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## The Influence of Green Marketing, Green Awareness and Green Product Innovation on Purchase Decision


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***ABSTRACT***

*This research aims to identify and analyze the influence of Green Marketing, Green Awareness, and Green Innovation Products on Purchasing Decision. (Studi pada konsumen AQUA Life di Sunter Agung, Jakarta Utara). The research uses quantitative methods with consumer populations that have purchased environmentally friendly products from Sunter Agung, North Jakarta communities. The samples were selected using purposive sampling techniques, with 206 respondents. Data were collected through questionnaires and analyzed using a double linear regression method to determine the relationship and influence of independent variables (green marketing, green awareness, green product innovation) to dependent variables Purchase decision. This study uses the analysis method of Partial Least Square. (PLS). The results of this study indicate that: (1) green marketing has a significant positive effect on purchasing decision of AQUA Life product customers in Sunter Agung. (2) green marketing has a positive and significant effect on purchasing decision of AQUA Life customers in Sunter Agung. (3) green product innovation does not have a positive and insignificant effect on purchasing decision of AQUA Life product customers in Sunter Agung.*



***Keywords****: Green Marketing; Green Awareness; Green Product Innovation; Purchase.*

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## INTRODUCTION

Globalization has heightened public concern for environmental issues such as deforestation, pollution, and plastic waste. In Indonesia, plastic bottle waste is a major problem due to increasing AMDK consumption driven by population growth and modern lifestyles. Its non-biodegradable nature poses significant environmental risks.Sukiman and Salam (2021) report that Indonesia generates 175,000 tons of waste daily, with plastic bottles comprising 15%. Addressing this issue aligns with SDGs 12 (responsible consumption) and 14 (marine ecosystem protection). Carelessly discarded plastic bottles contribute to severe marine pollution, emphasizing the need for collective action to reduce waste and promote sustainability.

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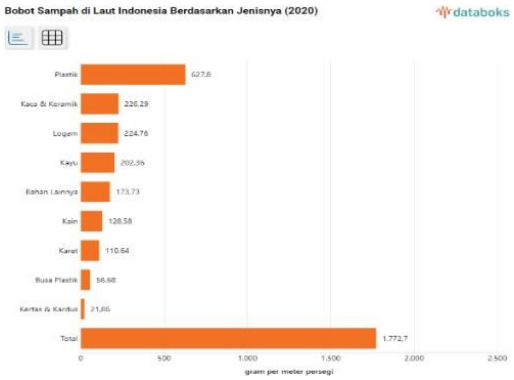
**Figure 1. Data on the Weight of Garbage in Indonesian Seas Based on Type**




Source : Databoks (2020)

In 2020, plastic waste was the largest contributor to marine pollution in Indonesia, reaching 627.8 g/m², far surpassing glass & ceramics (226.29 g/m²) and metal (224.76 g/m²). This issue stems from high plastic consumption and inadequate waste management from households, industry, and tourism, threatening marine ecosystems. Reducing single-use plastics and enhancing recycling are critical solutions. Apriliani and Aqmala (2021) highlight the importance of public awareness in driving eco-friendly behavior. Aqua, with a 46.7% market share since 1973, leads Indonesia's bottled water industry through strong distribution, marketing, and brand trust, maintaining its dominance over competitors.

**Figure 2. Bottled Water Market Share**


Source : Tempo.com (2019)

Despite Aqua's dominance in the bottled water market, competition remains fierce, with rivals like Club (4%), Le Minerale (3.5%), and 2 Tang (2.8%) expanding through innovation and marketing. New entrants, such as Le Minerale, focus on differentiation with natural mineral content. With over 500 industry players, Aqua must maintain loyalty through innovation and distribution.Indonesia's bottled water market, valued at IDR 22.51 trillion in 2013, is growing at 11.1% annually. Per capita consumption (91.04 liters/year) remains lower than in Thailand

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and the U.S., offering growth potential. Aqua's strong market position provides an advantage, but adapting to trends and maintaining consumer trust are crucial. PT. Tirta Investama (Danone-Aqua) also drives sustainability through the #BijakBerplastik campaign, promoting recycling and eco-awareness.

