EFFECT OF GREEN MARKETING STRATEGIES ON GREEN PURCHASE INTENTION FOR COMESTIC PRODUCTS OF GEN Z AND MILLENNIAL CONSUMERS IN HO CHI MINH CITY: FURTHER EXPLANATION BY MEDIATING FACTORS

Ho Chi Minh City, Vietnam

2025

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ABSTRACT

The increasing concern for environmental sustainability has reshaped consumer behavior, particularly among Gen Z and Millennials, who are increasingly drawn to eco-friendly products. This shift has led businesses, especially in the cosmetics industry, to adopt green marketing strategies, including green advertising, eco-labeling, and sustainable packaging, to appeal to environmentally conscious consumers. While research has explored the connection between green marketing and green purchase intention (GPI), limited attention has been paid to the mediating roles of green perceived value (GPV), after-marketing environmental awareness, and after-marketing environmental attitude. This study examines how these mediating factors influence the relationship between green marketing strategies and GPI in the context of Vietnam's cosmetics industry, with a focus on Gen Z and Millennials in Ho Chi Minh City. By applying the Theory of Planned Behavior (TPB), this research provides a comparative analysis of generational responses to green marketing and seeks to bridge gaps in the literature related to generational differences and the limited focus on green marketing in the Vietnamese market. The study aims to offer valuable insights for businesses seeking to implement effective green marketing strategies that align with the increasing demand for sustainable products, ultimately fostering environmentally responsible consumer behavior and driving long-term success in a competitive market.

Keywords: Green Marketing Strategies, Green Purchase Intention (GPI), Green Perceived Value (GPV), After-Marketing Environmental Awareness, After-Marketing Environmental Attitude, Gen Z Consumers, Millennial Consumers, Cosmetics Industry, Sustainable Packaging, Eco-Labeling, Green Advertising, Theory of Planned Behavior (TPB), Vietnam Market.

CHAPTER 01: INTRODUCTION

This chapter includes six parts. First, the brief description of the research's background and rationale; following, research problems are specified, which are then directed down to objectives and research questions. Then, the significance of the study is discussed. Coming up with the final part, which is the scope of the research.

1.1 BACKGROUND OF THE RESEARCH

Over the past few decades, growing concern for the environment has led to significant shifts in consumer behavior globally. As awareness of issues such as climate change, environmental degradation, and sustainability has heightened, consumers are actively seeking products and services that align with their environmental values. This shift is particularly prominent among younger generations like Gen Z (born between 1997 and 2012) and Millennials (born between 1981 and 1996). According to a Nielsen (2021) survey, 79% of consumers in Vietnam are willing to pay more for environmentally friendly products, with Gen Z and Millennials leading this change. These younger consumers are not only concerned about environmental issues but also factor sustainability into their purchasing decisions, making them pivotal in driving demand for eco-friendly products.

In Vietnam, the government has actively promoted green consumption through key policy initiatives, including the National Strategy on Green Growth (2012–2020) and the National Action Plan on Green Growth (2021–2030). These policies emphasize reducing environmental impacts across industries, including cosmetics, by encouraging sustainable practices and the production of eco-friendly products. This focus on green growth aligns with global efforts to advance corporate social responsibility (CSR) and sustainable development goals (SDGs), further incentivizing businesses to adopt green marketing

strategies (Ministry of Natural Resources and Environment, 2020). By supporting sustainable industries, these policies aim to foster a greener economy, meeting the rising demand for environmentally friendly products in sectors like cosmetics.

Parallel to these policy efforts, the academic research landscape surrounding green marketing strategies and green purchase intention in Vietnam has also expanded. Several studies have emerged exploring the impact of green marketing on consumer behavior, offering valuable insights into how environmental concerns influence purchasing decisions.

Table 1.1: Summary of notable research work related to the topic

Authors (Year)	**Scope and Sample**	**Research Questions**	**Research Framework**	**Empirical Findings**	**Declared Limitation**
Chen & Chang (2012)	Electronics industry, Taiwan, 600 consumers; age 20-50, working professionals	How do green marketing strategies influence green perceived value and purchase intention?	IV*: Green marketing strategies (eco-labeling, green advertising); Mediator: Green perceived value; DV***: Green purchase intention	Green perceived value mediates the relationship, enhancing the effect of green marketing strategies on GPI, especially when environmental benefits are clearly communicated.	Limited to electronics, Taiwan-only scope.

Paul et al. (2016)	India; 400 consumers; age 18-45, students & professionals	How do environmental concern and knowledge influence green purchase behavior?	IV: Attitudes, subjective norms, perceived behavioral control; Moderators: Environmental concern, knowledge; DV: Green purchase intention	Higher environmental concern and knowledge positively correlate with GPI, as concerned consumers are more motivated to purchase green products.	India-only scope; self-reported data bias.
Waris & Hameed (2020)	Pakistan; 300 consumers; age 25-50, urban population	How do eco-labels influence green purchase intention?	IV: Eco-labels; MV: Green trust, green perceived value; DV: GPI	Eco-labels significantly influence GPI through the mediating roles of trust and perceived value.	Pakistan-only scope; focuses only on eco-labels.
Taufique et al. (2017)	Emerging markets, general consumers	How does environmental awareness mediate the relationship between green marketing and	IV: Green marketing strategies (eco-labels); MV**: Environmental awareness;	Environmental awareness enhances the effectiveness of green marketing strategies in shaping	Emerging markets only; self-reported bias.

		purchase intention?	DV: GPI	purchase intention.	
Vu et al. (2021)	Vietnam, cosmetics industry; 300 consumers, age 18-35, Gen Z & Millennials	How does green packaging influence purchase intention?	IV: Green packaging; MV: Green perceived value; DV: Green purchase intention	Sustainable packaging drives GPI, especially among eco-conscious younger consumers.	Focus on cosmetics; Vietnam-only scope.
Nguyen et al. (2020)	Vietnam, urban consumers; 400 people, age 20-40	How does green branding affect green purchase intention?	IV: Green branding; MV: Brand credibility; DV: Green purchase intention	Brand credibility plays a critical role in fostering GPI, with consumers highly sensitive to greenwashing.	Urban, Vietnam-only focus; excludes other green marketing strategies.
Pham et al. (2019)	Vietnam, urban areas (Hanoi, HCMC); Millennials & Gen Z	How does environmental awareness influence consumer behavior?	IV: Environmental awareness; DV: Green purchase intention	Environmental awareness significantly influences purchase intention, particularly among younger	Urban focus only; no exploration of price or quality impact.

				consumers in urban areas.	
Hartmann & Apaolaza-Ibáñez (2012)	Energy sector, global; general consumers	How do emotions mediate the relationship between green advertising and purchase intention?	IV: Green advertising; MV: Emotional engagement; DV: Green purchase intention	Emotional engagement from green advertising strengthens environmental attitudes and drives purchase intention.	Focus on emotions only; may not apply across sectors.
Faraj et al. (2023)	Malaysia; Gen Z consumers	How do green marketing strategies influence green attitudes and purchase intentions?	IV: Green marketing strategies (advertising, labeling, packaging); MV: Green attitude; DV: Green purchase intention	Green attitude positively mediates the relationship between green marketing strategies and purchase intention.	Malaysia-only scope; Gen Z focus only.

** IV: Independent Variable (factors or strategies investigated, like green marketing strategies, eco-labels, or green branding).*

*** MV: Mediating Variable (factors that help explain the mechanism, such as green perceived value or emotional engagement).*

**** DV: Dependent Variable (the outcome, which is typically green purchase intention).*

For instance, Nguyen et al. (2020) analyzed the influence of green branding on consumer behavior in Vietnam and found that green advertising and eco-labeling significantly enhance consumer trust in products and drive green purchase intentions. The study underscored that consumer perception of authenticity in green marketing messages is crucial for the success of these strategies. This aligns with global research findings, such as those by Peattie and Crane (2005), who also emphasized the importance of perceived authenticity in green marketing campaigns.

Building on this, Vu et al. (2021) examined how green packaging influences purchase behavior in the Vietnamese food and cosmetics sectors. Their study revealed that consumers, especially Gen Z, are more likely to purchase products with sustainable packaging that highlights environmental benefits. They found that visual elements of eco-friendly packaging, such as symbols for recyclability, play a significant role in shaping consumers' perceptions of the brand's environmental commitment. These findings echo the work of Chen and Chang (2012), who demonstrated that green perceived value significantly mediates the relationship between green marketing and purchase intention across industries, including cosmetics.

Additionally, Pham et al. (2019) explored how environmental awareness affects consumer behavior in Vietnam, focusing on urban areas such as Ho Chi Minh City and Hanoi. The study revealed that younger Vietnamese consumers, particularly Millennials and Gen Z, are increasingly motivated by environmental concerns and are more likely to factor sustainability into their purchasing decisions. This trend is consistent with the Theory of Planned Behavior (TPB), as proposed by Paul et al. (2016), which identifies

attitudes, subjective norms, and perceived behavioral control as critical determinants of green purchase intentions. In Vietnam, Pham et al. (2019) confirmed that these psychological factors, along with environmental awareness, significantly influence the decision-making process of young consumers when it comes to eco-friendly products.

Despite these valuable contributions, there is still a limited body of research that specifically explores the unique dynamics of the cosmetics industry in Vietnam. While numerous studies have focused on the food and energy sectors, the cosmetics market—where factors such as product performance, luxury positioning, and personal care significantly influence purchasing decisions—remains underexplored. Furthermore, although the direct impact of green marketing on green purchase intentions has been well-established globally, there is a need for more comprehensive research on the mediating factors—such as green perceived value, environmental awareness, and environmental attitude—that shape the relationship between green marketing strategies and green purchase intentions in Vietnam's cosmetics industry. This thesis aims to bridge that gap by investigating how green marketing strategies influence green purchase intentions and by examining the mediating role of these factors. Specifically, this study will focus on Gen Z and Millennials, two demographic groups driving demand for eco-friendly products and shaping the future of consumer behavior in Vietnam.

The cosmetics industry in Vietnam is undergoing rapid growth, with its market value expected to reach $3.1 billion USD by 2025, driven by an annual growth rate of 7.4% (Statista, 2023). This surge is primarily influenced by Gen Z and Millennials, who are shaping market trends with their preference for organic, natural, and sustainably produced beauty products. Within this sector, the Natural Cosmetics market in Vietnam is projected to generate $62.26 million USD in revenue by 2025 (Statista, 2024). Vietnamese consumers are increasingly opting for organic and natural skincare products, valued for their skin-friendly and environmentally conscious attributes. This shift is largely attributed

to a rise in skin issues such as allergies, sensitivity, and premature aging, leading many to perceive natural products as a safer and more effective alternative to traditional cosmetics. As a result, the market is opening up significant opportunities for brands specializing in organic and natural skincare. Companies like Cocoon, L'Oréal Paris Botanicals, La Roche-Posay, and The Ordinary are gaining traction and growing in popularity in this evolving landscape.

Figure 1. 1: Revenue of the cosmetics market in Vietnam from 2019 to 2029, by segment (in million U.S. dollars)

Source: Statista, 2024

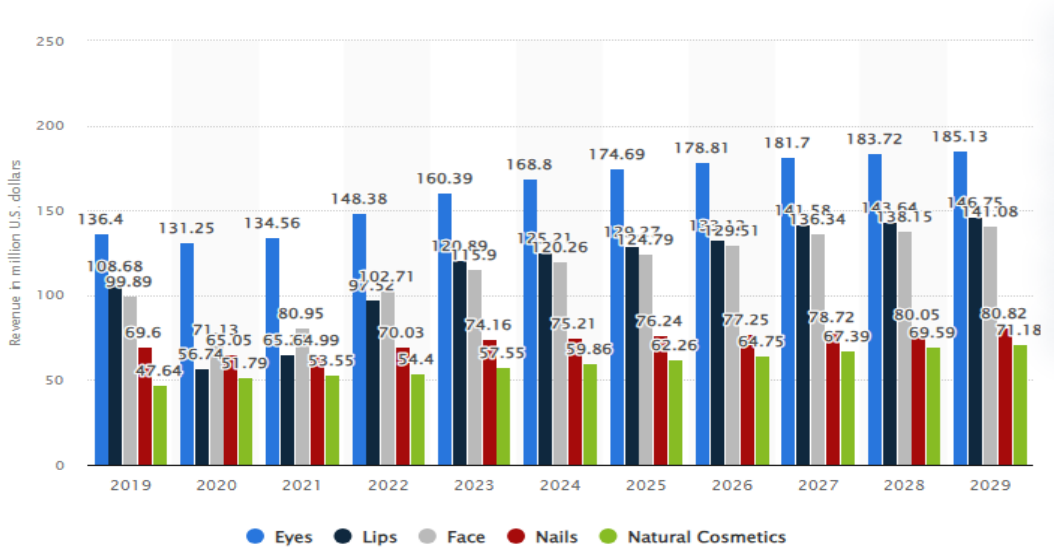
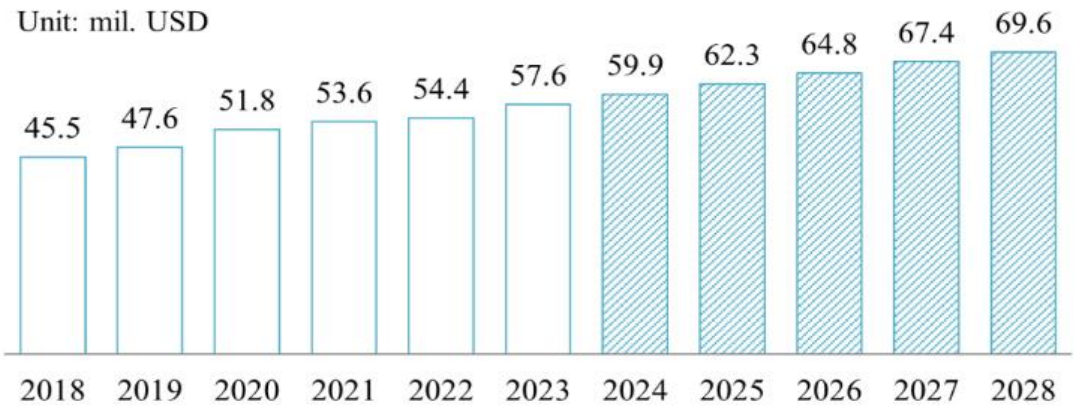


Figure 1. 2: Revenue of natural cosmetics market in Vietnam from 2018 - 2028 (in million U.S. dollars)

Source: Statista, 2024



Vietnam's cosmetics market is seeing a surge in green marketing as brands work to meet the growing demand for environmentally friendly products. Among these, Cocoon has become a standout. It's the only Vietnamese brand to make it into the top 10 best-sellers in 2023, with a market share of 10.3%. This local favorite has captured attention by focusing on natural ingredients, cruelty-free testing, and a deep commitment to sustainability. In a country like Vietnam, where Buddhist traditions run deep and around 10% of the population is vegan, the interest in vegan cosmetics is on the rise, especially as beauty and self-care gain more importance. Cocoon has nailed its strategy by offering products that are not only 100% vegan and cruelty-free but also made from Vietnamese plants, specifically designed to care for skin and hair naturally and effectively. What's more, Cocoon knows how to connect with its audience. Through social media, it speaks directly to eco-conscious Gen Z consumers, showcasing biodegradable packaging and real efforts to promote sustainability. This approach resonates deeply with younger people who value transparency and are eager to support brands that genuinely care about the planet. Cocoon's success isn't just about great products—it's about building a brand that feels authentic, thoughtful, and aligned with the values of its customers.

Another example is La Roche-Posay, an international skincare brand that has positioned itself as an eco-conscious choice by promoting its commitment to sustainable production processes and eco-friendly packaging. The brand's eco-labeling campaign highlights the use of recycled materials in packaging and efforts to reduce carbon emissions during production. HoIver, La Roche-Posay's green marketing strategy has achieved mixed results in Vietnam. While the brand enjoys a loyal following, particularly among Millennials who prioritize skincare effectiveness, its environmental messaging has not been as impactful compared to its performance in global markets. Vietnamese consumers, particularly Millennials, often prioritize product performance over sustainability, making it challenging for the brand to fully capitalize on its green marketing efforts.

These case studies highlight the increasing significance of green marketing strategies in Vietnam's cosmetics industry. However, the effectiveness of these strategies depends on several factors, including brand positioning, consumer awareness, and product pricing. For instance, while Cocoon has successfully built trust among Gen Z consumers by emphasizing its sustainability message, La Roche-Posay has faced challenges in making its environmental efforts resonate with a broader Vietnamese audience. This disparity underscores the need for a deeper understanding of how green marketing strategies influence green purchase intentions across various consumer segments in Vietnam, particularly among Gen Z and Millennials..

This study will focus on the mediating roles of Green Perceived Value, After-marketing Environmental Awareness, and After-marketing Environmental Attitude to provide a comprehensive understanding of how green marketing strategies impact consumer behavior. Furthermore, the comparative analysis between Gen Z and Millennials will offer valuable insights into how these two generations differ in their responses to green marketing. By addressing these factors, this research will not only contribute to the academic literature on green marketing and consumer behavior but also provide actionable

insights for cosmetics brands seeking to align their marketing efforts with the sustainability values of younger generations in Vietnam.

1.2 PROBLEM STATEMENT

In recent years, there has been a marked increase in environmental consciousness globally, significantly influencing consumer behavior. Gen Z and Millennials, two generational cohorts known for their heightened environmental awareness, are driving demand for eco-friendly products, particularly in the cosmetics industry. In Vietnam, this trend is echoed by a growing preference for organic, natural, and sustainably produced beauty products. According to Nielsen (2021), 79% of Vietnamese consumers, particularly among these younger generations, are willing to pay a premium for environmentally friendly products. This has created a fertile ground for brands to adopt green marketing strategies, such as green advertising, eco-labeling, and sustainable packaging, to appeal to the evolving demands of eco-conscious consumers.

Despite the increasing adoption of green marketing strategies in Vietnam, the effectiveness of these strategies in the cosmetics industry remains understudied, particularly when compared to other industries like food and energy. Existing literature, such as Peattie and Crane (2005), has established that green marketing can positively influence consumer behavior when perceived as credible and authentic. However, there is limited understanding of how green marketing influences purchase intentions in the cosmetics sector, where factors such as product efficacy, luxury positioning, and personal care also play significant roles. This gap in the research is notable because cosmetics are often viewed as personal, emotional products, and consumers may weigh factors like product performance and brand reputation more heavily than environmental claims (Nguyen et al., 2020).

Further complicating this issue is the need to better understand the mediating factors that shape the relationship between green marketing strategies and green purchase intentions. Chen and Chang (2012), for instance, highlighted the role of green perceived value in influencing consumer decisions, showing that consumers are more likely to engage in green purchasing when they perceive the environmental benefits of a product as outweighing the costs. Similarly, studies by Vu et al. (2021) and Pham et al. (2019) have shown that environmental awareness and attitudes toward eco-friendly products can significantly impact purchase behavior in Vietnam. HoIver, in the cosmetics industry, these mediating factors have not been thoroughly explored, leaving a gap in understanding how green perceived value, environmental awareness, and environmental attitude contribute to shaping purchase intentions.

