

CHAPTER I

INTRODUCTION

1.1 Problem Background of the Study

Environmental issues such as pollution, climate change, and the accumulation of plastic waste have sparked global attention towards more responsible consumption behavior. In an era of environmental awareness, consumers assess not only quality and price but also the environmental impact of the products they choose. This makes environmentally friendly purchasing behavior a strategic issue in modern marketing studies because it is linked to social responsibility and sustainability (Murtiningsih & Junaedi, 2025).

In line with this growing awareness, the bottled water (AMDK) industry faces significant pressure to adapt to increasingly sustainable consumer demands, particularly for top brands like Aqua, Le Minerale, Cleo, Club, and Ades. As market leaders, these brands are required not only to maintain product quality but also to be pioneers in addressing environmental issues such as the use of single-use plastics, distribution efficiency, and optimization of recycling systems.

ADES is a bottled drinking water brand in Indonesia known for its commitment to environmental sustainability through the application of green marketing concepts, particularly in the use of more environmentally friendly packaging and marketing strategies that emphasize consumer ecological awareness. However, brand index survey data shows that in the past four years the ADES brand has lagged far behind Le Mineral, Club and Cleo. A comparison of the Top Brand

Index (TBI) between ADES and its three main competitors from 2022 to July 2026 is presented in the table below.

Table 1. 1 Comparison of the Top Brand Index (TBI) of ADES and Its Three Main Competitors

Nama Brand	2022	2023	2024	2025	2026
Le Minerale	12.50	14.50	18.80	23.20	21.49
ades	6.40	5.30	5.50	3.90	7.03
Cleo	4.20	4.20	5.10	5.20	5.57
Club	3.80	3.50	3.30	3.70	2.80

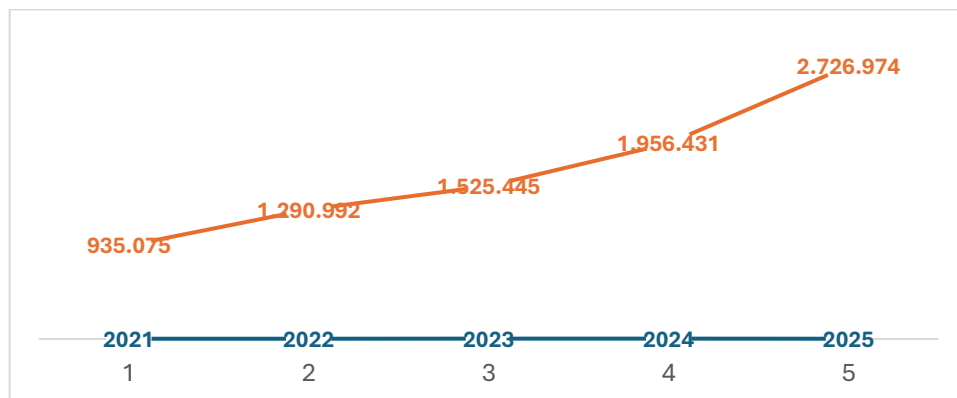
Source: (Top Brand Award, 2026)

Table 1.1 shows that although ADES remained below Le Minerale in terms of the Top Brand Index (TBI) throughout the 2022–July 2026 period, it was able to maintain its competitiveness compared to two of its major competitors, namely Cleo and Club. This is reflected in ADES' TBI score of 7.03% in July 2026, which was higher than Cleo (5.57%) and Club (2.80%). This achievement indicates that the various strategies implemented by the company, including the adoption of green marketing practices and efforts to build a positive brand image, have created added value in the minds of consumers.

The success of ADES in maintaining its competitive position in the TBI survey reflects the importance of consumers' purchase intention, as a higher level of purchase intention increases a brand's likelihood of achieving a stronger competitive position in the marketplace. Purchase intention is the likelihood consumers have of purchasing a particular brand or product, or the likelihood consumers will switch from one brand to another that they perceive as more profitable (Zahra & Rohman, 2024). Consumers with high purchase intentions tend to be more ready to make a transaction, making them an important indicator for

companies in predicting sales and the success of marketing strategies. Purchase intentions can be shaped by attitudes, subjective norms, and behavioral control (Tamareynee & Siagian, 2024).

ADES, a product of PT Akasha Wira International Tbk in the Bottled Drinking Water (AMDK) category, is part of the company's product portfolio, contributing to overall sales performance. Based on the company's net sales data, which covers various product lines, including ADES, it shows an upward trend during the 2021–2025 period, as shown in the figure below.



Sumber:(Akasha International, 2026)

Figure 1. 1 Development of the Company's Net Sales for 2021-2025

Figure 1.1 above shows that the company's net sales in 2021 were recorded at Rp 935,075, then increased to Rp 1,290,992 in 2022. Furthermore, net sales experienced growth again in 2023 at Rp 1,525,445, increasing to Rp 1,956,431 in 2024, and reaching Rp 2,726,974 in 2025. This increase reflects the growth of the company's overall performance, including the contribution of ADES products in strengthening the company's position in the bottled water industry. Although the sales data covers the company's entire product line, this positive trend indicates increasing consumer acceptance of the products offered. This is closely related to

purchase intention, because increased consumer purchase intention is one of the factors that drives purchasing decisions and ultimately contributes to increased company sales.

One factor that determines the intention to purchase environmentally friendly products is green marketing. ADES, as part of Coca-Cola Indonesia, has launched a green marketing strategy in 2020, in the form of the #NiatMurni environmental campaign, which aims to encourage the public to manage PET plastic bottle waste responsibly. This campaign was implemented through a collaboration with Gojek and Waste4Change to make it easier for consumers to send used plastic bottles for recycling, while also providing incentives in the form of reward points for participating consumers. Through this program, ADES not only promotes its products but also raises consumer awareness of the importance of plastic waste management and environmental sustainability practices (Ramdhani, 2020).

From 2025 through early 2026, these efforts continued via the "Recycle Me 2025" program, launched by Coca-Cola Indonesia to encourage the responsible collection and recycling of PET plastic bottles. Announced on December 15, 2025, in Bali, the program was implemented in partnership with Grab, Yayasan Mahija Parahita Nusantara, Amandina Bumi Nusantara, and BenihBaik.com, running through February 27, 2026, across Jakarta, Bogor, Tangerang, Bekasi, Bandung, Semarang, and Badung. Under this program, consumers could collect a minimum of 12 PET bottles from Coca-Cola products to receive a reward in the form of OVO credit, while Coca-Cola Indonesia contributed a donation of IDR 1,000 for every PET bottle collected. The collected bottles were subsequently processed into

recycled PET (rPET) for reuse as raw material in the production of new bottles. Thus, the Recycle Me 2025 program demonstrated the evolution of green marketing activities extending into early 2026 integrating consumer involvement in plastic waste management, incentive provision, and circular economy principles while simultaneously reinforcing the communication of the company's sustainability values to consumers (The Coca-Cola Company, 2026).

Green marketing is a proactive approach for companies to achieve long-term sustainability goals while gaining a competitive advantage by strategically positioning products in the minds of customers (Majeed et al., 2022), indicating that the implementation of environmentally oriented marketing strategies can increase consumers' willingness to choose and purchase environmentally friendly products. Previous studies have shown that green marketing has a positive effect on purchase intention (Murtiningsih & Junaedi, 2025). However, another study found no effect of green marketing on purchase intention (Zahra & Rohman, 2024).

This situation can be linked to the green marketing practices implemented by ADES through various environmental and social initiatives. One such instance occurred on February 13, 2026, when Coca-Cola Indonesia, in collaboration with the Mahija Parahita Nusantara Foundation, launched the "Recycle Me Zone" program in Duren Sawit, East Jakarta; the initiative focused on PET waste management and the empowerment of informal sector workers. The program also included the distribution of 1,100 packages of basic necessities and 3,300 food packages across 36 locations (www.coca-cola.com, 2026). These activities demonstrate that the company's environmental commitment is not merely

communicated through its products but is also manifested in tangible actions that enhance consumer perception regarding the company's concern for the environment and the community. Such perceptions have the potential to strengthen the green brand image and foster a positive consumer attitude toward ADES, ultimately driving purchase intentions. Consequently, ADES's green marketing practices warrant further study to determine whether these environmentally oriented marketing activities truly influence consumer purchase intentions.

