. This type of research is quantitative. The data sources used in this study are primary and secondary data. The research employed a questionnaire as the method for gathering data. The findings indicate a noteworthy impact of GSCM on environmental performance. Second, GSCM has a significant impact on government regulations. Third, government regulation does not have a substantial impact on environmental performance, and finally, government regulation does not have a significant impact on the mediation of GSCM on environmental performance.

Keywords: *Environmental Performance, Green Supply Chain Management, Government Regulation, MSMEs*

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) have become one of the largest sources of employment in Indonesia, significantly contributing to improving societal well-being and supporting national economic growth. Data from the Ministry of Finance (MoF) in 2022 shows that MSMEs play a vital role in employment, constituting 97 percent of the labor force and accounting for approximately 60.4 percent of total investments in Indonesia (MoF, 2022). According to information from the Ministry of Cooperatives and Small and Medium Enterprises (MoCSME), the number of micro, small, and medium enterprises (MSMEs) in Indonesia in 2022 is estimated at 8.71 million business units. The contribution of MSMEs to the Gross Domestic Product (GDP) stands around 61.07%, equivalent to Rp8,573.89 trillion. West Java, the largest province in Indonesia, makes a significant contribution with 1.49 million businesses (databoks, 2022b). The large number of MSMEs in Indonesia has led to increasingly fierce competition among them. Currently, MSMEs are facing increasingly fierce business competition, making it necessary for each of them to maximize all the resources they have, including natural resources, human resources, and financial resources to increase their competitive advantage. There are already too many clear examples of exploitation in resource utilization, especially in large-scale enterprises. This may also happen to MSMEs as it is continuously growing in Indonesia. The growth of MSMEs must be balanced with environmentally friendly practices and environmental preservation, but unfortunately, Indonesia still lags in environmentally friendly practices and environmental conservation efforts.

Global data on the environmental performance of countries in 2022 showed that Indonesia ranked 9th in the Southeast Asia region, or 164th out of 180 countries surveyed, with a score of 28.20 points (databoks, 2022a). The Environmental Performance Index (EPI) report in 2022 rated Indonesia's environmental sustainability as poor across Asia-Pacific and the rest of the world. Out of

25 countries in Asia-Pacific, Indonesia ranked 22nd (databoks, 2022c). According to the EPI, countries that prioritize economic growth over environmental sustainability tend to receive low scores. One of the main issues causing environmental pollution in Indonesia is the waste problem.

Despite the positive impact generated by MSMEs on the economic aspect of community welfare, MSME production activities greatly contribute to environmental pollution. This means that MSME actors must consider and implement green supply chain management. The process must be environmentally friendly and not harmful to society or the environment (Widyacantika et al., 2020). MSMEs can start implementing some or even all elements in the green supply chain process, including green purchasing, green manufacturing, green distribution, and reverse logistics (Hervani et al., 2005). However, not all MSMEs consider the environmental impact caused by their industrial operations.

One of the types of MSME business that causes pollution through waste in Indonesia, according to data from the Ministry of Economy, Maritime Affairs and Investment, is the textile, convection, batik, yarn, and fabric industries. Convection MSMEs are a growing industry in Indonesia as it is in line with the increasing number of MSMEs, and the fashion sector in Indonesia is currently experiencing more rapid growth.

For example, the convection in West Java Province has 1.5 million units, making it the highest number in Indonesia. The number of convection MSMEs reached 310,060 units in 2021 and continues to grow by approximately 20 percent. One of the largest MSMEs in West Java is the convection MSMEs. This research was conducted at convection MSMEs in the city of Depok, namely the Bulak Timur convection center. Bulak Timur is one of the largest convection centers in the city of Depok. The large number of convections plus a large amount of production causes a lot of waste generated, including fabric scraps and liquid waste from dyeing or screen printing processes, as well as plastic packaging. Usually, these fabric scraps have already been reused by the business owners by reselling or processing them into other products. However, other waste such as plastics and dye residues from screen printing have not been maximized properly. Business owners need to pay more attention to environmental impacts, and government involvement also needs to be emphasized to provide socialization in raising awareness about the environmental consequences of hazardous materials to reduce the impact.

