
THE INFLUENCE OF GREENWASHING PERCEPTION AND WORD-OF-MOUTH TOWARD GREEN PURCHASE INTENTION ON SINGLE-USE PLASTIC PRODUCTS

¹ Nurul Marliza Putri Hesti, ² Hafiz Rahman, ³ Donard Games

^{1,2,3} Master of Management Program, Faculty of Economics and Business, Universitas Andalas

Correspondent author: nurulmarlizaph@gmail.com

Padang, 25171, Indonesia

Abstract

The background of this research is the misleading eco-friendly claim made by manufacturers of products with disposable packaging (Single-Use Plastic Products). These practices are referred as greenwashing. The purpose of this study is to examine the impact of greenwashing perceptions and word-of-mouth on green purchase intention towards environmentally friendly products on products that use Single-Use Plastics packaging, especially bottled mineral water products (Air Minum dalam Kemasan/AMDK). The research method uses a quantitative approach. The sampling technique uses purposive sampling, where respondents are selected by considering certain criteria. The number of samples in this study were 160 respondents who live in Padang City, Indonesia. The data collection technique uses a survey method with questionnaires both online and offline. The data processing method uses Structural Equation Modeling - Partial Least Square (SEM-PLS) v4. The results showed that greenwashing perception has a negative effect on green purchase intention. This means that the higher the greenwashing perception of consumers, the lower their intention to purchase disposable packaging products. Meanwhile, word-of-mouth has a positive and significant effect on green purchase intention.

Keywords: Green Marketing; Green Purchase Intention; Greenwashing Perception; Single-Use Plastic Products

Open Access at: <https://journalpublicuho.uho.ac.id/index.php/journal/index>

Journal Publicuho is licensed under a [Creative Commons Attribution 4.0 International License](#).

INTRODUCTION

Environmental issues continue to be an important issue of global concern. The real impact felt by many people has made leaders, environmental activists and public realize about sustainability in the future. To face the challenges in environmental, political and economic area, the United Nations Conference in 2015 agreed on an agenda for sustainable development goals (SDGs). One focus of environmental issues in the SDGs is on Goal 12, which aims to promote more responsible consumption and production by ensuring the adoption of sustainable consumption and production.

As environmental concerns become more serious, the consumption of environmentally friendly products is gaining more attention from companies and consumers. Manufacturers that make products with single-use plastics (SUPs) are one of the main contributors to the increase in plastic waste (OECD, 2022). The increasing demand for consumption of "green" products encourages companies to develop more environmentally friendly marketing strategies to show consumers a good corporate image and social

responsibility (Zhang et al., 2018). However, these “green” or “sustainable” claims are not always well accepted by consumers. When consumers perceive that green marketing communication is not accompanied by real action, consumers perceive the company's actions as greenwashing practices (Setiawan & Yosephani, 2022). Perceived greenwashing is a consumer attitude when a company's green marketing promises more benefits for environmental sustainability than what the company actually does (Zhang et al., 2018).

Consumers who have a positive perception of a product tend to give recommendations to others, including family, friends, relatives, coworkers, or even do reviews through social media. This is what can be referred to as word of mouth (WOM). If a company makes environmentally friendly claims that cannot be proven to its consumers through greenwashing, it allows customers to spread opinions that shape their and others' market behavior (Singh et al., 2022).

As awareness of the importance of the environment increases, many consumers realize that their purchasing decisions have an impact on the ecological environment (Zhuang et al., 2021). Purchase intention refers to the likelihood of consumers to buy products that are produced with the environment in mind, and reflects how much consumers are willing to buy products and services from companies that are known to be environmentally friendly (Zhang et al., 2018).

Based on a report released by Plastic Overshoot Day in 2023, the total plastic consumption worldwide was 158.94 million tons per year. Of the total plastic waste, around 43.19% or 68.64 million tons of it is not managed properly at the end of its life, so that it ends up on land and waters, such as rivers and oceans. In fact, Indonesia ranks fourth in terms of poorly managed plastic waste production, after India, China and Brazil (Plastic Overshoot Day, 2023).

In Indonesia, the amount of national waste continues to increase every year. The National Waste Management Information System (SIPSN) of the Ministry of Environment and Forestry of the Republic of Indonesia (Ministry of LHK) released data that the total national waste generation has increased by 35.31% year-on-year in 2022 compared to 2019.