**Table 1. Top Brand Indeks AMDK 2021-2023**

| Merek | *Top Brand Indeks* | | |
|---|---|---|---|
| | **2021** | **2022** | **2023** |
| AQUA | 62.50% | 57.20% | 55.10% |
| Le Minerale | 4.60% | 12.50% | 14.50% |
| Ades | 7.50% | 6.40% | 5.30% |
| Cleo | 3.70% | 4.20% | 4.20% |
| Club | 5.80% | 3.80% | 3.50% |

Source : Top Brand Award (www.topbrand-award.com)

It can be seen in table above in 2021-2023 the AQUA brand experienced a decline in the Top Brand Index. This decline was caused by the many alternative choices of AMDK on the market. The change in the Top Brand Index decline was also seen by the Danone-Aqua company to create mineral water with environmentally friendly packaging in order to reduce plastic waste.

AQUA Life, a Danone-Aqua product, features 100% recycled and recyclable plastic packaging, reinforcing its green marketing strategy. Research highlights various factors influencing purchasing decisions. Wibowo and Santoso (2024) found green marketing crucial, while Rayon and Widagda (2021) emphasized environmental ads. Sukiman and Salam (2021) identified green awareness as key in AQUA purchases, and Lestari (2020) added price, brand image, and social influence. Putri et al. (2023) noted green product innovation enhances brand perception and sales, while Islamey and Maskur (2023) linked innovation, brand image, and location to consumer interest.

## LITERATURE REVIEW

### Purchase Decision

Kotler and Armstrong (2018) define purchasing decisions as part of consumer behavior, involving the selection, purchase, and use of products to satisfy needs. It is a key stage in decision-making, where consumers recognize problems, evaluate alternatives, and choose products based on preferences.

### Green Marketing

Jamal et al. (2021) describe green marketing as offering products and services that meet consumer needs while minimizing environmental harm. Nazir et al. (2021) emphasize eco-friendly production, while Rayon and Widagda (2021) highlight its relevance due to environmental concerns influencing purchases. Gunawan et al. (2020) note its role in reducing plastic waste, and Wibowo and Sabardini (2024) stress its goal of meeting consumer needs while reducing environmental impact.

### Green Awareness

Alamsyah et al. (2018) define green awareness as consumer behavior toward eco- friendly products, linked to their purchasing decisions. Abdulai et al. (2020) describe it as understanding

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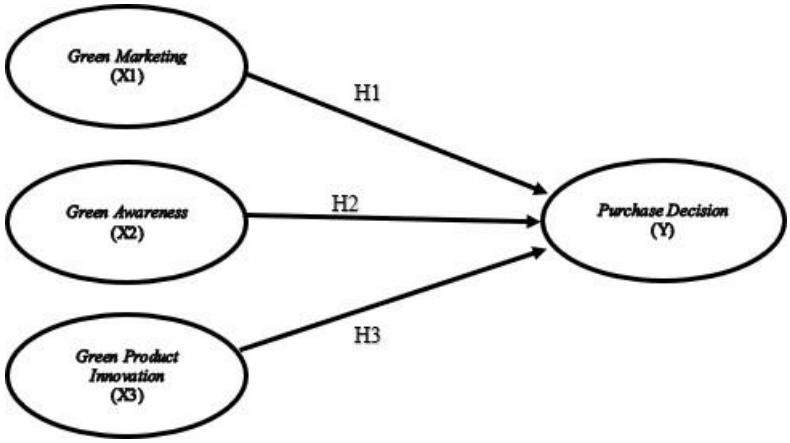
the impact of human activities on the environment and actively participating in sustainability efforts.

**Green Product Innovation**

Ahmed & Qureshi (2021) define green product innovation as using sustainable materials, recycled packaging, and minimizing resource use to enhance environmental performance. Pangesti (2023) states it fosters competitive advantage by improving design, quality, and energy efficiency while reducing waste and pollution across a product's life cycle.

**Figure 4. Conceptual Framework**




**Hypothesis** :

H1: Green Marketing has a positive and significant effect on Purchase decision.
H2: Green Awareness has a positive and significant effect on Purchase decision.
H3: Green Product Innovation has a positive and significant effect on Purchase decision.

## METHOD

This study, conducted in Sunter Agung, North Jakarta, from June 2024 to January 2025, examines the impact of Green Marketing (X1), Green Awareness (X2), and Green Product Innovation (X3) on Purchase Decisions (Y) using a descriptive causal associative approach. A Likert scale was used to measure respondents' attitudes and perceptions.The population consists of AQUA Life consumers in Sunter Agung, chosen for its high bottled water consumption and diverse environmental awareness levels. The sample, determined through purposive sampling, includes male and female consumers, with a minimum of 206 respondents based on Hair et al. (2021). Data was collected via questionnaires and analyzed using Partial Least Square (PLS) with SmartPLS 3.0, following Ghozali (2021) to assess the measurement model, structural model, and hypothesis testing.

