

## THE EFFECT OF GREENWASHING PERCEPTIONS ON GREEN PRODUCT PURCHASING DECISIONS: A CASE STUDY ON BOTTLED DRINKING WATER CONSUMERS

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### Abstract

Greenwashing is a serious challenge amid increasing consumer awareness of sustainability. Even though companies like Aqua (Danone) implement green marketing, they still encounter manipulative practices that lower trust and hinder the purchase of environmentally friendly products. This study aims to analyze the influence of greenwashing perception on the decision to buy green products, by highlighting the mediating role of feelings of betrayal as well as the moderation of environmental responsibility and consumer environmental knowledge. A quantitative approach was used in this study with a cross-sectional design. Data was collected from 300 respondents who consumed green products through purposive sampling techniques. Data analysis was carried out using the Structural Equation Modeling (SEM) method. The results of the study show that the perception of greenwashing has a significant negative effect on the decision to buy green products and has a positive effect on the feeling of betrayal. The feeling of betrayal has been shown to lower the purchase decision and acts as a mediator in the relationship between the perception of greenwashing and the purchase decision. However, environmental responsibility and environmental knowledge have not been shown to moderate the relationship between greenwashing perceptions and purchasing decisions. These findings emphasize the importance of transparency in green marketing strategies. Companies need to ensure honesty in sustainability claims so as not to cause a sense of betrayal that can damage consumers' buying intentions for environmentally friendly products. **Keywords:** *Greenwashing*, Green Purchasing Decisions, Feelings of Betrayal, Environmental Responsibility, Environmental Knowledge.

### INTRODUCTION

The issue of environmental sustainability has become an increasingly urgent global agenda along with increasing awareness of the adverse impacts of climate change and environmental degradation. In this context, many companies are starting to adopt green marketing strategies as a step to meet the needs of consumers who are increasingly concerned about the environment (Boeske, 2023; Feroz et al., 2021; Jeswani et al., 2020; Rume & Islam, 2020; Usubiaga-Liaño & Ekins, 2021). Green products or eco-friendly products, which are aimed at reducing adverse impacts on the environment, are now a major attraction for many consumers. This strategy not only serves to attract customers, but also to improve the company's image in a competitive market (D'Angelo et al., 2023; Kamalanon et al., 2022; Majali et al., 2022; Moslehpour et al., 2023; Nuryakin & Maryati, 2020).

However, the practice Greenwashing It is a serious challenge in an effort to encourage green consumption. Greenwashing refers to the actions of companies that provide misleading

claims or images regarding the sustainability of their products or business activities, without any real basis in the company's operations. Consumers exposed to the practice Greenwashing , consumers in Jakarta are also the main targets for green marketing campaigns, including Greenwashing practices. Given the high rate of urbanization and consumer expectations of sustainability, understanding the dynamics of Greenwashing in Jakarta will provide valuable insights into how green marketing strategies can be tailored for the Indonesian market.

This study aims to analyze how the perception of Greenwashing affects the decision to buy green products in Jakarta. In addition, the study also sought to explore the role of feeling of betrayal as a mediating variable in this relationship. In line with this, this study will also identify the role of moderation of environmental responsibility and consumer environmental knowledge in strengthening or weakening these relationships.

The significance of this research lies not only in its theoretical contribution to the green marketing literature but also in its practical implications for companies operating in sustainability-sensitive markets. By understanding the factors that influence consumer perceptions and decisions, companies can adopt a more transparent and credible approach to green marketing.

## RESEARCH METHOD

This study adopts a quantitative approach aimed at testing hypotheses to determine the causal relationship between consumer perceptions of *greenwashing*, feelings of betrayal, environmental responsibility, knowledge of environmental issues, and decisions to purchase green products. The research design used is a cross-sectional design, collecting data at a single point in time. The primary data were gathered using a structured questionnaire divided into several sections based on the variables under investigation: consumer *greenwashing* perception (dependent variable), feelings of betrayal (mediating variable), environmental responsibility and environmental knowledge (moderating variables), and green product purchase decision (independent variable). The instrument used was tested for validity through Corrected Item Total Correlation and for reliability using Cronbach's Alpha, with  $\alpha > 0.70$  indicating internal consistency.