Moreover, while existing studies have explored green marketing strategies in various industries, there is a lack of research specifically focusing on the comparative behavior of Gen Z and Millennials—two key demographics driving the green movement in Vietnam. Waris and Hameed (2020) demonstrated that generational differences influence the effectiveness of green marketing strategies, with Gen Z responding more to authenticity and social responsibility, while Millennials tend to balance environmental concerns with practicality and performance. HoIver, there has been little exploration of how these generational differences play out in the Vietnamese cosmetics market, where preferences for eco-friendly products are still emerging.

In light of these gaps, there is a pressing need to investigate how green marketing strategies—specifically green advertising, eco-labeling, and sustainable packaging—influence green purchase intentions in Vietnam's cosmetics industry. Additionally, the exploration of mediating factors, such as Green Perceived Value, After-marketing Environmental Awareness, and After-marketing Environmental Attitude, is critical for understanding the full extent of this relationship. By examining these mediating roles, this

research will provide a more nuanced understanding of the mechanisms that drive green purchasing behavior among Vietnamese consumers. Furthermore, by conducting a comparative analysis between Gen Z and Millennials, this study will shed light on how these two demographic groups differ in their responses to green marketing, offering valuable insights for brands seeking to target these key consumer segments effectively.

In summary, while the cosmetics industry in Vietnam is rapidly adopting green marketing strategies in response to shifting consumer preferences, there is limited empirical research investigating the effectiveness of these strategies in influencing green purchase intentions. Furthermore, little is known about the mediating factors that shape this relationship and the potential generational differences between Gen Z and Millennials. This research seeks to address these gaps by exploring the impact of green marketing strategies on green purchase intentions in the Vietnamese cosmetics industry, with a focus on the mediating roles of Green Perceived Value, After-marketing Environmental Awareness, and After-marketing Environmental Attitude.

1.3 RESEARCH OBJECTIVES

The main objectives of this study are:

- To examine how green marketing strategies (green advertising, eco-labeling, and sustainable packaging) influence green purchase intentions in Vietnam's cosmetics industry.
- To explore the mediating roles of Green Perceived Value, After-marketing Environmental Awareness, and After-marketing Environmental Attitude in the relationship between green marketing strategies and green purchase intentions.
- To conduct a comparative analysis between Gen Z and Millennials to understand how these generational cohorts differ in their responses to green marketing strategies in the cosmetics industry.

- To provide actionable insights for cosmetic brands looking to align their marketing strategies with the sustainability values of younger generations in Vietnam.

1.4 RESEARCH QUESTIONS

The study will address the following research questions:

- RQ1: How do green marketing strategies (green advertising, eco-labeling, and sustainable packaging) influence green purchase intentions in Vietnam's cosmetics industry?
- RQ2: How is the mediating roles of Green Perceived Value, After-marketing Environmental Awareness, and After-marketing Environmental Attitude in the relationship between green marketing strategies and green purchase intentions?
- RQ3: How do Gen Z and Millennials differ in their responses to green marketing strategies in the cosmetics industry?
- RQ4: How can cosmetic brands effectively align their marketing strategies with the sustainability values of Gen Z and Millennials in Vietnam?

1.5 SIGNIFICANCE OF THE RESEARCH

1.5.1 Contribution to Academic Literature

This study will contribute to the academic literature on green marketing, consumer behavior, and sustainability by exploring how green marketing strategies influence green purchase intentions in the cosmetics industry. It will also add to the growing body of research on mediating factors such as Green Perceived Value, Environmental Awareness, and Environmental Attitude, providing a more nuanced understanding of how these factors shape consumer behavior. Furthermore, the comparative analysis between Gen Z and Millennials will offer new insights into generational differences in responses to green marketing.

1.5.2 Contribution to Businesses and Organizations

The author aims that the findings from this research will provide valuable insights for cosmetics companies operating in Vietnam. By understanding the impact of green marketing strategies on green purchase intentions, brands can tailor their marketing efforts to better meet the needs and preferences of Gen Z and Millennials. The findings will also help companies identify the mediating factors that play a crucial role in influencing consumer behavior, enabling them to design more effective marketing campaigns that emphasize environmental benefits, build trust, and resonate with eco-conscious consumers.

1.6 RESEARCH SCOPE

The research will focus on Gen Z and Millennials in Ho Chi Minh City, Vietnam, as these two generational groups are at the forefront of driving demand for eco-friendly cosmetics. The study will examine green marketing strategies in the cosmetics industry, with a particular emphasis on green advertising, eco-labeling, and sustainable packaging. It will also explore the mediating roles of Green Perceived Value, After-marketing Environmental Awareness, and After-marketing Environmental Attitude in the relationship between green marketing and purchase intentions.

CHAPTER 02: LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

In chapter 2, the researcher clarifies all the definitions and concepts related to the study. After reviewing previous studies about relevant topics, a conceptual framework is proposed along with hypotheses.

2.1 LITERATURE REVIEW

2.1.1 Value-Belief-Norm (VBN) Theory

The Value-Belief-Norm (VBN) Theory, proposed by Stern et al. (1999), is a psychological framework designed to explain pro-environmental behavior by focusing on the values, beliefs, and personal norms of individuals. VBN theory integrates aspects of norm-activation theory (NAT) and the New Environmental Paradigm (NEP) to offer a detailed explanation of how environmental values translate into environmentally responsible actions. The core of the theory is that individuals' personal norms—a sense of moral obligation—are activated by their values and beliefs about the state of the environment, which motivates them to engage in pro-environmental behaviors.

The VBN framework is built upon three key components—values, beliefs, and norms—each of which plays a pivotal role in shaping behavior:

(i) Values: At the base of the VBN model are values, which are deep-rooted and stable concepts that influence a person's worldview. These values are categorized into three types:

- Altruistic values: Motivated by a concern for others and societal well-being.
- Biospheric values: Concerned with the health and sustainability of the natural environment.

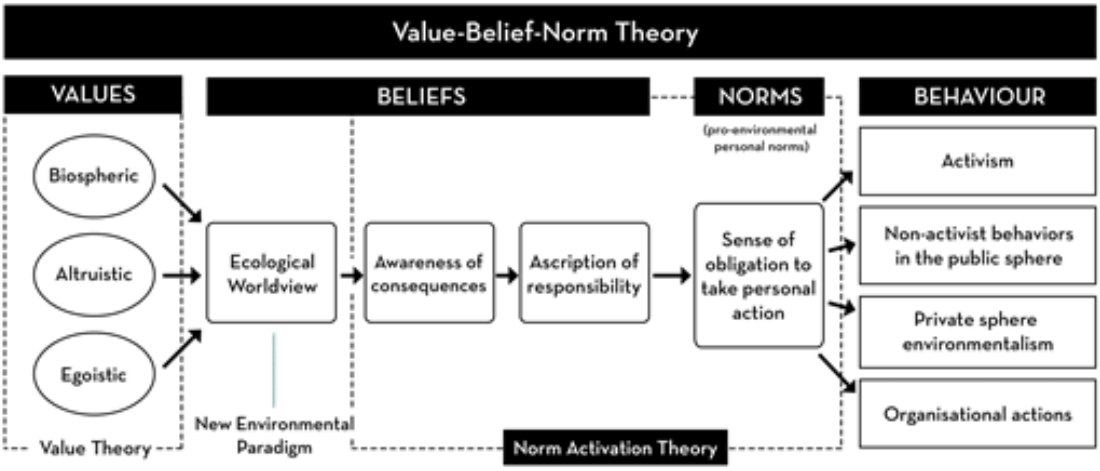
- Egoistic values: focused on self-interest, personal benefits, and material gains.

Individuals who hold strong altruistic and biospheric values are more likely to adopt pro-environmental attitudes, as they are concerned with minimizing environmental harm for the benefit of society and nature.

(ii) Beliefs: The second component of the model involves individuals' beliefs about the environment, which are often shaped by their values. The New Environmental Paradigm (NEP) is a core belief system within the VBN framework. It reflects the idea that human actions significantly contribute to environmental degradation and that it is necessary to limit this damage. These beliefs include:

- Awareness of the negative environmental consequences of human activities.
- The belief that individuals and society have the power to mitigate or prevent environmental harm.
- This awareness prompts individuals to believe that they have a responsibility to act, activating their personal norms.

(iii) Personal Norms: Personal norms represent an individual's moral sense of obligation to take action. These norms are activated when individuals believe that their behavior can either cause harm to the environment or help prevent it. In the context of VBN theory, personal norms directly influence pro-environmental behavior. For example, someone with strong environmental beliefs might feel a moral obligation to reduce their carbon footprint or purchase eco-friendly products. According to Stern et al. (1999), individuals who experience activated personal norms are more likely to engage in behaviors such as purchasing sustainable products, recycling, or reducing energy consumption. The intensity of these personal norms is heavily influenced by the individual's underlying values and beliefs about the environment.



VBN theory is a valuable framework for understanding consumer behavior in green marketing and sustainable purchasing. It explains why consumers with strong biospheric values and beliefs in the environmental impact of their choices are more likely to prefer eco-friendly products. For example, Han (2015) found that environmental values predicted the choice of sustainable hotels, while Steg et al. (2005) showed similar patterns in energy conservation behavior. These findings suggest that VBN theory can guide green marketing strategies in the cosmetics industry, where consumer values increasingly drive demand for sustainable products..

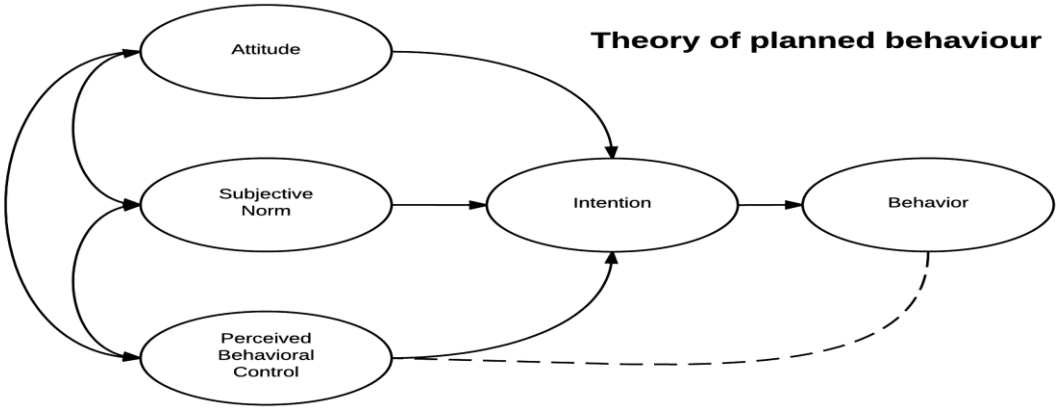
In the context of the cosmetics industry, VBN theory helps explain why certain consumers, particularly Gen Z and Millennials, are more likely to respond positively to green marketing strategies. These consumers often prioritize sustainability in their purchasing decisions due to their underlying values and beliefs about environmental protection. Green marketing campaigns that appeal to consumers' altruistic and biospheric values can activate their personal norms, making them feel morally obligated to choose eco-friendly products over conventional alternatives.

For example, when a cosmetic brand emphasizes the use of natural ingredients, cruelty-free testing, or sustainable packaging, these elements may resonate with consumers who hold strong environmental values. Such consumers may perceive their purchase as an ethical decision that aligns with their personal responsibility to reduce environmental harm, thereby increasing their green purchase intention (GPI).

Incorporating VBN theory into the framework of this study offers valuable insights into how consumers' environmental values, beliefs, and personal norms drive their responses to green marketing strategies. By understanding the psychological mechanisms behind pro-environmental behavior, businesses can design more effective marketing campaigns that resonate with consumers' values and encourage sustainable purchasing. VBN theory complements other behavioral models, such as the Theory of Planned Behavior (TPB), by adding a moral and value-based dimension to the analysis of green consumer behavior, making it highly relevant for the study of green purchase intention (GPI) in Vietnam's cosmetics industry.

2.1.2 Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB), developed by Ajzen (1991), remains one of the most widely applied theories for understanding and predicting consumer behavior



across various contexts, including environmentally responsible consumption. According to TPB, the intention to perform a behavior is the most immediate predictor of actual behavior, and this intention is influenced by three factors: attitude toward the behavior, subjective norms, and perceived behavioral control.

The attitude component reflects an individual's positive or negative evaluation of performing a behavior. In green consumerism, a positive attitude toward eco-friendly products significantly increases the likelihood of purchasing them. Subjective norms involve perceived social pressure to engage in a behavior. When peers, family, or society view green purchasing positively, individuals are more likely to align with these norms. Perceived behavioral control refers to the consumer's belief in their ability to perform the behavior, influenced by factors like financial capability or product availability.

Studies by Paul et al. (2016) and Yadav & Pathak (2017) validate the Theory of Planned Behavior (TPB) in explaining green purchasing. Paul et al. (2016) found that attitudes, subjective norms, and perceived behavioral control significantly predicted green purchase intentions in India, with attitudes being the strongest factor. Yadav & Pathak (2017) emphasized the roles of subjective norms and perceived behavioral control in shaping green buying behaviors. These findings underscore the psychological drivers of green purchasing, especially in emerging markets, and highlight the relevance of TPB in understanding these dynamics.

In Vietnam, TPB has also been utilized in studies related to green consumer behavior. Nguyen et al. (2020) applied TPB to understand how attitude, subjective norms, and behavioral control influence green purchasing behavior among urban consumers. They found that attitudes toward environmental conservation and social influences were key predictors of green purchase intention. This study, by focusing on how green marketing strategies influence Gen Z and Millennials through the lens of TPB, aims to provide a

deeper understanding of how these factors can drive sustainable purchasing decisions in the cosmetics industry.

The relevance of TPB to green marketing strategies is clear. When a company employs green advertising, eco-labeling, and sustainable packaging, these strategies influence consumer attitudes by highlighting the environmental benefits of products, influencing subjective norms through societal endorsement of sustainable consumption, and enhancing perceived behavioral control by making eco-friendly products accessible and affordable.

2.1.3 Green Marketing Strategies

The concept of green marketing originated in the early 1970s, driven by growing public awareness of environmental issues such as pollution and resource depletion. Fisk (1973) introduced the term, emphasizing the need for businesses to balance environmental protection with profitability. However, green marketing gained prominence only in the late 1980s and early 1990s, following Ottman's (1992) influential work on promoting eco-friendly products to meet the rising demand from environmentally conscious consumers.

Green marketing strategies have evolved significantly over time. Early efforts focused on recycling and pollution control, but by the 1990s, Peattie (1995) broadened the scope to include sustainable practices across the product lifecycle, from sourcing materials to disposal. Today, green marketing serves as a strategic tool for businesses to differentiate themselves in competitive markets, foster brand loyalty, and cater to a growing segment of eco-conscious consumers.

From an economic perspective, green marketing offers substantial opportunities. Mintel (2020) reported that 72% of global consumers are willing to pay more for products aligned with their environmental values, signaling a shift toward sustainable consumption. This trend has opened lucrative avenues for businesses, particularly in industries like

cosmetics, food, and fashion. However, adopting green marketing comes with challenges. Companies must balance the costs of sustainable practices—such as sourcing eco-friendly materials or reducing carbon footprints—with maintaining competitive pricing. Moreover, as Ottman (1992) cautioned, failing to authentically communicate sustainability efforts can lead to accusations of greenwashing, damaging reputations and causing financial losses.

Over the past three decades, academic research on green marketing has expanded significantly. Initial studies centered on consumer attitudes toward environmental issues and the role of green marketing in influencing purchase decisions. The field has since grown to include green advertising, eco-labeling, and sustainable packaging. Peattie & Crane (2005) and Leonidou et al. (2013) have been pivotal in exploring the effectiveness of green marketing across diverse cultural and economic contexts.

Green marketing research is particularly relevant in industries with significant environmental impacts, such as cosmetics, food, automotive, and fashion. Leonidou et al. (2013) highlighted its strategic importance in enhancing brand differentiation, building consumer trust, and promoting long-term sustainability. The rise of corporate social responsibility (CSR) and sustainable development goals (SDGs) has further reinforced the role of green marketing in both academic and industry discourse, solidifying its position as a cornerstone of modern business strategy.

Green marketing strategies can be broken down into **several key components**, with the most widely studied being green advertising, eco-labeling, and sustainable packaging. These components are seen as critical to communicating a company's environmental values and encouraging consumers to engage in more sustainable consumption.

Green Advertising: Green advertising involves promoting the environmental benefits of a product or service through marketing communications. Leonidou et al. (2013) defined green advertising as marketing messages that focus on the eco-friendly attributes

of a product, such as the use of natural ingredients or energy-efficient production methods. Green advertising is particularly effective when it appeals to emotions and aligns with consumer values, as it helps to build a deeper connection between the brand and the consumer. However, it must be authentic and backed by real environmental actions to avoid accusations of greenwashing. Hartmann & Apaolaza-Ibáñez (2012) found that green advertising significantly influences emotional engagement and brand loyalty, particularly among younger consumers like Gen Z.

Green advertising also plays a role in educating consumers about the environmental benefits of specific products or behaviors. In Vietnam, for example, companies such as Cocoon and La Roche-Posay have successfully used green advertising to promote their commitment to natural ingredients and cruelty-free production, resonating with consumers who value ethical consumption. However, the success of green advertising depends heavily on consumer trust in the brand's environmental claims.

Eco-Labeling: Eco-labeling serves as a certification that indicates a product meets specific environmental standards. It is a key visual cue in green marketing, helping consumers quickly identify products that align with their sustainability values. Waris & Hameed (2020) found that eco-labels play a significant role in building trust among consumers, particularly when the labels are issued by credible organizations like EcoCert or Fair Trade. The use of eco-labels has been particularly effective in industries like food, fashion, and cosmetics, where consumers are more likely to base their purchase decisions on ethical and environmental considerations. In the Vietnamese cosmetics market, Vu et al. (2021) found that Gen Z consumers are more likely to purchase products that carry eco-labels, as these labels provide a sense of credibility and authenticity. However, eco-labeling is still a relatively new concept in emerging markets, and there is a need for consumer education to increase awareness of the significance of eco-labels in driving sustainable purchasing decisions.

Sustainable Packaging: Sustainable packaging refers to the use of eco-friendly materials in product packaging, such as biodegradable plastics, recycled paper, or reusable containers. The shift toward sustainable packaging is largely driven by consumer concern over the environmental impact of plastic waste and the desire to reduce one's carbon footprint. Chen & Chang (2012) highlighted that sustainable packaging is not only an important marketing tool but also a key driver of green purchase intentions, as it signals the company's commitment to environmental sustainability. In Vietnam, Nguyen et al. (2020) found that sustainable packaging plays a crucial role in influencing purchase decisions, particularly among urban consumers who are more likely to be environmentally conscious. Many cosmetic brands, both domestic and international, have adopted sustainable packaging as a way to appeal to the growing demand for eco-friendly alternatives. Companies like The Body Shop and Innisfree have implemented packaging solutions that minimize environmental harm, such as using recycled plastic or offering refillable containers. However, the adoption of sustainable packaging often comes with higher costs, which may impact the overall affordability of green products.