ADES, in addition to implementing green marketing, also consistently builds its brand image as a quality drinking water brand that cares about the environment. Through its "Pure & Filtered" positioning and the Eco Crush Bottle innovation, ADES creates a perception as a product that combines quality drinking water with more environmentally friendly packaging. This image is further strengthened through the #NiatMurni campaign, which encourages the public to manage plastic bottle waste. These various initiatives demonstrate that ADES is not only building an image as a provider of quality drinking water, but also as a brand with a real commitment to environmental sustainability (Coca-Cola Europacific Partners, 2026).

ADES' efforts to build its brand image are also closely related to consumers' purchase intention. Brand image reflects consumers' perceptions of a brand's overall character, including quality attributes and environmental values, which can influence purchasing decisions. Several studies have shown that brand image has a positive impact on purchase intention because consumers tend to buy products from brands perceived as having a good reputation and quality (Verado & Handayani,

2023). However, other research has found that brand image does not always have a significant effect on purchase intention (Hadi & Keni, 2022), indicating a research gap that requires further exploration.

For consumers with a strong environmental attitude, the various environmental values communicated through green marketing and brand image can serve as factors in shaping their environmental attitudes. Consumers consider not only the functional benefits of a product but also the extent to which the product and brand reflect environmental concern. For instance, consumers concerned about reducing plastic waste may respond positively to the use of Eco Crush bottles and PET bottle collection and recycling programs, as both offer opportunities to practice more responsible consumption. This is supported by prior research demonstrating that green marketing and brand image has a positive impact on environmental attitudes (Mendrofa et al., 2023). Thus, the implementation of green marketing and the cultivation of a sustainability-oriented brand image can act as stimuli that contribute to shaping consumers' environmental attitudes.

The phenomena observed indicate that the presence of green marketing strategies and a brand image emphasizing environmental concern does not automatically explain how these values translate into consumer purchase intentions. Conflicting research findings regarding the impact of green marketing and brand image on purchase intention highlight the need to consider psychological factors that can elucidate the underlying mechanisms of this relationship. In this context, environmental attitude can serve as a mechanism bridging consumer perceptions of marketing strategies and brand image with the inclination to purchase. This

inclination is reflected in purchase intention, which this study measures using four indicators employed: transactional interest (the tendency to make a purchase), preferential interest (the tendency to choose ADES over other products), referential interest (the tendency to seek or consider recommendations), and exploratory interest (the tendency to seek further information before making a purchase) (Verado & Handayani, 2023). Therefore, this study examines the role of environmental attitude as a mediating variable in the relationship between green marketing, brand image, and purchase intention among ADES consumers.

Based on the foregoing discussion, the inconsistent findings regarding the effects of *green marketing* and *brand image* on *purchase intention* indicate a research gap that warrants further investigation, particularly concerning the role of *environmental attitude* in explaining these relationships. Although *environmental attitude* has previously been examined as a mediating variable linking *green marketing* to the purchase intention of ADES products (Mendrofa et al., 2023), the present study extends this relationship by incorporating *brand image* alongside *green marketing* within the same research model. This approach is expected to provide a more comprehensive understanding of how marketing strategies and brand perceptions influence consumers' *purchase intention* through their *environmental attitude*. Accordingly, this study seeks to contribute to the consumer behavior literature by examining the mediating role of *environmental attitude* in the relationship between *green marketing*, *brand image*, and *purchase intention* among ADES consumers.

1.2 Formulation of the Problem

In this research the problems faced in the research process can be formulated as follows:

1. How does green marketing influence on purchase intention toward ADES product?
2. How does brand image influence on purchase intention toward ADES product?
3. How does environmental attitude influence on purchase intention toward ADES product?
4. How does green marketing influence on environmental attitude toward ADES product?
5. How does brand image influence on environmental attitude toward ADES product?
6. How does the role of environmental attitude as a mediating variable in the influence green marketing on purchase intention toward ADES product?
7. How does the role of environmental attitude as a mediating variable in the influence brand image on purchase intention toward ADES product?

1.3 Research Purpose

Following the problems that have been formulated, the research objectives to be achieved are as follows:

1. To identify and analyze the influence of green marketing on purchase intention toward ADES product.

2. To identify and analyze the influence of brand image on purchase intention toward ADES product.
3. To identify and analyze the influence of environmental attitude on purchase intention toward ADES product.
4. To identify and analyze the influence of green marketing on environmental attitude toward ADES product.
5. To identify and analyze the influence of brand image on environmental attitude toward ADES product.
6. To identify and analyze the role of environmental attitude as a mediating variable in the influence of green marketing on purchase intention toward ADES product.
7. To identify and analyze the role of environmental attitude as a mediating variable in the influence of brand image on purchase intention toward ADES product.

1.4 The Benefit of the Study

1.4.1 Theoretical Benefits

This study is expected to contribute to the development of Consumer Behaviour Theory, particularly by explaining how marketing stimuli and brand perceptions can influence consumers' psychological processes in forming environmental attitude and purchase intention. This study is also expected to enrich consumer behavior research in the context of products that integrate environmental values by emphasizing the relationship between green marketing, brand image, environmental attitude, and purchase intention.

1.4.2 Practical Benefits

1. For ADES Bottled Drinking Water Company

This study is expected to provide practical benefits to ADES by serving as a basis for evaluation and consideration when formulating more effective marketing strategies to boost purchase intention. The findings can guide ADES in optimizing green marketing through communication and promotional activities that highlight environmental benefits, strengthen brand image, and enhance consumers' environmental attitudes. Such efforts are expected to help ADES increase product appeal, stimulate consumer buying interest, and bolster both sales and brand reputation in the market.

2. For the Community

This study is expected to increase public awareness in choosing environmentally friendly products, encourage more responsible consumption behavior, and help consumers make more informed and sustainable purchasing decisions.

1.5 Theoretical Framework

1.5.1 Consumer Behaviour Theory

Consumer behavior refers to the processes undertaken by individuals or groups in searching for, purchasing, using, and evaluating products, services, ideas, or experiences that satisfy their needs and wants, or the study of how consumers make purchasing decisions and interact with the market (Sudirman et al., 2020). Consumer behavior refers to the actions consumers take when selecting and deciding upon various product or service alternatives for purchase and ownership. It encompasses decisions regarding what to buy, whether or not to make a purchase,

when and where to buy, how to make the purchase, and the methods of acquisition and payment (cash or credit) (Irwansyah et al., 2021).

Factors influence consumer behavior, including cultural factors, social factors (reference groups, family, roles and status), personal factors (age, occupation, economic circumstances, lifestyle, personality), and psychological factors (motivation, perception, learning processes, beliefs, and attitudes) (Rahayu & Afrilliana, 2021). Kotler & Keller (2012) explain that the factors influencing consumer behavior include:

- 1) Cultural Factors. Culture is a determinant of desires and behavior, reflected in the lifestyles, habits, and traditions that shape the demand for various goods and services. Consequently, consumer behavior varies from one individual to another because there is no homogeneity within the culture itself.
- 2) Social Factors. Social factors also influence buyer behavior. Product choices are heavily influenced by small groups, family, friends, and the consumer's social roles and status.
- 3) Personal Factors. Purchasing decisions are also influenced by personal characteristics such as age and life-cycle stage, occupation, economic situation, lifestyle, and the consumer's personality.
- 4) Psychological Factors. An individual's choice of goods is further influenced by four key psychological factors: motivation, perception, knowledge, and beliefs and attitudes. Based on the description above, perception is identified as a psychological sub-factor that influences consumer behavior (Zusrony, 2022).