The population in this study consists of individuals who have experience purchasing green products. Using purposive sampling, 300 respondents were selected based on specific criteria relevant to the research objective. The questionnaire employed a 5-point *Likert* scale ranging from strongly disagree (1) to strongly agree (5). Data were collected over two weeks using an online distribution method. To ensure data integrity, a pilot test was conducted to assess the instrument's reliability and validity. Demographic questions were also included to support descriptive statistical analysis.

For data analysis, the study used *SPSS* 29.0 for descriptive statistics and *SmartPLS* 4.0 for Structural Equation Modeling (*SEM*). *SEM* was chosen to explore both direct and moderating effects between variables. The analysis included testing the outer model (measurement model) for convergent validity, discriminant validity, and composite reliability, as well as the inner model (structural model) for  $R^2$ , effect size ( $f^2$ ), and hypothesis testing using the bootstrapping technique. Moderating effects were analyzed using the product indicator

approach as outlined by Chin et al., to assess the interaction between environmental knowledge/responsibility and the main predictors.

## RESULTS AND DISCUSSION

### Description of Research Data

The data used in this study is primary data collected directly from respondents through the distribution of online questionnaires. This study aims to analyze the influence of *Greenwashing* Perception on the Decision to Buy Green Products with *Feeling of Betrayal* as the mediating variable and Environmental Responsibility and Environmental Knowledge as the moderation variable.

Data collection was carried out over a period of two weeks, and the total responses collected were 300 respondents. Data is collected online to reach respondents more widely and efficiently. Each variable indicator is described in the form of a statement that is relevant and in accordance with the theoretical concept underlying this study. The following are the characteristics of the respondents:

### Respondent Data by Gender

**Table 1. Description of Respondents by Gender**

Gender	Sum	Percentage
Man	108	36,00%
Woman	192	64,00%
<b>Total</b>	<b>300</b>	<b>100%</b>

Source : Researcher Questionnaire, 2025

Based on Table 1, it can be seen that the majority of respondents in this study are women, which is 192 people or 64% of the total 300 respondents. Meanwhile, the male respondents amounted to 108 people or around 36%. This shows that women's participation in this study is more dominant than that of men.

### Data by Age

**Table 2. Descriptive by Age**

Age	Sum	Percentage
17-24 Years	91	30,33%
25-35 Years	109	36,33%
36-45 Years	55	18,33%
46-55 Years	28	9,33%
56-60 Years	17	5,67%
<b>Total</b>	<b>300</b>	<b>100%</b>

Source : Researcher Questionnaire, 2025

Based on Table 2 above, it can be seen that the age group with the largest number of respondents is in the age range of 25-35 years, which is 109 people or 36.33% of the total respondents. Furthermore, the age group of 17-24 years ranked second with a total of 91 people

or 30.33%. Respondents in the age range of 36-45 years amounted to 55 people (18.33%), while the age group of 46-55 years was 28 people (9.33%). The respondents aged 56-60 years were the smallest group with 17 people or 5.67%. This shows that the majority of respondents in this study are of productive age, especially in the range of 25–35 years.

**Data by Recent Education**

**Table 3. Descriptive Based on Education**

<b>Education</b>	<b>Sum</b>	<b>Percentage</b>
SMA	26	8,67%
Bachelor	107	35,67%
Master	82	27,33%
Other	85	28,33%
<b>Total</b>	<b>300</b>	<b>100%</b>

Source : Researcher Questionnaire, 2025

Based on Table 3, it can be seen that the majority of respondents in this study have a Bachelor's education (S1) background, which is as many as 107 people or 35.67% of the total respondents. The next group is the "Other" category which includes educational levels outside the main choice (such as D3, Elementary, Junior High, or others), with a total of 85 respondents or 28.33%. Respondents with the last Master's education (S2) amounted to 82 people (27.33%), and high school graduates as many as 26 people (8.67%). These findings show that most of the respondents have higher education, with a dominance of Bachelor's graduates.