Research highlights several key factors that influence the effectiveness of green marketing strategies, including consumer trust, perceived authenticity, environmental awareness, and brand credibility. Consumer trust is pivotal, as trust in a company's environmental claims significantly impacts sustainable purchasing behavior. Waris & Hameed (2020) found that the credibility of eco-labels and transparency in green advertising enhance consumer trust, which, in turn, boosts green purchase intentions.

Perceived authenticity is equally important, as consumers are increasingly wary of greenwashing—false or exaggerated environmental claims without substantive action. Leonidou et al. (2013) emphasized that green marketing must align with a company's genuine sustainability practices to be seen as authentic and credible. Similarly, environmental awareness plays a critical role. Taufique et al. (2017) noted that consumers

with greater awareness of environmental issues are more receptive to green marketing messages. In emerging markets like Vietnam, where environmental awareness is still developing, companies may need to educate consumers on the environmental impact of their choices as part of their green marketing efforts.

Brand credibility is another vital determinant. Nguyen et al. (2020) demonstrated that consumers are more likely to engage with green marketing strategies when they perceive a brand as credible and genuinely committed to sustainability. This is particularly relevant in Vietnam, where consumers are increasingly critical of companies engaging in greenwashing without delivering on their environmental promises.

Green marketing strategies, including green advertising, eco-labeling, and sustainable packaging, are essential for meeting the growing demand for eco-friendly products and differentiating brands in competitive markets. These components influence green purchase intentions by building consumer trust, enhancing brand credibility, and aligning with consumer values. However, their effectiveness depends on authenticity and genuine environmental action to avoid the risks associated with greenwashing.

While progress has been made in understanding the factors driving green marketing success, gaps remain, especially in emerging markets like Vietnam. Cultural and demographic factors, particularly among Gen Z and Millennials who are leading the shift toward sustainable consumption, require further exploration. This study seeks to address these gaps by examining how green marketing strategies influence purchasing behavior in Vietnam’s cosmetics industry and providing actionable insights for brands looking to enhance their green marketing efforts.

2.1.4 Green Purchase Intention

Green purchase intention (GPI) refers to a consumer's willingness or inclination to buy environmentally friendly products, driven by personal beliefs, attitudes, and values

related to sustainability. Emerging from the broader concept of purchase intention, GPI was first introduced by Chan (2001) to understand consumer motivations for choosing environmentally sustainable products. The concept gained prominence alongside growing global concerns about climate change, deforestation, and pollution, which have more influenced consumers to seek products aligned with their environmental values.

The development of GPI is closely tied to the rise of sustainable consumption and corporate social responsibility (CSR). Early research focused on the influence of environmental concern on consumer behavior, but it soon became evident that GPI is shaped by a complex interplay of psychological, social, and economic factors. Scholars like Paul et al. (2016) and Yadav & Pathak (2017) advanced the understanding of GPI by applying frameworks such as the Theory of Planned Behavior (TPB) and the Norm Activation Model (NAM) to analyze how attitudes, subjective norms, and perceived behavioral control influence green purchasing decisions.

The increasing relevance of GPI has substantial economic implications for businesses and markets. As consumers become more environmentally conscious, demand for green products—those that minimize environmental impact or are sustainably produced—has surged. This trend has fueled the growth of green markets, with eco-friendly companies capturing greater market share and profitability. Mintel (2020) reported that sustainability now drives purchase decisions for a majority of consumers, especially among younger generations like Gen Z and Millennials. In response, businesses across industries have adopted green marketing strategies to attract eco-conscious consumers and differentiate themselves in competitive markets.

Beyond its impact on businesses, GPI is driving broader economic and policy changes. Governments are increasingly promoting sustainable consumption to address environmental challenges. For instance, Vietnam's National Action Plan on Green Growth

(2021–2030) encourages businesses to adopt sustainable practices and market green products. This shift in consumer demand has also spurred investment in green technologies, leading to advancements in sustainable manufacturing, packaging, and supply chains. As such, GPI not only shapes consumer behavior but also contributes to broader economic transitions toward sustainability.

Academic interest in GPI has grown significantly over the past two decades, with researchers examining its determinants across diverse cultural and economic contexts. Initially focused on Western markets, GPI research has expanded to emerging economies such as Vietnam, China, and India, where green consumerism is rapidly gaining traction. These studies underscore the global relevance of GPI in understanding and addressing the dynamics of sustainable consumption.

Several models have been applied to explain GPI, including the Theory of Planned Behavior (TPB), the Theory of Reasoned Action (TRA), and the Norm Activation Model (NAM). These models provide a framework for understanding how individual attitudes, social influences, and perceived control over behavior influence green purchase decisions. Scholars have also examined how factors such as trust in eco-labels, brand credibility, and green perceived value (GPV) contribute to GPI.

Key determinants of GPI can be categorized into psychological, social, and situational factors. The rationale behind these determinants lies in the interplay between psychological drivers and external influences. Environmental concern, attitudes, and perceived behavioral control reflect the internal motivations of consumers, while subjective norms, trust in eco-labels, and cultural factors represent external influences that shape consumer decisions. Among psychological drivers, environmental concern stands out as a critical influence. Consumers who are more aware of environmental issues, such as climate change and pollution, are more motivated to make eco-friendly purchases (Paul

et al., 2016). Similarly, attitudes toward green products, shaped by beliefs in their environmental benefits, play a significant role. Consumers with positive attitudes are more likely to align their purchasing behavior with environmental preservation goals, as demonstrated by Yadav & Pathak (2017).

Social influences, particularly subjective norms, also affect GPI. In collectivist cultures, the perception of social expectations from peers or family significantly impacts purchasing decisions (Leonidou et al., 2013). Situational factors such as perceived behavioral control, or the consumer's belief in their ability to access and afford green products, further shape GPI. Chen & Chang (2012) found that accessibility and affordability are crucial enablers of green purchasing behavior. Other determinants, such as GPV and trust in eco-labels, highlight the importance of perceived value and credibility. GPV reflects a consumer's assessment of a product's environmental benefits relative to its cost and performance, mediating the effectiveness of green marketing strategies (Chen & Chang, 2012). Trust in eco-labels and credible green claims is equally essential, as consumers are more likely to engage in green purchasing when certifications are backed by reputable organizations (Waris & Hameed, 2020).

Cultural and demographic factors add another layer of complexity. Younger generations, particularly Gen Z and Millennials, exhibit higher GPI due to their exposure to global environmental issues and preference for sustainable products (Nguyen et al., 2020). These intrinsic and extrinsic factors together reflect the interplay of internal motivations, such as environmental consciousness, and external pressures, including social norms and brand trust (Leonidou et al., 2013; Paul et al., 2016).

Despite advancements in understanding GPI, significant gaps remain, particularly in emerging markets like Vietnam. Limited research has explored how green marketing strategies influence GPI within specific industries, such as cosmetics, where product

performance and brand credibility are critical. Furthermore, the role of cultural and demographic factors, particularly among Gen Z and Millennials, warrants deeper investigation. Addressing these gaps can provide actionable insights for businesses aiming to align their strategies with consumer demand for sustainable products while advancing the broader goal of promoting sustainable consumption.

Exploring green purchase intention (GPI) is critical in understanding how consumer behavior is evolving in response to growing environmental concerns. The existing literature on GPI highlights several key determinants, including environmental concern, attitude, subjective norms, and green perceived value. While much progress has been made in identifying the factors that influence GPI, there remain significant research gaps, particularly in emerging markets like Vietnam. For instance, few studies have examined how green marketing strategies influence GPI in the cosmetics industry, where factors such as product performance and brand credibility play crucial roles. Additionally, there is a need for more research on how cultural and demographic factors shape GPI, particularly among Gen Z and Millennials, who are driving demand for sustainable products. Addressing these gaps will provide actionable insights for businesses seeking to align their marketing strategies with consumer demand for eco-friendly products, while also contributing to the broader goal of promoting sustainable consumption.

2.1.5 Impact of Green Marketing Strategies on Green Purchase Intention

Green marketing strategies play a pivotal role in influencing green purchase intention (GPI) by altering consumer perceptions and attitudes toward environmentally friendly products. The current literature suggests that green marketing, through mechanisms such as green advertising, eco-labeling, and sustainable packaging, can significantly enhance consumer trust and perceived value, which in turn drive green purchase behavior.

A comprehensive study by Chen & Chang (2012) emphasized that green perceived value (GPV) serves as a critical factor mediating the relationship between green marketing and GPI. Consumers are more likely to purchase products with a high GPV, particularly when they perceive that the product's environmental benefits justify its price premium. This is especially relevant in the cosmetics industry, where consumers often balance product efficacy with environmental considerations. Vu et al. (2021) demonstrated that green marketing strategies that emphasize eco-friendly ingredients and sustainable production practices have been particularly successful in driving Gen Z and Millennials in Vietnam toward purchasing eco-friendly cosmetic products.

Studies from emerging markets also provide evidence of the cultural relevance of green marketing strategies. In India, Paul et al. (2016) applied the Theory of Planned Behavior (TPB) to green consumerism and found that attitudes toward environmental issues and subjective norms significantly influence purchase intentions. Their findings align with studies in Vietnam, such as Nguyen et al. (2020), who found that subjective norms play an important role in shaping green purchase behavior, especially among younger generations who are influenced by social networks and environmental advocacy campaigns.

In Vietnam, the rise of social media and digital advertising has provided a platform for brands to connect with younger, more environmentally aware consumers. Nguyen et al. (2020) found that green advertising on platforms like Facebook and Instagram had a profound impact on shaping the purchasing decisions of urban consumers, particularly in Ho Chi Minh City. The study highlighted the importance of authenticity in green marketing campaigns, with consumers responding more positively to brands that demonstrate a genuine commitment to sustainability rather than engaging in superficial greenwashing tactics.

At a global level, Leonidou et al. (2013) argue that green marketing strategies must be aligned with a company's broader sustainability practices to build long-term consumer trust. They caution that while green marketing can enhance brand differentiation and attract eco-conscious consumers, it must be implemented alongside credible environmental actions to avoid the risk of greenwashing, which can lead to consumer skepticism and reputational damage.

In conclusion, the current research landscape underscores the importance of trust, perceived value, and authenticity in determining the success of green marketing strategies. In Vietnam's cosmetics industry, green marketing strategies that align with consumer values and demonstrate transparency in sustainability efforts are likely to drive green purchase intentions. However, more research is needed to explore how cultural factors and digital marketing platforms can enhance the effectiveness of green marketing in influencing purchase behavior across different consumer segments.

2.1.6 Green Perceived Value of the Products, and Mediating Role of this Factor

Green perceived value (GPV) refers to a consumer's assessment of the environmental benefits of a product, relative to its cost and performance. GPV plays a crucial mediating role in the relationship between green marketing strategies and green purchase intention by influencing how consumers evaluate the sustainability claims of a product. The concept of GPV, introduced by Chen & Chang (2012), has since been widely studied across various industries, with scholars agreeing that GPV significantly enhances the effectiveness of green marketing.

The literature suggests that when consumers perceive high GPV in a product, they are more willing to purchase it, even if it carries a price premium. Taufique et al. (2017) explored GPV in the context of eco-labeling and found that when consumers trust the credibility of eco-labels, they perceive higher value in green products. This is especially

relevant in the cosmetics industry, where eco-conscious consumers place a high value on natural ingredients, ethical production processes, and sustainable packaging. In Vietnam, Vu et al. (2021) found that Gen Z and Millennials assign high GPV to cosmetics that use biodegradable packaging and emphasize cruelty-free testing.

Further supporting this, Paul et al. (2016) found that subjective norms and environmental concern positively influenced green purchase intentions when consumers perceived a high GPV. Their research demonstrates that GPV amplifies the effectiveness of green marketing by reinforcing the perceived environmental benefits of a product.

In Vietnam, Nguyen et al. (2020) identified a strong link between GPV and green purchasing behavior among urban consumers, particularly in cosmopolitan areas like Ho Chi Minh City. However, the study also noted that price sensitivity can be a barrier to the widespread adoption of green cosmetics. Many Vietnamese consumers still prioritize affordability over sustainability, highlighting the importance of communicating the long-term value of eco-friendly products in terms of health benefits, durability, and environmental impact.

Another important factor is the emotional engagement that GPV can create. Hartmann & Apaolaza-Ibáñez (2012) found that when green marketing strategies appeal to consumers' emotions—such as through advertising that emphasizes environmental responsibility—consumers are more likely to perceive a high GPV, resulting in stronger purchase intentions. For cosmetics brands, this suggests that cultivating emotional connections through marketing narratives can enhance the perceived value of their eco-friendly offerings.

Overall, the current research landscape indicates that GPV is a powerful mediator in the relationship between green marketing strategies and green purchase intentions. By enhancing consumers’ perceptions of the environmental value of products, companies can

drive sustainable purchasing behavior. However, further research is needed to explore how cultural factors, such as the collectivist orientation of Vietnamese society, influence GPV and its impact on green purchase decisions.

2.1.7 After-Marketing Environmental Awareness, and Mediating Role of this Factor

Environmental awareness refers to the degree to which individuals are conscious of the impact that human activities have on the environment, including awareness of issues such as pollution, climate change, resource depletion, and biodiversity loss. The term was first introduced in the academic sphere by Gifford (1997), who emphasized the importance of understanding environmental issues as a precursor to behavioral change. Gifford argued that raising environmental awareness is a critical step in motivating individuals and societies to adopt more sustainable behaviors.

In consumer behavior, environmental awareness significantly influences decision-making, particularly in industries like cosmetics, where environmental concerns intersect with health and ethical considerations. By increasing consumers' understanding of the environmental impact of their consumption, companies can encourage more sustainable purchasing behaviors. Brands that integrate environmental awareness into their marketing strategies can shift consumer attitudes, fostering a stronger preference for eco-friendly products. This shift is increasingly evident in global markets, where more than 70% of consumers are willing to pay a premium for products that align with their environmental values (Mintel, 2020).

Economically, investing in raising environmental awareness not only promotes corporate social responsibility but also strengthens brand loyalty and market share. Waris & Hameed (2020) found that when consumers are more aware of a product's environmental benefits, they are likelier to trust the brand and make repeat purchases. This underscores

the dual role of environmental awareness as a tool for fostering both sustainability and competitive advantage, particularly in eco-conscious markets.

In Vietnam, where rapid urbanization and economic growth are transforming consumer behavior, environmental awareness is becoming especially prominent among younger generations. Vu et al. (2021) observed that Gen Z and Millennials are highly receptive to sustainability-focused marketing messages, particularly in sectors like cosmetics, food, and fashion. This growing awareness is reshaping consumer preferences, pushing companies to adopt greener practices to remain relevant.

After-marketing environmental awareness specifically refers to the increase in consumer understanding of environmental issues following exposure to green marketing strategies. This concept is critical because it influences how consumers process sustainability messages and subsequently shapes their purchase intentions. Research by Taufique et al. (2017) highlighted the role of credible eco-labels in raising environmental awareness, which positively affects green purchase intentions (GPI). Similarly, Vu et al. (2021) found that effective green marketing campaigns targeting Gen Z consumers in Vietnam enhance awareness and lead to intentional purchases of eco-friendly products.

The mediating role of environmental awareness between green marketing strategies and purchase behavior is well-documented. Leonidou et al. (2013) demonstrated that consumers with higher environmental awareness are more likely to engage in green purchasing. This highlights the importance of not only promoting the environmental features of products but also educating consumers about the broader implications of their choices. Hartmann & Apaolaza-Ibáñez (2012) further showed that green advertising strengthens GPI by increasing environmental awareness.

In Vietnam, research by Nguyen et al. (2020) revealed that eco-labels and green advertising are effective in raising awareness, particularly among urban Gen Z and

Millennials. However, there remains a need for broader consumer education across all demographics to fully realize the potential of after-marketing environmental awareness. Brands must move beyond superficial marketing and invest in campaigns that enhance consumer knowledge, thereby fostering long-term sustainable purchasing habits.

In conclusion, after-marketing environmental awareness is a pivotal factor in mediating the relationship between green marketing strategies and green purchase intentions. By educating consumers about environmental issues and the impact of their choices, companies can drive sustainable consumption and influence long-term purchasing behavior. However, further research is needed to understand how cultural differences affect the effectiveness of these strategies in shaping green purchasing behavior across various markets. This study will explore these dynamics within the Vietnamese cosmetics industry, focusing on the influential role of after-marketing environmental awareness among Gen Z and Millennials.

2.1.8 After-Marketing Environmental Attitude, and Mediating Role of this Factor

Environmental attitude refers to a psychological tendency expressed by evaluating the environment with some degree of favor or disfavor. It is an individual's mental disposition or feelings towards the environment, reflecting their beliefs, emotions, and intentions to behave in environmentally responsible ways. The concept of environmental attitude was introduced by Dunlap and Van Liere (1978) in their New Environmental Paradigm (NEP), a scale developed to measure pro-environmental worldviews. This paradigm shifted the focus from purely technological solutions to environmental problems toward a greater appreciation of the role of individual and societal attitudes in fostering sustainable behaviors.

In consumer behavior, environmental attitude is more specifically defined as the positive or negative evaluation of eco-friendly products, behaviors, and actions. Positive environmental attitudes are linked to a greater willingness to adopt sustainable consumption patterns, such as purchasing green products. Studies by Paul et al. (2016) and Leonidou et al. (2013) have shown that consumers with favorable environmental attitudes are more likely to buy eco-friendly products and support companies with sustainable practices. These attitudes carry economic implications, as businesses can leverage them to justify premium pricing for green products, boosting profit margins. However, insincere environmental claims, or greenwashing, can undermine consumer trust and harm a company's reputation.

After-marketing environmental attitude refers to changes in consumers' environmental attitudes following exposure to green marketing strategies, such as green advertising, eco-labeling, and sustainable packaging. These strategies shape how consumers perceive the environmental benefits of products, fostering positive attitudes that influence green purchase intention (GPI). For instance, Hartmann & Apaolaza-Ibáñez (2012) found that green advertising emphasizing a brand's environmental commitment fosters emotional engagement, leading to more favorable attitudes toward the brand and its products. These attitudes act as psychological triggers, driving consumers toward sustainable consumption.

In Vietnam, Nguyen et al. (2020) highlighted the impact of after-marketing environmental attitudes on green purchase behavior among Gen Z and Millennials in urban areas like Ho Chi Minh City. Their study showed that eco-labels and green advertising campaigns effectively enhanced positive attitudes toward sustainability, driving these consumers to prioritize eco-friendly cosmetics. This finding aligns with global research by Leonidou et al. (2013), which demonstrated that environmental attitudes mediate the relationship between green marketing strategies and purchase behavior. Consumers with

positive attitudes are more likely to perceive eco-friendly products as socially desirable and environmentally beneficial, aligning their purchases with their values.