Several studies that raise this topic have made their respective statements. Rakhmawati et al. (2020) found in their research that the increased environmental performance from the implementation of green supply chain management by MSME actors is driven by their awareness rather than the anticipated consequences of minimal government regulations. MSME actors are already aware and responsive to the fact that residual production waste can be turned into added value for business economic benefits since it can be managed and resold. Meanwhile, Rakhmawati et al. (2019) stated that indeed, green supply chain management has a very positive impact on environmental performance, and government influence contributes to improving the positive effects of green supply chain implementation on environmental performance. A note in the study suggests that the government should intensify efforts in socializing regulations and the importance of environmental preservation. The study found that the stronger the government's efforts, the higher the value of its influence on the implementation of the green supply chain by MSME actors. Thus, it can be concluded that the implementation of green supply chain management is necessary to reduce the negative impact on environmental performance.

Based on the aforementioned background, the issue pertains to waste management that has not been maximized in convection in the city of Depok. The purpose of this study is to investigate the influence of green supply chain management on environmental performance with the involvement of the government.

LITERATURE REVIEW

Green Supply Chain Management

The concept of Green Supply Chain Management (GSCM) was first introduced by Michigan State University, USA, in 1996. Initially, the goal of GSCM was to eliminate or reduce waste generated throughout the supply chain, including emissions, hazardous chemicals, and sewage waste. The GSCM process involves a series of actions which include idea formation, progress toward green product design, purchasing, logistics, production, and waste management (Al-Ghdabi et al., 2019).

Increasing consumer awareness and stricter regulations have driven industries to integrate environmental aspects into the execution of their business operations. In addition, industries are progressively shifting to more sustainable supply chains by adopting green technologies in product design, production processes, and distribution. These efforts, along with the desire to incorporate expanded production responsibilities, have led to the evolution of SCM into GSCM (Wang & Gupta, 2011).

Environmental Performance

Environmental performance is the ability of a company to reduce air emissions, handle liquid waste, and manage solid waste. Additionally, it also includes efforts to reduce the use of hazardous and toxic materials, as well as reduce the occurrence of environmental accidents (Rakhmawati et al., 2020).

To achieve effective environmental performance, companies must take responsibility and

allocate resources to suppliers, demonstrating a commitment to sustainability (Amemba et al., 2013). GSCM also has the potential to strengthen collaboration and productivity among business partners, supporting improved environmental performance and waste reduction as an effort to achieve cost efficiency (Rao & Holt, 2005). This will improve their competitiveness through increased efficiency and collaboration among business partners, helping in improving environmental performance and reducing waste to save costs.

Government Regulation

The government plays a central role in environmentally-oriented supply chains as it has the authority to regulate business operations by influencing companies' internal and external resources. Furthermore, the government can encourage the media to increase the legitimacy of companies committed to sustainability in chain management and may impose taxes on those neglecting this aspect of sustainability (Rakhmawati et al., 2020). The importance of corporate social responsibility is influenced by government accountability due to its role as one of the company's stakeholders (Basuki & Patrioty, 2011). Government regulations can also affect the sustainability of a company's supply chain amid uncertainties, such as those experienced during the COVID-19 pandemic (Chatterjee & Chaudhuri, 2021).

Moreover, the government here can also impose sanctions on companies that fail to prioritize sustainability in their supply chain management practices. Zhu et al. (2017) state that the key indicator of government regulation is regulation from the government itself. In addition, Regional Regulation Number 3 of 2013 of Depok City that regulates the Guidelines for Environmental Protection and Management governs several things such as (1) the establishment of environmental criteria and standards mandatory for all activities and businesses impacting the environment, (2) the establishment of obligations and responsibilities of business actors in protecting and managing the environment, (3) the establishment of sanctions for violations of the provisions outlined in this regulation, up to (4) the procedures for supervision and law enforcement against violations of the provisions in this regional regulation.

The Influence of Green Supply Chain Management on Environmental Performance

Based on the research conducted by Yalviolita and Hendayani (2022), it was found that green supply chain management (GSCM) has a positive and significant impact on economic and environmental performance in the context of poultry farming in Pesisir Selatan District, West Sumatra. Similar findings were also revealed in a study conducted by Rakhmawati et al. (2019), which showed that green supply chain management (GSCM) has a positive influence on environmental performance. Based on these findings, the hypothesis is formulated as follows:

H_1: GSCM influences environmental performance.