Consumer behavior theories are conceptual frameworks used to understand and explain consumer behavior within the context of purchasing decisions. These theories integrate various factors that influence consumer behavior, such as individual preferences, motivation, perception, attitudes, and the social environment. Some key theories in consumer behavior include:

1) Theory of Utility and Satisfaction.

This theory posits that consumers seek to maximize the utility or satisfaction they derive from the products or services they purchase.

2) Theory of Planned Behavior.

This theory proposes that consumer behavior can be predicted through the intention to engage in that behavior. Intention is influenced by attitudes toward the behavior, subjective norms, and perceived behavioral control.

3) Theory of Consumer Decision Making.

This theory emphasizes that consumers go through several stages in making a purchase decision: need recognition, information search, evaluation of alternatives, the purchase decision, and post-purchase evaluation.

4) Theory of Attitudes.

This theory states that consumer attitudes toward a product or brand influence their purchasing behavior, shaped by prior experience, knowledge, and information received.

5) Brand Effect Theory.

This theory examines aspects such as brand awareness, brand associations, brand loyalty, and perceived quality to understand how a brand influences consumer preferences and purchasing decisions.

6) Sustainable Consumer Behavior Theory.

This theory focuses on consumer behavior aimed at minimizing negative impacts on the environment and society (Sudirman et al., 2020).

Based on the preceding explanation, Consumer Behaviour Theory serves as the foundation for this study to elucidate the process by which consumer behavior is formed in response to marketing strategies and brand perceptions. In this research context, green marketing represents a marketing stimulus emphasizing environmental aspects, while brand image reflects consumer perception of the brand. Both factors can influence environmental attitude a psychological aspect of the consumer which subsequently plays a role in shaping purchase intention. Thus, Consumer Behaviour Theory provides the conceptual basis for explaining the relationships among marketing factors, perceptions, environmental attitudes, and the consumer's propensity to make a purchase.

1.5.2 Purchase Intention

Purchase intention is the likelihood that a consumer will purchase a brand or switch from one brand to another. Consumers will consider and compare more products before purchasing. Kotler & Armstrong, (2017) define purchase intention as a consumer's likelihood to compare and consider products before purchasing (Verado & Handayani, 2023). Purchase intention is a consumer's preference for a

product or service. In other words, purchase intention includes the aspect that consumers will purchase a product after evaluating it (Hadi & Keni, 2022). Purchase intention encompasses the consumer-initiated purchasing process, starting with the formation of a purchase intention in response to an advertisement (Fitriani et al., 2023).

Indicators for measuring purchase intention include (1) an example of a purchasing motive is an advertisement that makes you feel compelled to buy the product. Purchasing motive refers to the internal or external factors that encourage consumers to buy a product. This motive can arise from various influences such as advertisements, personal needs, trends, or recommendations from others. For example, an attractive advertisement may create a strong desire in consumers to purchase a product because they perceive it as useful, high-quality, or suitable for their needs. (2) consumers seeking information about the product they are interested in. Information seeking is the behavior of consumers when searching for information about a product they are interested in before making a purchase decision. Consumers may look for information through the internet, social media, product reviews, or by asking friends and family. The purpose is to obtain details about the product's quality, price, benefits, and possible advantages or disadvantages (Fitriani et al., 2023).

There are also indicators such as (1) transactional interest, (2) preferential interest, (3) requesting references, and (4) exploratory interest (Verado & Handayani, 2023; Zahra & Rohman, 2024).

1. Transactional Interest

Transactional interest refers to the consumer's tendency or intention to actually purchase a product. At this stage, consumers already have a strong desire to buy and are more likely to carry out the purchasing transaction. This indicates that their interest has progressed beyond simple curiosity and is closer to real buying behavior.

2. Preferential Interest

Preferential interest refers to a consumer's tendency to prioritize a particular product over other similar alternatives. Consumers who have this type of interest consider the product as their main choice because it better meets their preferences, expectations, or perceived value compared to competing products.

3. Reference Interest (Requesting References)

Reference interest describes the tendency of consumers to seek or give recommendations about a product. Consumers may ask others for opinions or references before purchasing, or they may recommend the product to others once they develop an interest in it. This reflects the role of social influence in shaping purchase intention.

4. Exploratory Interest

Exploratory interest refers to the consumer's desire to explore more information about a product they are interested in. Consumers may compare different product variants, examine features, evaluate benefits, or investigate alternative brands. This exploration helps them gain deeper understanding

before making a final purchase decision (Verado & Handayani, 2023; Zahra & Rohman, 2024).

1.5.3 Green Marketing

Green marketing is a marketing concept that emphasizes efforts to promote environmentally friendly products, services, and business practices while supporting environmental conservation. This concept developed in response to increasing public awareness of environmental issues and the need for sustainable business activities. Since the 1980s, academics have begun to focus on green marketing as an approach that integrates environmental aspects into a company's marketing strategy. Its development has accelerated since the early 1990s, as the number of environmentally conscious consumers has increased and new market opportunities have emerged, encouraging companies to adopt more environmentally responsible marketing practices (Majeed et al., 2022).

Green marketing is a marketing strategy that pays attention to the surrounding environment by utilizing changes in consumer awareness in choosing a product that has benefits that are not only safe for consumers but also safe for the surrounding environment from the initial product manufacturing process, packaging until it finally reaches the consumer's hands (Mendrofa et al., 2023). Green marketing refers to a marketing strategy that aims to promote environmentally friendly products, including product redesign, adjusting production processes, modifying packaging, and creating responsible advertising campaigns (Murtiningsih & Junaedi, 2025).

Green marketing is a corporate strategy implemented by manufacturers within the conventional marketing mix to produce products that satisfy consumers while minimizing environmental impact. Indicators for measuring green marketing include environmentally friendly products, premium prices, environmentally friendly distribution channels, and environmentally friendly promotions (Yahya, 2022). The green marketing variable can also be measured using indicators such as green product, green process, green packaging, green promotion, environmental concern/awareness, and environmental impact reduction, which reflect the extent to which a company implements environmentally friendly marketing practices in its business activities (Mendrofa et al., 2023).

Green marketing can be defined as a company's response to the emergence of many environmental problems that arise as a result of company activities that pollute the environment, so that to overcome this, the company carries out various innovation efforts related to the company's operational activities to then attract consumer interest and increase consumer intentions to buy environmentally friendly products or services (Zahra & Rohman, 2024). Furthermore, some use indicators such as: (1) Green Product, refers to consumers' perceptions that a product is made using environmentally friendly materials and recyclable packaging. (2) Green Price, refers to consumers' perceptions that a product's price reflects its environmental value and sustainability benefits. (3) Green Promotion, refers to consumers' perceptions of marketing activities that communicate environmental responsibility and sustainability. (4) Green Place, refers to consumers' perceptions that products

are distributed through environmentally responsible and easily accessible channels (Zahra & Rohman, 2024).

1.5.4 Brand Image

Brand image is the perceptions, thoughts, or feelings that consumers have when they hear or see a brand name, essentially reflecting what consumers have learned and understood about the brand (Bahri & Wijayanti, 2021). Brand image, as beliefs and perceptions reflected in consumer memory from experiences and information about the product, can be interpreted as anything felt by consumers can shape perceptions in their minds (Verado & Handayani, 2023). Brand image includes symbolic meanings related to specific brand features and is defined as the mental image consumers have of a brand in their minds related to an offering (Hadi & Keni, 2022).

Indicators of brand image include recognition, reputation, and affinity (Bahri & Wijayanti, 2021).

1. Recognition

Recognition refers to the stage where a brand is already known and recognized by consumers compared to other competing brands. This condition gives the brand a positive advantage because consumers tend to feel more familiar with brands they already know. Recognition usually occurs when consumers face a choice between an existing brand and a new or unfamiliar product, where they are more likely to choose the brand that they have previously recognized.