**Job-Based Respondent Data**

**Table 4. Descriptive Based on Work**

<b>Work</b>	<b>Sum</b>	<b>Percentage</b>
Student/Student	41	13,67%
Entrepreneur/Entrepreneur	66	22,00%
Private Employees	102	34,00%
Civil Servant	53	17,67%
Other	38	12,67%
<b>Total</b>	<b>300</b>	<b>100%</b>

Source : Researcher Questionnaire, 2025

Based on Table 4, it can be seen that the majority of respondents in this study work as private employees, with a total of 102 people or 34% of the total respondents. Furthermore, respondents who work as entrepreneurs or entrepreneurs rank second most, namely 66 people (22%). Civil servants totaled 53 people (17.67%), while students or students were 41 people (13.67%). The other categories of work, such as freelance or non-permanent workers, amounted to 38 people (12.67%). These findings show that respondents with a background as private employees were the dominant group in this study.

### *Respondents Based on Marital Status*

**Table 5. Descriptive Based on Marital Status**

<b>Marital Status</b>	<b>Sum</b>	<b>Percentage</b>
Single	114	38,00%
Marry	168	62,00%
<b>Total</b>	<b>300</b>	<b>100%</b>

Source : Researcher Questionnaire, 2025

Based on Table 5, it can be seen that the majority of respondents in this study are married, namely 186 people or 62% of the total 300 respondents. Meanwhile, respondents who are still single amounted to 114 people or around 38%.

### *Respondents Based on Monthly Expenses*

**Table 6. Descriptive Based on Monthly Expenses**

<b>Monthly Expenses</b>	<b>Sum</b>	<b>Percentage</b>
Less than 3 million rupiah	67	22,33%
3 – 5 million rupiah	127	42,33%
More than 5 million rupiah	106	35,33%
<b>Total</b>	<b>300</b>	<b>100%</b>

Source : Researcher Questionnaire, 2025

Based on Table 6, the majority of respondents in this study have monthly expenses of 3 to 5 million rupiah, which is 127 people or around 42.33% of the total respondents. Furthermore, as many as 106 respondents (35.33%) have monthly expenses of more than 5 million rupiah. Meanwhile, respondents with expenses of less than 3 million rupiah amounted to 67 people or 22.33%. These findings show that most consumers of environmentally friendly bottled water products such as Aqua from Danone come from the middle to upper purchasing power group. This is important in the context of research because this group tends to be more environmentally conscious and more critical of *the Greenwashing* practices carried out by companies.

### **Descriptive Statistics**

Descriptive analysis aims to describe the profile of the sample data before utilizing statistical analysis techniques that serve to test hypotheses. Descriptive statistics provide an overview of data seen from the mean value, standard deviation, maximum, and minimum.

Minimum and maximum values indicate the extreme distribution of the data, while average values provide information about central tendencies. Standard deviation is used to see how far the data is spread from the mean value, which can reflect the homogeneity or heterogeneity of the data. This study involved 300 respondents, with the variables analyzed consisting of independent variables, namely *Greenwashing Perception*, dependent variables, namely Green Product Purchase Decisions, and mediation and control variables such as Feelings of Betrayal, Consumer Environmental Responsibility, and Consumer Environmental Knowledge.

**Table 7. Result *Descriptive Statistical Analysis***

<b>Variable</b>	<b>N</b>	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>Std. Deviation</b>
Perception of <i>Greenwashing</i>	300	15.00	50.00	36.0400	7.90612
Feelings of Betrayal	300	8.00	40.00	28.1367	6.30002
Decision to Buy Green Products	300	8.00	40.00	27.7000	6.74103
Consumer Environmental Responsibility	300	15.00	40.00	33.6300	4.44285
Consumer Environmental Knowledge	300	13.00	35.00	28.1833	4.16664

The results of descriptive statistical analysis of each variable can be explained as follows:

- 1) Greenwashing perception *has* a minimum value of 15.00 and a maximum value of 50.00, with an average value of 36.0400 and a standard deviation of 7.90612. This shows that respondents' perceptions of *Greenwashing* practices are quite varied and tend to be at moderate to high levels.
- 2) Betrayed Feelings showed a minimum value of 8.00 and a maximum of 40.00, with an average of 28.1367 and a standard deviation of 6.30002. This value indicates that most respondents feel a fairly high level of betrayal of eco-friendly claims that may not be entirely true.
- 3) The Green Product Purchase Decision has a minimum value of 8.00 and a maximum of 40.00, with an average of 27.7000 and a standard deviation of 6.74103. This means that there is a strong tendency in decision-making to buy environmentally friendly products among respondents.
- 4) Consumer Environmental Responsibility shows a minimum value of 15.00 and a maximum of 40.00, with an average of 33.6300 and a standard deviation of 4.44285. This reflects the high environmental awareness among consumers in this study.
- 5) Consumer Environmental Knowledge has a minimum value of 13.00 and a maximum of 35.00, with an average of 28.1833 and a standard deviation of 4.16664. This shows that respondents have a fairly good level of knowledge regarding environmental issues.

### **The Effect of *Greenwashing Perception* on Purchasing Decisions for Environmentally Friendly Products**

Based on the results of the analysis in Table 12, a coefficient value of -0.144 with a significance level of 0.028 was obtained, which shows that there is a negative and significant influence between the perception of *Greenwashing* on the purchase decision of environmentally friendly products. This negative coefficient value indicates that the higher the consumer's perception of *Greenwashing*, the lower their decision to buy the product, in this case bottled drinking water from Danone's Aqua brand.

When consumers judge that the sustainability claims of a product are inauthentic or misleading, they experience an increased perceived risk to the integrity of the product and the company, leading to a decrease in trust and intention to buy green products (Chen & Chang, 2013). *Greenwashing* creates cognitive dissonance due to the mismatch between the ethical expectations of consumers and the reality of corporate behavior. Consumers who feel let down by such false claims become more defensive, skeptical, and ultimately avoid products with sustainability claims, regardless of their quality or environmental benefits (Ahmed *et al.*, 2020). Even companies with previously strong reputations, such as Aqua in the context of this study, can lose credibility when consumers feel the "eco-friendly" message doesn't align with their actual practices, such as the use of single-use plastics. Therefore, the higher the consumer's perception of *Greenwashing*, the lower their tendency to buy green products (Hung & Chang, 2024).

*Greenwashing* creates confusion and risks felt by consumers due to the mismatch between green claims and reality. In this study, several respondents said that they began to doubt the validity of Aqua's "eco-friendly" claim because there are still many uses of single-use plastic packaging. Furthermore, these results are also reinforced by the findings of Ahmed *et al.* (2020) which found that *Greenwashing* has a negative impact on consumer confidence and ultimately reduces the intention to buy green products. Consumers who feel that companies are using eco-friendly imagery only for marketing purposes without real evidence are likely to avoid the product.

Hung & Chang (2024) also support this finding, where in their study they mention that the perception of *greenwashing* contributes to declining trust and increasing consumer skepticism, which has a negative impact on purchasing decisions. In the context of this study, the inconsistency between Danone-Aqua's "Plastic Wise" campaign and the reality of plastic use is considered a form of inauthenticity of the company's green claims.

This research is also in accordance with Adil *et al.* (2024), which reveals that the perception of *Greenwashing* causes feelings of betrayal in consumers, which ultimately reduces purchase intent. In the case of Aqua, something similar happened, especially in respondents with a high level of environmental knowledge. Zhang *et al.* (2024) added that *Greenwashing* can weaken the overall brand value and make consumers question the integrity of the company. Therefore, the findings in this study reinforce the previous literature that the practice of *greenwashing*, when realized by consumers, can actually have the opposite effect on loyalty and purchase decisions.