Further research by Paul et al. (2016) applied the Theory of Planned Behavior (TPB) to green purchasing and identified environmental attitude as one of the strongest predictors of GPI. This underscores the importance of fostering positive attitudes through green marketing, particularly in industries like cosmetics, where ethical considerations often drive consumer decisions. After-marketing environmental attitude plays a pivotal role in determining green purchase intention by shaping how consumers internalize the messages conveyed through marketing campaigns.

This study examines the mediating role of after-marketing environmental attitude in the relationship between green marketing strategies and GPI, particularly among Gen Z and Millennials in Vietnam. The deliberate use of "after-marketing" highlights the dynamic nature of this factor, emphasizing that changes in environmental attitude occur as a result of engaging with green marketing strategies. This conceptualization is crucial for understanding how green marketing influences consumer mindsets and behaviors, ultimately leading to higher green purchase intentions. By clarifying these pathways, this study contributes to a deeper understanding of the mechanisms through which green marketing can drive sustainable consumption.

2.1.9 Adoption of Green Marketing Strategies and Characteristics of Green Purchase Behavior in Gen Z and Millennials Consumers

Gen Z and Millennials are at the forefront of the global shift toward sustainable consumption, particularly in the cosmetics, fashion, and food industries. Mintel (2020) reports that over 60% of Gen Z consumers are willing to pay more for eco-friendly products, indicating a strong preference for sustainability. Millennials, similarly, are highly

motivated by environmental concerns, with 73% reporting that they prefer to buy from brands that align with their sustainability values (Deloitte, 2021).

Gen Z, known for being digitally native and highly aware of environmental issues, is particularly responsive to green marketing strategies that emphasize authenticity, transparency, and social responsibility. Their purchasing decisions are often influenced by social media and digital campaigns that highlight the ethical and environmental practices of brands. Millennials, while also environmentally conscious, may weigh factors such as price, product performance, and convenience more heavily in their purchasing decisions (Waris & Hameed, 2020). This generational divide suggests that green marketing strategies must be tailored to address the distinct needs and values of Gen Z and Millennials.

2.2 EMPIRICAL FINDINGS

Empirical studies on green marketing have provided valuable insights into how green advertising, eco-labeling, and sustainable packaging influence consumer behavior. Below are five key empirical studies that inform this research:

Chen & Chang (2012): This study examined how green perceived value mediates the relationship between green marketing strategies and purchase intention in the electronics industry. The authors employed a mediated research framework where green perceived value was positioned as a key mediator between green marketing strategies (eco-labeling, green advertising) and green purchase intention. Their findings indicated that consumers are more likely to purchase products with higher perceived environmental value, and that this perception mediates the effect of marketing strategies on purchase intention. This study provides a foundation for exploring the role of GPV in the cosmetics industry. Implications suggest that businesses need to clearly communicate the environmental benefits of their products to enhance GPV and drive green purchases.

Paul et al. (2016): This study extended TPB by incorporating environmental concern and knowledge as predictors of green purchase behavior in India. The authors' research model positioned attitudes, subjective norms, and perceived behavioral control as key variables influencing green purchase intention. Their findings showed that environmental concern strengthens attitudes toward green products, and consumer knowledge moderates the impact of green marketing strategies on purchase intention. This provides valuable insights for our study by demonstrating how consumer attitudes and external pressures shape green behavior. The implication here is that enhancing consumer education around environmental issues can strengthen green purchase intention, especially when green marketing strategies are well-executed.

Waris & Hameed (2020): This study investigated the impact of eco-labels on purchase intention for energy-efficient products in Pakistan using a model that emphasized green trust and green perceived value as mediators. The authors found that eco-labels significantly influence green purchase intention, with trust in the labels acting as a critical factor. The research model indicated that eco-label credibility and consumer trust directly affect green purchasing behavior, moderated by green perceived value. The implications for this study suggest that in the cosmetics industry, eco-labels need to be perceived as trustworthy and credible to drive purchase behavior, and GPV plays a central role in moderating these effects.

Hartmann & Apaolaza-Ibáñez (2012): This study explored how green advertising influences consumer emotions and purchase intentions in the energy sector. The authors developed a model that integrated emotional engagement as a mediator between green advertising and purchase intention. They found that emotional responses to green advertising strongly influenced purchase intentions, particularly when consumers perceived the product to align with their environmental values. The study's research framework showed that positive emotional responses lead to stronger environmental

attitudes, which in turn affect purchase intention. For our research, this study implies that green advertising in cosmetics should not only inform but also emotionally engage consumers, enhancing their environmental attitudes and driving green purchases.

Taufique et al. (2017): This study focused on how environmental awareness mediates the relationship between green marketing and purchase intention in emerging markets. The authors' research model placed environmental awareness as a key mediator between eco-labels and purchase intention, finding that awareness significantly enhances the effectiveness of green marketing. Their findings suggest that increasing environmental awareness through marketing efforts can directly influence consumers' decisions to purchase eco-friendly products. The implication for our study is that after-marketing environmental awareness plays a crucial role in translating green marketing strategies into consumer action, particularly in markets where awareness levels are still developing.

Nguyen et al. (2020) focused on the role of green branding in Vietnam, exploring how brand credibility influences green purchase intentions. They found that consumers are highly sensitive to greenwashing and are more likely to purchase eco-friendly products when they trust the brand's environmental claims. This finding emphasizes the importance of building consumer trust through authentic green marketing strategies in the Vietnamese market.

Vu et al. (2021) examined the influence of green packaging on consumer behavior in Vietnam. Their study found that Gen Z consumers are more likely to purchase cosmetics with eco-friendly packaging, particularly when the packaging aligns with their values of sustainability. This suggests that sustainable packaging is a key driver of green purchasing behavior in the cosmetics industry.

The empirical studies reviewed provide a comprehensive understanding of how green marketing strategies influence green purchase intentions. The findings suggest that

green advertising, eco-labeling, and sustainable packaging are all critical factors in shaping consumer behavior, particularly when they are perceived as credible and authentic. In Vietnam's cosmetics industry, the challenge for brands is to effectively communicate their environmental commitments while ensuring that consumers perceive the environmental value of their products.

However, research gaps remain regarding the mediating roles of green perceived value, after-marketing environmental awareness, and after-marketing environmental attitude in the relationship between green marketing and purchase intentions. Additionally, there is a need for more studies focusing on how Gen Z and Millennials respond differently to green marketing strategies in Vietnam's cosmetics market. This research will aim to bridge these gaps by providing insights into the psychological and generational factors that influence green purchasing behavior.

2.3 RESEARCH FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Based on the literature review and empirical findings, the following research framework and hypotheses are proposed. The framework aims to explain how green marketing strategies influence green purchase intention through the mediating roles of Green Perceived Value, After-Marketing Environmental Awareness, and After-Marketing Environmental Attitude. The research will also provide a comparative analysis between Gen Z and Millennials.

2.3.1 Research Framework

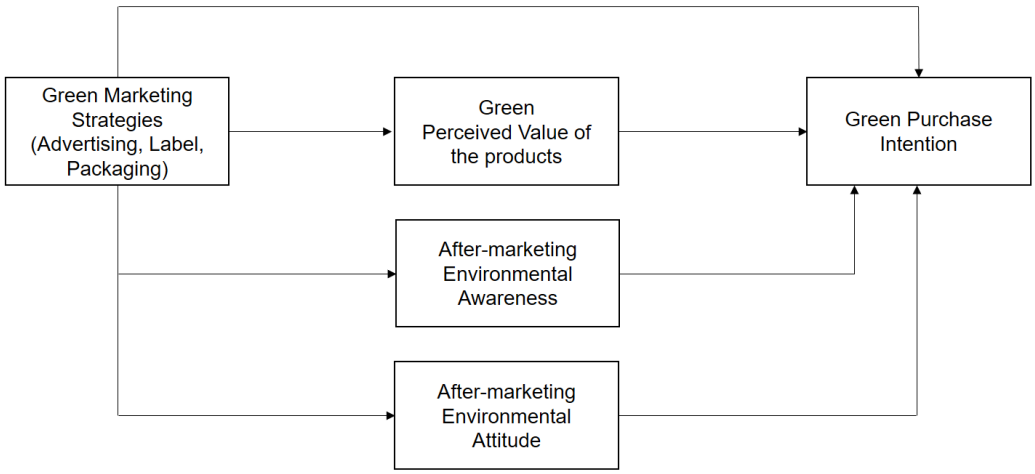
Green Marketing Strategies (Advertising, Eco-Labeling, Packaging) → Green Purchase Intention

Mediated by:

- Green Perceived Value
- After-Marketing Environmental Awareness
- After-Marketing Environmental Attitude

Figure 2. 1: Proposed research framework

(Source: Author's Analysis)



2.3.2 Hypothesis Development

Hypotheses:

- **H1: Green marketing strategies have a positive direct effect on green purchase intention.**

Green marketing strategies, such as eco-labeling, green advertising, and sustainable packaging, have a direct and significant impact on green purchase intention (GPI). These strategies create an emotional and intellectual connection between consumers and the products they choose by emphasizing the environmental and ethical benefits of those products. When companies highlight their commitment to sustainability through these efforts, they appeal to the values and beliefs of increasingly eco-conscious consumers.

Ottman (1992) first emphasized that green marketing directly influences consumer behavior by positioning products as solutions to environmental challenges, which enhances their appeal.

In Vietnam, where environmental concerns are gaining traction among younger demographics, this effect is particularly evident. Vu et al. (2021) observed that eco-conscious consumers, especially from Gen Z and Millennial cohorts, are more likely to respond positively to brands that integrate green marketing strategies into their messaging. The study highlighted that green advertising, combined with visible practices like sustainable packaging, directly influences consumer decisions by offering reassurance of a brand's authenticity and environmental commitment. Furthermore, digital platforms amplify the reach of green campaigns, making them more impactful. For instance, social media campaigns by brands like Cocoon have successfully tapped into the values of Vietnamese consumers by showcasing tangible, transparent efforts toward sustainability. These findings underscore how green marketing serves as a direct pathway to shaping purchase behavior, particularly in emerging markets where eco-consciousness is on the rise..

- **H2: Green Perceived Value mediates the relationship between green marketing strategies and green purchase intention.**

Green Perceived Value (GPV) is a critical factor that mediates the relationship between green marketing strategies and GPI. GPV represents a consumer's perception of the balance between the environmental benefits offered by a product and the costs associated with purchasing it. When consumers perceive that a product provides significant ecological or ethical value, they are more likely to justify a purchase, even if it involves a premium price. Chen and Chang (2012) highlighted that GPV acts as the psychological

bridge between green marketing efforts and consumer purchasing behavior, emphasizing the importance of emphasizing eco-friendly product benefits.

In the cosmetics industry, where consumers often weigh product efficacy alongside ethical considerations, GPV plays a decisive role. Taufique et al. (2017) found that eco-labeling enhances GPV by signaling that products meet credible environmental standards. This aligns with findings from Vu et al. (2021), who demonstrated that Vietnamese consumers, particularly Gen Z and Millennials, assign high value to cosmetics with biodegradable packaging and cruelty-free certifications. For these consumers, GPV amplifies the impact of green marketing strategies by reinforcing their belief that eco-friendly products deliver superior environmental and ethical benefits. Consequently, companies that effectively communicate GPV through transparent and trustworthy marketing campaigns are better positioned to drive GPI. This reinforces the notion that GPV is a necessary mediator that transforms green marketing strategies into tangible consumer action.

- **H3: After-marketing environmental awareness mediates the relationship between green marketing strategies and green purchase intention.**

After-marketing environmental awareness refers to the increased understanding and consciousness consumers develop about environmental issues after engaging with green marketing strategies. By raising awareness of the broader ecological implications of their purchasing decisions, green marketing fosters an informed consumer base that feels a heightened sense of responsibility. This increased awareness not only encourages more sustainable behavior but also strengthens the connection between green marketing efforts and GPI. Taufique et al. (2017) emphasized that environmental awareness mediates this

relationship by equipping consumers with the knowledge necessary to make informed, eco-conscious decisions.

In Vietnam, where consumer awareness about sustainability is growing but remains uneven, brands that prioritize educational marketing have been particularly successful. Nguyen et al. (2020) demonstrated that urban consumers in cities like Ho Chi Minh City are more likely to purchase eco-friendly products when green advertising campaigns explicitly highlight the environmental benefits of those products. Cocoon's use of social media to explain the ecological impact of its sustainable packaging has been an effective example of fostering post-engagement awareness. Similarly, campaigns that use eco-labels as a focal point create a visual and informational connection that increases environmental understanding. This suggests that raising awareness through green marketing strategies not only strengthens the relationship between these strategies and GPI but also helps nurture long-term changes in consumer behavior toward sustainable practices.

- **H4: After-marketing environmental attitude mediates the relationship between green marketing strategies and green purchase intention.**

After-marketing environmental attitude captures the change in consumers' perceptions, beliefs, and emotional responses toward environmental issues after being exposed to green marketing strategies. These attitudes act as a psychological catalyst, shaping how consumers evaluate eco-friendly products and translating those evaluations into purchase decisions. Hartmann and Apaolaza-Ibáñez (2012) found that emotionally engaging green advertising significantly improves environmental attitudes, which in turn increases GPI. This underscores the importance of crafting marketing messages that not only inform but also resonate on an emotional level.

Vietnam's younger consumers, particularly Gen Z and Millennials, are heavily influenced by marketing campaigns that evoke a sense of environmental responsibility.

Nguyen et al. (2020) found that eco-labels and green branding efforts play a pivotal role in shaping positive environmental attitudes among these groups. For example, advertisements that emphasize cruelty-free testing or carbon-neutral production help consumers form favorable attitudes, leading to stronger purchase intentions. Unlike environmental awareness, which focuses on knowledge, attitudes represent a deeper, value-driven alignment between consumers and brands. The emotional connection cultivated by green marketing thus mediates its impact, creating a powerful mechanism through which environmental messaging translates into sustainable consumer choices.

- **H5: The effects of green marketing strategies on the green purchase intention of Gen Z are more significant than that of Millennials.**

Generational differences play a significant role in determining how consumers respond to green marketing strategies. Gen Z, as digital natives, exhibit higher sensitivity to green marketing compared to Millennials. This heightened responsiveness stems from their strong environmental consciousness, skepticism of traditional marketing, and preference for transparency. Waris and Hameed (2020) observed that Gen Z's commitment to sustainability leads them to scrutinize green claims rigorously, making authenticity and consistency key determinants of their purchase decisions. For this generation, attributes such as sustainable packaging, ethical sourcing, and zero-waste production are not just desirable but expected.

In contrast, Millennials, while still motivated by sustainability, tend to balance these considerations with practicality. Factors like product performance, convenience, and price often weigh more heavily in their decisions. Vu et al. (2021) highlighted that Millennials are less influenced by green marketing campaigns compared to Gen Z, primarily because of competing priorities. However, Millennials still value eco-friendly features, especially when those features are presented alongside clear functional benefits.

In Vietnam, where both generational groups drive significant portions of consumer demand, tailoring marketing strategies to these distinctions is critical. For Gen Z, campaigns should emphasize bold environmental commitments and visual transparency. For Millennials, green marketing must balance sustainability with practicality, ensuring products deliver both ecological and everyday value. This divergence highlights why green marketing strategies tend to exert a stronger influence on Gen Z than Millennials, making targeted messaging essential for maximizing GPI among these groups.

CHAPTER 03: DATA AND METHODOLOGY

Chapter 3 gives guidance of research methodology, which includes research approach, data collection method, sampling design. Sampling design will include sample, sample size, sampling method, questionnaire design, data analysis technique and procedure.

3.1 SAMPLE DESIGN AND DATA COLLECTION METHOD

This study explores the impact of green marketing strategies—eco-labeling, green advertising, and sustainable packaging—on the green purchase intentions of Gen Z and Millennials in Ho Chi Minh City's cosmetics market. It examines the mediating roles of Green Perceived Value, Environmental Awareness, and Attitude in this relationship. Data was collected via an online questionnaire, tailored to the green cosmetics context, using simple random sampling. By targeting a representative sample, the study captures the knowledge, attitudes, and experiences of these consumer groups, ensuring a robust dataset for analysis.

3.1.1 Sample demographics

This study will focus on a sample of Gen Z (ages 18-28) and Millennials (ages 28-44) residing in Ho Chi Minh City, Vietnam. As reported by the General Statistics Office of Vietnam (2022), Gen Z accounts for approximately 18% of the national population, while Millennials make up 22%. These age groups are particularly concentrated in urban areas like Ho Chi Minh City, where higher disposable incomes and greater availability of eco-friendly products make them a prime demographic for investigating green consumer behavior. A report by Statista (2021) highlights that 80% of Gen Z and 75% of Millennial

consumers in Vietnam actively seek information about the environmental impact of the products they buy, demonstrating their strong commitment to sustainability.

In addition, Gen Z and Millennials in Ho Chi Minh City are typically well-educated and digitally adept, with many either pursuing higher education or employed in professional sectors. Their proficiency with digital technologies enables them to engage effectively with green marketing efforts, especially through social media and online platforms, making them particularly receptive to eco-friendly campaigns. These attributes make Gen Z and Millennials an ideal population for exploring how green marketing strategies influence sustainable purchasing behavior within the cosmetics sector.

3.1.2 Sample size

According to Hair, Black, Babin et al. (2019), an ideal ratio of observations to variables is 15:1 or 20:1, with the ratio increasing when stepwise estimation is applied. The minimum acceptable ratio is 5:1. Based on this guideline, the sample size can be calculated using the following formula:

Sample size = (number of questions per variable × number of variables × 5)

In this study, with a total of 7 variables and approximately 5 questions per variable, the minimum required sample size is calculated to be at least 245 respondents to complete the survey. In addition, Comfrey and Lee (1992) provided a scale for assessing the adequacy of sample sizes, ranging from poor to excellent. They classified a sample size of 50 as poor, 100 as fair, 150-200 as good, 250-300 as very good, 500 as excellent, and 1,000 as outstanding. Considering these recommendations, the researcher aims to collect a minimum of 250 responses to ensure a robust dataset.

3.1.3 Sampling method

Given the research objectives and constraints in terms of budget and schedule, the authors employed a combination of Stratified Sampling and Convenience Sampling method to achieve a sufficient number of respondents while ensuring broader generalizability to the overall population. Since each age group exhibits distinct purchasing behaviors, particularly in relation to high-engagement products like cosmetics, and according to Statista 2024, Gen Z and Millennial cosmetic consumers are distributed across the 18-24, 25-34, and 35-44 age groups at rates of 26%, 37%, and 37%, respectively, the authors first stratified the population into these three distinct age groups. After stratification, Convenience Sampling method was applied to select respondents from each subgroup until at least 300 total responses were collected, and the contributions of each age group are met at the above rates. This approach was intended to balance accurate representation of the population with cost-effectiveness, allowing for a sample that reflects the broader demographics while optimizing resources.