2. Reputation

Reputation refers to the overall perception or image of a brand that exists in the minds of consumers. This perception is formed through consumers' experiences, information, and opinions regarding the brand. Reputation can change over time depending on the brand's performance, product quality, and consumer satisfaction. A brand can develop a positive reputation if consumers perceive it as trustworthy and high-quality, while negative experiences may lead to a decline in its reputation.

3. Affinity

Affinity refers to the emotional attraction or sense of sympathy that consumers feel toward a brand. This indicator reflects the level of liking and emotional connection that consumers develop with the brand. Affinity is often expressed through positive attitudes, loyalty, and supportive behaviors toward the brand, such as recommending it to others or consistently choosing it over competing products (Bahri & Wijayanti, 2021).

1.5.5 Environmental Attitude

Environmental attitude is a cognitive assessment of the value of environmental protection (Mendrofa et al., 2023). Environmental attitude represents a society's belief in the interconnection between humans and the environment; thus, having a positive environmental attitude enables people to identify the negative consequences of their behavior on the environment (Haryono, 2021).

To measure the Environmental Attitude variable, there are five dimensions/indicators as items directly through the Environmental Attitude Scale based on the New Ecological Paradigm (Dunlap et al., 2000), including (1) limits to growth; (2) anti-anthropocentrism; (3) fragility of nature's balance; (4) rejection of exemptionalism; and (5) possibility of an ecocrisis (Soeharso et al., 2023). Environmental attitude can also be measured using indicators including (1) Commitment to Environmental Safeguards; (2) Responsibility for a Sustainable Environment; (3) Providing for Environmental Issues and Problem Solving; (4) Protecting and Improving the Environment. (5) Share solutions and problem solving for the environmental damage (Haryono, 2021).

1.6 Correlation Between Research Variables

Based on the theoretical foundation and relevant research results, the framework of thinking in this study is as follows.

1.6.1 The Influence of Green Marketing on Purchase Intention

Green marketing is a marketing strategy that emphasizes environmentally friendly aspects in the production, distribution, and promotion of products. By implementing this strategy, companies strive to demonstrate their commitment to environmental sustainability, thereby building positive perceptions in the minds of consumers. When consumers perceive that a product is produced and marketed with environmental sustainability in mind, this can increase consumer trust and interest in that product.

Numerous studies have shown that the implementation of green marketing can positively influence consumer purchase intention (Murtiningsih & Junaedi,

2025). This marketing strategy, which emphasizes environmentally friendly values, can encourage consumers to choose products perceived as more environmentally responsible. Therefore, the better a company implements green marketing, the greater the likelihood that consumers will have the intention to purchase that product.

1.6.2 The Influence of Brand Image on Purchase Intention

Brand image is the perception or impression formed in consumers' minds regarding a brand, which develops through their experiences, information, and various associations related to the brand. This perception is built over time through interactions such as product usage, marketing communication, and exposure to advertisements. A positive brand image reflects the perceived quality, strong reputation, and value offered by a product, which can enhance consumer trust and confidence. When consumers have a favorable perception of a brand, they tend to evaluate the product as superior compared to competing products, which in turn increases their likelihood and intention to purchase the product.

In the purchasing decision-making process, brand image plays a crucial role in influencing purchase intention. In other words, brand image has a positive effect on purchase intention (Verado & Handayani, 2023). Consumers are generally more interested in purchasing products from brands with a positive image because they are perceived as more trustworthy and of high quality. Therefore, the more positive a brand's image is in the minds of consumers, the greater the likelihood that consumers will have the intention to purchase that product.

1.6.3 The Influence of Environmental Attitude on Purchase Intention

Environmental attitude refers to consumers' attitudes or perspectives toward the importance of preserving and protecting the environment. This attitude reflects the extent to which individuals are concerned about environmental issues and their willingness to contribute to environmental sustainability through their daily behaviors, including consumption activities. Consumers with a strong environmental attitude are more likely to consider the environmental impact of the products they purchase, such as choosing eco-friendly or sustainable products. As a result, a positive environmental attitude can increase consumers' purchase intention, as they tend to prefer products that align with their environmental values and support environmental conservation efforts.

Consumers with a strong environmental attitude tend to be more concerned about the environmental impact of the products they consume. A positive attitude toward the environment can encourage consumers to choose products perceived as more environmentally friendly. Therefore, the higher the level of consumer concern for the environment, the greater the likelihood of purchasing products that support environmental sustainability.

1.6.4 The Influence of Green Marketing on Environmental Attitude

Green marketing is a marketing approach that integrates environmental considerations into a company's marketing activities spanning product, price, distribution, and promotion while emphasizing sustainability values. From the perspective of Consumer Behavior Theory, the marketing information and stimuli received by consumers can influence their perceptions, knowledge, beliefs, and

attitudes regarding specific products or issues (Rahayu & Afrilliana, 2021). When companies communicate the environmental benefits of their products through green marketing strategies, consumers receive stimuli that can heighten awareness and understanding of the importance of considering environmental aspects in consumption activities.

Green marketing serves not only as a marketing strategy but also as a means to shape consumer perceptions and attitudes toward environmental values. The more effectively green marketing is implemented and communicated to consumers, the greater the likelihood of fostering a positive environmental attitude. This indicates that conveying information about environmental concern through marketing activities can encourage consumers to adopt more positive attitudes toward products and engage in environmentally oriented behaviors. Therefore, it can be hypothesized that green marketing has a positive influence on environmental attitude; thus, the better the implementation of green marketing, the more positive the consumer's environmental attitude becomes.

1.6.5 The Influence of Brand Image on Environmental Attitude

Brand image refers to the perceptions and associations formed in consumers' minds based on information, experiences, and various attributes associated with a brand. In the context of products that prioritize sustainability, brand image reflects the extent to which consumers perceive a brand as caring about and committed to the environment (Zusrony, 2022). A positive brand image can strengthen consumer trust in the environmental values and commitments communicated by the company.

According to Consumer Behavior Theory, consumer perception is a psychological factor that influences the formation of attitudes and behaviors (Irwansyah et al., 2021). A positive perception of a brand can reinforce consumer belief in the value offered by that brand. Therefore, the more positive the brand image perceived by consumers particularly regarding environmental concern and responsibility the more positive the resulting environmental attitude. Thus, it can be hypothesized that brand image has a positive effect on environmental attitude.

1.6.6 The Role of Environmental Attitude as a Mediating Variable in the Influence of Green Marketing and Brand Image on Purchase Intention

Environmental attitude refers to consumers' evaluations of the importance of environmental protection, reflected in their concern, beliefs, and willingness to support environmentally friendly products. In this study, environmental attitude is proposed as a mediating variable that explains the relationship between green marketing, brand image, and consumers' purchase intention. Green marketing strategies and a positive brand image not only provide information about product quality but also shape consumers' perceptions of a company's commitment to environmental sustainability. These perceptions subsequently foster more positive environmental attitudes, increasing consumers' willingness to choose products with ecological value.

According to Consumer Behaviour Theory, purchasing decisions are the result of psychological processes involving perception, learning, motivation, and attitude formation before consumers make their buying decisions. In the context of environmentally friendly products, green marketing and brand image act as external

stimuli that influence consumers' perceptions of a company's environmental responsibility. When consumers perceive that a company consistently implements sustainable and environmentally responsible practices, they are more likely to develop positive environmental attitudes. These attitudes then shape how consumers evaluate the product and strengthen their intention to purchase products that align with their environmental values.

Therefore, environmental attitude serves as a psychological mechanism that links the effects of green marketing and brand image to purchase intention. Consumers with positive environmental attitudes are more likely to respond favorably to green marketing messages, develop more positive evaluations of environmentally responsible brands, and exhibit stronger purchase intentions than those with less favorable environmental attitudes. Consequently, environmental attitude is expected to mediate the relationship between green marketing and purchase intention, as well as the relationship between brand image and purchase intention for environmentally friendly products.