### **The Effect of *Greenwashing* Perception on Feelings of Betrayal**

Based on the results of the analysis presented in Table 4.16, the second hypothesis (H2) that states that consumer *Greenwashing* perception has a positive effect on feelings of betrayal is supported by the results of the study. The coefficient obtained was  $\beta = 0.801$ ,  $p = 0.000$ , which shows that the effect of *Greenwashing* perception on feelings of betrayal is statistically significant.

The perception of *greenwashing* can increase the sense of betrayal in consumers, especially when they feel that a company's sustainability claims are only being used as a marketing tool, without any real commitment to sustainability. *Greenwashing* leads to

confusion and mistrust, which gives rise to feelings of betrayal among consumers who are initially committed to eco-friendly practices (Lu *et al.*, 2022). Consumers feel aggrieved by claims that are not realized in the company's products or actions, thus giving rise to a deep sense of disappointment (Nguyen *et al.*, 2021). This research shows that the higher the perception of *Greenwashing*, the more likely consumers are to feel betrayed, which can affect their relationship with the brand or product.

Lu *et al.* (2022) provides similar findings, indicating that the perception of *Greenwashing* in the fashion industry triggers feelings of betrayal among young consumers, especially those with high levels of environmental awareness. Consumers feel disadvantaged because of environmentally friendly claims that are not supported by real actions. Research by Nguyen *et al.* (2021) also supports these results by showing that *Greenwashing* in the electronics industry worsens corporate image and creates feelings of betrayal among consumers. When eco-friendly claims are proven wrong, consumers are more likely to feel lied to, which further lowers their trust in the product.

### **The Influence of Feelings of Betrayal on Buying Decisions**

The third hypothesis (H3) tests the influence of feelings of betrayal on the decision to buy green products. The results of the analysis showed that the feeling of betrayal had a negative and significant effect on the decision to buy green products, with a coefficient value of -0.636, t-statistic of 9.242, and p-value of 0.000. This means that the greater the feeling of betrayal felt by consumers, the less intention they have to buy green products. The feeling of betrayal caused by the perception of *Greenwashing* plays an important role in lowering the decision to buy environmentally friendly products. When consumers feel they have been manipulated by invalid sustainability claims, their desire to endorse the product or brand decreases drastically.

These findings are in line with previous research results that showed that *greenwashing* can trigger feelings of betrayal among consumers, ultimately reducing their intention to buy green products. For example, research conducted by Tarabieh (2021) states that *Greenwashing* triggers negative emotions in the form of feelings of betrayal, which directly decreases the decision to buy green products. A similar thing was also found in the study of Zhang *et al.* (2024), which reveals that the perception of *Greenwashing* lowers the brand image and purchase intention of green products through feelings of betrayal.

In addition, the research of Lu *et al.* (2022) also supports these findings, suggesting that the perception of *Greenwashing* serves as a mechanism that lowers the decision to buy green products by increasing feelings of betrayal. In this case, consumers who feel cheated by inauthentic sustainability claims become more reluctant to support the company, leading to a decrease in buying interest.

### **Mediating Effects of Betrayed Feelings in the Relationship between *Greenwashing* Perceptions and Purchasing Decisions**

The fourth hypothesis (H4) in this study examines whether the feeling of betrayed acts as a mediator in the relationship between the perception of *Greenwashing* and the decision to buy green products. The results of the analysis show that the feeling of betrayal has a significant mediating influence, so this hypothesis is supported. This means that the high perception of

*Greenwashing* leads to an increased feeling of betrayal, which in turn decreases the intention or decision of consumers to buy green products. In this case, the feeling of betrayal acts as an intermediary that mediates the effects of *Greenwashing* on the decision to buy eco-friendly products.

These findings are consistent with Tarabieh's (2021) research which reveals that *Greenwashing* can increase the confusion and risk that consumers feel, ultimately leading to feelings of betrayal. This feeling directly affects the decision to buy green products, which further reduces the desire of consumers to buy the product. Therefore, feelings of betrayal can serve as a mechanism that links the perception of *Greenwashing* to reduced purchase intent.