## RESULTS AND DISCUSSION

The loading factor test is related to the principle that indicators in a variable should be highly correlated with each other. According to Sugiyono (2020), an indicator is said to have good validity if the loading factor value is $\geq 0.7$. In empirical research experience, a loading factor value of $\geq 0.5$ is still acceptable. Some experts even tolerate the number 0.4. Thus, a loading factor value $<0.4$ must be removed from the model. The following is a description of the results

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of the convergent validity test on the variables Green Marketing, Green Awareness,Green Product Innovation, and Purchase decision.

**Table 3. Loading Factor**

| Variable | Indicator | *Outer Loading* | Information |
|---|---|---|---|
| **Green Marketing** | GM1 | 0.857 | Pass the Test |
| | GM2 | 0.805 | Pass the Test |
| | GM3 | 0.871 | Pass the Test |
| | GM4 | 0.851 | Pass the Test |
| | GM5 | 0.841 | Pass the Test |
| | GM6 | 0.847 | Pass the Test |
| | GM7 | 0.820 | Pass the Test |
| | GM8 | 0.731 | Pass the Test |
| **Green Awareness** | GA1 | 0.738 | Pass the Test |
| | GA2 | 0.676 | Pass the Test |
| | GA3 | 0.746 | Pass the Test |
| | GA4 | 0.723 | Pass the Test |
| | GA5 | 0.734 | Pass the Test |
| | GA6 | 0.703 | Pass the Test |
| | GA7 | 0.784 | Pass the Test |
| | GA8 | 0.742 | Pass the Test |
| | GA9 | 0.731 | Pass the Test |
| | GA10 | 0.745 | Pass the Test |
| **Green Product Innovation** | GPI1 | 0.790 | Pass the Test |
| | GPI2 | 0.779 | Pass the Test |
| | GPI3 | 0.815 | Pass the Test |
| | GPI4 | 0.849 | Pass the Test |
| | GPI5 | 0.841 | Pass the Test |
| | GPI6 | 0.824 | Pass the Test |
| | GPI7 | 0.872 | Pass the Test |
| | GPI8 | 0.869 | Pass the Test |
| **Purchase Decisions** | PD1 | 0.742 | Pass the Test |
| | PD2 | 0.769 | Pass the Test |
| | PD3 | 0.697 | Pass the Test |
| | PD4 | 0.617 | Pass the Test |
| | PD5 | 0.530 | Pass the Test |
| | PD6 | 0.511 | Pass the Test |
| | PD7 | 0.660 | Pass the Test |
| | PD9 | 0.632 | Pass the Test |
| | PD10 | 0.809 | Pass the Test |

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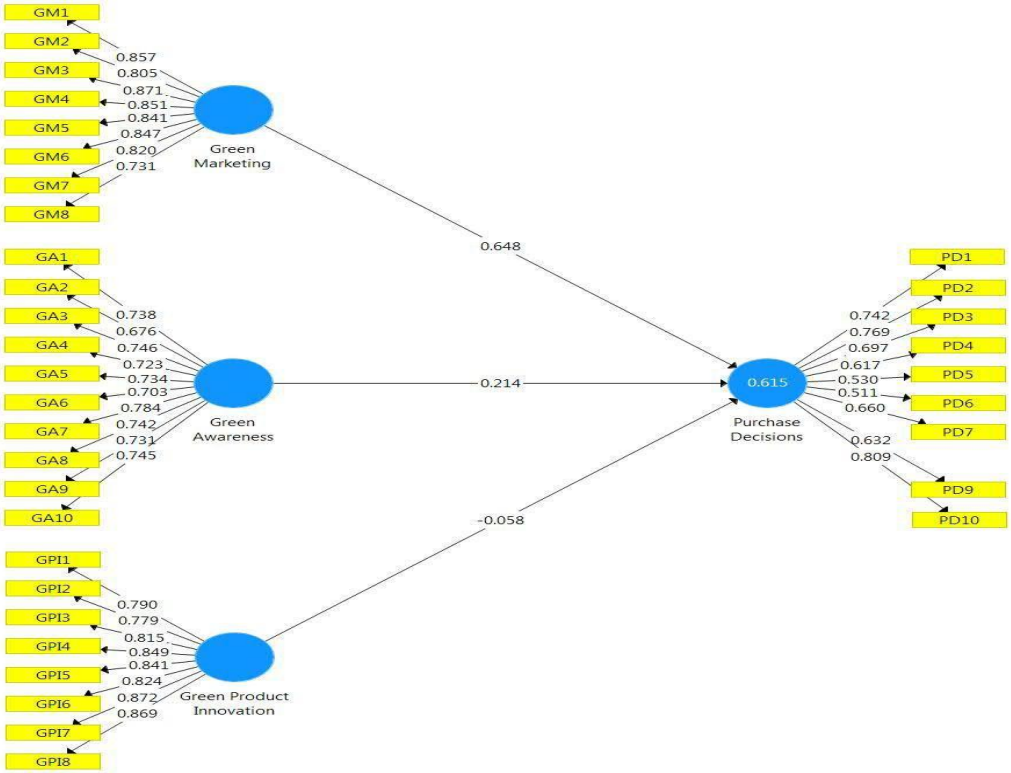
**Figure 5. Outer Model**




