OPTIMIZING THE GREEN PRODUCT STRATEGY IN IMPROVING MSME PERFORMANCE

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Abstract
Environmentally friendly business activities can be carried out by implementing environmentally friendly products (green products). Modern society tends to choose environmentally friendly products in its consumption activities. So that green products experience rapid development and gain the trust of consumers. Because of the rapid development of green products, business actors if they do not want to lose in their business competition, this condition must be used to start innovating products by making environmentally friendly products (green products), including business units classified as MSMEs. This study aims to determine the influence of green input, green process and green output in the application of green products on the performance of MSMEs in Penjaringan District, North Jakarta. The method carried out with purposive sampling samples, the number of respondents used in this study was 100 respondents of MSMEs in the food and beverage sector in Penjaringan District, North Jakarta. The data used is primary data in the form of questionnaires distributed to respondents. The data analysis method used in this study is data analysis with descriptive statistical tests, data quality tests, classical assumption tests, multiple linear regression analysis tests, which test variables from data using IBM SPSS (Statistical Product and Service Solutions) for Windows version 25. The results of research and hypothesis testing show that green input in the application of green products has a positive and significant effect on the performance of MSMEs, Green process in the application of green products has a positive and significant effect on MSME performance, green output in the application of green products has a positive and significant effect on MSME performance

Keywords: Green Product, Green Input, Green Process, Green Output, MSME Performance.

1. Introduction

Environmental damage can result in many natural disasters and raises public concern about environmental problems and has changed the perspective and pattern of human life, people who want comfort and safety in using products demand companies to provide information transparently and are also responsible regarding their business activities towards Public. The company is expected not only to focus on increasing profits, but also to consider environmental factors in its operating activities. This can be seen in the change in the pattern of business approach which is starting to lead to an environmentally friendly (green business) based business activity approach in an effort to participate in preserving the environment. Environmentally friendly business (Green Business) or in other words sustainable business (business sustainability) is a concept in the business world where

companies run businesses that are not only profit-oriented but companies also pay attention to the impact on the environment from the business activities they carry out. . By implementing this environmentally friendly business, companies in improving company performance measure the environmental impact of their business or allocate costs related to the environment and also make savings that come from appropriate environmental activities. Cost information related to the environment is included in environmental management accounting. Cost information related to the environment is in the environmental management accounting system which helps a manager to improve the performance of his company both from an economic perspective and an environmental perspective.

Running environmentally friendly business activities can be done by implementing environmentally friendly products (green products). The emergence of the movement to save the environment which is a form of public awareness to participate in preserving the environment, modern society tends to choose environmentally friendly products in its consumption activities. So that green products experience rapid development and gain the trust of consumers. Due to the rapid development of green products, if businesses do not want to lose out in business competition, this condition must be used to start innovating products by making green products, including business units belonging to MSME.

Green product is a product that is harmless or friendly to the environment and has benefits for consumers as well as social benefits that can be felt by consumers. Green product is a product that is designed and processed in an environmentally friendly way to reduce the effects of environmental pollution, both in production, distribution and consumption systems. Measurement of environmentally friendly products consists of the following aspects: green input which is the selection of environmentally friendly materials used as a source of raw materials for a product. Green input consists of product composition, raw material characteristics, organic agricultural raw materials and the presence of preservatives. Second, the green process, which is a production process that pays attention to the impact on the environment, consisting of efficient energy use, production process waste, emission reduction, and no product testing on animals (no animal testing). Third, green output with product criteria that minimizes impact on the environment. Green output consists of the use of biodegradable packaging, product durability, eco labels and product certification.

In implementing green products, the costs incurred by the company are related to costs for exploring innovative ideas, costs for obtaining raw materials and so on. If the green product produced by the company succeeds in minimizing the use of resources, then the company can create efficiency in allocating operational expenses. The decrease in operating expenses will decrease, so that the company will generate an increase in profit which is expected to improve the company's performance. Green products that succeed in improving company performance will result in effective and efficient implementation of environmental management accounting. Micro, Small and Medium Enterprises (MSMEs) which are an important pillar in the Indonesian economy. The increase in the number of Micro, Small and Medium Enterprises (MSMEs) has provided an increase in the Indonesian economy, however, in their business activities, MSMEs have a significant contribution to reducing the quality of the environment caused by waste in its various forms, inefficient production processes both in the use of materials raw materials, energy, and the use of other auxiliary materials. Not a few SMEs in running their business are only concerned with sales turnover without regard to the surrounding environment. The problems faced by MSMEs are related to running a business by paying attention to

environmental sustainability which is a concern, namely the problem of knowledge regarding sustainability itself and the level of readiness of MSMEs in carrying out environmentally friendly activities and the high cost of implementing the green product. The use of environmentally friendly raw materials can incur costs. addition to business productivity. Environmentally friendly raw materials have a higher price compared to the use of plastic materials. Like eco-friendly shopping bags that have a higher price than disposable plastic bags. And this is one of the problems of SMEs in implementing green products. The purpose of this study was to determine the effect of green input, green process, and green output in implementing green products on the performance of MSMEs in the Penjaringan District, North Jakarta.