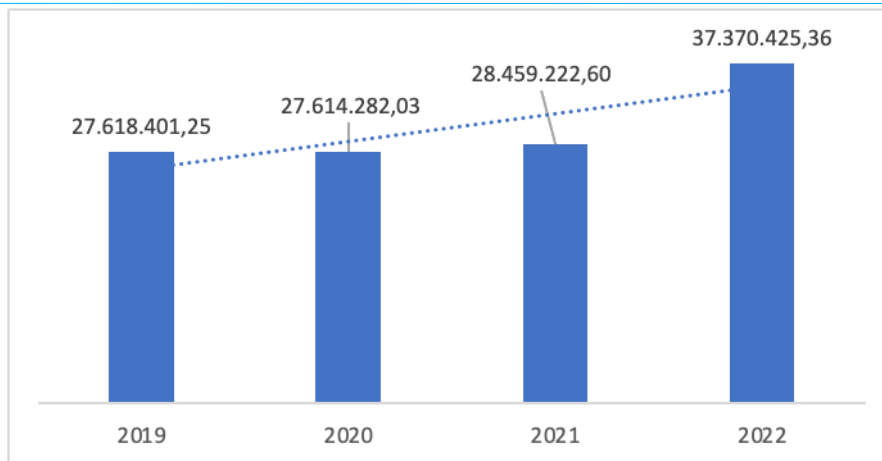


Figure 1. National Waste Generation 2019 - 2022

Source: Processed from SIPSN KemenLHK for research, 2024

In line with the increase in national waste generation, the amount of plastic waste in Indonesia is also experiencing an increasing trend every year. When differentiated by waste type, the national waste composition in 2022 is dominated by food waste (40.77%), and plastic waste is the second largest (18.24%).

In 2021-2022, the trend of plastic waste data in Padang City decreased from 13.6% to 12.4%. However, in 2023 it tends to stagnate even though it has increased in terms of the amount of waste generation. As for 2022, the total plastic waste generation in Padang City was 28,940 tons. For Padang City, the composition of waste generation in 2023 is also dominated by food waste of 148,867 tons (63%) and plastic waste of 29,301 tons (12.4%).

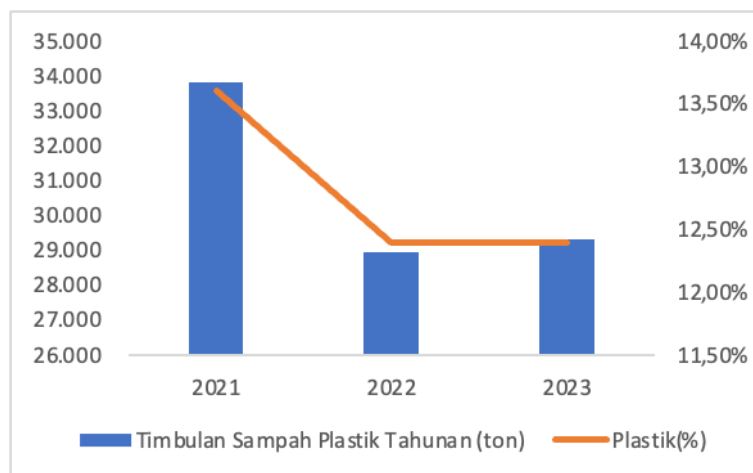


Figure 2. Plastic Waste Generation in Padang City, West Sumatera in 2021-2023

Source: Processed from SIPSN KemenLHK for research, 2024

With the large amount of waste that exists in areas in Indonesia, such as Padang City, it must certainly be balanced with recycling facilities, especially for plastic waste. Defitri (2022) argues that in Indonesia itself, the waste recycling rate (recycle rate) is still low. The National Plastic Action Partnership (NPAP) Indonesia states that of the total plastic waste generated in

all regions in Indonesia, less than 10% is further processed through the recycling process (World Resources Institute (WRI) Indonesia, 2023).

In Indonesia, manufacturers of bottled water, soft drinks, etc. market their products through a commitment to contribute to solving the plastic waste problem. Among other things, they use recyclable packaging, provide recycle points, have their own recycling plants, continue to encourage consumers to be wise in the use of plastic and so on. However, the recycling system is unable to keep up with the increasing amount of plastic waste generated, causing recycling facilities to be unable to handle and process it. This results in most plastics ending up in landfills, being incinerated, or dispersing in the environment without being recycled (Jimenez, 2019).

On the basis of facts & data, this research has an urgency to examine consumer perceptions of environmental issues and word-of-mouth on their purchase interest in greenwashing products, especially products with disposable packaging such as bottled drinking water (AMDK) and soft drinks.