Based on the test results in Table 3, it shows that all indicators have met the outer loading criteria because they have a loading factor value ≥ 0.5.

Convergent validity is related to the principle that the measuring indicators (manifest variables) of a construct should be highly correlated (Ghozali, 2021). According to Ghozali (2021), the rule of thumb commonly used to assess convergent validity is that the average variance extracted (AVE) value must be greater than 0.50.

**Table 4. Average Variance Extracted (AVE)**

| Variable | *Average Variance Extracted* (AVE) | Information |
|---|---|---|
| ***Green Marketing*** | 0.687 | Valid |
| ***Green Awareness*** | 0.537 | Valid |
| ***Green Product Innovation*** | 0.690 | Valid |
| ***Purchase Decisions*** | 0.545 | Valid |

Based on the table above, it can be concluded that all AVEs of each construct have correlations between constructs and other constructs in the model with an AVE value > 0.5.

Discriminant validity test uses the Fornell-Larcker Criterion value. If the square root value of AVE for each construct is greater than the correlation value between constructs with other constructs in the model, then the model is said to be good. The following are the results of the Fornell-Larcker Criterion test:

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**Table 5. Fornell Lacker Criterium**

| Variable | *Green Marketing* | *Green Awareness* | *Green Product Innovation* | *Purchase Decision* |
|---|---|---|---|---|
| ***Green Marketing*** | 0.829 | | | |
| ***Green Awareness*** | 0.825 | 0.733 | | |
| ***Green Product Innovation*** | 0.779 | 0.710 | 0. 831 | |
| ***Purchase Decision*** | 0.772 | 0.679 | 0.656 | 0.738 |

Based on the table, all AVE roots (Fornell-Larcker Criterion) exceed their correlations with other variables, confirming validity. Discriminant validity is further assessed using the Heterotrait-Monotrait Ratio (HTMT), which ensures a construct is more strongly related to its own indicators than to others in the model. An HTMT value below 0.9 indicates good discriminant validity (Hair et al., 2021). The following are the HTMT test results:

**Table 6. Heterotrait-Monotrait Ratio**

| | *Green Marketing* | *Green Awareness* | *Green Product Innovation* | *Purchase Decision* |
|---|---|---|---|---|
| ***Green Marketing*** | | | | |
| ***Green Awareness*** | 0.897 | | | |
| ***Green Product Innovation*** | 0.897 | 0.851 | | |
| ***Purchase Decision*** | 0.843 | 0.781 | 0.721 | |

Table above shows that all construct relationships have values below 0.9, confirming good discriminant validity based on the Heterotrait-Monotrait Ratio. Reliability testing, using composite reliability, ensures instrument consistency in the research model. A construct is considered reliable if both composite reliability and Cronbach's alpha are ≥ 0.7 (Hair et al., 2021). The results confirm that all constructs meet reliability criteria.

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**Table 7. Composite Reliability & Cronbach's Alpha**

| Variable | *Composite Reliability* | *Cronbach's Alpha* | Information |
|---|---|---|---|
| ***Green Marketing*** | **0.935** | 0.946 | Reliable |
| ***Green Awareness*** | **0.904** | 0.920 | Reliable |
| ***Green Product Innovation*** | **0.936** | 0.947 | Reliable |
| ***Purchase Decision*** | **0.833** | 0.877 | Reliable |

The composite reliability and Cronbach's alpha values for each latent variable exceed 0.70, confirming measurement consistency and reliability. Therefore, all tested variables are reliable and suitable for further analysis. In PLS models, the R-square value measures how well exogenous variables explain the endogenous variable. An R-square between 0.25–0.50 is weak, 0.51–0.75 is moderate, and above 0.75 is strong, indicating a better model fit.