2. Theoretical Background

Environmental Friendly Business (Green Business)

The increasing environmental damage resulting from excessive use of natural resources for business activities is a common concern, business actors are starting to turn to environmentally friendly growth strategies and win-win solutions for climate action and sustainability. Environmentally friendly business activities are popularized by the term "green business or environmentally friendly business". Green business is a relatively new thing, and is a term that cannot be well defined so that it can be interpreted in many different ways by different people or organizations. What is considered 'green' by one organization may not be the same for other organizations" (Ernst & Young, 2008). Green Business is a business activity to convert inputs (raw materials and supporting materials) into outputs (goods and services) by prioritizing balance and synergy between economic, social and environmental benefits (Mutamimah, 2011 in Utomo & Pratiwi, 2021). According to Cooney (2009) in Kanio et al., (2018), green business is an effort made by companies to minimize the negative impacts of the company's economic activities on society, community, economy and local and global environment by fulfilling sustainable principles triple bottom line of business.

According to Elkington (2001) in Kanio et al., (2018), the triple bottom line of business which is the basic pillar of the sustainability of a business is the universe or the environment (planet), society (people) and company profits (profit). The relationship between economic, social and environmental are three inseparable aspects. In its Green Paper on environmentally friendly business models in the Java Region, FORA define an environmentally friendly business model as "a business model that supports the development of products and services (systems) with environmental benefits, reduces wasteful use of resources and is economically viable. This business model has a lower environmental impact than traditional business models." A business can be said to be 'green' by producing green products or providing green services, or by greening their own processes or parts of their value chain. "Green Product" (environmentally friendly product) is a product that saves energy or materials, in terms of which it is included in the "green" category is in the product application, use and maintenance phase. "Green Service" is a service that contribute to reducing the ecological footprint by providing expertise to customers or hiring, sharing resources. Green process means limiting the company's ecological footprint with cleaner production processes, reuse or reduction of materials and energy (Wibowo, 2022).

Green Products

Product (product) according to (Kotler) in Hendarsih (2017) is anything that can be offered to the market to get attention, buy, use or consume that can satisfy a want or need. Green product according to Firmansyah et al. (2019) in Dianti & Paramita (2021) is a product that does not cause damage to resources and the environment, and does not cause pollution. D'Souza et al. (2006) in Padmalia (2018) explains that green products are products that have benefits for consumers and also have social benefits that consumers feel, such as being friendly to the environment. Rahnama & Rajabpour (2016) in Dianti & Paramita (2021) categorize green products into four types. The first type is that products do not contain harmful elements when consumed, and these products can help preserve the environment without producing pollution.

The second type is having efficiency in energy use, where green products are more efficient than other conventional products (Dangelico & Pontrandolfo, 2010 in Dianti & Paramita, 2021). The third type is products made from raw materials that provide recycled functionality; and the fourth type is a product with an environmentally friendly production process technology (Dangelico & Pontrandolfo, 2010 in Dianti & Paramita, 2021).

Green products have many benefits for the environment, including reducing pollution to the environment and air pollution resulting from the production process. Packaging on green products that are environmentally friendly and recyclable can reduce the amount of waste in the surrounding environment. In addition, green products can also save energy during the production process (Deuze, Mark., 2008 & Okada, 2010 in Usada & Murni, 2020). Green product according to Grundey, D., & Zaharia, M.R. (2008). -times, recycling: products can be reprocessed and converted to raw materials to be used to manufacture the same products, and reduced: use less raw materials or generate less waste.

Based on the explanation above, it can be concluded that green products are products made using environmentally friendly materials by carrying out clean production, processing and minimizing waste, recycling, reuse and eco-efficiency which can provide guarantees for sustainability for environmental preservation, human health, saving natural resources, saving water use and saving electricity and energy. Based on the results of Hakim's research (2010) in Padmalia (2018) shows that there are three aspects of green product as follows:

Green Input

Green input, which is a number of environmentally friendly materials used as a source of raw materials for a product. Green input consists of product composition, presence of preservatives, raw material characteristics, and organic agricultural raw materials (Hakim, 2010 in Padmalia, 2018). In green input using environmentally friendly materials in addition to preserving the environment is also to protect the health of consumers. The indicators used for green inputs include: (1) using non-hazardous materials; (2) using raw materials that are abundant in nature; (3) paying attention to product composition; (4) pay attention to the content of preservatives.

Green Process

Green process is a stage of production that takes into account the impact on the environment. This green process consists of efficient energy use, reduction of production process waste, emissions, and no product testing on animals (no animal testing) (Hakim, 2010 in Padmalia, 2018). Green process is a production process, the raw materials used are environmentally friendly or do not cause global warming (Kusdi, R, 2018 in Sumiati & Susanto, 2021). The indicators used for the green process include the following: (1) efficient use of energy in the product production process; (2) managing waste products; (3) reduce emissions during the production process; (4) reduce the consumption of water, electricity, or oil in the production process. In implementing the green process adheres to the principle of eco-efficiency. Eco-efficiency is a production process that minimizes the use of raw materials, energy and water as well as the environmental impact per unit of product. Eco-efficiency can reduce some of the problems caused by global warming by emphasizing more efficient use of energy and maximizing the use of renewable resources (Zulkifli, 2020).