METHOD

This study aims to identify the effect of greenwashing perception and WOM on green purchasing intention using a quantitative approach. According to Creswell & Creswell (2018), quantitative research is an approach to testing objective theories by examining the relationship between variables. These variables can be measured with instruments, so that numerical data can be analyzed using statistical procedures. The variables used in this study consist of independent variable (X), namely greenwashing perception (X1) and word-of-mouth (X2) and dependent variable (Y), namely green purchase intention.

The population in this study are all individuals and households who are aware of the eco-friendly claims of bottled water and soft drinks brand products. The sample in this study was selected using the Non-Probability Sampling method with a purposive sampling approach, because the sample had to meet certain criteria. In this study, the sample size was 160 respondents using a guideline of 10 times the number of indicators/items. Data sources were obtained from primary data. The data collection technique uses a survey through a questionnaire distributed online and offline to respondents. A five-point Likert scale is used in measuring perception data from each question item or indicator for each variable. The Likert scale is used to assess the attitudes, views, and perceptions of individuals or groups regarding social phenomena (Sugiyono, 2022, p. 146).

Data analysis using the Structural Equation Model (SEM) SmartPLS version 4 to test the hypothesis. After the data is collected, it is then processed through SmartPLS, by testing the outer model and inner model test. Outer model test consists of validity and reliability tests. The validity test is to test whether a series of indicators can be used or not. The validity test consists

of convergent validity and discriminant validity. Convergent validity tests indicators by looking at the outer loadings value. The general rule for convergent validity tests is that outer loadings must be at least 0.70 or higher (Outer Loadings > 0,70). In addition, the data can be concluded valid if the Average Variance Extracted (AVE) value is greater than 0.50. In discriminant validity, it can be seen in the value of cross loadings and the Heterotrait-Monotrait ratio (HTMT). The recommended HTMT threshold value is <0.90.

The reliability test aims to ensure consistent measurements both over time and between the various items contained in the instrument. In this study, the reliability test is seen from the Cronbachs Alpha and Composite Reliability values. if a variable has a Cronbach alpha and composite reliability value greater than 0.70, it can only be said to be reliable. Furthermore, the R Square assessment is carried out to see the proportion of variation in the dependent variable explained by the independent variable. Hypothesis testing can be analyzed from the bootstrapping results. The output can explain whether the hypothesis is accepted or rejected, by looking at the original sample value, t-statistics and p-values. Original sample to see the direction of influence between variables, positive or negative. Variables can be concluded to be significant if the T statistics value is greater than 1.64 (one-tailed) with a significance level > 0.05 (95% confidence level).

RESULTS AND DISCUSSION

Characteristics of Respondents

Based on gender, the characteristics of respondents are dominated by women as many as 126 people or 78.75%, while men are 34 people or 21.25%. Based on age, respondents are dominated by 21-30 years old by 45%, 31-40 years old by 21.88% and 17-20 years old by 15%, the rest are 41 years old and above. Based on the last level of education, Undergraduate dominates with 57.5%, followed by Senior High graduates by 33.125%. This is because most of the respondents are still undergraduate students.

Outer Model Measurement

Convergent validity can be seen from the AVE value. Table 1 shows that all variables meet the prerequisites of convergent validity, reflected by the AVE value > 0.5. In addition, reliability prerequisites are also met. Cronbach's alpha and Composite reliability values > 0.70. Thus, it can be concluded that each indicator has consistency and accuracy in measuring constructs.

Table 1. Cronbach's Alpha, Composite Reliability and AVE

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Green Purchase Intention	0.792	0.873	0.875	0.703
Greenwashing Perception	0.893	0.956	0.919	0.694
WOM	0.948	0.949	0.963	0.866

Source: Data processing from SmartPLS, 2024.

The discriminant validity test can be seen from the HTMT ratio value. Hair et al. (2019), suggest using HTMT because it is considered more accurate in measuring discriminant validity. The recommended HTMT ratio is lower than 0.90. In Table 2, the HTMT value has met the prerequisites of the discriminant validity test with a value <0.90.

Table 2. Rasio Heterotrait-Monotrait (HTMT)

	Green Purchase Intention	Greenwashing Perception	WOM
Green Purchase Intention			
Greenwashing Perception	0.207		
WOM	0.677	0.245	

Source: Data processing from SmartPLS, 2024.

R Square

Based on the results of data processing with SEM PLS, the R-Square results are obtained as follows:

Table 3. R-Square

	R-square	R-square adjusted
Green Purchase Intention	0.392	0.384

Source: Data processing from SmartPLS, 2024.