The Influence of Green Supply Chain Management on Government Regulation

The influence of green supply chain management (GSCM) can impact government regulation. Regulatory pressure from the government can influence a company's implementation of environmentally friendly practices. GSCM practices can be influenced by government regulations, and conversely, government regulations can also affect the implementation of GSCM in companies (Priyono, 2009). The government has issued policies to encourage companies or institutions to implement environmentally friendly practices. By the provisions stated in the Depok City Government Regulation No. 3 of 2013 regarding Guidelines for Environmental Protection and Management, the regulation covers everything from waste management to the use of environmentally friendly materials in companies or institutions in the city of Depok. Based on these considerations, the hypothesis is formulated as follows:

H_2: There is an influence of GSCM on government regulation.

The Influence of Government Regulation on Environmental Performance

Research conducted by Rakhmawati et al. (2019) on the influence of government regulation on environmental performance indicates that both significantly affect green supply chain management. Another study by Ling Guo et al. (2017) found that environmental regulation has no impact on regional green growth performance (RGGP), but environmental regulation can have a positive influence on regional green growth through green innovation. Research by Priyono (2009) examined the relationship between GSCM practices and company performance with government regulations as a moderating variable. The results show that GSCM practices benefit company performance, and government regulations can help moderate the relationship between GSCM and company performance. Based on these considerations, the hypotheses are formulated as follows:

H_3: Government regulation influences environmental performance.

H_4: Government regulation mediates green supply chain management (GSCM) on environmental performance.

Conceptual Framework

The variables that are the focus of this study are green supply chain management (GSCM), government regulation (GR), and environmental performance (EP). Based on previous research

findings, the relationships between the dependent and independent variables and mediation are illustrated in the conceptual framework as follows.

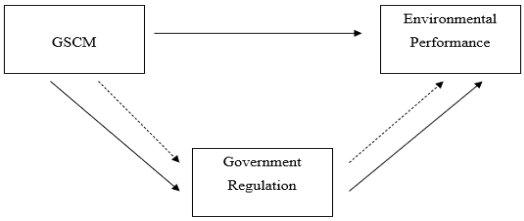

Figure 1. Conceptual Framework

METHOD

This research is quantitative, describing and summarizing the conditions or situations of various variables by testing predetermined hypotheses based on a certain population and sample. The method used for data collection in this study was carried out through the use of a questionnaire. A questionnaire is a technique that involves delivering written questions to respondents (Sugiyono, 2008). The Likert scale was employed, ranging from a score of 1 to 5.

The population of focus in this study is the owners of Micro, Small, and Medium Enterprises (MSMEs) in Depok City operating in the convection sector. Based on reference data from a study conducted by Wahbi et al. (2020), there are 32 convection businesses located in Bulak Timur, Depok. In this study, the census sampling technique, also known as saturated sampling, was utilized to select samples from each member of the population (Sugiyono, 2012). Data analysis was conducted using the partial least structural equation model (PLS-SEM) method to evaluate measurement and model structures.

RESULT AND DISCUSSION

Respondent Characteristics

Data related to the characteristics of respondents here consist of gender and length of convection business. This information is used to determine the distribution of respondents who filled out the questionnaire. Figure 2 presents the gender distribution of respondents.

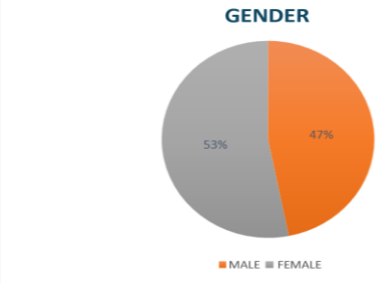

Figure 2. Gender of the Respondents

Figure 2 illustrates the gender distribution of the respondents, with 47% or 15 individuals being male and 57% or 17 individuals being female. This indicates that the average respondent is female. The length of age of the convection business can be seen in Figure 3 Length of Convection Business.

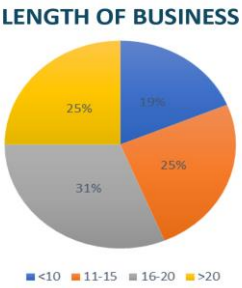

Figure 3. Length of Convection Business

Based on the above figure, it is known that the age range of convection businesses located in Bulak Timur is 5 to 28 years. The majority of the convection ages fall within the range of 16-20 years, amounting to 10 convections with a percentage of 31%. This is followed by those in business for 11 - 15 years, which amount to 8 convections with a percentage of 25%. Additionally, 8 convections have been in business for over 20 years, also accounting for 25%. Finally, the ones that have been in business for less than 10 years have as many as 6 convections, representing 19%.