Green Output

Green output with product criteria with minimal impact on the environment. Green output consists of the use of biodegradable packaging, product durability, eco labels, and product certification (Hakim, 2010 in Padmalia, 2018). According to Zhang & Zhao (2012) in Setiawan (2021), environmentally friendly packaging is packaging that can be recycled or used repeatedly, made from natural plants, susceptible to degradation and encourages sustainable development where the packaging is harmless. for the environment and the health of living things (Singh & Pandey, 2017 in Setiawan, 2021). Product durability is related to how long the product can be used and can be defined as a measure of the expected operating life of the product under normal conditions (Azizah, 2021). A green label or eco label is a logo or certification on a product that provides information to consumers that the product in its production creates a relatively smaller negative environmental impact compared to other similar products without a green label or eco label. This green label or ecolabel information is used by buyers or prospective buyers in selecting the desired product based on environmental and other aspects. On the other hand, product providers expect the application of basic environmental labels to influence consumers in making product purchasing decisions (Saputra, 2015). The indicators used for green output include: (1) use of biodegradable packaging (packaging made of easily decomposed materials); (2) packaging can be reused; (3) packaging does not use hazardous materials; (4) pay attention to product durability.

MSME performance

Performance is an achievement obtained by a person or company in achieving a goal. According to Aribawa (2016) in Larasati (2018) performance is the success of an organization that realizes strategic and predetermined goals with the behavior that an organization expects. Good, maximum and optimal performance is the goal of all MSMEs. In a good performance produced by an MSME, it will be stronger to become the backbone of the economy and will play an increasingly important role in the national economy. Good performance in all sectors, including finance, production, distribution and marketing, is an absolute requirement for MSMEs to continue to live (Rapid, 2015). The following are indicators of MSME performance, as follows: (1) sales growth; (2) Customer growth; (3) Profit growth; (4) Market growth and marketing.

The framework of thought in this research can be drawn as follows:

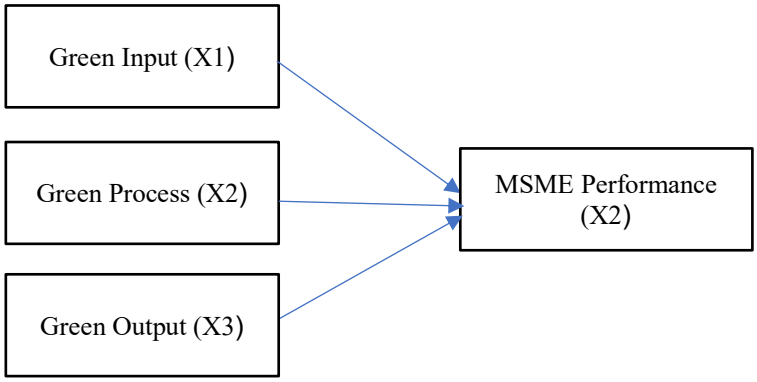

Figure 1. Framework

3. Methods

This section describes the research design, scope or object (population and sample), data collection techniques, operational definitions of research variables, and analysis techniques. This study uses a causal relationship research design. The types of data used in this research are primary data and secondary data. This primary data was obtained from the results of respondents, namely MSME actors in the food and beverage sector in Penjaringan District through statements in the questionnaire. The population in this study are SMEs in the Penjaringan District, North Jakarta, which are engaged in the food and beverage sector. The population was obtained from the North Jakarta Industry, Trade, Cooperative, Small and Medium Enterprises (PPKUKM) Sub-agency, as many as 2,854 MSMEs engaged in the food and beverage sector. While the number of samples in this study will be taken as many as 100 MSMEs in Penjaringan District, North Jakarta which are engaged in the food and beverage sector which innovate their products by implementing green products. The sampling technique in this study used non-probability sampling with a purposive sampling technique. The research data were analyzed using SPSS version 26 as an analytical tool consisting of: descriptive statistics, data quality testing, namely the reliability test and validity test, classical assumption test, and hypothesis test with the multiple-regression equation as follow:

$$\boldsymbol{Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e}$$

Information:

Y	: MSME performance
α	: Constant
X1	: Green Input
X2	: Green Process
X3	: Green Output
β1, β2, β3	: Regression Coefficient
e	: error

4. Results and Discussion

Research Object Description

Based on the results of descriptive statistical analysis in table 1 below, the data analyzed from 100 respondents obtained that all the variables studied showed the mean value was smaller than the standard deviation which indicated that the results were good.

Table 1. Descriptive Statistics Test Results

	N	Minimun	Maximum	Mean	Std. Deviation
GI1	100	1	5	4,63	0,691
GI2	100	2	5	4,42	0,727
GI3	100	1	5	4,42	0,878
GI4	100	1	5	4,54	0,822
GP1	100	2	5	4,37	0,734
GP2	100	1	5	3,98	1,015
GP3	100	3	5	4,35	0,730
GP4	100	2	5	4,53	0,703
GO1	100	1	5	4,07	0,967
GO2	100	1	5	3,75	1,192
GO3	100	1	5	4,47	0,784
GO4	100	2	5	4,42	0,741
K1	100	2	5	4,23	0,723
K2	100	2	5	4,28	0,712
K3	100	2	5	4,31	0,692
K4	100	2	5	4,33	0,711
Valid N (listwise)	100				

Source: Processed primary data, 2023

The results of the descriptive analysis of the green output variable and MSME performance in the table above show that the average value (mean) is greater than the standard deviation so that the respondents' assessment of all indicators is in the high and very high categories, which means that the cause of the data shows normal results and not cause bias.