**Table 8. R Square**

| Variabel | *R Square* | *R Square Adjusted* |
|---|---|---|
| ***Purchase Decision*** | 0.615 | 0.609 |

The R-square value for Purchase Decision is 0.615, meaning 61.5% of its variance is explained by Green Marketing, Green Awareness, and Green Product Innovation, while the remaining 38.5% is influenced by other factors. A higher R-square indicates a stronger explanatory power of the independent variables. The effect size ($F^2$) test measures the impact of exogenous variables on endogenous ones. According to Hair et al. (2021), $F^2 \geq 0.35$ signifies a large effect, 0.15–0.35 a medium effect, 0.02–0.15 a small effect, and below 0.02 no meaningful effect.

**Table 9. F-Square**

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| Variabel | *Green Marketing* | *Green Awareness* | *Green Product Innovation* | *Purchase Decisions* |
|---|---|---|---|---|
| ***Green Marketing*** | | | | 0.263 |
| ***Green Awareness*** | | | | 0.032 |
| ***Green Product Innovation*** | | | | 0.003 |
| ***Purchase Decisions*** | | | | |

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Based on Table above, the $F^2$ value for Green Marketing is 0.263, indicating a moderate impact on Purchase Decision. Green Awareness has an $F^2$ of 0.032, showing a low influence, while Green Product Innovation, with an $F^2$ of 0.003, has no meaningful effect. To assess predictive relevance, $Q^2$ values are used. According to Hair et al. (2021), a $Q^2$ value above 0 confirms predictive relevance, with 0.02–0.15 indicating low relevance and 0.15–0.35 indicating moderate relevance.

**Table 10. Q Square**

| Variabel | *Q- Square atau $Q^2$* |
|---|---|
| ***Purchase Decision*** | 0.215 |

Thus, this model is said to have moderate relevant predictive value and is worthy of use. This indicates that the model has very good predictive ability and can be relied on for further analysis.This stage tests the relationship between exogenous and endogenous latent variables using the bootstrapping procedure. According to Hair et al. (2021), the Bias-Corrected and Accelerated (BCa) Bootstrap method should be used to assess path coefficient significance. Alternatively, significance can be determined by a p-value < 0.05. Path coefficients range from -1 to +1, with values near +1 indicating a strong positive relationship and near -1 a strong negative one. A hypothesis is accepted if the T-Statistic is ≥ 1.96; otherwise, it is rejected.

**Table 11. Hypothesis Test**

| Relationship between Variables | *Original Sample* | *St Dev* | *T-Statistics* | *P-Values* | Information |
|---|---|---|---|---|---|
| ***Green Marketing -> Purchase Decision*** | 0.672 | 0,660 | 5.434 | 0.000 | Positive and Significant |
| ***Green Awareness -> Purchase Decision*** | 0.918 | 0,213 | 2.227 | 0.026 | Positive and Significant |
| ***Green Product Innovation -> Purchase Decision*** | -0.069 | 0,102 | 0.679 | 0.497 | Not Significant |

Hypothesis testing shows that Green Marketing significantly impacts Purchase Decisions (T = 5.434, P = 0.000), confirming H1. Effective green marketing, especially eco- themed ads, enhances brand preference, aligning with Wibowo and Santoso (2024). Green Awareness also positively influences Purchase Decisions (T = 2.227, P = 0.026), supporting H2. Consumers prioritize eco-friendly products, consistent with Lestari (2020) and Iswanti et al. (2021), who highlight environmental concern, brand image, and social influence. However, Green Product Innovation does not significantly affect Purchase Decisions (T = 0.679, P = 0.497), leading to H3's rejection. This contradicts Islamey and Maskur (2023), who found sustainable innovation enhances consumer interest.

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## CONCLUSION

This study confirms that Green Marketing and Green Awareness positively influence Aqua Life consumers' Purchase Decisions. Stronger environmental promotions and awareness increase consumer preference for Aqua products, driven by sustainability-focused marketing. However, Green Product Innovation does not significantly impact Purchase Decisions, suggesting that eco-friendly innovations alone do not drive consumer choices. For practical applications, AQUA Life should enhance green marketing through eco-themed ads, eye- catching packaging, and loyalty programs like bottle return incentives. Social media and influencer campaigns can boost acceptance of green innovations. Theoretically, sustainability messaging should be reinforced across all marketing channels, and consumer education must be prioritized to build trust in green product innovations.

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