Lu *et al.* (2022) also showed that the perception of *Greenwashing* leads to feelings of betrayal which ultimately decreases the decision to buy green products, which corroborates the results of this study. The research states that when consumers feel that sustainability claims made by companies are not trustworthy, they are more likely to feel betrayed, which ultimately hurts their purchasing decisions. In addition, Nguyen *et al.* (2021) found that the feeling of betrayal caused by *Greenwashing* reduces consumer confidence in green products and hinders the decision to buy them. This study underscores the importance of feelings of betrayal in mediating the influence of *Greenwashing* on purchasing decisions.

### **The Role of Consumer Environmental Responsibility Moderation in the Relationship between *Greenwashing* Perceptions and Purchasing Decisions**

The fifth hypothesis (H5) examines the role of consumer environmental responsibility moderation in the relationship between *Greenwashing perception* and green product purchasing decisions. The results of the analysis showed that the influence of these interactions was not significant, so this hypothesis was rejected. This means that the level of consumer environmental responsibility does not moderate the influence of *Greenwashing* perception on the decision to buy green products. In this case, even though consumers have a high level of environmental responsibility, it is not enough to reduce the negative impact that the perception of *greenwashing* has on purchasing decisions.

These findings contradict previous research, such as Bulut *et al.* (2021), which shows that consumers with a high level of environmental knowledge and concern are better able to reduce the negative impact of *Greenwashing*. Knowledge and positive attitudes towards sustainability should allow consumers to be more critical in evaluating inauthentic sustainability claims, so that the influence of *Greenwashing* on purchasing decisions becomes weaker. However, the results of this study show that in certain contexts, the level of environmental responsibility is not strong enough to change purchasing decisions if the perception of *Greenwashing* is already too dominant.

Consumers with high environmental responsibility are more skeptical of inauthentic green claims, other factors, such as the strength and perseverance of perceptions of *the greenwashing* practice itself, may be more dominant in influencing purchasing decisions. Therefore, these results suggest that psychological factors and perceptions of inauthentic green claims may influence purchasing decisions more than just consumer environmental responsibility levels.

### **The Role of Moderating Consumer Environmental Knowledge in the Relationship between *Greenwashing* Perceptions and Purchasing Decisions**

The sixth hypothesis (H6) examines the role of moderation's level of environmental knowledge on the relationship between *Greenwashing perception* and the decision to purchase green products. The results of the analysis show that the influence of these interactions is not significant, so this hypothesis is not supported. This means that consumers' level of environmental knowledge does not strengthen or weaken the relationship between the perception of *Greenwashing* and the decision to buy green products. This shows that even if consumers have a higher level of knowledge about environmental issues, it is not enough to reduce the negative influence that the perception of *greenwashing* has on purchasing decisions.

These results contradict the findings of Zhang *et al.* (2024) which show that consumers with a high level of environmental knowledge are more critical in evaluating inauthentic green claims and thus better able to mitigate the negative impacts of *Greenwashing*. This study shows that environmental knowledge should serve as a factor that reduces the adverse effects of *Greenwashing*. However, the results of this study show that in certain contexts, environmental knowledge is not enough to change the purchase decision if *Greenwashing* is felt to be very strong.

In addition, Sun & Shi's (2022) research indicates that consumers with a high level of environmental responsibility are more likely to reduce the perceived impact of *Greenwashing*. The study highlights that stronger factors in moderating perceptions of *Greenwashing* are psychological factors, such as feelings of betrayal or environmental responsibility, compared to technical or cognitive knowledge of green issues.

### **CONCLUSION**

This study underscores the critical importance of transparency in green marketing to support sustainable consumption and advance global sustainability goals, particularly those outlined in *SDG* 12, 13, and 14. By focusing on bottled water products in Jakarta, the research demonstrates that honest communication about environmental efforts can empower consumers to make responsible choices, promote recycling, and reduce environmental harm. However, the findings may not fully represent consumer behavior in other regions or product categories. Therefore, future research should expand to include diverse industries and geographic areas, as well as adopt longitudinal designs to better understand how greenwashing and sustainability evolve over time with changing consumer awareness and policy developments.

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