Outer Model Evaluation

This study employs a reflective measurement model. According to Hair et al., cited in Yamin (2023), convergent and discriminant validity are essential for evaluating the measurement model.

Convergent Validity

Convergence validity is assessed by examining the loading factor values ≥ 0.70, Composite Reliability ≥ 0.70, Cronbach's Alpha ≥ 0.70, and AVE ≥ 0.50. The following are the results of the PLS algorithm calculations.

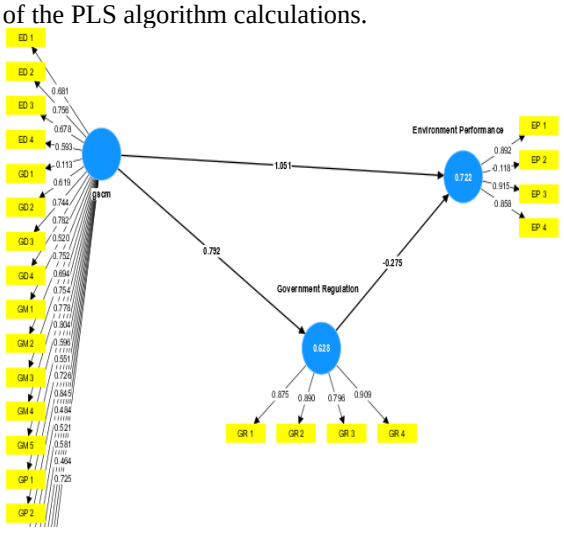

Figure 4. Results of the PLS Algorithm

The figure above shows that there is an outer loading or loading factor showing indicator values for

each variable less than 0.7. Indicator values with a value of less than 0.7 will be eliminated because they do not meet the loading factor criteria and are considered invalid. The following Figure 5 shows the recalculated PLS algorithm.

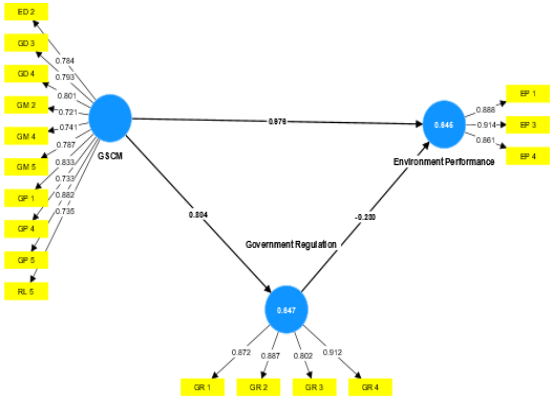

Figure 5. Recalculation of the PLS Algorithm

Loading Factor

Outer loading or loading factor indicates the level of item validity to measure the variable. This measure illustrates how well the items reflect the measurement of variables. If the loading factor value is > 0.70, it is considered acceptable.

Table 1. Loading Factor

	Environment Performance	Government Regulation	GSCM
EP 1	0.888		
EP 3	0.914		
EP 4	0.861		
ED 2			0.784
GD 3			0.793
GD 4			0.801
GM 2			0.721
GM 4			0.741
GM 5			0.787
GP 1			0.833
GP 4			0.733
GP 5			0.882
RL 5			0.735
GR 1		0.872	
GR 2		0.887	
GR 3		0.802	
GR 4		0.912	

Based on the results of the table above, all measurement items have a loading factor above 0.7, indicating that the measurement items are valid to reflect variable measurements.

Composite Reliability and AVE

Composite reliability is a measure that reflects the level of reliability or internal consistency. For a dimension or variable to be considered reliable, the minimum value is 0.70.

Average Variance Extracted (AVE) is a measure of convergent validity, indicating how well items as a whole represent or reflect the measurement of a variable. AVE value ≥ 0.50 indicates better convergent validity. The following is a table of composite reliability and AVE.

Table 2. Composite Reliability dan AVE

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
EP	0.867	0.873	0.918	0.789
GR	0.894	0.924	0.925	0.756
GSCM	0.929	0.932	0.940	0.612

The composite reliability value for the environmental performance variable is 0.918, and Cronbach's alpha value is 0.867. These values are greater than 0.7, indicating that overall, the measurement items that measure the environment performance variable have acceptable reliability. The AVE value for environment performance is 0.789, which is greater than 0.50, indicating that the evaluation of the measurement model meets the criteria for convergent validity.