3.1.4 Questionnaire development

This study will use a questionnaire as the primary data collection tool, administered via Google Forms. A pilot study will precede the main survey to ensure the clarity and effectiveness of the questions.

The questionnaire comprises two sections. The first gathers demographic data, including gender, age, income, occupation, residence, and familiarity with eco-labeled green food products. This information will help identify trends and differences across respondent groups. The second section measures key constructs: Green Marketing Strategies, Green Perceived Value, Environmental Awareness, Environmental Attitude, and Green Purchase Intention. Questions will use a 5-point Likert scale (1 = strongly

disagree, 5 = strongly agree) and will be adapted from validated scales to ensure reliability and validity.

For the first part of the questionnaire, below are the seven aforementioned demographic-oriented questions:

1. Age Group: (15-18, 19-22, 23-28, 28-35, 36-45, above 45).
2. Gender: (Male / Female / Other).
3. Income Level (measure by million VND): (< 5, 5-10, 10-20, 20-30, >30).
4. Educational Background: (University (current), Secondary / High school, Post-graduate, University graduated).
5. Occupation: (Student, Officer, Business, Medical related, Engineer, Freelancer, Housewife, Other).
6. Purpose of cosmetic purchase: (Skincare and special treatment for specific skin issues, or Basic skincare and makeup, others).

For the second part, the table below is proposed to outline the seven variables in the research model that will be measured in the first part of the questionnaire:

Table 3. 1: Questionare development

(Source: Author's analysis)

Construct	Reference	Code	Question
	Hartmann &	GA1	Cosmetic ads should be promoted in a reliable way.
		GA2	Cosmetic ads should show ecological and emotional benefits.

Green Advertising (GA)	Apaolaza-Ibáñez (2012)	GA3	Cosmetic ads inspire me to buy eco-friendly cosmetic products.
		GA4	Cosmetic ads can change my decision when buying a cosmetic product.
		GA5	Cosmetic ads attract me to eco-friendly cosmetic products and services.
Green Labeling (GL)	Waris & Hameed (2020)	GL1	Eco-friendly labels help me find sustainable cosmetic products.
		GL2	Eco-friendly labels provide enough information on cosmetic products.
		GL3	I think eco-friendly labels on cosmetic products are easy to read.
		GL4	Eco-friendly labels make me want to buy cosmetic products that fit my lifestyle.
		GL5	The information on eco-friendly cosmetic labels is correct.
Green Packaging (GP)	Hartmann & Apaolaza-Ibáñez (2012)	GP1	Packaging information is important when choosing cosmetic products.
		GP2	Reusing cosmetic packaging is good for the environment.
		GP3	Biodegradable cosmetic packaging attracts consumers.
		GP4	I prefer buying cosmetics in eco-friendly packaging.
	Paul et al. (2016)	AT1	I feel good about buying eco-friendly cosmetics after seeing green marketing.

Green Attitude (AT)		AT2	Green marketing for cosmetics makes me more supportive of sustainable products.
		AT3	Choosing eco-friendly cosmetic products helps protect the environment.
		AT4	Green marketing for cosmetics makes me feel more responsible for reducing my environmental impact.
Green Perceived Value (PV)	Chen & Chang (2012)	PV1	Eco-friendly cosmetic products are worth their higher price for the environment.
		PV2	Using eco-friendly cosmetic products helps reduce my environmental impact.
		PV3	The benefits of eco-friendly cosmetics outweigh the inconveniences.
		PV4	I believe eco-friendly cosmetic products offer better value than non-green alternatives.
Environment Awareness (AW)	Cerri et al. (2018)	AW1	Green ads for cosmetic products have increased my awareness of environmental issues.
		AW2	I am more aware of my cosmetics' environmental impact after seeing eco-friendly marketing.
		AW3	Green marketing for cosmetics makes me more aware of sustainability.

		AW4	I now think more about the environmental impact of using cosmetics.
Green Purchase Intention (GPI)	Yadav & Pathak (2017)	PI1	I am likely to buy eco-friendly cosmetic products soon.
		PI2	I will choose eco-friendly cosmetic products over regular ones, even if they cost more.
		PI3	I will support cosmetic brands that use sustainable practices.
		PI4	I am willing to pay more for eco-friendly cosmetic products to reduce my environmental footprint.

3.1.5 Data processing method

To prepare the collected data for analysis, the author begins by cleaning the dataset, starting with the removal of incomplete responses to ensure that only valid and complete data points are included in the analysis. This process involves checking for missing values and handling them by either imputing or discarding incomplete entries, using statistical software such as R. Additionally, any outliers detected during the cleaning process will be removed, as they can skew the results.

It is also essential to ensure that the Likert scale, which measures variables on a scale from 1 (strongly disagree) to 5 (strongly agree), is consistently coded across all items in the survey. Finally, composite scores or averages will be computed for each green marketing strategy (e.g., green advertising, green labeling, green packaging) by aggregating the relevant items. This step will prepare the dataset for further analysis.

3.2 ECONOMETRICS METHODOLOGY

3.2.1 Research model

Next, structural model validation is conducted to assess the hypothesized relationships between variables. Path coefficients are estimated to determine the strength and direction of the relationships between constructs, such as the impact of each of the green marketing strategies on green purchase intention (GPI). To test the statistical significance of these relationships, bootstrapping is used to generate t-statistics and p-values, helping to identify whether the relationships are statistically meaningful. Additionally, mediation analysis is employed to examine whether the mediating variables explain the relationship between an independent variable and the dependent variable.

To examine the above relationship, the Partial Least Squares Structural Equation Modeling (PLS-SEM) method was deployed, following the past study of Faraj & Asadul et al. 2024. Structural Equation Modeling (SEM) is a statistical technique designed to evaluate complex relationships among observed and latent variables, providing a framework for testing both measurement and structural models simultaneously. SEM was first introduced by Jöreskog (1970), who developed the traditional covariance-based SEM (CB-SEM), allowing researchers to assess theoretical constructs and their interrelationships. PLS-SEM, an extension of SEM, was pioneered by Wold (1975), specifically to address scenarios involving prediction-focused research and data with smaller sample sizes or less stringent distributional assumptions.

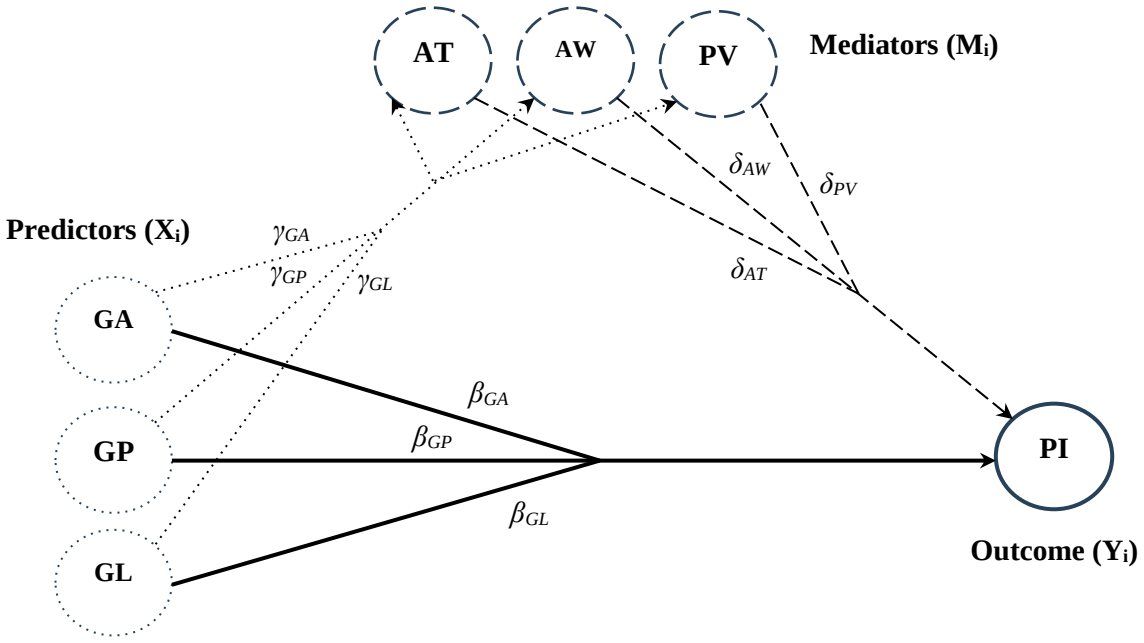
The author opted for PLS-SEM in this analysis due to its ability to handle the exploratory nature of the research, where the objective is to predict and understand the relationships between green marketing strategies (advertising, labeling, packaging) and green purchase intention. Moreover, PLS-SEM is better equipped to deal with non-normal distributions often encountered in behavioral and marketing research. Its robustness in

handling complex models with limited sample sizes and its focus on predictive accuracy make it the ideal choice for this study. For the Structural Equation Model, the variables are defined below:

- Predictors or Independent variables (Xi) represented by three constructs: Green Advertising (GA), Green Labeling (GL), and Green Packaging (GP).
- Mediators or Mediating variables (Mi): represented by three constructs: Green Perceived Value (PV), After-marketing Environmental Awareness (AW), and Green Attitude (AT).
- Outcome or Dependent variable (Yi): represented by the construct Green Purchase Intention (PI).

Figure 3. 1: Structural Equation Model employed

(Source: Author's analysis)



To have a better analysis about the mediating role of the moderators' variables, it is necessary to be familiar with the concept of Direct, Indirect, and Total effect of the independent variables on the dependent variables; and Partially or Fully Mediation role of the mediating variables (Gunzler, et al. 2013).

Direct effect: Direct effect is the relationship between an independent variable (Xi) and a dependent variable (Yi) while controlling for the mediator (Mi). It represents the part of the effect that is not mediated and is shown as a direct path in the SEM diagram. Direct effects are measured straight forward by the beta coefficients of the relationship, in this research, they are βGA, βGP, βGL which are the path coefficients from GA, GP, GL to PI respectively. If the direct effect is significant, it indicates that the independent variable directly influences the dependent variable without involving any mediation.

Indirect effect: It captures the relationship between the independent variable (Xi) and the dependent variable (Yi) that occurs through a mediator (Mi). It reflects the pathway where Xi affects Mi, and Mi subsequently affects Yi. Mathematically, the indirect effect is calculated as the product of the two coefficients, representing the combined influence of Xi to Mi and Mi to Yi. If the indirect path is significant, it suggests that mediation is occurring.

Total effect: It is the combined effect of Xi on Yi, encompassing both the direct and indirect pathways. It quantifies the overall relationship between Xi and Yi, regardless of whether mediation is involved. If the total effect is significant, Xi influences Yi through a combination of direct and mediated pathways.

Full mediation: If the mediating variables (Mi) have a full mediation role, it means that the effect of independent variables (Xi) on the dependent variable (Yi) is 100% mediated by the mediator. In other words, full mediation occurs when the direct effect becomes non-significant after accounting for the statistically significance of the indirect effect via the moderating variable.

Partial Mediation: In most applications, however, partial mediation is more common, in which case the mediator only mediates part of the effect of the intervention on the outcome, that is, the independent variable has some residual direct effect even after the mediator is introduced into the model (Gunzler, et al. 2013). Partial mediation is confirmed by both statistical significance of direct and indirect effects or the statistical significance of the total effect.

Table 3. 2: Mediation role definition summary

(Source: Author's analysis, Gunzler, et al. 2013)

Mediation role	Conclusion

Full mediation	The indirect effect is statistically significant And the direct effect is non-significant
Partial mediation	Both the indirect effect and the indirect effect are statistically significant Or the total effect is statistically significant
No mediation	Other case

3.2.2 Measurement model

Before proceeding to the structural model validation, it is essential to first validate the measurement model to ensure the constructs are accurately captured. This process involves testing both Convergent and Discriminant validity, which ensures that the constructs are distinct, reliable, and well-represented by their indicators, thus forming the foundation for further analysis. If any constructs or their associated items fail these validity tests, adjustments—such as removing items, adding new ones, or reconstructing the scale—should be made accordingly. Referring to the study of Brunner, et al. 2005, Hair et al., 2019, and Fornell & Larcker, 1981, we have measurement statistics with respective comparative thresholds as follow:

Convergent validity: is confirmed by checking that the factor loadings for each item are above 0.7, the Composite Reliability (CR) exceeds 0.7, and the Average Variance Extracted (AVE) is greater than 0.5. These criteria ensure that each construct is adequately represented by its underlying items.

Discriminant validity: is evaluated using the Fornell-Larcker criterion, where the square root of the AVE for each construct must be higher than the correlations between that construct and others, ensuring that the constructs are distinct. Additionally, the Heterotrait-Monotrait (HTMT) ratio is employed, with values below 0.85 considered acceptable, further confirming discriminant validity.

In addition, the author uses Cronbach's Alpha (CA) and the Variance Inflation Factor (VIF) to evaluate the reliability and potential multicollinearity among constructs. A CA value greater than 0.7 is considered acceptable, indicating that the items consistently

measure the same underlying construct. Meanwhile, VIF values should ideally be below 5, indicating that the predictor variables (such as green advertising, labeling, packaging, etc.) are not excessively correlated. High VIF values would suggest multicollinearity, which could distort the path coefficient estimates and reduce the accuracy of the model. For detail explanation and mathematical expression of these statistic, please refer to Appendix

3.3 PILOT STUDY AND QUESTIONNAIRE REVISION

Before conducting the final analysis on the collected data, a reliability analysis was performed during the pilot questionnaire phase to evaluate the quality and robustness of the measurement scale. This step ensured any necessary adjustments to the methodology or questionnaire before rolling out the full survey. Targeting 300 respondents in three phases of 100 each, the reliability analysis was conducted on the first phase to allow timely adjustments if issues arose.

The reliability analysis involved two steps: a Cronbach's Alpha test and Exploratory Factor Analysis (EFA). Details of these analyses are provided in the Appendix. As a result, seven items (PV3, AT2, AT4, AW3, AW4, PI3, and PI4) were excluded due to weak corrected item-total correlations, low factor loadings, or significant improvements in Cronbach's Alpha upon removal. This refinement reduced the original 30 items to 23, ensuring better alignment and coherence. The revised scale will be used in the Partial Least Squares Structural Equation Modeling (PLS-SEM) to enhance the validity and reliability of the results. By focusing on the strongest items, the study ensures a robust foundation for subsequent analytical processes.

CHAPTER 04: DATA ANALYSIS AND FINDINGS

Chapter 4 will include data tables that have been analyzed by Python and R programming language with various statistical packages. In addition, this part explores the implications that might be inferred from the main data questionnaire findings

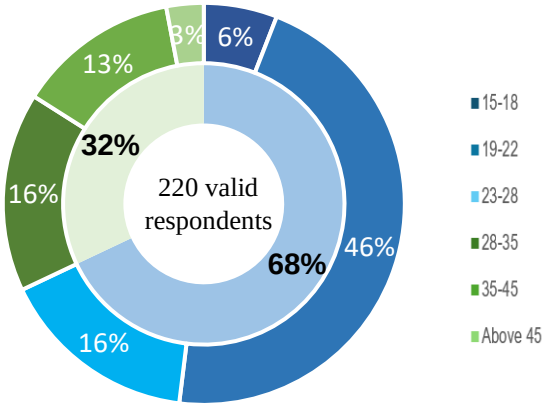
4.1 SAMPLE DEMOGRAPHIC SUMMARY

During the data collection process, the author received 257 respondents through an online survey. However, after filtering according to the conditions of the research article, 37 form responses did not meet the necessary conditions and were considered as invalid. These 37 responses will be removed from the analysis process. In summary, the researcher used 220 valid respondents, which accounts for 85.6% of the total number of people who completed the survey form.

The pie chart shows that Gen Z respondents dominate with 68% (150 respondents), with the largest contribution from the 19-22 age group (46% of total respondents), reflecting the use of Convenient Sampling. The second largest group is 23-28, comprising 16% of respondents, equal to the 29-35 age group, the largest among Millennials. Millennials account for 32% of respondents, totaling 70 valid responses. For analysis and comparison, the descriptive statistics of Gen Z and Millennials will be reported, with aggregated data presented in a stacked chart format.

Figure 4. 1: Sample Age contribution

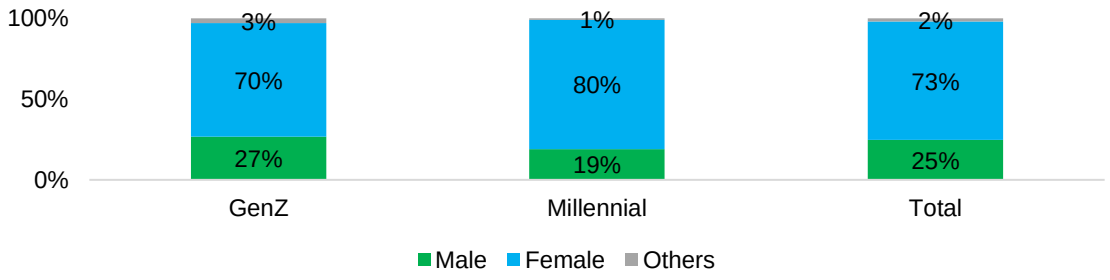
(Source: Author's analysis)



Among the 220 respondents who met the criteria to continue the analysis for the research topic, the number of surveyed participants who identified as female and male was 161 and 55, accounting for nearly 73% and 25% respectively. Only 4 respondents (2% contribution) decided to keep their Gender as Others. These gender contribution structures are similar across GenZ, Millennials group vs aggregate respondent.

Figure 4. 2: Sample Gender contribution

(Source: Author's analysis)



The stacked chart in **Figure 4.3** below shows the educational background distribution of respondents across Gen Z, Millennials, and the overall population. It reveals a clear generational divide: Gen Z respondents are predominantly university students (61%), followed by university graduates (16%), secondary/high school attendees (13%),

and postgraduates (10%). In contrast, Millennials are mostly university graduates (60%), with smaller proportions being university students (13%), postgraduates (13%), and secondary/high school attendees (16%). The distinct education background from two groups results in a different education background for aggregate respondents where university students dominate with 42%, followed by university graduates (28%), while the contributions of other backgrounds are nearly the same across different groups.