Data Quality Test

Validity Test Results

Based on the results of the validity test, which was measured by comparing the Pearson correlation value with r table. Then the results of the validity test in table 2 are as follows:

Table 2. Validity Test Results

Variable	Grain	R count	R table	Information
Green Input	GI1	0,840	0,1966	Valid
	GI2	0,742	0,1966	Valid
	GI3	0,773	0,1966	Valid
	GI4	0,718	0,1966	Valid
Green Process	GP1	0,763	0,1966	Valid
	GP2	0,781	0,1966	Valid
	GP3	0,752	0,1966	Valid

	GP4	0,696	0,1966	Valid
Green Output	GO1	0,727	0,1966	Valid
	GO2	0,662	0,1966	Valid
	GO3	0,700	0,1966	Valid
	GO4	0,663	0,1966	Valid
MSME Performance	K1	0,882	0,1966	Valid
	K2	0,903	0,1966	Valid
	K3	0,874	0,1966	Valid
	K4	0,882	0,1966	Valid

Source: Processed primary data, 2023

Based on the table above, the validity test results have been carried out for each variable in this study (green input, green process, green output, MSME performance) which can state that all statement items for each variable have a value of r count > r table, which means that all statement items related to all research variables are declared valid so that each statement in the questionnaire can be used in research.

Reliability Test Results

Based on the results of the reliability test results in this study, it can be seen in the table 3 below:

Table 3. Reliability Test Results

Variable	Cronbach's Alpha	Critical Value	Result
Green Input	0,760	0,60	Reliable
Green Process	0,728	0,60	Reliable
Green Output	0,601	0,60	Reliable
MSME performance	0,908	0,60	Reliable

Source: Processed primary data, 2023

Based on the table above, the results of the reliability test have been carried out on each variable in this study (green input, green process, green output, MSME performance) which can state that all research variables have a Cronbach's alpha greater than 0.60, indicating that the respondents' answers are related to all the research variables is reliable and each statement in the questionnaire can be used in research.

Classic Assumption Test

The classical assumption test carried out in this study consists of: (1) (Normality Test; (2) Multicollinearity Test; (3) Heteroscedasticity test which can be seen in tables 4, 5 and 6 below:

Table 4. One Sample Kolmogorov-Smirnov Test (K-S) Results

		Unstandardized Residual
N		**100**
Normal Parameters[a,b]	Mean	,0000000
	Std. Deviation	1,77790570
Most Extreme Differences	Absolute	,083

	Positive	,047
	Negative	-,083
Test Statistic		,083
Asymp. Sig. (2-tailed)		,084[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
Source: Processed primary data, 2023

Based on the table above, the results of the normality test have been carried out which show a significance value of 0.084 > 0.05. So it can be concluded that the residual values are normally distributed.

Table 5. Multicollinearity Test Results

Variabel	Collinearity Statistics	
	Tolerance	VIF
Green Input	,728	1,374
Green Process	,520	1,922
Green Output	,606	1,649

a. Dependent Variable: MSME performance
Source: Processed primary data, 2022

Based on the table above, it can be seen that the tolerance value for the green input variable (X1), green process variable (X2) and green output variable (X3) shows a tolerance value of more than > 0.1. And the VIF value for each independent variable is less than < 10. So it can be concluded that the three variables (green input, green process, and green output) do not have multicollinearity, because VIF < 10 and tolerance value > 0.1 .

Table 6. Heteroscedasticity Test Results

Variable	Sig.	Result
Green input	,656	Free of Heteroscedasticity
Green process	,743	Free of Heteroscedasticity
Green Output	,576	Free of Heteroscedasticity

a. Dependent Variable: LN_RES
Source: Processed primary data, 2023

Based on the table above, it can be seen that the significance value of the green input (X1), green process (X2) and green output (X3) variables shows a significance value greater than 0.05, so it can be concluded that the three variables (green input, green process, and green output) there were no symptoms of heteroscedasticity.

Furthermore, the results of the t-test, F-test and test of the coefficient of determination can be seen in Table 7 and 8 below:

Table 7. Statistical test results t

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,963	1,604		1,224	,224
	Green Input	,248	,089	,236	2,782	,007
	Green Process	,291	,105	,276	2,761	,007
	Green Output	,342	,092	,345	3,719	,000

a. Dependent Variable: Kinerja UMKM

Source: Processed primary data, 2023

Based on the table above, the t test results for the green input variable (X1), the green process variable (X2) and the green output variable (X3 have t count greater than t table with a significance value of less than 0.05, this indicates that each – each independent variable has a significant and positive effect on the performance of SMEs.

Table 8. F test results

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	311,816	3	103,939	31,886	,000[b]
	Residual	312,934	96	3,260		
	Total	624,750	99			

a. Dependent Variable: Kinerja UMKM

b. Predictors: (Constant), Green Output, Green Input, Green Process

Source: Processed primary data, 2023

Based on the table above, it is known that the significance value for the influence of green input (X1), green process (X2), and green output (X3) has a calculated f that is greater than f table with a significance value of less than 0.05 so that each variable is independent collectively have a significant influence on the dependent variable, namely the performance of SMEs (Y).

Table 9. Coefficient of determination test results

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,808[a]	,654	,643	1,39210

a. Predictors: (Constant), Green Output, Green Input, Green Process

b. Dependent Variable: MSME performance

Source: Processed primary data, 2023

Based on the table above, it is known that the Adjusted R Square value is 0.643, this implies that the magnitude of the influence of the green input (X1), green process (X2), green output (X3) variables simultaneously on the performance of UMKM (Y) is 64.3%, while the rest (100% - 64.3% = 35.7%) is the influence of other variables outside the three variables in this study.