The composite reliability value for the environmental performance variable is 0.918, and Cronbach's alpha value is 0.867. These values are greater than 0.7, indicating that overall, the measurement items that measure the environmental performance variable have acceptable reliability. The AVE value for environmental performance is 0.789, which is greater than 0.50, indicating that the evaluation of the measurement model meets the criteria for convergent validity.

The composite reliability value for the GSCM variable is 0.940, with a Cronbach's alpha value of 0.929. These values exceed 0.7, indicating that overall, the measurement items that measure the GSCM variable have acceptable reliability. The AVE value for GSCM is 0.612, which is greater than 0.50, fulfilling the criteria for convergent validity in the measurement model evaluation.

HTMT

According to Hair et al., as cited in Yamin (2023), among the three discriminant validity evaluation methods, namely cross loading, Fornell-Lacker, and HTMT, it is indeed recommended to report HTMT in the research report. Discriminant validity can be tested by observing HTMT values < 0.90.

Table 3. HTMT

	EP	GR	GSCM
EP			
GR	0,867		
GSCM	0,579	0,848	

Based on the table above, the correlation values between items that measure the same variable have a value of less than 0.9. Therefore, discriminant validity based on the HTMT criterion is acceptable.

Inner Model Evaluation

The next stage of model evaluation is inner model evaluation. VIF values, path coefficient influence, 95% confidence interval path coefficient, and F square are some of the criteria used to assess the inner model. The following is Figure 6, presenting the bootstrapping results.

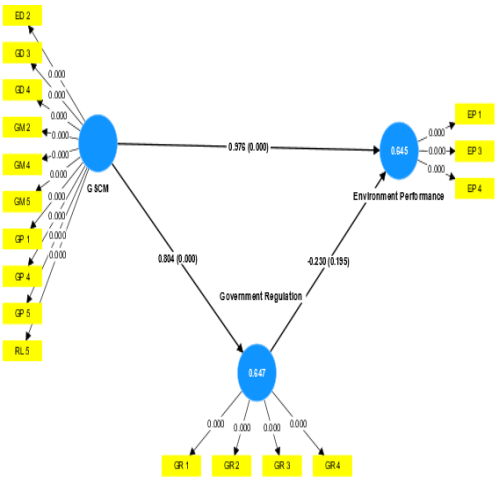

Figure 6. Bootstrapping Results

VIF

VIF is used to identify multicollinearity among latent variables (constructs) in the model, not independent variables, as in linear regression.

Table 4. VIF

	VIF		VIF
ED 2	2.882	GM 5	2.434
EP 1	2.904	GP 1	4.188
EP 3	3.164	GP 4	2.432
EP 4	1.779	GP 5	4.661
GD 3	3.179	GR 1	2.155
GD 4	2.954	GR 2	2.738
GM 2	3.992	GR 3	2.815
GM 4	3.466	GR 4	4.502
		RL 5	3.327

Before testing the inner model hypothesis, VIF values must be checked to determine whether there is multicollinearity among variables. The estimation results show that the inner VIF value is less than 5, indicating a low level of multicollinearity. These findings suggest that the parameter estimates of the PLS-SEM are unbiased.

Hypothesis Testing

Hypothesis testing is carried out to determine whether all variables ultimately have statistically significant relationships or influences, by the previously proposed hypotheses, or possibly rejecting the hypothesis that has been proposed. Information regarding the results of hypothesis testing can be found in Table 5.

Table 5. Hypothesis Test Results

Hypothesis	Path Coefficient	P-Value	T Statistic	95% Confidence Interval Path Coefficient		F Square
				Lower Limit	Upper Limit	
GSCM -> Environment performance	0.976	0.000	6.598	0.734	1.331	0.947
GSCM -> Government Regulation	0.804	0.00	13.045	0.676	0.917	1.831
Government Regulation -> Environment performance	-0.230	0.195	1.298	-0.626	0.062	0.053