1.7 Previous Research

Much research has been conducted on the factors that influence purchase intention, some of which can be seen in the following table:

Table 1. 2 Relevant Previous Research

No	Researcher s & Year	Research Title	Research Variables	Research Method	Research Results
1.	(Maharani & Musdalifa h, 2024)	The Effect of Green Advertising on ADES Brand Image	Green Advertising, Brand Image	Quantitative	Green advertising has a significant effect on ADES brand image
2.	(Rachmaw aty & Hasbi, 2020)	The Effect of Green Marketing and Brand Image on ADES Purchase Intention	Green Marketing, Brand Image, Purchase Intention	Quantitative	Green marketing and brand image have a significant effect on consumer purchase intention.
3.	(Pertiwi & Paulus, 2021)	Green Marketing Mix and ADES Purchase Decision	Green Product, Green Price, Green Place, Green Promotion, Purchase Decision	Quantitative	All variables of the green marketing mix influence the purchase decision.
4.	(Mamahit, 2015)	The Effect of Green Marketing on ADES Product Purchase Decision	Green Product, Green Promotion, Green Place, Purchase Decision	Quantitative	Green marketing has a positive effect on purchase decision.
5.	(Mendrofa et al., 2023)	Green Marketing and Brand Awareness on Purchase Intention through Environmental Attitude	Green Marketing, Brand Awareness, Environment al Attitude, Purchase Intention	SEM-PLS	Environmental attitude mediates the effect of green marketing on purchase intention.

6.	(Ariescy & Anindita, 2019)	The Effect of Green Advertising and Environmental Awareness on ADES Purchase Intention	Green Advertising, Environmental Awareness, Purchase Intention	Quantitative	Green advertising and environmental awareness have a positive effect on purchase intention.
7.	(Su & Li, 2024)	Exploring the Impact of the Green Marketing Mix on Environmental Attitudes and Purchase Intentions: Moderating Role of Environmental Knowledge	Green 4 P (product, price, place, promotion). Attitude, environmental knowledge. Purchase Intention	Quantitative	Environmental attitude strongly influenced green purchase intention. Both green products and promotions positively affected green purchase intention, whereas price and place had no notable impact.
8.	(Jonathan & Tunjungsari, 2025)	The Influence Of Brand Awareness And Brand Image On Purchase Intention Mediated By Perceived Value And Brand Trust	Brand awareness, brand image, perceive value, brand trust, purchase intention	Quantitative	Brand awareness positively and directly impacted purchase intention. brand image was found to have a positive but insignificant effect on purchase intention.
9.	(Muljono et al., 2025)	The Influence of Green Marketing and Price Perception on Brand Image and Its Impact on Purchase Intention	Green Marketing, Price Perception, Brand Image, Purchase Intention	Quantitative	Brand Image has the strongest influence on Purchase Intention. Although these two variables also have a direct effect on

					Purchase Intention, they become stronger when mediated by Brand Image.
10.	(Keprinal & Gunawan, 2025)	The Influence of Green Promotion, Brand Image and Environmental Awareness on Purchase Intention	Green Promotion, Brand Image And Environmental Awareness, Purchase Intention	Quantitative	Brand image has a positive and significant effect on purchase intention. Environmental awareness has no positive and significant effect on purchase intention
11.	(Udayanti et al., 2025)	The Influence of Green Marketing on Purchase Intention Mediated by Brand Image	Green Marketing, Brand Image, Purchase Intention	Quantitative	Green marketing dan brand image as a mediating variable have a significant influence in forming positive attitudes that drive purchase intention.
12.	(Jinan et al., 2020)	The Effect Of Green Marketing and Environmental Knowledge On Purchase Intentions Mediated By Brand Image	Green Marketing, Environmental Knowledge, Brand Image, Purchase Intention	Quantitative	Green marketing has no significant on purchase intention. Green marketing mediated by brand image has a significant effect on purchase intention.

Based on previous research, it is clear that many studies have focused on green marketing and ADES, focusing on their direct impact on brand image, brand awareness, and purchase intention. Most studies have used multiple linear regression analysis, which tends to only test direct relationships between variables, such as the research by Maharani & Musdalifah (2024), which emphasized the relationship between green advertising and brand image, and Rachmawaty & Hasbi (2020), which examined green marketing and brand image on purchase intention. This indicates that much of the previous research is partial and does not fully describe the interrelationships of variables within a unified conceptual model.

Furthermore, several studies have begun to develop models by including mediating variables such as environmental attitude and brand image. For example, the research by Mendrofa et al. (2023) used SEM-PLS to analyze more complex relationships. However, these models are still limited to specific variable combinations, such as green marketing and brand awareness or green marketing and brand image, without integrating all three primary variables simultaneously within a single research framework. Furthermore, research linking green marketing, brand awareness, and brand image simultaneously with the mediating variable environmental attitude is still very limited, particularly in Semarang.

Therefore, this study is original in developing a more comprehensive model by simultaneously integrating green marketing, brand awareness, and brand image with purchase intention through environmental attitude as a mediating variable. Furthermore, this study uses the SEM-PLS approach, which is capable of testing not only direct relationships but also indirect relationships more accurately and in-

depth. This distinction demonstrates that this study not only replicates previous research but also expands the conceptual model and provides new contributions to understanding consumer behavior toward environmentally friendly products, particularly ADES in Semarang.

1.8 Hypothesis and Research Model

1.8.1 Research Model

This research model explains the direct relationship between green marketing, brand awareness, and brand image on purchase intention for ADES products in Semarang City. Green marketing, as an environmentally based marketing strategy, is expected to increase consumer interest and purchase intention by conveying information about the company's environmental concerns. Meanwhile, a positive brand image fosters positive perceptions of the product's quality and environmental commitment, which ultimately leads to increased purchase intention. Therefore, this direct relationship demonstrates that marketing factors and brand perception play a significant role in shaping consumers' initial decisions to purchase environmentally friendly products.

Based on this direct relationship, environmental attitude is positioned as a mediating variable that strengthens or clarifies the influence of green marketing, and brand image on purchase intention. When consumers receive stimuli from green marketing, have a high level of brand awareness, and view ADES's image positively, these three factors not only directly impact purchase intention but also foster an attitude of concern for the environment. Environmental attitude is the psychological mechanism that bridges the transition from consumer perception and

awareness to purchasing decisions. Therefore, the relationship in this model is not only direct but also indirect through the formation of environmental attitudes.

Furthermore, to simultaneously test these direct and indirect relationships, this study used the Structural Equation Modeling–Partial Least Squares (SEM-PLS) approach. This method is highly relevant because it can analyze complex models involving mediating variables such as environmental attitude while simultaneously estimating the influence between latent variables. SEM-PLS also does not require normally distributed data and is suitable for consumer behavior research such as this. This allows for a more comprehensive and accurate analysis of the relationship between green marketing, brand image, environmental attitude, and purchase intention, in accordance with the research model framework described previously.