Effect of green input on MSME performance

Based on the results of the tests that have been carried out in this study, it proves that the application of green input which is carried out using non-hazardous raw materials, using raw materials that are abundant in nature, paying attention to the content of preservatives, and paying attention to product composition has a positive and significant effect on the performance of SMEs in the field of food and drink in Penjaringan District, North Jakarta. This explains that the application of green input is related to the performance of MSMEs, due to increased consumer awareness of the environment and the negative impacts that will result from products made from harmful chemicals, making consumers more careful in choosing products for consumption, especially in food and beverages. The main food and beverage safety issues are in raw materials. Applying green input is the use of raw materials that are safe for human health and the environment in the production process. So in implementing green input it makes (product composition) used better, so that the higher the effect on improving MSME performance.

The results of the analysis on green input variables which are measured using non-hazardous raw materials have a significant influence on the performance of MSMEs in the food and beverage sector in Penjaringan District, North Jakarta. This explains that MSME actors in the food and beverage sector in Penjaringan District, North Jakarta, in producing products use non-hazardous raw materials to produce products that are safe for consumers. Non-hazardous raw materials used, namely by using natural raw materials that are abundant in nature such as making green dye from suji leaves and pandan leaves, not using chemicals and preservatives, for products that can last a long time by cooking the product until it has perfect maturity and producing with good techniques such as in the production of pastries, the flour used is roasted or fried without oil beforehand so that the resulting pastries do not become moldy quickly, in making cakes, coconut milk is boiled first so that the cakes can last longer. The non-hazardous raw materials used have an effect on improving the performance of SMEs so that consumers are satisfied with the use of products produced by SMEs in this study.

The results of the analysis on green input variables which are measured using raw materials that are abundant in nature have a significant influence on the performance of SMEs. This explains that MSME actors in the food and beverage sector in Penjaringan District, North Jakarta, in producing products use raw materials that are abundant in nature or the raw materials used can be renewed such as rice, potatoes, tempeh, tofu, chilies, carrots, glutinous rice, bananas, pineapple, peanuts, granulated sugar, palm sugar, lemon, coconut, green beans, peanuts, coffee beans, suji leaves, pandan leaves and many other natural ingredients. By using raw materials that are abundant in nature to produce products made from natural ingredients that are safe for humans and the environment. Food and beverage products made from natural ingredients have an effect on improving the performance of MSMEs so that consumers are satisfied with the use of products produced by MSMEs in this study.

The results of the analysis on the green input variable which is measured by taking into account the content of preservatives have a significant influence on the performance of MSMEs in the food and beverage sector in Penjaringan District, North Jakarta. This shows that MSMEs in the food and beverage sector in Penjaringan District, North Jakarta, in producing products pay attention to the preservative content in raw materials by not using harmful preservatives because the presence of harmful preservatives in food and beverage products has a negative impact on human health. For products to last a long time, this is done by cooking the product until it has perfect maturity and producing with

good techniques such as in the production of pastries, the flour used is roasted or fried without oil first so that the resulting pastries do not become moldy quickly, in cake making, coconut milk boiled beforehand so that the cake can last longer, in making chili products, the processed chili sauce is then fried before being packaged, coconut for traditional cakes is steamed first then cooked with the cake batter, for dairy products always store the product in a cooler with the temperature is stable and the bottles and lids that will be used are sterilized first using warm water to kill bacteria and dirt and all the equipment that will be used is also sterilized, this is done so that the milk product can last a long time. Producing food and beverage products without using harmful preservatives has an effect on improving the performance of MSMEs so that consumers are satisfied with the use of products produced by MSMEs in this study.

The results of the analysis on green input variables which are measured by paying attention to product composition have a significant influence on the performance of MSMEs in the food and beverage sector in Penjaringan District, North Jakarta. MSME actors in the food and beverage sector in Penjaringan District pay attention to product composition by using non-hazardous raw materials, using natural ingredients, not using harmful preservatives, and ensuring that the size of raw materials is always correct by measuring or weighing each raw material used to produce the product the good one. In addition, by paying attention to the composition of the product so that the correct dosage of raw materials is used, it can expedite the production process. Product composition with improper dosage can cause failure in the production process which can increase production costs. And product composition is an important part of a product, especially food and beverages. So, by paying attention to product composition, it has an effect on improving the performance of MSMEs so that consumers are satisfied with the use of products produced by MSMEs in this study.

Effect of green process on MSME performance

Based on the test results that have been carried out in this study, it proves that the green process which is carried out by using energy efficiently in the product production process, managing waste products, reducing emissions during the production process, and reducing water, electricity or oil consumption in the production process has a positive effect and significantly to the performance of MSMEs in the food and beverage sector in Penjaringan District, North Jakarta. This explains that the green process is related to the performance of SMEs. The characteristics of implementing a green process are not only producing products that are produced that do not contain hazardous materials and are processed without hazardous chemicals. In addition, the characteristics of the green process also use resources and energy during production efficiently. Implementing a green process is an effort to care for the environment that is carried out and can provide distinct benefits for business actors such as saving electricity and energy use which will lead to a decrease in production costs. The reduction in production costs has an impact on increasing profits so that the performance of MSMEs also increases.