The R Square value indicates how much the combination of independent variables together affects the value of the dependent variable. Based on Table 3, the R square value for Green Purchase Intention is 0.392, meaning that the combination of Greenwashing Perception and Word-of-Mouth variables is able to explain the Green Purchase Intention variable by 39.2%. While the remaining 60.8% is the influence of other independent variables outside the model used in this study.

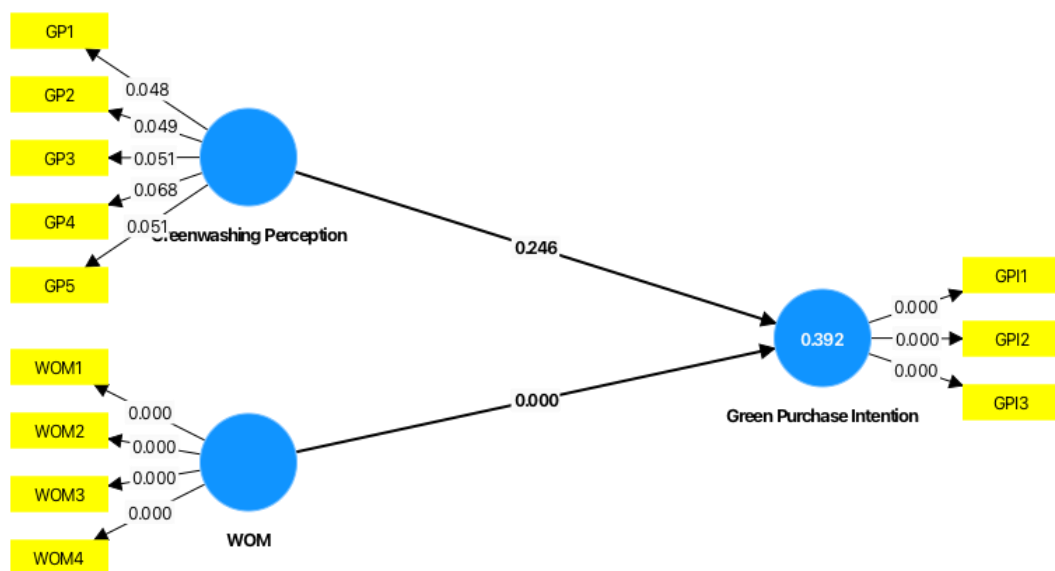


Figure 3. Bootstrapping Output

Source: Data processing from SmartPLS, 2024.

Hypotheses Testing

Hypothesis testing is measured from the output results through bootstrapping. The output can determine whether the hypothesis is accepted or rejected.

In this study there are two hypotheses, as follows:

H1: Greenwashing perception is negatively related to Green Purchase Intention on Single-Use Plastic (SUPs) products.

H2: Green WOM is positively related to Green Purchase Intention on Single-Use Plastic (SUPs) products.

Table 4. Path Coefficients

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Greenwashing Perception -> Green Purchase Intention	-0.062	-0.027	0.091	0.686	0.246
WOM -> Green Purchase Intention	0.639	0.635	0.060	10.689	0.000

Source: Data processing from SmartPLS, 2024.

Based on Table 4, it can be concluded that both hypotheses are accepted. The relationship between Greenwashing Perception and Green Purchase Intention shows an opposite or negative direction of 0.062. Meanwhile, the relationship between WOM and Green Purchase Intention shows a relationship with a positive direction of 0.639 and is significant with a T statistics value of $10.689 > 1.64$, p values of $0.000 < 0.05$.

Greenwashing Perception and Green Purchase Intention

The results of data processing show that greenwashing perception is negatively related to green purchase intention on products with Single-Use Plastic (SUPs) packaging. This means that the higher consumers' perceptions of greenwashing actions carried out by producers or companies, the lower their intention to buy these single-use packaging products. This finding is supported by previous research which shows that perceptions of greenwashing have a negative impact on the purchase intention of environmentally friendly products (Lu et al., 2022; Setiawan & Yosephani, 2022; Sun & Shi, 2022; Zhang et al., 2018).

Word-of-Mouth and Green Purchase Intention

Consumers have the ability to influence other consumers in the decision-making process to buy environmentally friendly products. Based on the research results, WOM is positively and significantly related to Green Purchase Intention on products with disposable packaging. This finding is in line with the findings of Zhang et al. (2018) which proves that Green WOM has a significant positive relationship with the purchase intention of environmentally friendly products. Tseng & Hung (in Ahmad & Zhang, 2020) in their study found that consumers who are exposed to information about environmentally friendly products not only contribute to the environment but also increase their purchase intentions.