Based on Table 5, the first hypothesis (H1) is accepted, indicating that GSCM has a significant influence on environmental performance with a p-value of 0.00 < 0.05 and a T-statistic value of 6.598 > 1.96. The path coefficient value of 0.976 indicates a very strong positive relationship. This means that changes in the GSCM variable will have a significantly strong positive impact on environmental performance. Every change in GSCM will improve environmental performance, with a 95% confidence interval showing the influence of GSCM in improving environmental performance ranging from 0.734 to 1.331. The structural f-square level of 0.947 indicates a high level of variable influence in the structure, reaching the category of high influence. The findings of this study are consistent with previous research conducted by Yalviolita and Hendayani (2022), which stated that green supply chain management (GSCM) has a positive impact on environmental performance in the chicken farming sector in the West Coast of Sumatra region. Furthermore, the conclusion of this study is also consistent with the findings of Nugraha and Hendayani (2020), which showed that GSCM has a positive impact on environmental performance. This positive influence can be attributed to the awareness of Micro, Small, and Medium Enterprises (MSMEs) in the Convection industry in Bulak Timur, who have realized the importance of utilizing environmentally friendly raw materials, reusing leftover production materials, and reducing production waste found in MSMEs in Bulak Timur by recycling or selling them.

The second hypothesis (H2) is accepted, indicating that green supply chain management (GSCM) has a significant influence on government regulation. This is evidenced by the p-value of 0.00 < 0.05 and a T-statistic value of 13.045 > 1.96. The path coefficient of 0.804 indicates a very strong positive relationship. Therefore, any changes in the GSCM variable will have a significantly strong positive impact on government regulation. The 95% confidence interval shows that the influence of GSCM in improving government regulation ranges from 0.676 to 0.917. The structural f-square level of 1.831 means that the influence of variables in the

structure is in the high influence category. Based on these findings, convection MSMEs in Bulak Timur that implement better GSCM practices can influence the government to create or improve regulations that are stricter and supportive of the environment. The adoption of GSCM by convection can be considered a good example and may encourage the government to take further steps in protecting the environment through stricter regulations. Moreover, the implementation of GSCM in convection can be supported by the government by providing incentives or support for convection MSMEs that implement GSCM.

The third hypothesis (H3) is rejected, indicating that government regulation has no significant influence on environmental performance, with a p-value of 0.195 > 0.05 and a T-statistic value of 1.298 < 1.96. The path coefficient value of -0.230 signifies a negative relationship between government regulation and environmental performance, with a low relationship. The 95% confidence interval shows a range of values for the path coefficient. The value of the confidence interval here includes a high negative value, ranging from -0.626 to 0.062. The influence of government regulation on environmental performance has a low impact, with an f-square value of 0.053. This finding contradicts the results produced by Rakhmawati et al. (2019) and Ling Guo et al. (2017), who found that government regulation does influence environmental performance. This suggests that although there are existing government regulations related to the environment, these regulations have not, or do not, have a significant impact on the environmental performance of convection MSMEs in Bulak Timur. Several reasons may contribute to this, such as a lack of government monitoring, the ineffectiveness of regulations or city government rules in Depok, and a lack of awareness and compliance among convection shop owners due to insufficient socialization of the regulations issued by the Depok city government. The government also needs to provide incentives to further enhance the implementation of GSCM in convection shops in Bulak Timur, as business actors in Bulak Timur feel a lack of government involvement thus far. Therefore, the role of government regulation needs to be strengthened to improve environmental performance in Bulak Timur.

Mediation Test

Mediating variables are those that act as intermediaries in connecting the influence of one variable on another. In the mediation test, Upsilon V was measured to determine the effect size in the existing mediation tests.

Table 6. Mediation Test

Hypothesis	Path Coefficient	P-value	T statistic	95% Confidence Interval Path Coefficient		Upsilon v
				Lower Limit	Upper Limit	
GSCM -> Government Regulation -> Environmental Performance	-0,185	0,223	1,220	-0.545	0.050	0,0342

Based on the results of hypothesis H4 above, it can be concluded that government regulation does not significantly mediate the influence of GSCM on environmental performance, with a p-value of 0.223 > 0.05 and a T-statistic value of 1.220 < 1.96. The path coefficient value of -0.185 suggests a negative relationship, falling into the low category. The 95% confidence interval shows the range of values for the path coefficient, with the confidence interval encompassing negative values ranging from -0.545 to 0.050. The influence of government regulation in mediating has a low effect, with an Upsilon V value of 0.00737.