The results of the green process analysis as measured by the efficient use of energy in the product production process have a significant influence on the performance of MSMEs in the food and beverage sector in Penjaringan District, North Jakarta. This explains that MSME actors in the food and beverage sector in Penjaringan District, North Jakarta, in carrying out the production process use energy efficiently, such as in cake production, when using a mixer, input ingredients such as eggs, sugar, and cake developer to be mashed first, then put coconut milk in. This is done so that it expands quickly and

doesn't take long to use the mixer so as to save electricity, make 2 to 3 doughs in one mixer, the basic dough is made at once, besides that in frying the potatoes, before cooking the potatoes are soaked with whiting powder and whiting water so that the potatoes don't absorbs a lot of oil and cooks quickly so you can save on the use of oil and gas, using a Teflon double pan to grill or burn food can reduce the smoke produced and cook faster so you can save on gas, use presto so that the food cooks quickly and soft so that it can save on gas use, packaging with a sealer machine is done simultaneously with other products so that it can save electricity, the coffee machine used can turn off automatically if not used for 15 minutes so it is efficient in electricity use. Carrying out the production process by using energy efficiently can reduce the cost of production used. This reduction in production costs can increase the profits obtained so that the performance of MSMEs also increases.

The results of the green process analysis as measured by managing waste products have a significant influence on the performance of MSMEs in the food and beverage sector in Penjaringan District, North Jakarta. This shows that MSME actors in Penjaringan District, North Jakarta, manage waste. Waste management is carried out such as the remaining raw material for egg whites being recycled to become spring roll skins, coffee grounds which are collected are then processed into fertilizers or masks, raw material wastes such as cereal cartons are collected for reuse, waste produced from dairy products is made back into processed food, collecting used oil production and then handing it over to PKK/Dasawisma officers to be processed into biodiesel where the proceeds from the sale of the biodiesel are for social activities such as feeding the elderly. This waste management can save costs and produce new products that can increase profits so that the performance of MSMEs also increases. In addition, it can provide benefits to the environment.

The results of the green process analysis as measured by reducing emissions during the production process have a significant influence on the performance of MSMEs in the food and beverage sector in Penjaringan District, North Jakarta. This shows that MSME actors in the food and beverage sector in carrying out the production process seek to reduce emissions such as having a cooker hood, installing exhaust fans in the kitchen area to help improve air circulation and eliminate smoke and odors, using double pans for baking or Burning food can reduce food smoke and cook faster so that it can save on gas usage, roasting using an oven and efficient use of electricity is also a solution to reduce greenhouse gas emissions. Efforts to reduce emissions by using double pan Teflon and efficiency in the use of electricity can reduce production costs which affect increased profits so that the performance of SMEs also increases. In addition, these efforts can reduce the pollution produced so that it is environmentally friendly.

The results of the green process analysis as measured by reducing water, electricity or oil consumption have a significant influence on the performance of MSMEs in the food and beverage sector in Penjaringan District, North Jakarta. This shows that MSME actors in the food and beverage sector in Penjaringan District, North Jakarta, in the production process reduce the consumption of water, electricity or oil by using it efficiently, such as washing all equipment after production is complete. This is done in an effort to reduce water use, washing production equipment with wash it in a container filled with water first then rinse it under running water, a non-stick pan covered with parchment paper is cleaned with a wet tissue then put it in the oven which is still hot from the production to sterilize the tin, the tin used is doused with hot water then around the tin cleaned with a brush and rinsed 2 to 3 times using hot water, this is done in addition to being able to save

on water use as well so that it doesn't stick when used because if the baking sheet is washed the Teflon in the pan can be lost due to washing soap so can't cause the pan to stick when used to make cakes, besides that the efficient use of water that can be done is by using water used to wash raw materials that are still suitable for use such as washing vegetables or fruit to clean production equipment such as stoves and production tables, using coffee grinder machine with small watts, the coffee machine if not used for 15 minutes will turn off automatically so as to save electricity, in frying the potatoes before cooking the potatoes are soaked with whiting powder and whiting water then rinsed and squeezed repeatedly to reduce the water content in potatoes so that the potatoes do not absorb a lot of oil and cook quickly so that they can save on the use of oil and gas. Reducing the consumption of water, electricity or oil can reduce production costs incurred. The reduction in production costs has an effect on increasing the profits obtained so that the performance of MSMEs also increases.

Effect of green output on MSME performance

Based on the results of the tests that have been carried out in this study, it proves that the application of green output is carried out by using biodegradable packaging (packaging made of materials that are easily decomposed), reusable packaging, packaging does not use hazardous materials, paying attention to product durability has a positive and significant effect on the performance of MSMEs in the food and beverage sector in Penjaringan District, North Jakarta. This explains that green output is related to the performance of MSMEs in the food and beverage sector, because the majority of consumers already understand and understand the importance of implementing environmentally friendly packaging, so using environmentally friendly packaging is considered by consumers to help contribute to reducing the amount of waste that cannot be recycled. . So that now the use of environmentally friendly packaging for products has become a trend and an opportunity for business actors. So the implementation of green output has the effect of increasing the performance of MSMEs so that consumers are satisfied with the use of products produced by MSMEs in this study.

The results of the analysis on the green output variable as measured by biodegradable packaging (packaging made of materials that are easily decomposed) have a significant influence on the performance of MSMEs in the food and beverage sector in Penjaringan District, North Jakarta. Biodegradable packaging used such as biodegradable lunch boxes, biodegradable bowls, and biodegradable plastic bags instead of disposable plastic bags. Biodegradable packaging is packaging made of materials that are easy to decompose, besides that it has a thicker and stronger design, can be reused, makes the product look more attractive and environmentally friendly. Using environmentally friendly packaging is considered by consumers to help contribute to reducing the amount of waste that cannot be recycled. So using biodegradable packaging has the effect of increasing the performance of MSMEs so that consumers are satisfied with the use of products produced by MSMEs in this study.