Figure 4. 3: Sample Educational Background contribution

(Source: Author's analysis)

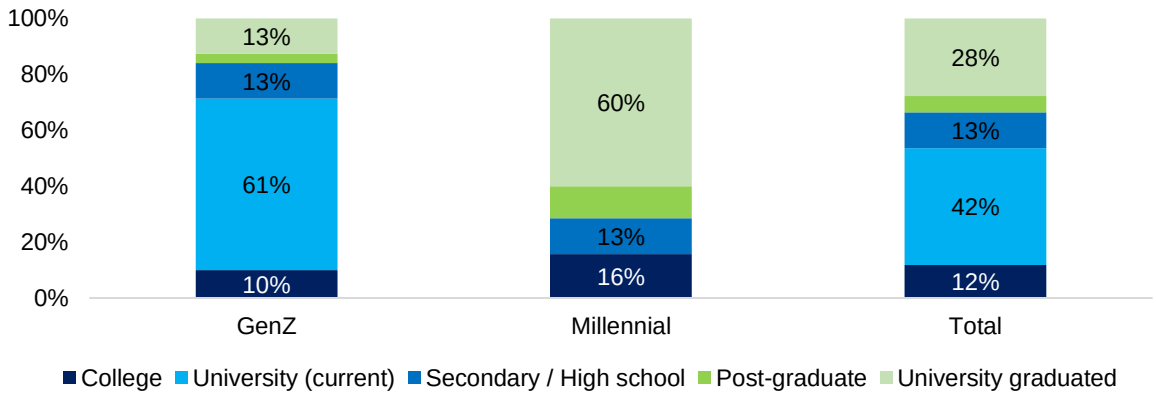


Figure 4.4 illustrates the occupational distribution of respondents across Gen Z, Millennials, and the total survey population. Among Gen Z, 75% are students, followed by Officers (9%) and Engineers and Freelancers (4% each). In contrast, Millennials are primarily Officers (50%), with smaller shares as students (19%) and Freelancers or Business professionals. Overall, students make up the largest share (52%), followed by Officers (22%) and Engineers (9%).

Income distribution in **Figure 4.5** reflects these occupational patterns. Among Gen Z, 72% earn less than 5 million VND monthly, with 7% earning between 5-10 million.

Millennials show a more balanced income distribution: 49% earn 20-30 million, 24% earn 10-20 million, and 23% earn over 30 million. Overall, 49% of respondents earn less than 5 million VND, aligning with the large student population, while 18% earn 20-30 million. These results highlight a strong link between occupation and income, with Gen Z's student majority correlating to lower incomes, while Millennials' professional roles correspond to higher income levels.

Figure 4. 4: Sample Occupation contribution

(Source: Author's analysis)

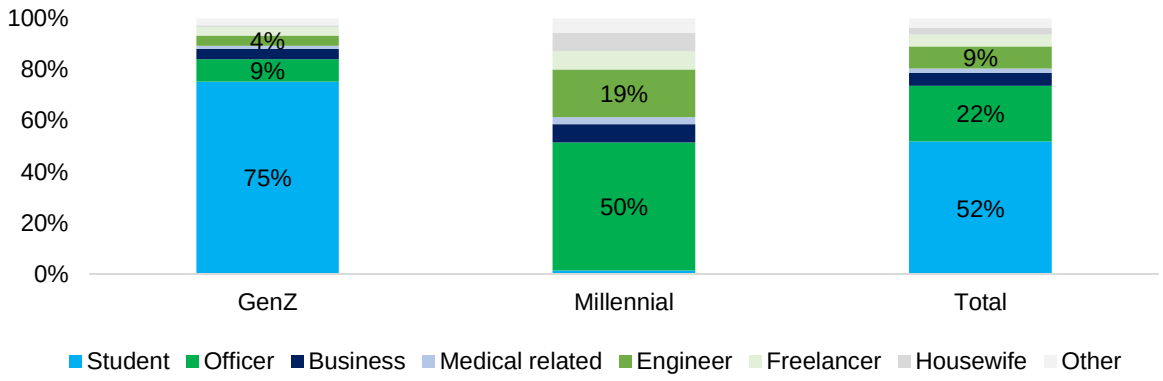
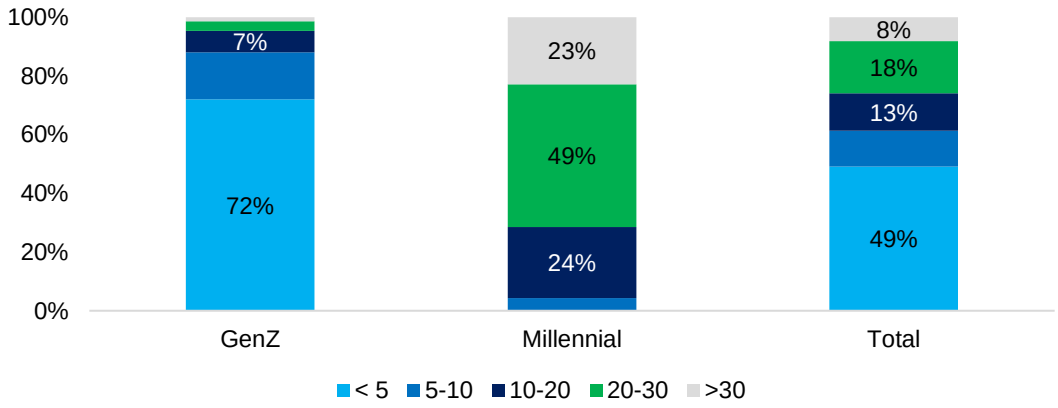


Figure 4. 5: Sample Income Level contribution

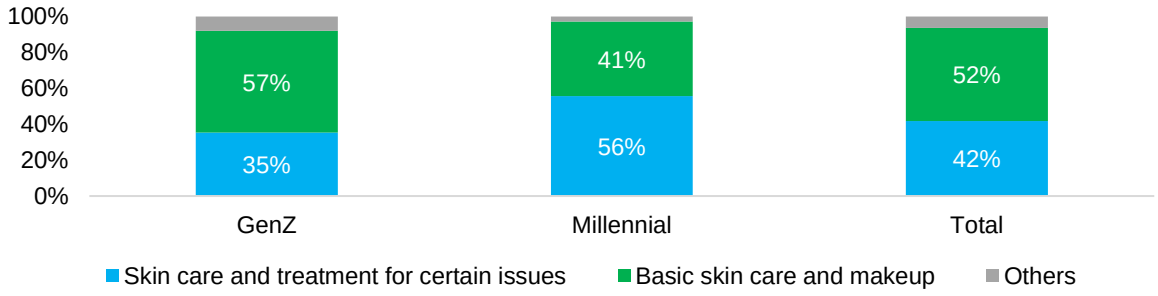
(Source: Author's analysis)



Finally, the stack chart in **Figure 4.6** illustrates skincare preferences among Gen Z and Millennials. Among Gen Z, 57% prioritize basic skincare and makeup, 35% focus on treatments for specific issues, and 8% choose other options. For Millennials, 56% prefer skincare treatments for specific issues, while 41% prioritize basic skincare and makeup. Across the total population, preferences are fairly balanced, with 52% favoring basic skincare and makeup and 42% opting for specific treatments.

Figure 4. 6: Sample Cosmetic Purchase Purpose contribution

(Source: Author's analysis)



4.2 OBSERVED VARIABLES DESCRIPTIVE STATISTICS

The descriptive statistics show that all observed variables among the constructs were measured on a 5-point scale, with mean scores ranging between 2.71 and 3.34, indicating moderate levels of agreement across the constructs. Green Advertising items have slightly higher mean values, particularly GA1 (3.26), suggesting stronger perceptions compared to other variables. Green Labeling and Green Packaging items exhibit lower mean scores, such as GL4 (2.78) and GP4 (2.79), reflecting relatively weaker agreement or perception. After-Marketing Green Perceived Value (PV) has the highest mean (PV2: 3.34), indicating it resonates strongly among respondents. The standard deviations for most items exceed 1, showing considerable variability in responses. Overall, the data highlights differing perceptions across green marketing constructs, offering insights for focused analysis. Please refer to Appendix for detailed descriptive statistics of observed variables.

4.3 MEASUREMENT MODEL OUTPUTS

Having explored the descriptive statistics to provide a foundational understanding of the dataset and its characteristics, the next crucial step before jumping into the testing the hypothesis of the structural equation model is to ensure the measurement model's validity. Specifically, this involves assessing Convergent Validity and Discriminant Validity of the constructs. These tests verify whether the indicators adequately represent their respective constructs and whether the constructs themselves are sufficiently differentiated. By validating the measurement model, we can confidently proceed to evaluate the structural paths and relationships in the PSL SEM framework. The results of the validity tests are detailed in the following sections, starting with an examination of convergent validity.

4.3.1 Convergent validity

Table 4. 1: Convergent validity analysis

(Source: Author's analysis)

Var.	Measurement Model	FL	AVE	CR	CA	VIF
Green Advertising (GA)						
GA1	Cosmetic ads should be promoted in a reliable way.	0.866	0.743	0.935	0.912	3.525
GA2	Cosmetic ads should show ecological and emotional benefits.	0.928				5.126
GA3	Cosmetic ads inspire me to buy eco-friendly cosmetic products.	0.829				2.816
GA4	Cosmetic ads can change my decision when buying a cosmetic product.	0.899				4.167
GA5	Cosmetic ads attract me to eco-friendly cosmetic products and services.	0.780				2.323
Green Labeling (GL)						
GL1	Eco-friendly labels help me find sustainable cosmetic products.	0.857	0.720	0.928	0.907	3.031
GL2	Eco-friendly labels provide enough information on cosmetic products.	0.786				2.343
GL3	I think eco-friendly labels on cosmetic products are easy to read.	0.865				3.183
GL4	Eco-friendly labels make me want to buy cosmetic products that fit my lifestyle.	0.855				3.038
GL5	The information on eco-friendly cosmetic labels is correct.	0.877				3.384
Green Packaging (GP)						

GP1	Packaging information is important when choosing cosmetic products.	0.881	0.747	0.922	0.911	3.385
GP2	Reusing cosmetic packaging is good for the environment.	0.841				2.880
GP3	Biodegradable cosmetic packaging attracts consumers.	0.872				3.320
GP4	I prefer buying cosmetics in eco-friendly packaging.	0.863				3.112
Green Attitude (AT)						
AT1	I feel good about buying eco-friendly cosmetics after seeing green marketing.	0.872	0.760	0.864	0.832	2.371
AT3	Choosing eco-friendly cosmetic products helps protect the environment.	0.872				2.371
Green Perceived Value (PV)						
PV1	Eco-friendly cosmetic products are worth their higher price for the environment.	0.784	0.661	0.854	0.799	1.999
PV2	Using eco-friendly cosmetic products helps reduce my environmental impact.	0.825				2.167
PV4	I believe eco-friendly cosmetic products offer better value than non-green alternatives.	0.829				2.181
Environment Awareness (AW)						
AW1	Green ads for cosmetic products have increased my awareness of environmental issues.	0.823	0.677	0.807	0.749	1.847
AW2	I now think more about the environmental impact of using cosmetics.	0.823				1.847
Green Purchase Intention (PI)						
PI1	I am likely to buy eco-friendly cosmetic products soon.	0.909	0.826	0.904	0.875	3.140

PI4	I will support cosmetic brands that use sustainable practices.	0.909				3.140

Abbreviations: ; FL, Factor Loadings ; AVE, Average Variance Extracted; CR, Composite Reliability; CA, Cronbach's Alpha; VIF, Variance Inflation Factor

Fortunately, after the revising the questionnaire with seven variables dropping, the results of the convergent validity assessment conducted on the whole sample confirm that all constructs in the measurement model meet the necessary criteria, with:

- Factor loadings (FL) for all indicators are above the acceptable threshold of 0.7, indicating strong correlations between the observed variables and their respective constructs.
- Average Variance Extracted (AVE) values for all constructs exceed the recommended minimum of 0.5, confirming that each construct captures sufficient variance from its indicators.
- Composite Reliability (CR) and Cronbach's Alpha (CA) values are consistently above 0.7 across all constructs, demonstrating high internal consistency and reliability.
- Additionally, Variance Inflation Factor (VIF) values are within acceptable limits, ranging from 1.847 to less than 5.0, only except for a slightly above-threshold high case of GA2 at 5.126, which ensures minimized multicollinearity issues.

These results establish that the constructs are adequately represented by their observed variables, validating the measurement model and providing a strong foundation for further analyses, including discriminant validity testing and structural model evaluation.

4.3.2 Discriminant validity

With the convergent validity of the measurement model successfully established, the next step involves evaluating the discriminant validity of the constructs. This study

employs both the Fornell-Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio to assess discriminant validity. The Fornell-Larcker criterion confirms whether constructs explain more variance in their indicators than in their correlations with other constructs by comparing the square root of the AVE to inter-construct correlations. Meanwhile, the HTMT ratio provides a stricter assessment by detecting potential overlaps, with values below 0.85 considered acceptable. The empirical findings of these analyses are presented in the following section.

Table 4. 2: Fornell and Larcker criteria

(Source: Author's analysis)

	GA	**GL**	**GP**	**AT**	**PV**	**AW**	**PI**
GA	0.862						
GL	0.018	0.848					
GP	0.005	0.738	0.864				
AT	0.620	0.044	0.041	0.872			
PV	(0.030)	0.567	0.556	0.015	0.813		
AW	0.522	0.112	0.138	0.559	0.031	0.823	
PI	0.739	0.048	0.045	0.736	(0.009)	0.664	0.909

Table 4. 3: Heterotrait-monotrait (HTMT) ratio matrix

(Source: Author's analysis)

	GA	GL	GP	AT	PV	AW	PI
GA	0.000						
GL	0.024	0.000					
GP	0.007	1.007	0.000				
AT	0.826	0.059	0.054	0.000			
PV	0.043	0.823	0.790	0.021	0.000		
AW	0.737	0.161	0.194	0.778	0.046	0.000	
PI	0.944	0.062	0.057	0.929	0.013	0.884	0.000

Firstly, the Fornell-Larcker results confirm that all constructs satisfy the discriminant validity requirement. The square root of the AVE for each construct exceeds its inter-construct correlations, demonstrating that each construct explains more variance in its indicators than it shares with other constructs. For example, GA's square root of AVE is 0.862, which is higher than its correlations with all other variables. Similarly, GL and GP have square root AVE values of 0.848 and 0.864, respectively, both surpassing their highest inter-construct correlations. AT, PV, AW, and PI follow the same pattern, with square root AVE values of 0.872, 0.813, 0.823, and 0.909, all exceeding the corresponding inter-construct correlations. These results confirm clear distinctions among the constructs.

Secondly, the HTMT analysis provides further support for discriminant validity, as most construct pairs have HTMT values below the recommended threshold of 0.85. For instance, the HTMT values for GA with GL (0.024), GP (0.007), and PV (0.043), as well as GL with AT (0.059) and PI (0.062), remain well below the acceptable limit.

However, some construct pairs exceed the threshold, indicating potential overlap. Specifically, GL-GP (1.007), AT-PI (0.929), and GA-PI (0.944) have values above 0.85, suggesting strong relationships between these constructs. Despite these instances, the majority of HTMT values align with the threshold, and the Fornell-Larcker results confirm distinctiveness across all constructs.

Given that both methods predominantly support discriminant validity, the overlaps observed in HTMT are not considered significant enough to undermine the measurement model. Therefore, the results validate the distinctiveness of the constructs, and the author proceeds with the PSL structural model analysis in the subsequent section.

4.4 STRUCTURAL EQUATION MODELLING TEST

4.4.1 Model fit assessment

The evaluation of the structural equation model (SEM) begins with an assessment of the overall model fit using established fit indices. These indices provide a comprehensive understanding of how well the proposed model aligns with the observed data. According to the Table 4.4:

- The model's χ^2/df value is 2.551, which falls within the acceptable range (≤ 5) and is close to the preferred threshold of ≤ 3, indicating a good fit.
- The chi-square p-value of 0.1624 further suggests no significant discrepancies between the model and the data, supporting model adequacy.
- The GFI is 0.9245, exceeding the good-fit criterion of ≥ 0.9, though it is slightly below the very good threshold of ≥ 0.95.
- Similarly, the CFI and TLI values are 0.9761 and 0.9684, respectively, both exceeding the very good-fit threshold of ≥ 0.95, indicating excellent model fit.
- Finally, the RMSEA value is 0.0424, which is well below the good-fit cutoff of ≤ 0.06, further confirming the model's adequacy.

These results collectively demonstrate that the structural model fits the observed data well. With the overall model fit established, the analysis can proceed to evaluate the relationships within the structural model.

Table 4. 4: PSL SEM model-fit measurements

(Source: Author's analysis, *Hair and Black (2006), Chau and Hu (2001))*

Model-fit measure	**Value**	**Criteria**
chi2/df	2.551	≤ 3 is good; ≤ 5 is acceptable
chi2 p-value	0.1624	≥ 0.05 is consider significant
GFI	0.9245	≥ 0.9 is good; ≥ 0.95 is very good; ≥ 0.8 is acceptable in some cases
CFI	0.9761	≥ 0.9 is good; ≥ 0.95 is very good; ≥ 0.8 is acceptable
TLI	0.9684	≥ 0.9 is good
RMSEA	0.0424	≤ 0.06 is good; ≤ 0.08 is acceptable

4.4.2 Hypothesis testing

Hypotheses testing on the positive direct impact of Green Market Strategies on Green Purchase Intention

The table below provides the results of the path analysis conducted in the Partial Least Squares Structural Equation Model (PLS-SEM), including the path coefficient estimates, standard errors, z-values, and p-values for each hypothesized relationship. These metrics are used to determine the significance of the relationships between constructs, as outlined in the Chapter 3 Methodology section.

Table 4. 5: PSL-SEM model output (Total sample)

(Source: Author's analysis)

Path	**Relationship**	**Path coefficient**	**Path coefficient estimate**	**Std. Err**	**z-value**	**p-value**
X_i -> Y_i	PI ~ GA	β_{GA}	0.6229***	0.1475	4.2226	0.0011
	PI ~ GL	β_{GL}	(0.8064)	1.6756	(0.4813)	0.6303
	PI ~ GP	β_{GP}	0.8052	1.6889	0.4767	0.6336
X_i -> M_i	AT ~ GA	$\gamma_{GA->AT}$	1.0340***	0.1380	7.4933	0.0012
	AT ~ GL	$\gamma_{GL->AT}$	(3.4543)*	1.8303	(1.8873)	0.0591
	AT ~ GP	$\gamma_{GP->AT}$	3.4117*	1.7807	1.9159	0.0454
	PV ~ GA	$\gamma_{GA->PV}$	(0.0682)	0.0653	(1.0448)	0.2961
	PV ~ GL	$\gamma_{GL->PV}$	1.4742*	0.8733	1.6880	0.0914
	PV ~ GP	$\gamma_{GP->PV}$	(0.7268)	0.8470	(0.8581)	0.3908
	AW ~ GA	$\gamma_{GA->AW}$	(1.0341)	14.2790	(0.0724)	0.9423
	AW ~ GL	$\gamma_{GL->AW}$	82.0662	606.2373	0.1354	0.8923
	AW ~ GP	$\gamma_{GP->AW}$	(79.7801)	590.6354	(0.1351)	0.8926
M_i -> Y_i	PI ~ AT	δ_{AT}	0.3815***	0.1313	2.9056	0.0037
	PI ~ PV	δ_{PV}	(0.0410)	0.0758	(0.5413)	0.5883
	PI ~ AW	δ_{AW}	0.2025	0.2196	0.9222	0.3564

Note ***, **, * equivalent to 1%, 5%, 10% statistical significance respectively

The results of the PLS-SEM testing are presented as follows.