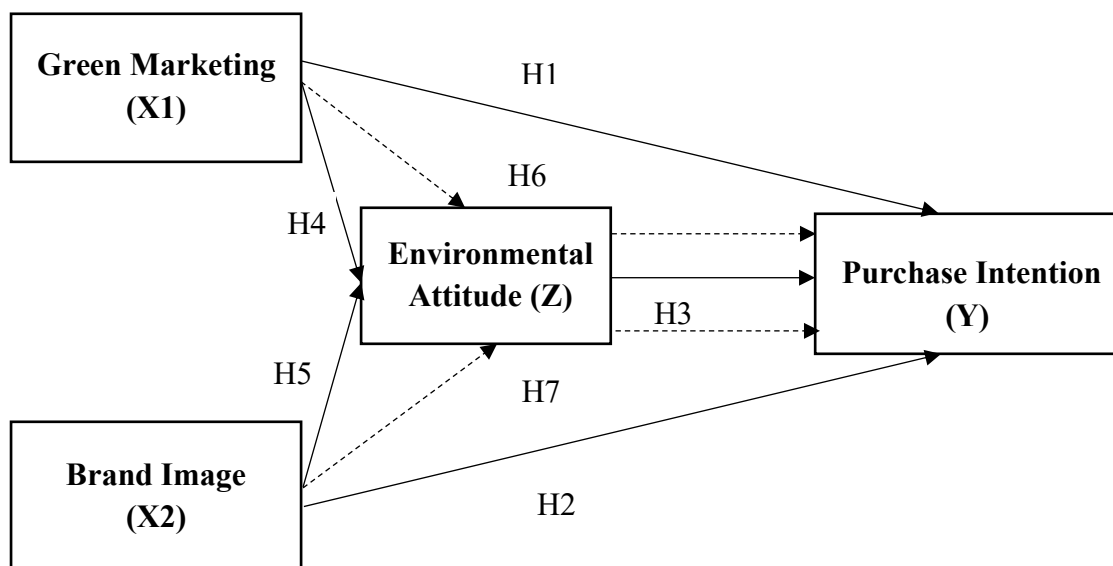


Figure 1. 2 Paradigma Research Model

Information:

- : Direct Influence
- : Indirect Influence

1.8.2 Hypothesis

Based on the formulation of the problem and the empirical studies that have been carried out previously, the hypothesis proposed in this study is:

- H1 : Green marketing has a positive effect on purchase intention
- H2 : Brand image has a positive effect on purchase intention
- H3 : Environmental attitude has a positive effect on purchase intention
- H4 : Green marketing has a positive effect on environmental attitude
- H5 : Green marketing has a positive effect on environmental attitude
- H6 : Environmental attitude mediates the effect of green marketing on purchase intention
- H7 : Environmental attitude mediates the effect of brand image on purchase intention

1.9 Conceptual Definition

The definition of the concept provides defines the research variable, which is explained in the following definition:

1.9.1 Purchase Intention

Purchase intention is the possibility of consumers to compare and consider when purchasing a product (Verado & Handayani, 2023).

1.9.2 *Green marketing*

Green marketing is a company's response to the emergence of many environmental problems that arise as a result of company activities that pollute the environment, so that to overcome this, the company carries out various innovative efforts related to the company's operational activities to then attract consumer

interest and increase consumer intentions to buy environmentally friendly products or services (Zahra & Rohman, 2024).

1.9.4 Brand Image

Brand image is the perceptions, thoughts, or feelings that consumers have when they hear or see a brand name, essentially reflecting what consumers have learned and understood about the brand (Bahri & Wijayanti, 2021).

1.9.5 Environmental Attitude

Environmental attitude is a society's belief about the interconnection between humans and the environment. Thus, having a positive environmental attitude enables people to identify the negative consequences of behavior on the environment (Haryono, 2021).

1.10 Operational Definition

The operational definition contains a more detailed description of indicators regarding research variables, including:

1.10.1 Purchase Intention

Purchase intention in this study is the level of consumer tendency and intention to consider, select, and purchase ADES products. This variable is measured using four indicators previously used by researchers: transactional interest, preferential interest, requesting references, and exploratory interest (Verado & Handayani, 2023).

1. Transactional interest: a consumer's intention or tendency to make an immediate purchase.
2. Preferential interest: a consumer's tendency to prefer one product over another.

3. Reference interest: a consumer's tendency to seek or provide recommendations regarding a product.
4. Exploratory interest: a consumer's desire to seek and explore further information about a product before purchasing.

1.10.2 Green Marketing

Green marketing is the respondents' perception of the green marketing strategies implemented by ADES in marketing its bottled drinking water through the application of environmental sustainability principles in its products, pricing, promotional activities, and distribution channels. The green marketing variable is measured using four indicators previously used by researchers: green product, green price, green promotion, and green place (Zahra & Rohman, 2024).

1. Green Product: This indicator refers to ADES bottled water products that are designed using environmentally friendly, safe, hygienic, and recyclable packaging materials that support ecological sustainability.
2. Green Price: This indicator refers to consumers' perceptions that the price of ADES bottled drinking water is fair and reflects the environmental value offered, including the use of eco-friendly materials, sustainable production processes, and high product quality, making consumers willing to pay an appropriate price for environmentally responsible products.
3. Green Promotion: This indicator refers to ADES' marketing communication activities that emphasize the company's commitment to environmental sustainability by providing information about eco-friendly packaging,

sustainability initiatives, and campaigns that encourage consumers to adopt environmentally responsible consumption behaviors.

4. Green Place: This indicator refers to consumers' perceptions of the availability and accessibility of ADES bottled drinking water through distribution channels that incorporate environmentally sustainable practices, including efficient logistics, broad product availability, and distribution processes designed to minimize environmental impact.

1.10.3 Brand Image

Brand image is the respondents' perceptions and beliefs about the ADES drinking water brand, formed from consumer experience, information, and assessments. This brand image variable is measured using three indicators: recognition, reputation, and affinity (Bahri & Wijayanti, 2021).

1. Recognition: Consumers' ability to recognize the ADES brand as a bottled water product with a clear identity.
2. Reputation: Consumers' perception of ADES' reputation as a brand that offers good quality and cares about the environment.
3. Affinity: Consumers' emotional closeness and liking for the ADES brand, formed through experiences and information received.

1.10.4 Environmental Attitude

Environmental attitude is the level of respondents' attitudes, beliefs, and concerns regarding environmental issues and the impact of consumption behavior on the environment, particularly in the context of using and selecting ADES products as environmentally friendly bottled drinking water. This environmental

attitude variable is measured using five indicators, including: (1) Commitment to Environmental Safeguards; (2) Responsibility for a Sustainable Environment; (3) Providing for Environmental Issues and Problem Solving; (4) Protecting and Improving the Environment. (5) Share solutions and problem solving for the environmental damage (Haryono, 2021).

1. Commitment to Environmental Safeguards: Consumer commitment to preserving the environment by choosing more environmentally friendly ADES products.
2. Responsibility for a Sustainable Environment: Consumers' sense of responsibility for environmental sustainability in using drinking water products such as ADES.
3. Providing for Environmental Issues and Problem Solving: Consumers' concern for environmental issues and efforts to find solutions to the environmental impacts of ADES plastic consumption.
4. Protecting and Improving the Environment: Consumer actions and attitudes that support environmental protection and improvement through wiser consumption of ADES products.
5. Sharing solutions and problem-solving for environmental damage: Consumers' tendency to share solutions and ideas to reduce environmental damage, including those related to the use of ADES packaging.

For more details, the operational definition of research variables and their indicators can be seen in the following table.