The results of the analysis on the green output variable as measured by reusable packaging have a significant influence on the performance of MSMEs in the food and beverage sector in Penjaringan District, North Jakarta. Because using reusable packaging provides many benefits such as making the product safer, reducing the risk of damage to the product, and making the product look more attractive. In addition, the use of reusable packaging can also provide benefits for consumers because it can be used for other needs and is safer to carry. The packaging used includes biodegradable food containers, screw

jars, thinwall (heat-resistant bowls), spoundbond bags and so on. So the use of reusable packaging has an effect on improving the performance of MSMEs so that consumers are satisfied with the use of products produced by MSMEs in this study.

The results of the analysis on the green output variable as measured by packaging that does not use hazardous materials have a significant influence on the performance of MSMEs in the food and beverage sector in Penjaringan District, North Jakarta. In this case using packaging such as replacing single-use plastic bags with recycled paper bags, spoundbond bags, or biodegradable plastic, replacing styrofoam with thinwall (heat-resistant bowls), replacing streples with solatip, using packaging from leaves, standing pouches of recycled paper, cups recycled paper and so on. Packaging with non-hazardous materials is safe for products and consumers, can be reused by consumers, product appearance is more attractive and environmentally friendly. Using environmentally friendly packaging is considered by consumers to help contribute to reducing the amount of waste that cannot be recycled. So the use of packaging with non-hazardous materials has an effect on improving the performance of MSMEs so that consumers are satisfied with the use of products produced by MSMEs in this study.

The results of the analysis on the green output variable which is measured by taking into account product resilience has a significant influence on the performance of MSMEs in the food and beverage sector in Penjaringan District, North Jakarta. This shows that MSME actors in the food and beverage sector in Penjaringan District, North Jakarta pay attention to product durability by ensuring that the products to be marketed have good durability and provide information regarding product durability which is stated on the product packaging. Paying attention to product durability is done by storing some of each product produced for up to several days to test the product's durability, which then results are listed on the product packaging. So paying attention to product resistance and including product resistance on the packaging produces products with good quality and are safe for consumers.

5. Conclusion

The conclusions obtained from this study are as follows: (1) Green input has a positive and significant effect on the performance of SMEs in the food and beverage sector in Penjaringan District, North Jakarta, which states that SMEs in the food and beverage sector in Penjaringan District, North Jakarta apply environmentally friendly raw materials (green input) by using non-hazardous materials, using raw materials that are abundant in nature, paying attention to the content of preservatives, and paying attention to product composition can improve the performance of MSMEs. Due to increased consumer awareness of the environment and the negative impacts that will result from products made from hazardous chemicals, consumers are more careful in choosing products for consumption, especially in food and beverages. The main food and beverage safety issues are in raw materials. Applying green input is the use of raw materials that are safe for human health and the environment in the production process. So in implementing green input it makes (product composition) used better, so that the higher the effect on improving MSME performance; (2) Green process has a positive and significant effect on the performance of MSMEs in the food and beverage sector in Penjaringan District, North Jakarta, which states that MSME actors in the food and beverage sector in Penjaringan District, North Jakarta carry out environmentally friendly production (green process) with efficient energy use in the product production process, manage waste

products, reduce emissions during the production process, and reduce water consumption, electricity, or oil in the production process can improve the performance of MSMEs. The characteristics in applying the green process not only result in products that are produced do not contain harmful ingredients and are processed without harmful chemicals. In addition, the characteristics of the green process are also by using resources and energy during production efficiently. Implementing a green process is an effort to care about the environment carried out and can provide its own benefits for business actors such as saving electricity and energy use will cause a decrease in production costs. The decrease in production costs has an impact on increasing profits so that the performance of MSMEs also increases; (3) Green output has a positive and significant effect on the performance of MSME in the food and beverage sector in Penjaringan District, North Jakarta, which states that MSME actors in the food and beverage sector in Penjaringan District, North Jakarta, use environmentally friendly packaging (green output) on their product packaging. biodegradable (packaging made of materials that are easy to decompose), reusable packaging, packaging that does not use hazardous materials, and paying attention to product durability as stated on product packaging can improve MSME performance. Because the majority of consumers already understand and understand the importance of implementing environmentally friendly packaging, using environmentally friendly packaging is considered by consumers to help contribute to reducing the amount of waste that cannot be recycled. So that now the use of environmentally friendly packaging for products has become a trend and an opportunity for business actors. So the implementation of green output has the effect of increasing the performance of MSMEs so that consumers are satisfied with the use of products produced by MSMEs in this study.

References

Aribawa, D. (2016). Pengaruh Literasi Keuangan Terhadap Kinerja danKeberlangsungan UMKM di Jawa Tengah. Siasat Bisnis.

Azizah, D. G. (2021). Pengaruh Kinerja Keuangan dan Ukuran Perusahaan TerhadapNilai Perusahaan Pada Perusahaan Food and Beverages di BEI. Jurnal Ilmudan Riset Akuntansi. 10(1).