Hypothesis 1

For H1, the path coefficient β_{GA} for the relationship between Green Advertising (GA) and Green Purchase Intention (PI) is 0.6229, with a p-value of 0.0011. This indicates a statistically significant relationship at the 99% confidence level ($p < 0.05$). Thus, the hypothesis that green advertising positively affects green purchase intention is supported. Moreover the magnitude of the impact is also quite strong with one Likert point increase in GA would directly increase the PI by 0.6229.

The acceptance of H1, which posits that green advertising positively impacts green purchase intention (PI), is strongly supported by both theoretical frameworks and empirical evidence. This finding aligns with the Theory of Planned Behavior (TPB) by Ajzen (1991), which emphasizes that attitudes, subjective norms, and perceived behavioral control shape behavioral intentions. Green advertising enhances consumer attitudes by highlighting environmental benefits, consistent with findings from Hartmann & Apaolaza-Ibáñez (2012), who demonstrated its role in fostering emotional engagement and brand loyalty. This finding is particularly evident in the cosmetics industry, where green advertising focusing on eco-friendly ingredients and sustainable practices resonates with consumers who balance product efficacy and environmental concerns, as demonstrated by Vu et al. (2021). Additionally, consumer trust and authenticity play a pivotal role in the success of green advertising. Studies like Leonidou et al. (2013) emphasize that green marketing must align with broader sustainability practices to avoid greenwashing and maintain credibility. In Vietnam, Nguyen et al. (2020) found that green advertising, particularly on digital platforms like Facebook and Instagram, has significantly influenced urban consumers,

especially in Ho Chi Minh City, where younger generations are driven by subjective norms and environmental advocacy.

Hypothesis 2 and 3:

For H2, which examines the relationship between Green Labeling (GL) and Green Purchase Intention (PI), the path coefficient β_{GL} is surprisingly negative at -0.8064 with a p-value of 0.6303. However, as the p-value exceeds 0.05, the relationship is not statistically significant, leading to the rejection of this hypothesis.

Lastly, H3, which hypothesizes a positive relationship between Green Packaging (GP) and Green Purchase Intention (PI), has a path coefficient β_{GP} of 0.8052 and a p-value of 0.6336. Similar to H2, the lack of statistical significance ($p > 0.05$) results in the rejection of this hypothesis.

The rejection of H2 and H3 is not consistent with the findings of Ottman (1992) and Paul et al. (2016), who demonstrated that green packaging and eco-labeling significantly influence green purchase intention (PI). This discrepancy suggests several potential reasons rooted in the cultural and socioeconomic context of Vietnamese consumers. One key factor could be low awareness and familiarity with eco-labels. In Vietnam, eco-labeling is relatively new, and consumers may not fully understand or recognize their significance in verifying environmental claims. Nguyen et al. (2020) argue that digital advertising plays a more prominent role in urban Vietnam, which could overshadow the effectiveness of green labeling. Additionally, trust issues related to green claims could play a role. In emerging markets, consumers often question the authenticity of green claims due to the prevalence of greenwashing. Leonidou et al. (2013) emphasized that for green marketing strategies like labeling and packaging to be effective, brands must demonstrate credibility and consistency in their sustainability practices.

The cost factor associated with sustainable packaging could further contribute to the non-significant relationship. Vietnamese consumers, particularly in the cosmetic market, may prioritize affordability over eco-friendly packaging, especially when price-sensitive segments dominate urban markets. Vu et al. (2021) highlighted that while younger Vietnamese consumers are drawn to green products, their willingness to pay a premium often hinges on perceived product value. If green packaging fails to communicate added value effectively, it may not translate into purchase intention.

Cultural and contextual factors also play a crucial role. Vietnamese consumers' purchase decisions are heavily influenced by subjective norms and social trends, as noted by Paul et al. (2016) and Nguyen et al. (2020). These dynamics might diminish the impact of individual green attributes like labeling or packaging in favor of broader, digitally driven campaigns that align with social influences. Additionally, the urban-rural divide and socioeconomic disparities in Vietnam could result in varying perceptions of green marketing strategies, with urban consumers in Ho Chi Minh City focusing more on aesthetics and convenience than on environmental considerations.

In conclusion, while the rejection of H2 and H3 appears inconsistent with global findings, it underscores the importance of contextualizing green marketing strategies to specific markets. The results highlight the need for analyzing various factors that may mediate the impact of green market strategies to have a more granular understanding about these relationships.

Hypotheses testing on the mediating role of Green Attitude, Green Awareness, and Green Perceived Value.

The Table 4.6 below presents the path coefficients and their significance for the direct, indirect, and total effects of green marketing strategies (GA, GL, GP) on green

purchase intention (PI) under the mediating roles of environmental attitude (AT), after-marketing awareness (AW), and perceived value (PV). The table also identifies whether mediation is partial, full, or absent based on the significance of the effects.

Table 4. 6: Mediation analysis (Total sample)

(Source: Author's analysis)

Path	Direct Effect	Indirect Effect	Total Effect	Mediators' role
GPI ~ AT ~ GA	0.6229***	0.3945**	1.0174**	Partial mediation
GPI ~ AW ~ GA	0.6229***	(0.2094)	0.4135	
GPI ~ PV ~ GA	0.6229***	0.0028	0.6257	
GPI ~ AT ~ GP	0.8052	1.3016**	2.1068	Full mediation
GPI ~ AW ~ GP	0.8052	(16.1555)	(15.3503)	
GPI ~ PV ~ GP	0.8052	0.0298	0.8350	
GPI ~ AT ~ GL	(0.8064)	(1.3179)*	(2.1242)	Full mediation
GPI ~ AW ~ GL	(0.8064)	16.6184	15.8121	
GPI ~ PV ~ GL	(0.8064)	(0.0605)	(0.8668)	

Note ***, **, * equivalent to 1%, 5%, 10% statistical significance respectively

At first glance, it can be seen that the findings above highlight the pivotal role of environmental attitude (AT) as a mediator in the relationship between green marketing strategies and green purchase intention (PI), offering valuable insights into the dynamics

of consumer behavior. For the path **GA → AT → PI**, the significant direct and indirect effects demonstrate partial mediation, with a total effect of 1.0174. This reflects that the presence of AT amplifies the impact of green advertising (GA) on PI, increasing the magnitude of influence from 0.6229 (direct effect) to 1.0174 (total effect). This result aligns with the Theory of Planned Behavior (TPB) by Ajzen (1991), which posits that attitudes are key precursors to intentions and behaviors, underscoring the importance of shaping positive environmental attitudes to drive green purchasing decisions.

Similarly, for the path GP → AT → PI, the direct effect is insignificant, but the significant indirect effect indicates full mediation, highlighting that AT entirely mediates the relationship between green packaging (GP) and PI. This suggests that without fostering positive attitudes, green packaging alone may not significantly influence purchase intentions. This finding is consistent with research by Chen & Chang (2012), who emphasized that green perceived value and attitudes are critical mediators in the effectiveness of green marketing strategies. It also reflects insights from Paul et al. (2016), who demonstrated that positive attitudes toward environmental initiatives are essential for green marketing strategies like eco-labeling and packaging to impact purchase intentions meaningfully.

The strong mediating role of AT can be attributed to its ability to enhance consumer trust and emotional engagement. Hartmann & Apaolaza-Ibáñez (2012) highlighted that emotional engagement, driven by positive attitudes, is a key factor in encouraging sustainable consumer behavior. By fostering a favorable attitude through green advertising and packaging, brands can effectively bridge the gap between marketing strategies and purchase intentions, particularly in emerging markets like Vietnam. In the context of Ho Chi Minh City, the mediating role of AT becomes even more significant as urban consumers are exposed to various green marketing campaigns. However, they are more

likely to respond to strategies that resonate with their environmental values and enhance their perceived green identity.

For Green Labeling, the path GL → AT → PI demonstrates full mediation, as the direct effect of green labeling (GL) on green purchase intention (PI) is not significant, while the indirect effect through environmental attitude (AT) is significant at the 10% level. This finding underscores the critical role of AT in mediating the relationship between GL and PI, emphasizing that the influence of GL on PI is entirely contingent on fostering favorable attitudes toward environmental concerns. However, the negative indirect effect coefficient of -1.3179 reveals an unexpected negative relationship, which contradicts previous research, such as Ottman (1992) and Paul et al. (2016), that highlights green labeling's ability to enhance consumer trust and perceived value, which challenges the earlier hypothesis (H1), which posited a positive impact of green marketing strategies, including labeling, on PI.

The negative coefficient could reflect consumer skepticism or distrust toward green labeling in the studied context, particularly in Ho Chi Minh City, Vietnam. One plausible explanation is the prevalence of greenwashing—where companies exaggerate or falsify their environmental claims—leading to reduced consumer confidence in eco-labels. Leonidou et al. (2013) warned that green marketing strategies must be underpinned by credible environmental actions to avoid consumer skepticism and reputational damage. In Vietnam, where green labeling is still a relatively nascent concept, the lack of standardization or transparency in eco-labeling practices could further exacerbate this distrust. Additionally, limited awareness or understanding of eco-labels among Vietnamese consumers might diminish their perceived relevance, rendering them ineffective in influencing PI positively.

In contrast to the strong mediating role of AT, the mediating effects of after-marketing awareness (AW) and perceived value (PV) are generally insignificant across all paths, suggesting they play a minimal role in explaining the relationship between green marketing strategies and PI in this context. There is also an unusually large indirect effect coefficient for GL → AW → PI (16.6184), which deviates significantly from expected patterns. This anomaly could indicate data irregularities or reflect unique contextual factors, such as cultural or situational influences, warranting further investigation. For instance, AW might have been disproportionately impacted by outliers or a misinterpretation of awareness-related survey questions among respondents.

Overall, these findings reinforce the pivotal role of AT as the primary mediator, while AW and PV appear less influential in this specific context. The negative indirect effect in the GL → AT → PI path highlights the need for companies to address consumer skepticism and enhance trust in green labeling. This could be achieved by educational campaigns to improve consumer understanding of eco-labels, ensuring greater transparency and standardization in labeling practices, and demonstrating authentic sustainability commitments. Furthermore, the anomalous results for GL → AW → PI call for a more granular analysis of the data to identify potential errors or uncover hidden contextual insights.

4.5 A COMPARISON BETWEEN GENZ AND MILLENIALS

The fifth hypothesis (H5) posits that the effects of green marketing strategies on green purchase intention differ between Gen Z and Millennials. This hypothesis is rooted in prior research by Waris and Hameed (2020), which highlights generational differences in environmental awareness and attitudes, potentially leading to varying responses to green marketing efforts. To evaluate this hypothesis, the sub-sample analysis for Gen Z and

Millennials was conducted separately, and the results are detailed in the following subsections.

For this inferential analysis, we directly utilize the SEM model outputs to test H5, as the measurement model metrics, such as convergent and discriminant validity, are consistent with the findings from the total sample. These measurement model statistics are included in the Appendix for reference.

4.5.1 GenZ sub-sample

Table 4. 7: PSL-SEM model output (GenZ sub-sample)

(Source: Author's analysis)

Path	Relationship	Path coefficient	Path coefficient estimate	Std. Err	z-value	p-value
X_i -> Y_i	PI ~ GA	β_{GA}	0.7582***	0.2522	3.0066	0.0026
	PI ~ GL	β_{GL}	(1.1388)	1.7940	(0.6348)	0.5256
	PI ~ GP	β_{GP}	1.2900	1.9369	0.6660	0.5054
X_i -> M_i	AT ~ GA	$\gamma_{GA->AT}$	1.0883***	0.1901	5.7235	0.0054
	AT ~ GL	$\gamma_{GL->AT}$	(3.1946)*	1.7726	(1.8022)	0.0715
	AT ~ GP	$\gamma_{GP->AT}$	3.3099*	1.8265	1.8121	0.0700
	PV ~ GA	$\gamma_{GA->PV}$	(0.1106)	0.0974	(1.1355)	0.2562
	PV ~ GL	$\gamma_{GL->PV}$	1.4970	0.9262	1.6164	0.1060
	PV ~ GP	$\gamma_{GP->PV}$	(0.8457)	0.9505	(0.8898)	0.3736
	AW ~ GA	$\gamma_{GA->AW}$	(12.2299)	279.0175	(0.0438)	0.9650
	AW ~ GL	$\gamma_{GL->AW}$	213.8740	4,564.0724	0.0469	0.9626
	AW ~ GP	$\gamma_{GP->AW}$	(220.6493)	4,713.4883	(0.0468)	0.9627
M_i -> Y_i	PI ~ AT	δ_{AT}	0.4518***	0.1567	2.8830	0.0039
	PI ~ PV	δ_{PV}	(0.0948)	0.0880	(1.0780)	0.2810
	PI ~ AW	δ_{AW}	0.0835	0.2801	0.2981	0.7656

Note ***, **, * equivalent to 1%, 5%, 10% statistical significance respectively

As shown by Table 4.7 with the findings for the Gen Z subsample, the analysis provides unique insights into their distinct purchasing behavior and their heightened

responsiveness to green marketing strategies, particularly **Green Advertising (GA)**. With a path coefficient of 0.7582 ($p < 0.01$), the positive direct effect of GA on Green Purchase Intention (PI) is not only statistically significant but also notably stronger than in the total sample (path coefficient = 0.6229). This indicates that Gen Z consumers exhibit a greater sensitivity to green advertising, driven by their strong environmental consciousness and digital-native characteristics. Unlike the broader sample, Gen Z's preferences are shaped by their active engagement with visually stimulating and value-driven content across digital platforms, which allows brands to communicate environmental messages more effectively.

What distinguishes Gen Z from the whole sample mixed by Millennials cohorts is their preference for dynamic, interactive, and authentic advertising content. Being highly connected and socially aware, they are drawn to campaigns that resonate with their values and deliver messages with emotional and visual appeal (Francis & Hoefel, 2018). They also prioritize transparency and accountability, favoring brands that communicate their sustainability initiatives through relatable and engaging narratives rather than abstract claims. This responsiveness to GA highlights a generational shift where traditional marketing strategies are less effective compared to personalized, digital-first approaches that align with their eco-conscious identity.

In contrast, Green Labeling (GL) and Green Packaging (GP) fail to exhibit significant effects on PI in the Gen Z subsample, mirroring the results of the total sample. However, the reasons for this insignificance may differ for Gen Z. This demographic often views eco-labels and packaging with skepticism, questioning the credibility of green claims. Their high exposure to environmental discourse and awareness of greenwashing practices make them more critical of superficial sustainability efforts. Unlike older cohorts, Gen Z tends to rely less on standardized eco-labels and more on direct evidence of a brand's

commitment to environmental action, such as visible changes in supply chain practices or publicized sustainability goals.

Moreover, peer influence and social norms play a prominent role in shaping Gen Z's purchasing decisions, amplifying the impact of GA. They are heavily influenced by social media communities, where environmental advocacy and influencer endorsements strongly sway their perceptions of a brand's green efforts. This contrasts with older demographics, who may rely more on institutional endorsements like labels or certifications. The importance of peer-driven dynamics underscores the need for advertising campaigns that not only communicate sustainability but also create a sense of shared purpose and community engagement (Cone Communications, 2017).

Table 4. 8: Mediation analysis (GenZ sub-sample)

(Source: Author's analysis)

Path	Direct Effect	Indirect Effect	Total Effect	Mediators' role
PI ~ AT ~ GA	0.7582***	0.4917**	1.2499***	Partial Mediation
PI ~ AW ~ GA	0.7582	(1.0211)	(0.2629)	
PI ~ PV ~ GA	0.7582	0.0105	0.7687	
PI ~ AT ~ GP	1.2900	1.4953**	2.7853	Full Mediation
PI ~ AW ~ GP	1.2900	(18.4232)	(17.1332)	
PI ~ PV ~ GP	1.2900	0.0802	1.3702	
PI ~ AT ~ GL	(1.1388)	(1.4432)*	(2.5820)	Full Mediation
PI ~ AW ~ GL	(1.1388)	17.8575	16.7187	
PI ~ PV ~ GL	(1.1388)	(0.1419)	(1.2807)	

Note ***, **, * equivalent to 1%, 5%, 10% statistical significance respectively

Similarly to the whole sample, the mediation analysis for the Gen Z subsample further highlights the critical role of Attitude (AT) as a mediator in the relationships between green marketing strategies and green purchase intention (PI), revealing unique

generational behaviors. For Green Advertising (GA), AT partially mediates the relationship with PI, with a significant indirect effect of 0.4917 ($p < 0.01$), complementing GA's direct effect. This indicates that while Gen Z responds strongly to advertising, their environmental attitudes significantly enhance the translation of these campaigns into purchasing behavior.

In the case of Green Packaging (GP) and Green Labeling (GL), AT plays a fully mediating role, with significant indirect effects of 1.4953 ($p < 0.01$) and -1.4432 ($p < 0.05$), respectively, despite their direct effects on PI being insignificant. These results reveal that for Gen Z, packaging and labeling alone lack persuasive power unless they foster a favorable environmental attitude. Gen Z's critical stance on greenwashing and superficial sustainability claims means that they interpret green packaging and labeling more effectively through the lens of their attitudes, which act as filters to assess the credibility and relevance of such efforts (Nguyen et al., 2020; Leonidou et al., 2013).

What differentiates Gen Z from the broader sample is the stronger coefficients observed in the mediation effects, reflecting their heightened sensitivity to environmental messaging. Gen Z's digital-native characteristics and high exposure to environmental advocacy likely amplify their reliance on attitudes to interpret green marketing strategies (Francis & Hoefel, 2018). Moreover, their demand for authenticity and action over abstract claims further strengthens the mediating role of AT. They are more inclined to evaluate the sincerity of green initiatives and form purchasing decisions based on the alignment of these initiatives with their own values and environmental beliefs (Cone Communications, 2017).

These findings highlight the importance of crafting attitude-centric marketing strategies when targeting Gen Z. Brands should focus on not just promoting their green initiatives but also fostering positive environmental attitudes through transparent communication, storytelling, and relatable narratives. This approach not only strengthens

the mediating influence of AT but also ensures that green marketing strategies resonate deeply with this generation's eco-conscious identity.

4.5.2 Millennials sub-sample

Turning to the Millennials sub-sample, the analysis in Table 4.9 of the Millennials sub-sample reveals notable distinctions in their responses to green marketing strategies compared to Gen Z and the total sample. Unlike Gen Z, who exhibit a strong direct relationship between Green Advertising (GA) and Green Purchase Intention (PI), Millennials show no statistically significant direct effects of any green marketing strategies (GA, GL, or GP) on PI (e.g., $p = 0.2227$ for GA, $p = 0.2517$ for GL, and $p = 0.1906$ for GP). This suggests that Millennials' green purchase decisions are less directly influenced by green marketing tactics, reflecting a more nuanced and indirect approach to evaluating sustainability claims.