Table 1. 3 Operational Definitions of Variables

Variable	Operational Definition	Indicator	Item
Purchase Intention (Y)	Purchase intention in this study is the level of consumer tendency and intention to consider, select, and purchase ADES products.	1. Transactional interest	I intend to purchase ADES products in the near future. I plan to buy ADES whenever I need bottled drinking water.
		2. Preferential interest	I prefer ADES over other bottled water brands. ADES is one of my top choices when purchasing bottled drinking water.
		3. Requesting references	I am willing to ask others for opinions before buying ADES. I consider recommendations from others before deciding to buy ADES.
		4. Exploratory interest	I look for more information about ADES before deciding to purchase it.
Green Marketing (X1)	Green marketing is the consumer perception of various efforts made by ADES in implementing marketing strategies that are oriented towards environmental conservation through product development, pricing, promotional activities, and environmentally friendly	1. Green product	I believe that ADES uses environmentally friendly, safe, and recyclable packaging materials. The packaging innovation of ADES reflects its commitment to environmental sustainability.
		2. Green price	I believe that the price of ADES bottled drinking water is appropriate considering its environmental benefits. I am willing to pay for ADES because it provides environmental value.
		3. Green promotion	I believe that ADES clearly communicates its

	distribution channels.		commitment to environmental sustainability through its promotional activities. ADES's promotional campaigns increase my awareness of its environmental initiatives.
		4. Green place	I believe that ADES bottled drinking water is easily available through distribution channels that support environmentally sustainable practices. ADES is widely available at locations that are convenient for consumers.
Brand Image (X2)	Brand image is the respondents' perceptions and beliefs about the ADES drinking water brand, formed from consumer experience, information, and assessments.	1. Recognition	ADES has a clear and recognizable brand identity. I can easily distinguish ADES from other bottled drinking water brands.
		2. Reputation	ADES has a good reputation as a quality bottled water brand. I consider ADES to be a trustworthy brand.
		3. Affinity	I have a positive feeling toward the ADES brand. I feel comfortable choosing ADES over other bottled drinking water brands.
Environmental Attitude (Z)	Environmental attitude is the level of respondents' attitudes, beliefs, and concerns regarding environmental issues and the impact of consumption	1. Commitment for environmental safeguard	I am committed to protecting the environment in my daily consumption choices, including choosing ADES. I try to choose environmentally friendly products, including ADES.
		2. Responsibility for sustainable environment	I feel responsible for supporting environmental

behavior on the environment, particularly in the context of using and selecting ADES products as environmentally friendly bottled drinking water.		sustainability through my consumption behavior.
	3. Provide environmental issues and problem solving	I pay attention to environmental issues caused by plastic waste from bottled water like ADES.
	4. Protect and improve the environment	I support actions that help protect and improve environmental conditions through responsible consumption.
	5. Share solutions and problem solving for environmental damage	I encourage others to adopt environmentally responsible consumption practices.

1.11 Research Methods

1.11.1 Type of Research

This research uses a quantitative type, namely research aimed at a specific population or sample where the sampling is done randomly, data collection by distributing questionnaires and analysis using statistical analysis in testing the research hypothesis (Sugiyono, 2019). This type was chosen because it allows researchers to obtain quantitative data objectively from respondents who have made purchases through the distribution of questionnaires. The data obtained reflects the perceptions of respondents so that the relationship between research variables can be analyzed statistically without any treatment or manipulation of the variables studied. Thus, this study is expected to be able to provide empirical evidence regarding the influence of green marketing, brand awareness and brand image on purchase intention through environmental attitude.

1.11.2 Population and Sample

1.11.2.1 Population

A population is the entire group of people, events, or things of interest that a researcher wishes to investigate (Sekaran, 2017). The population in this study was all consumers in Java Province who were aware of the ADES drinking water product.

1.11.2.2 Sample

The sample was drawn from the research population, considering that it would be too large for the researcher to use the entire population. In this study, to ensure the sample size, with the population size unknown, the researcher used a formula of 5 to 10 times the largest number of formative indicators used to measure a construct (Hair et al., 2010).

This study used a total of 16 indicators; therefore, based on the above guidelines, the researchers determined a minimum sample size of 10×16 . The calculation shows that the minimum required sample is 160 consumers. However, to improve data accuracy, reduce potential bias, and strengthen the representativeness of the sample to the population, thereby ensuring more valid and reliable research results, the sample size was increased to 300 consumers.

The sampling procedure for 300 consumers used a non-probability sampling technique. This was done because the study did not allow for data collection on the entire population, thus becoming an effort to overcome time constraints (Neuman, 2017). The non-probability sampling technique used was purposive sampling, a technique for taking samples based on specific objectives or considerations (Hanief

& Himawanto, 2017), in this case, the researchers have determined the following considerations for the sample:

- 1) Respondents must be male or female.
- 2) Respondents must be at least 17 years old.
- 3) Respondents must reside in Java Province.
- 4) Respondents must be consumers who have purchased ADES bottled drinking water products.
- 5) Respondents must be willing to complete the research questionnaire completely and honestly.

1.11.3 Data Types and Sources

In research, the type and source of data play a crucial role in determining the quality and accuracy of the results. In this study, in accordance with quantitative research methods, the type of data used was primary data sourced from a questionnaire. Primary data is defined as data obtained directly from the research location (Sugiyono, 2019). Primary data was chosen because it provides direct information from the respondents, who are the research subjects, thus reflecting actual conditions in accordance with the research objectives. The questionnaire was systematically compiled to measure the variables studied and distributed to all predetermined respondents.

1.11.4 Measuring Scale

The questionnaire used in this study was a closed-ended questionnaire, a set of questions structured with multiple answer alternatives, allowing respondents to answer only those provided. Each item on the instrument used a Likert scale,

ranging from very positive to very negative, using words such as "among others" (Sugiyono, 2019).

In this study, the variables of green marketing, brand awareness, and brand image were measured against purchase intention through environmental attitude. The Likert scale is used to measure the attitudes, opinions, and perceptions of an individual or group of people regarding social phenomena (Sugiyono, 2019). Each respondent's answer choice is assigned a score or weight, arranged in a tiered manner using a Likert scale because the questions reflect attitudes, opinions, and perceptions regarding the research variables. The Likert scale used has five answer options:

Table 1. 4 Likert Measurement Scale

No	Response Scale	Code	Value
1	Strongly Agree	SS	5
2	Agree	S	4
3	Neutral	N	3
4	Disagree	TS	2
5	Strongly Disagree	STS	1

1.11.5 Data Collection Technique

Data collection techniques are the most important step in research, because the main objective of research is to obtain data (Sugiyono, 2019). In this study, data collection used a questionnaire. A questionnaire is a collection of a list of questions submitted in writing to a person (in this case called a respondent) and the way to answer is done in writing (Arikunto, 2013). The questionnaire will be distributed directly or indirectly (Google Form) by the researcher aimed at the community in

Semarang City who are research respondents according to the previously determined sample criteria. Answers to the questionnaire are collected by giving a set of written questions to respondents to answer.

1.11.6 Data Analysis Technique

Data analysis is the process of analyzing data using statistics (Paramita et al., 2021). Furthermore, data analysis techniques are defined as methods or ways to process data into information, making the data's characteristics easier to understand and useful for finding solutions to problems, particularly those related to research. Data analysis can also be defined as the process of transforming research data into information that can later be used to draw conclusions (Abdullah et al., 2022).

1.11.7.1 Descriptive Statistical Analysis

The description of the research variables uses an index analysis technique that describes respondents' responses to the questionnaire items. The scoring technique used in this study is a minimum score of 1 and a maximum of 5. Therefore, the respondent response index is calculated using the following formula (Ferdinand, 2014):

$$Index\ Value = \frac{(F1 \times 1) + (F2 \times 2) + (F3 \times 3) + (F4 \times 4) + (F5 \times 5)}{Max\ score}$$

Information:

F1 = Frequency of respondents in statements that scored 1

F2 = Frequency of respondents in statements that scored 2

F3 = Frequency of respondents in statements that scored 3

F4 = Frequency of respondents in statements that scored 4

F5 = Frequency of respondents in statements that scored 5

The calculated index results are subsequently used to interpret the tendency of respondents' answers regarding each research variable. The criteria for interpreting index values are divided into five categories, namely:

Table 1. 5 Categorization of Index Values

Index Value	Category
0,20 - 0,36	Very Low
0,37 - 0,52	Low
0,53 - 0,68	Moderate
0,69 - 0,84	High
0,85 – 1,00	Very High

Source: (Agustiningsih & Dema, 2022)

The categorization of index values provides a basis for determining the level of respondents' perceptions of each research variable. A higher index value indicates a stronger tendency toward the measured variable, while a lower index value indicates a weaker tendency. Therefore, these categories are used to facilitate the interpretation of respondents' responses to Green Marketing, Brand Image, Environmental Attitude, and Purchase Intention in this study.