This finding contrasts with the findings of Priyono (2009), who stated that government regulation can mediate between GSCM and performance. However, the insignificant mediation effect of government regulation may be due to various factors, such as current government policies and regulations that have not significantly impacted the convection shops in Bulak Timur to improve their environmental performance. This highlights the importance of developing and implementing stronger and more effective government regulations to support sustainability goals and environmental protection. Socialization regarding existing regulations needs to be conducted in the convection sectors in Bulak Timur to enhance the government's role in improving the environmental performance of the convection sectors there. Overall, the results of this analysis show the importance of synergy between government regulations, GSCM practices, and environmental performance in convection. Industrial engineering can play an important role in analyzing, designing, and recommending solutions to strengthen the impact of regulations and sustainable practices on better environmental performance.

Model Evaluation and Goodness-of-Fit Results R-Square

The following table of R-Square results shows the extent of the difference between endogenous and exogenous variables.

Table 7. R-Square Results

	R-*square*	R-*square adjusted*
EP	0,645	0,620
GR	0,647	0,635

The table above shows that the amount of variation in the environmental performance variable explained by GSCM and government regulation is 0.645 or 64.5%, while the remaining 35.5% is explained by other factors. This value falls into the moderate category. In the variation of government regulation variables, which is explained by GSCM, it is 0.647 or 64.7%, while the remaining 35.4% is explained by other factors. The R-square value of 0.647 also falls into the moderate category.

Q-Square Results

Q square is an indicator of prediction accuracy, measuring the extent to which changes in endogenous variables can predict the exogenous variable.

Table 8. Q-Square Results

	R-square	1-R square	Q square
EP	0,645	0,355	0,875
GR	0,647	0,353	

With a Q-square value of 0.875, which exceeds 0, it indicates that the PLS-SEM model has excellent predictive ability for the dependent variable based on the data used to construct the model. This indicates that about 87.5% of the variation in the dependent variable can be explained by the independent variables included in the model.

SRMR Results

The Standardized Root Mean Square Residual (SRMR) is a model fit matrix that assesses the difference between the data correlation matrix and the estimated model correlation matrix.

Table 9. SRMR Results

	Saturated model	Estimated model
SRMR	0,115	0,115

In the table above, the SRMR value of 0.115 suggests a fairly good fit between the constructed model and the observed data. The smaller the SRMR value, the better the fit between the model and the data. Typically, an SRMR value less than 0.08 is considered indicative of a good fit, while values between 0.08 and 0.10 are still acceptable. Therefore, based on the SRMR result of 0.115, it can be concluded that the fit is still acceptable.

Goodness-of-Fit Index Results

The Goodness of Fit Index (GOF Index) is a comprehensive assessment of the model that includes the evaluation of both measurement and structural models. The GoF Index values can be interpreted as follows: 0.1 indicates a low level of fit, 0.25 indicates a moderate level of fit, and 0.36 indicates a high level of fit.

Table 10. Gof Index Results

Mean Communality	Mean R-square	GoF Index
0,677	0,646	0,661

The calculation results above show that the GoF index value of 0.661 is greater than 0.36. Therefore, it can be categorized that the GOF Index value falls into the high category. The interpretation of this high category value implies that both the measurement model (outer model) and the structural model (inner model) can be considered valid or adequate.

Conclusion

Based on the findings of this study, it can be concluded that the first hypothesis (H1) is accepted, indicating that GSCM significantly influences environmental performance. This finding indicates that convection MSMEs in Bulak Timur have an awareness of GSCM practices, such as using environmentally friendly raw materials, recycling leftover production materials, and reducing waste from production. These actions, including recycling or selling production waste, aim to reduce environmental impacts. The second hypothesis (H2) is accepted, indicating that GSCM significantly influences government regulation. Based on this, convection MSMEs in Bulak Timur that implement better GSCM practices can influence the government to establish or enhance regulations that are stricter or supportive of the environment. The third hypothesis (H3) is rejected, indicating that government regulation has no significant influence on environmental performance. This shows that although there are existing government regulations related to the environment, these regulations have not, or do not, have a significant impact on the environmental performance of convection MSMEs in Bulak Timur. The fourth hypothesis H4, government regulation does not significantly mediate the effect of GSCM on environmental performance. The reason for the insignificant mediation of government regulation may be due to various factors, such as current government policies and regulations that have not had a significant impact in encouraging convection MSMEs in Bulak Timur to improve their environmental performance. Thus, the role of the government needs to be improved in terms of activities like socialization and other interventions. The role of the government needs to be reinforced to improve the implementation of green supply chain management (GSCM) so that it can have a positive effect on environmental performance in Bulak Timur. This is because the implementation of GSCM in convection MSMEs in Bulak Timur is based on the awareness of each business actor.

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