By that way, the mediation analysis for Millennials highlights the critical roles of Attitude (AT) and Awareness (AW) in shaping their "indirect" purchasing behavior. For the paths PI ~ AT ~ GA and PI ~ AW ~ GA, full mediation is observed, with significant indirect effects (0.4961, $p < 0.01$, and 0.3114, $p < 0.05$, respectively), leading to total effects of 1.2499 ($p < 0.05$) and 0.6074 ($p < 0.05$). This indicates that while GA does not directly impact PI for Millennials, its effectiveness is fully realized through positive attitudes and heightened awareness of environmental issues. Millennials seem to rely more on cognitive evaluation processes, where advertising fosters awareness and shapes attitudes, which in turn drive their purchase intentions.

In contrast to Gen Z, who are more emotion-driven and digitally engaged, Millennials exhibit a more rational and cautious approach to green marketing. They are likely to prioritize evidence-based claims and tangible sustainability practices rather than being swayed solely by the appeal of advertising. Their behavior reflects their bridging position between traditional and digital consumerism, as they grew up during the rise of digital media but retain some trust in traditional marketing elements, such as certifications or detailed product descriptions (Cone Communications, 2017).

Table 4. 9: PSL-SEM model output (Millennials sub-sample)

(Source: Author's analysis)

Path	Relationship	Path coefficient	Path coefficient estimate	Std. Err	z-value	p-value
X_i -> Y_i	PI ~ GA	β_{GA}	0.2960	0.2428	1.2195	0.2227
	PI ~ GL	β_{GL}	0.9948	0.8678	1.1462	0.2517
	PI ~ GP	β_{GP}	(0.7325)	0.5597	(1.3087)	0.1906
X_i -> M_i	AT ~ GA	$\gamma_{GA->AT}$	1.0757**	0.1278	8.4195	0.0175
	AT ~ GL	$\gamma_{GL->AT}$	0.1969	0.5742	0.3430	0.7316
	AT ~ GP	$\gamma_{GP->AT}$	(0.0766)	0.4991	(0.1535)	0.8780
	PV ~ GA	$\gamma_{GA->PV}$	(0.2545)	1.2460	(0.2043)	0.8382
	PV ~ GL	$\gamma_{GL->PV}$	(17.5735)	96.9664	(0.1812)	0.8562
	PV ~ GP	$\gamma_{GP->PV}$	15.8980	83.5874	0.1902	0.8492
	AW ~ GA	$\gamma_{GA->AW}$	0.9956**	0.1404	7.0939	0.0317
	AW ~ GL	$\gamma_{GL->AW}$	(0.0739)	0.6732	(0.1098)	0.9125
	AW ~ GP	$\gamma_{GP->AW}$	0.1051	0.5854	0.1795	0.8575
M_i -> Y_i	PI ~ AT	δ_{AT}	0.4611***	0.1747	2.6389	0.0083
	PI ~ PV	δ_{PV}	(0.2762)	0.3318	(0.8324)	0.4052
	PI ~ AW	δ_{AW}	0.3128***	0.1137	2.7509	0.0059

Note ***, **, * equivalent to 1%, 5%, 10% statistical significance respectively

Table 4. 10: Mediation analysis (Millennials sub-sample)

(Source: Author's analysis)

Path	Direct Effect	Indirect Effect	Total Effect	Mediators' role
PI ~ AT ~ GA	0.2960	0.4961***	0.7921*	Full mediation
PI ~ AW ~ GA	0.2960	0.3114**	0.6074*	Full mediation
PI ~ PV ~ GA	0.2960	0.0703	0.3663	
PI ~ AT ~ GP	(0.7325)	(0.0353)	(0.7678)	
PI ~ AW ~ GP	(0.7325)	0.0329	(0.6996)	
PI ~ PV ~ GP	(0.7325)	(4.3911)	(5.1236)	
PI ~ AT ~ GL	0.9948	0.0908	1.0856	
PI ~ AW ~ GL	0.9948	(0.0231)	0.9716	
PI ~ PV ~ GL	0.9948	4.8539	5.8487	

Note ***, **, * equivalent to 1%, 5%, 10% statistical significance respectively

Furthermore, the absence of significant mediation effects involving Green Packaging (GP) and Green Labeling (GL) in the Millennials sub-sample suggests a lower reliance on secondary marketing attributes compared to Gen Z. Millennials may view these strategies as insufficient unless paired with substantive actions that align with their expectations of corporate social responsibility (CSR). Unlike Gen Z, who tend to reject superficial green claims outright, Millennials may show a pragmatic tolerance for green marketing strategies, provided they are substantiated by credible evidence of sustainability efforts (Nguyen et al., 2020; Leonidou et al., 2013).

The differences between Millennials and Gen Z highlight distinct generational approaches to green marketing. While Gen Z prioritizes authenticity, emotional resonance, and peer-driven validation, Millennials lean toward rational evaluation, comprehensive information, and structured campaigns that align with their established perceptions of corporate accountability. This generational divide underscores the need for tailored marketing strategies: brands targeting Millennials should focus on delivering detailed,

transparent, and data-backed sustainability narratives to foster attitudes and awareness, whereas engaging Gen Z may require more emotionally driven, dynamic campaigns leveraging social media and influencers.

4.5.3 Comparison summary

The results presented in Table 4.11 provide a detailed comparison of hypothesis testing across the total sample, Gen Z sub-sample, and Millennials sub-sample, supporting the validity of Hypothesis 5, which posits that the effects of green marketing strategies on green purchase intention differ significantly between Gen Z and Millennials. The findings highlight a generational divide in how green marketing strategies influence purchasing behavior, with distinct patterns emerging for each cohort.

The Gen Z sub-sample emerges as the key driver of the overall analysis, as evidenced by the alignment of the total sample results with those of Gen Z. Gen Z consistently demonstrates higher intensity in significance and magnitude of coefficients, particularly in the relationship between Green Advertising (GA) and Green Purchase Intention (PI), as well as the mediating role of After-marketing Environmental Attitude (AT). For example, GA shows a stronger direct effect on PI for Gen Z (path coefficient = 0.7582, $p < 0.01$) compared to the total sample (path coefficient = 0.6229, $p < 0.01$), and AT partially mediates this relationship for Gen Z with stronger indirect effects. These results suggest that Gen Z's behavior heavily influences the overall trends, reflecting their high responsiveness to dynamic, emotionally resonant, and authentic advertising campaigns.

In contrast, the Millennials sub-sample exhibits weaker and less direct relationships between green marketing strategies and PI. While Millennials do not show significant direct effects of GA, Green Labeling (GL), or Green Packaging (GP) on PI, they do exhibit

significant mediation effects, particularly through AT and After-marketing Environmental Awareness (AW). For instance, GA influences PI for Millennials only via full mediation by AT (indirect effect = 0.4961, $p < 0.01$) and AW (indirect effect = 0.3114, $p < 0.05$). This highlights a more rational and awareness-driven decision-making process for Millennials, who are less influenced by direct marketing appeals and more reliant on perceived value and cognitive evaluations.

The divergent responses between Gen Z and Millennials underscore the importance of tailoring green marketing strategies to generational preferences. For Gen Z, campaigns should prioritize visually engaging, value-driven, and socially resonant messaging, leveraging digital platforms to connect emotionally with their eco-conscious identity. For Millennials, on the other hand, marketers should focus on delivering transparent, evidence-based narratives that build awareness and foster trust, reflecting their preference for rational evaluation and comprehensive information.

It is important to note that the imbalance in sample composition—with Gen Z accounting for nearly 70% of respondents—may introduce a potential bias in the analysis, overrepresentation of Gen Z's behavior and potentially diluting the nuances within the Millennials sub-sample. This suggests the need for further research with more balanced or weighted samples to ensure representative insights across generational cohorts. Additionally, future studies could explore how socio-economic, cultural, and digital engagement differences within these age groups further shape their responses to green marketing strategies.

In summary, the findings validate Hypothesis 5 and emphasize the importance of generational segmentation in green marketing strategies, with each cohort requiring distinct approaches to effectively influence their green purchase intentions.

Table 4. 11: Hypothesis testing summary

(Source: Author's analysis)

Hypothesis	Total	GenZ	Millennials
H1: Green Advertising, have a positive direct effect on green purchase intention.	Accept	Accept	
H1: Green Packaging, have a positive direct effect on green purchase intention.			
H1: Green Labeling, have a positive direct effect on green purchase intention.			
H2: Green Perceived Value mediates the relationship between green marketing strategies and green purchase intention.			
H3: After-marketing environmental awareness mediates the relationship between green marketing strategies and green purchase intention.			Full
H4: After-marketing environmental attitude mediates the relationship between green marketing strategies, particularly Green Advertising and green purchase intention.	Partial	Partial	Full
H4: After-marketing environmental attitude mediates the relationship between green marketing strategies, particularly Green Packaging and green purchase intention.	Full	Full	
H4: After-marketing environmental attitude mediates the relationship between green marketing strategies, particularly Green Labeling and green purchase intention.	Full	Full	
H5: The effects of green marketing strategies on green purchase intention differ between Gen Z and Millennials.	Accept		

CHAPTER 05: CONCLUSION, IMPLICATIONS AND LIMITATIONS

In Chapter 5, the study's research questions will be concisely addressed, and based on Chapter 4's results, recommendations for businesses and policymakers will be made. Mention the limitations of the research as well as potential areas for further study.

5.1 CONCLUSION

This study investigates the influence of green marketing strategies—green advertising, eco-labeling, and sustainable packaging—on green purchase intentions within Vietnam's cosmetics industry, adding value to current literature by exploring mediating roles of Green Perceived Value (GPV), After-marketing Environmental Awareness, and After-marketing Environmental Attitude factors. Using a robust dataset from over 300 Gen Z and Millennial respondents in Ho Chi Minh City, the study employs Structural Equation Modeling (SEM) to assess the relationships among variables. The findings reveal that green marketing strategies dynamically affect green purchase intentions (even both directly or indirectly via mediating factors), with notable differences between generational cohorts. These results contribute to understanding how sustainability-oriented marketing shapes consumer behavior in a rapidly evolving market.

The Role of Green Marketing Strategies in Shaping Purchase Intentions

The findings of this study reveal nuanced dynamics in the impact of green marketing strategies—green advertising (GA), green labeling (GL), and sustainable packaging—on green purchase intention (GPI). Among these, GA emerges as the most impactful independent variable with a significant and direct influence on GPI. This underscores the effectiveness of well-crafted advertising campaigns that highlight environmental benefits, engage consumers emotionally, and build trust in brand authenticity. However, GL and sustainable packaging, while impactful, predominantly

exert their influence indirectly through mediators such as Green Perceived Value (GPV), Environmental Awareness (AW), and Environmental Attitude (AT).

Interestingly, GL demonstrates a negative direct relationship with GPI, contradicting previous assumptions of a purely positive effect. This negative relationship may stem from consumers' skepticism about the credibility of green labeling claims, especially in cases where such labels lack transparency or independent verification. This finding emphasizes the importance of ensuring that green labeling practices are trustworthy, as consumer doubt can diminish the effectiveness of this strategy.

The dynamic interplay among these variables highlights that while GA holds the strongest direct impact, GL and sustainable packaging require mediators to translate their effects into actionable purchase intentions. These mixed results suggest that businesses must not rely on isolated strategies but rather adopt an integrated approach to green marketing. This involves ensuring consistency and credibility across advertising, labeling, and sustainable packaging efforts to maximize their collective impact on GPI.

The Mediating Role of GPV, Environmental Awareness, and Environmental Attitude

The study identifies AT as the most influential mediator between green marketing strategies and GPI. Consumers with strong AT are more likely to translate their positive perceptions of green marketing into sustainable purchasing behavior. AT emerges as a critical psychological mechanism, shaping how consumers evaluate eco-friendly products and fostering emotional connections that drive purchase intentions. This finding underscores the importance of green marketing strategies that cultivate favorable attitudes by resonating with consumers' values and evoking a sense of moral responsibility.

AW, the second strongest mediator, plays a pivotal role in increasing consumer awareness of environmental issues and their implications. Through AW, consumers gain a

deeper understanding of the environmental benefits of their purchasing decisions, which enhances their likelihood of choosing eco-friendly products. Marketing strategies that educate and inform—such as campaigns explaining the ecological benefits of sustainable packaging—effectively leverage AW to strengthen the relationship between green marketing and GPI.

GPV, while significant, has a relatively weaker mediating effect compared to AT and EA. This finding challenges conventional assumptions that perceived value is the most critical determinant of green purchasing behavior. Instead, the study suggests that consumers prioritize their attitudes and awareness over perceived value, particularly when green marketing strategies are implemented effectively. Nonetheless, GPV remains an important factor, especially in contexts where consumers weigh the cost-benefit tradeoffs of eco-friendly products.

These insights highlight the hierarchical importance of mediators, with AT as the strongest influence, followed by AW and GPV. This hierarchy suggests that businesses should prioritize marketing strategies that shape positive consumer attitudes and enhance environmental awareness while complementing these efforts with value-driven messaging to maximize their impact on GPI.

Generational Differences in Responses to Green Marketing Strategies

The generational analysis reveals a critical distinction between Gen Z and Millennial consumers in their responses to green marketing strategies. While both groups demonstrate positive reactions, the overall impact of independent variables on GPI is significantly weaker among Millennials compared to Gen Z. This finding indicates that Millennials, although environmentally conscious, weigh other considerations—such as price, convenience, and product performance—more heavily than Gen Z.

Additionally, within the Millennial sub-sample, EA emerges as the most significant mediating factor, contrasting sharply with the Gen Z sub-sample, where AT plays the strongest role. Millennials appear to prioritize knowledge and understanding of environmental issues as a basis for their purchasing decisions. This suggests that marketing campaigns targeting Millennials should emphasize educational content and provide clear, credible information about the environmental benefits of products.

For Gen Z, emotional engagement and alignment with personal values remain paramount. This cohort responds most strongly to strategies that evoke a sense of purpose, responsibility, and connection to broader sustainability goals. Brands targeting Gen Z should focus on creating emotionally resonant narratives and leveraging social media platforms to amplify these messages.

Strategic Alignment with Consumer Values

A significant finding of this study is the importance of aligning marketing strategies with the distinct sustainability values of Gen Z and Millennials. For Gen Z, businesses should prioritize campaigns that engage audiences through compelling narratives about sustainability, leveraging digital platforms to amplify reach. Meanwhile, for Millennials, messaging should balance environmental attributes with product functionality and value for money. Both groups, however, value transparency and authenticity, suggesting that brands must adopt a genuine approach to sustainability.

Contributions to the Literature and Implications

This research contributes to the growing body of literature on green marketing and consumer behavior by providing empirical evidence from a developing market context. By highlighting the mediating roles of GPV, Environmental Awareness, and Environmental Attitude, it offers a nuanced understanding of the pathways through which green marketing

influences purchase intentions. Additionally, the comparative analysis of Gen Z and Millennials provides actionable insights for segment-specific marketing.

5.2 RECOMMENDATIONS FOR BUSINESS AND MARKETERS

The findings of this study provide meaningful insights for businesses and marketers in Vietnam's cosmetics industry, particularly those aiming to align with the rising consumer demand for eco-friendly products. To effectively connect with Gen Z and Millennials, it is essential for businesses to embed sustainability into their operational practices and communication strategies in ways that resonate with the values and expectations of these demographics.

First, a key priority is enhancing the credibility and transparency of green marketing efforts. Consumers are increasingly skeptical of environmental claims, making it crucial for brands to avoid greenwashing by ensuring their claims are both accurate and verifiable. Collaborating with recognized certification bodies, such as EcoCert or Fair Trade, can add authenticity and reassure consumers about a brand's commitment to sustainability. Transparent communication, detailing actions like sourcing sustainable materials or reducing carbon emissions, further reinforces trust and fosters a positive brand image. As research suggests, consistent and genuine environmental practices encourage consumer loyalty and trust, laying a strong foundation for long-term brand success.

Second, understanding generational differences is equally important for crafting effective marketing strategies. Gen Z, a digital-native audience, is best reached through platforms like Instagram, TikTok, and YouTube, where authentic storytelling and influencer endorsements drive engagement. In contrast, Millennials respond to campaigns that highlight not only sustainability but also practical benefits such as product performance and affordability. By tailoring their messages to emphasize the tangible

advantages of eco-friendly products alongside their environmental impact, brands can effectively capture the interest of both groups.

Third, consumer education plays a pivotal role in shaping green purchase behavior, making it imperative for businesses to invest in educational campaigns. Informative and engaging content, such as videos or infographics accessible via QR codes on product packaging, can help consumers understand the environmental impact of their choices and the sustainability efforts behind the products they buy. Studies have shown that well-informed consumers are more likely to develop favorable attitudes toward eco-friendly products, bridging the gap between awareness and action.

Fourth, sustainable packaging is another significant driver of green purchase intentions. By prioritizing innovative solutions, such as biodegradable materials, refillable containers, or minimalist designs that reduce waste, businesses can align their products with consumer values while enhancing their appeal. Notably, research indicates that consumers are increasingly willing to pay a premium for products that showcase visible environmental benefits, making sustainable packaging a worthwhile investment for long-term growth and differentiation in the market.

Fifth, collaborations and partnerships further extend the reach and impact of green marketing efforts. Partnering with environmental NGOs or participating in government-led initiatives, such as Vietnam's National Action Plan on Green Growth, allows businesses to enhance their credibility while positioning themselves as leaders in corporate social responsibility. Moreover, leveraging sustainability influencers can amplify campaign effectiveness, particularly among Gen Z consumers who value authenticity and genuine engagement with environmental issues.

Finally, addressing the affordability barrier is crucial for broadening the adoption of green products. While sustainable products often come at a higher price point, businesses

can explore strategies such as introducing entry-level eco-friendly lines or adopting cost-effective sustainable materials to make their offerings more accessible. Research confirms that affordability remains a key consideration for many consumers, and by balancing sustainability with economic accessibility, brands can attract a broader audience while maintaining their commitment to eco-friendly principles.

5.3 LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

While this study provides valuable insights into green marketing and consumer behavior, several gaps remain that warrant further exploration. Addressing these gaps will enable future researchers to expand upon the current findings and provide a more comprehensive understanding of sustainable consumer behavior.

- **Expanding Demographic and Geographic Scope:** This study focuses on urban Gen Z and Millennials in Ho Chi Minh City, limiting the generalizability of the findings. Future research should consider rural and suburban populations to identify regional variations in green purchase behavior. Additionally, extending the scope to other cities, such as Hanoi or Da Nang, could provide a more holistic view of Vietnam's market dynamics.
- **Exploring Additional Demographic Groups:** While this study examines Gen Z and Millennials, other demographic groups, such as Baby Boomers or Gen X, remain underexplored. These cohorts may have different motivations and barriers when it comes to adopting sustainable products. Examining their behavior could uncover valuable insights for inclusive marketing strategies.
- **Examining Additional Mediators and Moderators:** While this study identifies GPV, Environmental Awareness, and Environmental Attitude as key mediators, future research could explore additional factors, such as green trust, cultural influences, or social norms. Investigating moderators, such as income levels or environmental literacy, could provide a more nuanced understanding of the variables shaping green purchase intentions.

APPENDIX

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