1.11.7.2 Quantitative Analysis

The quantitative analysis technique in this study used the Partial Least Squares (PLS) method with SmartPLS. The PLS approach is particularly useful for predicting dependent variables involving a large number of independent variables. Indicators are assumed to be uncorrelated, eliminating the need for internal consistency/reliability testing (Mustofa & Wijaya, 2018). The researcher used Partial Least Squares (PLS) because the variables used in this study are latent variables (not directly measurable) that can be measured based on their indicators

(manifest variables), and collectively involve a degree of measurement error. This allows the author to analyze in more detail the indicators of the latent variables that reflect the strongest and weakest latent variables, including their degree of error.

SEM is transformed from covariate-based to variance-based. Covariance-based SEM generally only tests theory, while PLS is more of a predictive model. PLS is a powerful analysis method because it is not based on numerous assumptions, such as data must be normally distributed and the sample size does not need to be large. In addition, PLS can be used to confirm theories and explain the existence or absence of relationships between variables. PLS can simultaneously analyze constructs formed with reflective and formative indicators.

Table 1. 6 Examples of CB-SEM and SEM-PLS Software

<i>Software CB-SEM</i>	<i>Software SEM-PLS</i>
<i>LISREAL</i>	<i>SmartPLS</i>
<i>Amos</i>	<i>WarpPLS</i>
<i>EQS</i>	<i>PLS-Grap</i>
<i>MPlus</i>	<i>Visual-PLS</i>
<i>Statcal</i>	<i>Statcal</i>

Mahmud and Ratmono stated that SEM-PLS can work efficiently with small sample sizes and complex models. Furthermore, the data distribution assumptions in SEM-PLS are relatively loose compared to CB-SEM. Estimation with CB-SEM requires a series of assumptions to be met, such as multivariate data normality, minimum sample size, homoscedasticity, and so on. The estimation results of both are not significantly different, so SEM-PLS can be a good proxy for CB-SEM. SEM-PLS can still produce estimates despite small sample sizes and deviations from the multivariate normality assumption.

SEM PLS can be viewed as a nonparametric approach to CB-SEM. Furthermore, when CB-SEM assumptions are not met, SEM-PLS can be an appropriate method for theory testing. Mahfud and Ratmono (2013) state that if the data precisely meets CB SEM assumptions, such as minimum sample size and normal distribution, then choose CB-SEM. Otherwise, choose SEM-PLS. SEM PLS is a nonparametric approach that can work well even for extremely non-normal data.

Parameter estimates obtained with PLS are categorized into three, namely (1) weight estimate which can be used to create latent variable scores; (2) path estimate which connects the latent variable with the latent variable and its indicator (loading); and (3) related to the means and location of parameters (constant regression values) for indicators and latent variables.

1. Evaluation of the Measurement Model (Outer Model)

Evaluation of the measurement model (outer model) is useful for assessing the validity and reliability of the model. The outer model, with reflective indicators, will be evaluated through the convergent and discriminant validity of the indicators forming the latent construct, the composite reliability, and Cronbach's alpha for the indicator blocks.

a. Convergent Validity Test

Convergent validity is evaluated using three stages: indicator validity, contract reliability, and average variance extracted (EVA) values. Validity indicators can be seen from factor loading values. If an indicator's outer

loading is less than 0.4 or 0.7, the indicator is removed. If the outer loading is above 0.7, the indicator is accepted.

b. Discriminant Validity Test

This evaluation (discriminant validity) is conducted in two stages: (a) observing the cross-loading value for each variable, which must be greater than 0.7, and (b) comparing the squared correlation between constructs and the AVE value, or the correlation between constructs and the AVE root. The criterion for cross-loading is that each indicator measuring its construct must correlate more highly with its construct than with other constructs.

c. Composite Reliability Test

This evaluation uses two criteria: composite reliability and Cronbach's alpha. A construct can be said to be reliable if the composite reliability and Cronbach alpha values are above 0.70.

2. Structural Model Evaluation (Inner Model)

The inner model (inner relation, structural model, and substantive theory) is a description of the relationships between variables based on substantive theory. The structural model is evaluated using the R-Square for the dependent construct and the t-test to determine the significance of the structural path parameter coefficients.

a. PLS Model Goodness of Fit Evaluation

The Goodness of Fit evaluation in Partial Least Squares Structural Equation Modeling (PLS-SEM) models is used to assess how well a theoretical model fits empirical data. Some of the main indicators used are as follows:

- 1) R-square (R^2): Indicates how much the independent variables are able to explain the dependent variable. An R^2 value ≥ 0.75 is considered strong, ≥ 0.50 moderate, and ≥ 0.25 weak
- 2) Standardized Root Mean Square Residual (SRMR): Measures the average difference between observed and predicted covariances. A good SRMR value is ≤ 0.08 , indicating a good model fit.
- 3) Chi-Square (χ^2): Used to compare the empirical model with the theoretical model. The smaller the chi-square value and the less significant the value, the better the model fit.
- 4) Normed Fit Index (NFI): Measures model fit by comparing the chi-square values of the initial model and the fitted model. An NFI value ≥ 0.90 indicates a good model fit.
- 5) d_ULS (Unweighted Least Squares Discrepancy) and d_G (Geodesic Discrepancy): Both are used in global model fit evaluation, particularly in SmartPLS. Smaller d_ULS and d_G values indicate minimal discrepancy between the empirical and theoretical model matrices, thus indicating a good model. These values are compared with bootstrap limits to assess significance.

The PLS-SEM approach, in addition to evaluating the model's fit, also emphasizes the model's predictive ability on new data or out-of-sample prediction, which is evaluated through PLS Predict. This test involves calculating RMSE, MAE, and Q^2 predict values using the k-fold cross-validation method to measure how well the model predicts indicators in

endogenous variables. If the Q^2 value is > 0 and the prediction error is lower than that of a benchmark model (e.g., linear regression), then the model is considered to have good predictive relevance. Thus, the evaluation of goodness of fit in PLS emphasizes not only the overall model fit but also the model's predictive power, making it more applicable in the context of management- or organization-based research that requires estimation of actual future behavior.

b. Hypothesis Testing (Bootstrapping)

To assess the significance of the influence between variables, a bootstrapping procedure must be performed. The bootstrapping procedure uses the entire original sample for resampling. In the bootstrap resampling method, the significance values used (two-tailed) are 1.65 (significance level = 10%), 1.96 (significance level = 5%), and 2.58 (significance level = 1%). Therefore, acceptance or rejection of the hypothesis is based on the following criteria:

- 1) If the p-value is < 0.05 and the t-statistic is < 1.96 , then H_0 is rejected, meaning there is a significant influence between one independent variable and the dependent variable.
- 2) If the p-value is > 0.05 and the t-statistic is > 1.96 , then H_0 is accepted, meaning there is no significant influence between one independent variable and the dependent variable.

c. Testing the Mediation Effect

The mediation effect test describes a situation where the relationship between two constructs is not constant but depends on the value of a third variable, known as the mediating variable. This test is used to examine the main

effect, namely the direct relationship between the independent variable (X) and the dependent variable (Y), which must be the main effect. Simultaneous testing of the mediation effect on the influence of the independent variable (X) and the moderating variable (Z) on the dependent variable (Y) can be conducted if it has been proven significant according to the following criteria:

- 1) If the relationship between variables X and Y is not significant (t-statistic < 1.96) in research using a mediating variable model, then variable Z does not play a role in mediating the relationship between variables X and Y.
- 2) If the t-statistic (total effect) between variables X and Z, and the t-statistic value of variable Z to Y, is < 1.96 , then the mediating variable does not play a role as a moderator of the relationship between variables X and Y.
- 3) If the relationship between variables X and Y is significant (t-statistic > 1.96), then variable Z plays a role in mediating the relationship between variables X and Y.