Dianti, N. R., & Paramita, E. L. (2021). Green Product dan Keputusan Pembelian Konsumen Muda. Jurnal Samudra Ekonomi Dan Bisnis, 12(1), 130–142. https://doi.org/10.33059/jseb.v12i1.2301

Dangelico, R.M. and Pontrandolfo, P. (2010) From Green Product Definitions and Classifications to the Green Option Matrix. Journal of Cleaner Production, 18, 1608-1628.http://dx.doi.org/10.1016/j.jclepro.2010.07.007

Ernst, & Young. (2008). Comparative advantage and green business. Comparative Advantage and Green Business, June.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/42972/1_20090501131921_e____ComparativeAdvantage.pdf

Firmansyah, F., Purnamasari, P. E., & Djakfar, M. (2019). Religiusitas, ingkungan dan pembelian green product pada konsumen Generasi Z. Iqtishoduna, 15(1), 5-10. https://doi.org/10.18860/iq.v1i1.5779

Grundey, D. 2008. Experiental Marketing vs Experiental Tradisional: Creating Rantional and Emotinal Liaisons With Consumers. Vilnius University. The Romanian Economic Jounarl. Year XI no. 29.

Hendarsih, I. (2017). Analisis Konsep Green Product sebagai Pelaksanaan Etika Bisnis

pada Perusahaan. Widya Cipta, 1(1), 76–85. https://doi.org/10.31294/widyacipta.v1i1.158

Hakim, A.R (2010). Analisis Pengaruh Penerapan Konsep Green MarketingTerhadap Keputusan Pembelian Produk di Serambi Botani,Botani Square, Bogor. Bogor: Institut Pertanian Bogor.

Kusdi, R. (2018). and Medium Enterprises. The Role of Green Management in

CreatingSustainability Performance on The Small and Medium Enterprises. Management ofEnvironmental Guality:An International Journal. https://doi.org/10.1108/MEQ-03-2018-0053

Kanio, Tjahjono, H. K., & Fauziyah. (2018). Analisis SWOT Sebagai Langkah Menentukan Strategi Kompetitif Pada Green Business. Journal of Management, 1–7. https://doi.org/http://dx.doi.org/10.1016/j.encep.2012.03.001

Larasati, K. D. (2018). Pengaruh Literasi Keuangan, Kompetensi Sumber Daya Manusia, Dan Modal Usaha Terhadap Kinerja UMKM DI Surabaya Artikel Ilmiah. STIE Perbanas Surabaya, 1–9. http://eprints.perbanas.ac.id/4086/

Okada, E.M. & Mais, E.L. (2010). Framingthe green alternative for environmentallyconscious consumers, sustainabilityaccounting. Management and PolicyJournal. 1 (2), 222-234

Pratiwi. R. S., (2022, Mei 21). Manfaatkan Sampah, Gerai Baru The Body Shop Lebih Ramah Lingkungan. Retrieved from Kompas.com: https://lifestyle.kompas.com/read/2022/05/21/060000420/manfaatkan-sampah-gerai-baru-the-body-shop-lebih-ramah-lingkungan?page=all

Padmalia, M. (2018). DETERMINAN KEPUTUSAN PEMBELIAN PRODUK GREEN. Jurnal Manajemen Maranatha, 17(2), 91–102. http://journal.maranatha.edu/jmm

Pandey, A., & Singh, G. (2017). Development and storage study of reduced sugarsoy containing compound chocolate. Journal of food science andtechnology, 48(1), 76-82

Rahnama, H., & Rajabpour, S. (2016).Identifying effective factors onconsumers' choice behavior toward green products: The case of Tehran, thecapital of Iran. Environmental Scienceand Pollution Research, 24(1). 911-925.doi: 10.1007/s11356-016-7791.

Rapih, S. (2015). Analisis Pengaruh Kompetensi Sumber Daya Manusia (Sdm), Modal Sosial Dan Modal Finansial Terhadap Kinerja Umkm Bidang Garmen Di Kabupaten Klaten. Assets: Jurnal Akuntansi Dan Pendidikan, 4(2), 1–20. https://doi.org/10.25273/jap.v4i2.685

Sumiati, & Susanto, R. (2021). Kontribusi Ghrm, Green Input, Green Process Dan Green Product Terhadap Economic Performance. Jurnal Menara Ekonomi : Penelitian Dan Kajian Ilmiah Bidang Ekonomi, 7(2), 81–92. https://doi.org/10.31869/me.v7i2.2870

Saputra, E. (2015). Analisa Faktor-Faktor Yang Mempengaruhi Minat Beli Konsumen dan Strategi Pemasaran Terhadap Produk Ramah Lingkungan Lampu LED Dikota Pekanbaru. http://repository.uin-suska.ac.id/2997/3/BAB II.pdf%0A

Usada, Untung & Widya Arie (2019). Pengaruh Green Product dan Green Marketing terhadap Kinerja Usaha KecilMenengah Berbasis Ramah Lingkungan.Prosiding SnasTeks 2019. Unusida,Sidoarjo.

Wibowo, A. (2022). Model Bisnis Ramah Lingkungan (Green Business). In Yayasan Prima Agus Teknik (Vol. 8, Issue 1).

Zulkifli, A. (2020). GREEN MARKETING; Redefinisi Green Product, Green Price, Green Promotion, Green Place (1st ed.). Graha Ilmu.

Zhang, Guirong, and Zongjian Zhao. 2012. "GreenPackaging Management ofLogisticsEnterprises." Physics Procedia 24:900–905.