CONCLUSION

Based on the results and discussion, it can be concluded that Greenwashing perception is negatively related to Green Purchase Intention on products with disposable packaging or Single-Use Plastics/SUPs. Green WOM is positively and significantly related to Green Purchase Intention on products Single-Use Plastics/SUPs. This finding is expected to be an evaluation material for producers, policy makers, and consumers related to waste management to ensure the adoption of sustainable consumption and production patterns.

BIBLIOGRAPHY

- Ahmad, W., & Zhang, Q. (2020). Green purchase intention: Effects of electronic service quality and customer green psychology. *Journal of Cleaner Production*, 267. <https://doi.org/10.1016/j.jclepro.2020.122053>
- Creswell, J. W., & Creswell, D. J. (2018). *Research Design: Qualitative, Quantitative, and Mixed Method Approaches* (A. Marks, Ed.; Fifth Edition). SAGE Publications, Ltd.
- Defitri, M. (2022, December 27). Fakta Mengejutkan Daur Ulang. *Waste4Change*. <https://waste4change.com/blog/fakta-daur-ulang-yang-mengejutkan/>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. In *European Business Review* (Vol. 31, Issue 1, pp. 2–24). Emerald Group Publishing Ltd. <https://doi.org/10.1108/EBR-11-2018-0203>
- Jimenez, A. (2019). Alasan Mengapa Sekali Pakai Bukan Pilihan yang Berkelanjutan. *Greenpeace Indonesia*. [https://www.greenpeace.org/indonesia/cerita/3860/alasan-mengapa-sekali-pakai-bukan-pilihan-yang-berkelanjutan/OECD. \(2022\). Global plastic waste set to almost triple by 2060, says OECD. OECD. <https://www.oecd.org/environment/global-plastic-waste-set-to-almost-triple-by-2060.htm>](https://www.greenpeace.org/indonesia/cerita/3860/alasan-mengapa-sekali-pakai-bukan-pilihan-yang-berkelanjutan/OECD. (2022). Global plastic waste set to almost triple by 2060, says OECD. OECD. https://www.oecd.org/environment/global-plastic-waste-set-to-almost-triple-by-2060.htm)
- Lu, X., Sheng, T., Zhou, X., Shen, C., & Fang, B. (2022). How Does Young Consumers' Greenwashing Perception Impact Their Green Purchase Intention in the Fast Fashion Industry? An Analysis from the Perspective of Perceived Risk Theory. *Sustainability* (Switzerland), 14(20). <https://doi.org/10.3390/su142013473>
- Setiawan, B., & Yosephani, A. (2022). The linkage of Greenwashing Perception and Consumers' Green Purchase Intention (A Case Study of Single-Use Water Bottled). *Trijurnal*, Vol. 22(Nomor 1 April 2022: 85-96).
- Singh, N., Gupta, K., & Kapur, B. (2022). Greenwashed word of mouth (GWWOM): a vibrant influence on customer green behaviour. *Journal of Global Responsibility*, 13(4), 472–487. <https://doi.org/10.1108/JGR-11-2021-0094>
- Sistem Informasi Pengelolaan Sampah Nasional (SIPSN). (2023). *Capaian Kinerja Pengelolaan Sampah Tahun 2022*. Sistem Informasi Pengelolaan Sampah Nasional (SIPSN) Kementerian Lingkungan Hidup Dan Kehutanan Republik Indonesia. <https://sipsn.menlhk.go.id/sipsn/>
- Sugiyono. (2022). *Metode Penelitian Kuantitatif, Kualitatif dan R&D* (Sutopo, Ed.; Cetakan Keempat). Alfabeta.
- Sun, Y., & Shi, B. (2022). Impact of Greenwashing Perception on Consumers' Green

Purchasing Intentions: A Moderated Mediation Model. *Sustainability (Switzerland)*, 14(19). <https://doi.org/10.3390/su141912119>

Zhang, L., Li, D., Cao, C., & Huang, S. (2018). The influence of greenwashing perception on green purchasing intentions: The mediating role of green word-of-mouth and moderating role of green concern. *Journal of Cleaner Production*, 187, 740–750. <https://doi.org/10.1016/j.jclepro.2018.03.201>

Zhuang, W., Luo, X., & Riaz, M. U. (2021). On the Factors Influencing Green Purchase Intention: A Meta-Analysis Approach. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.644020>